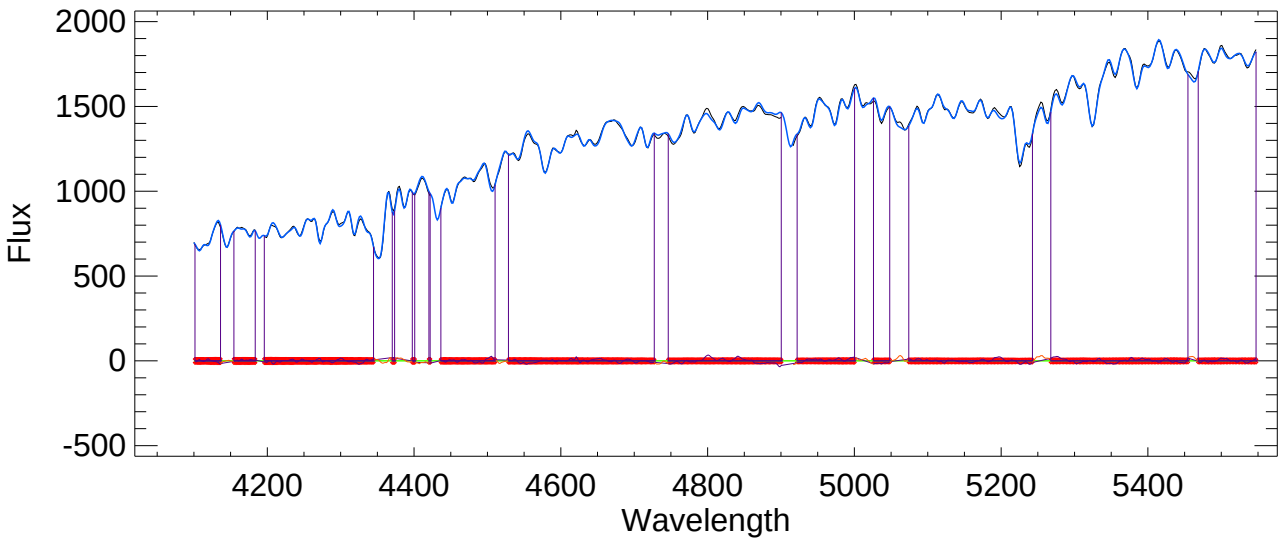
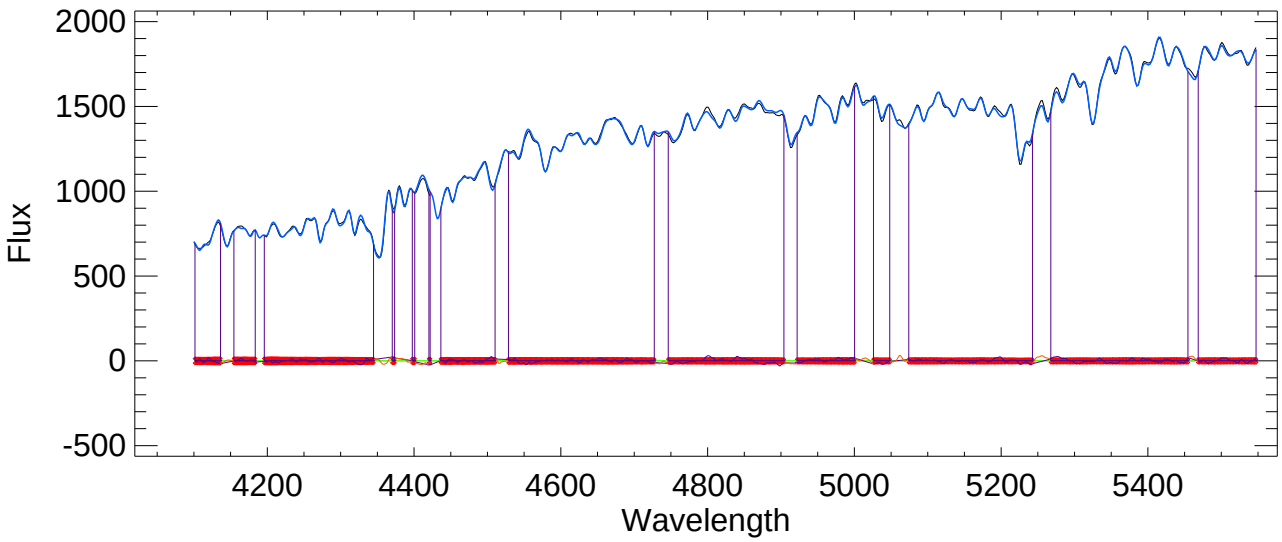
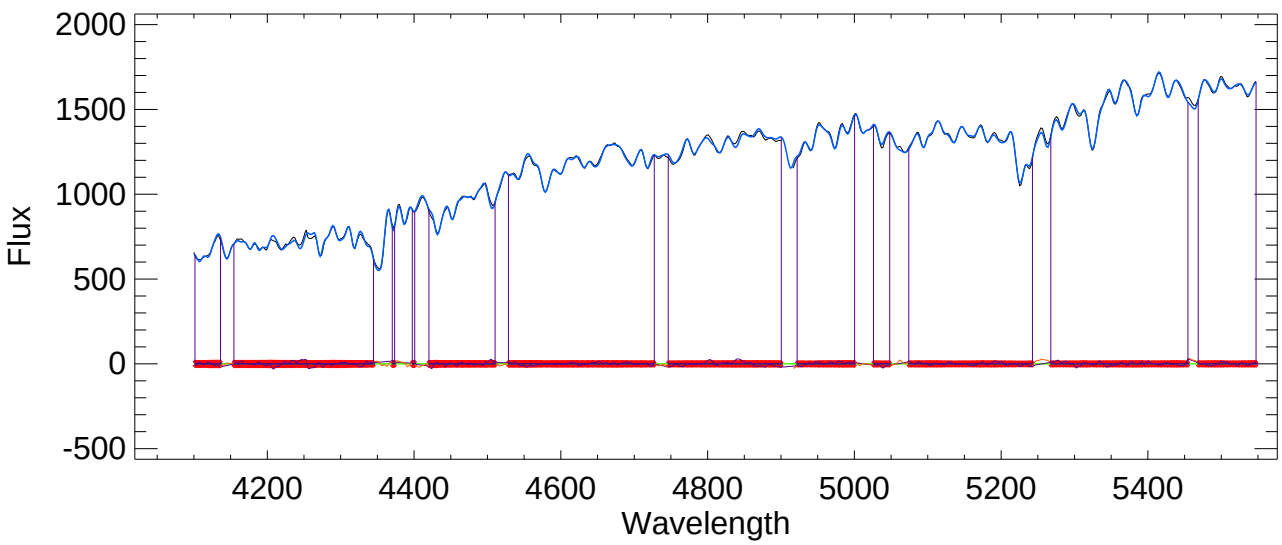
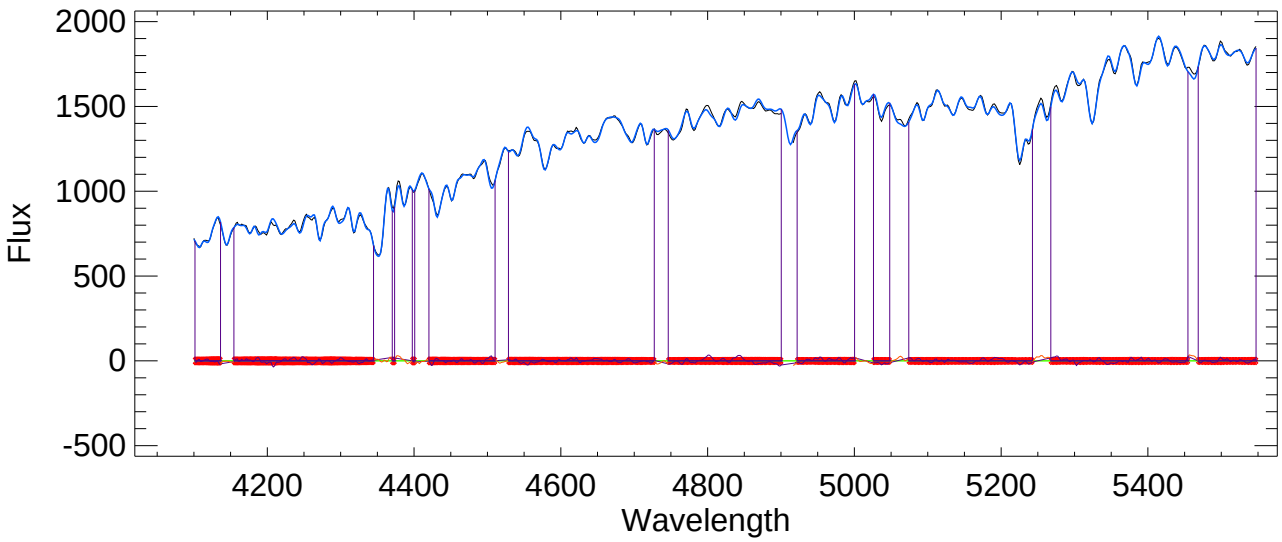
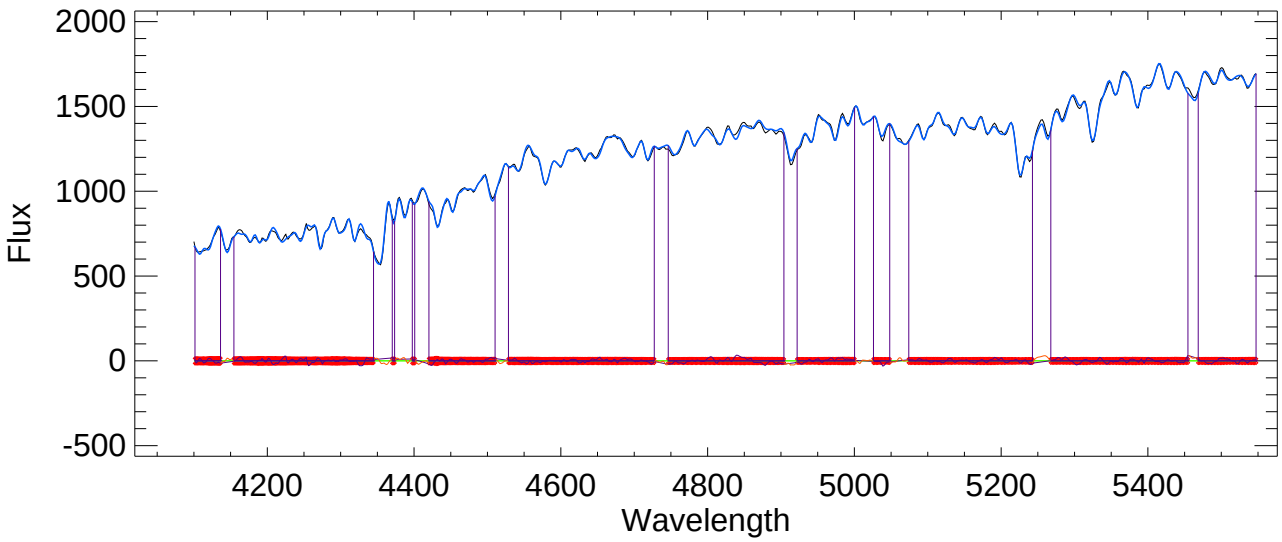
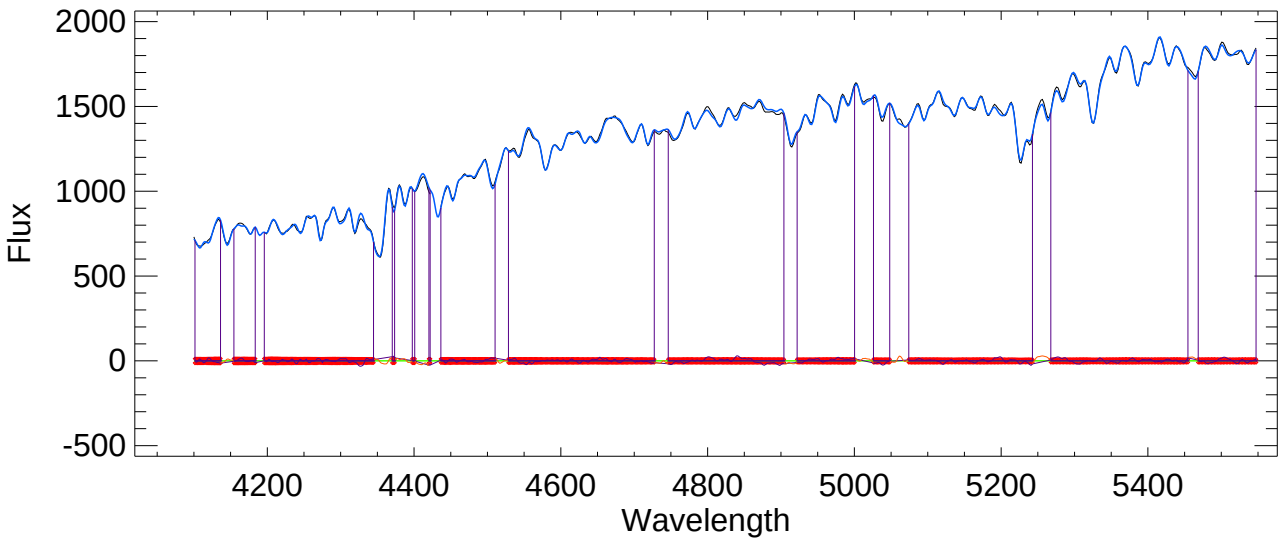

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

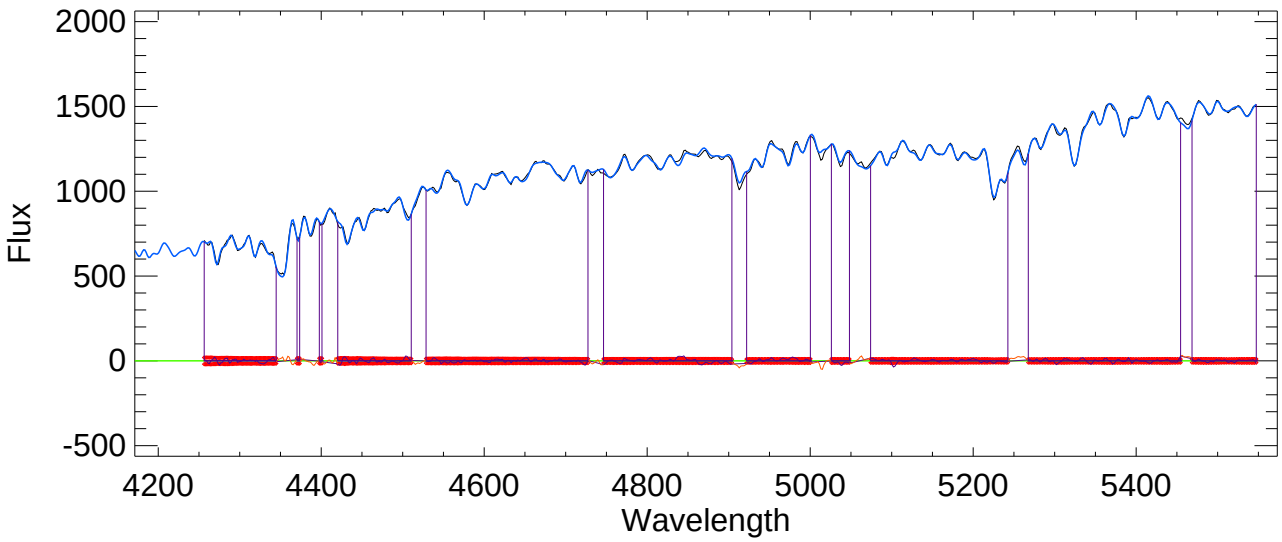

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

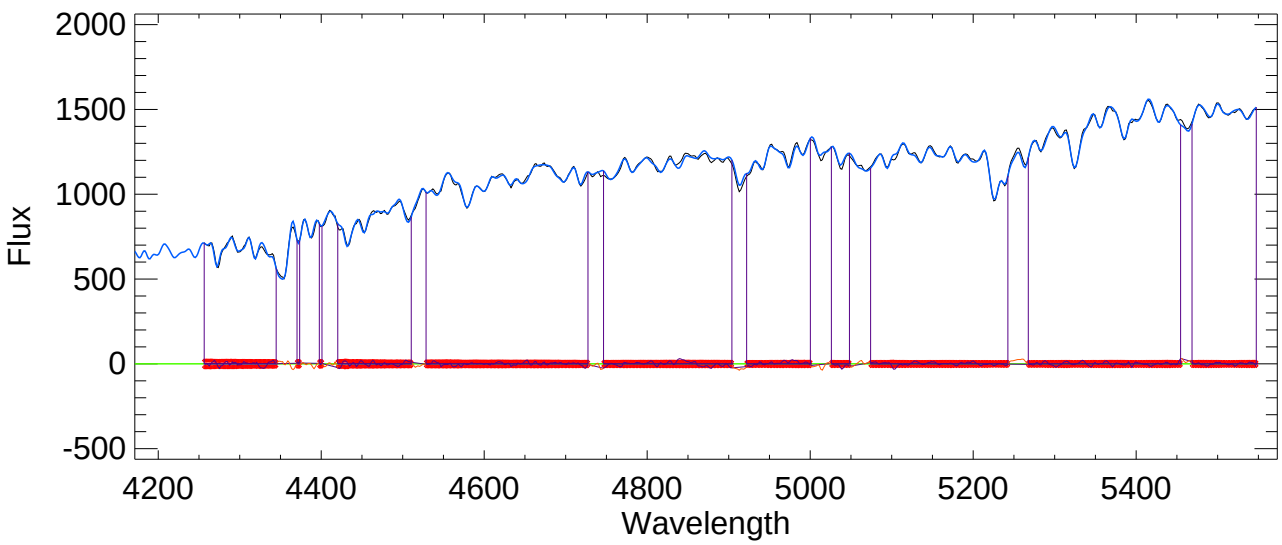

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

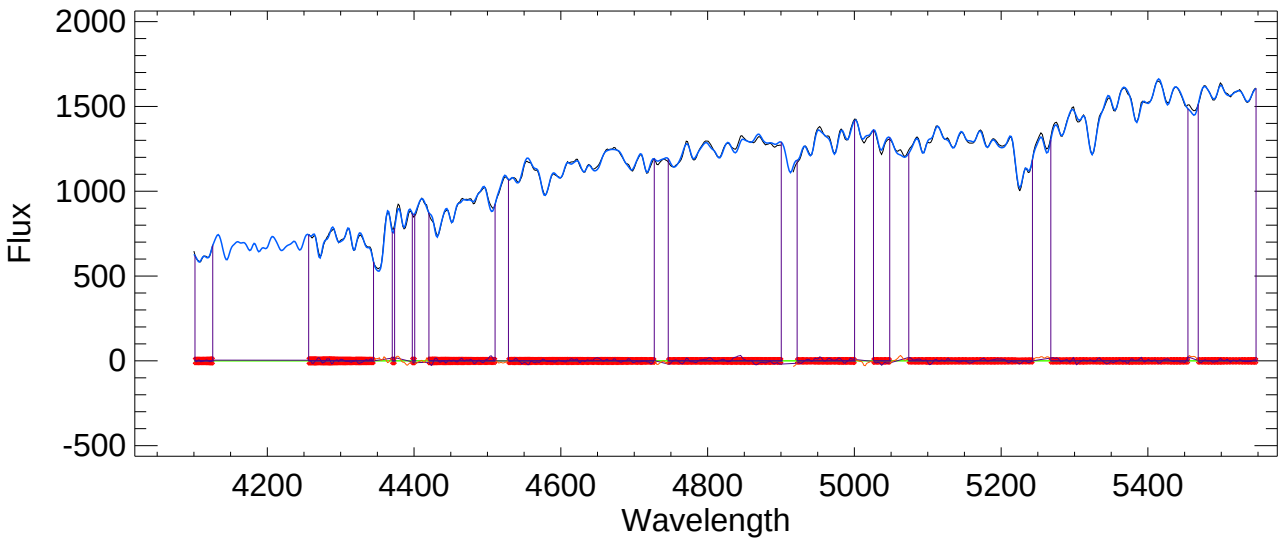

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

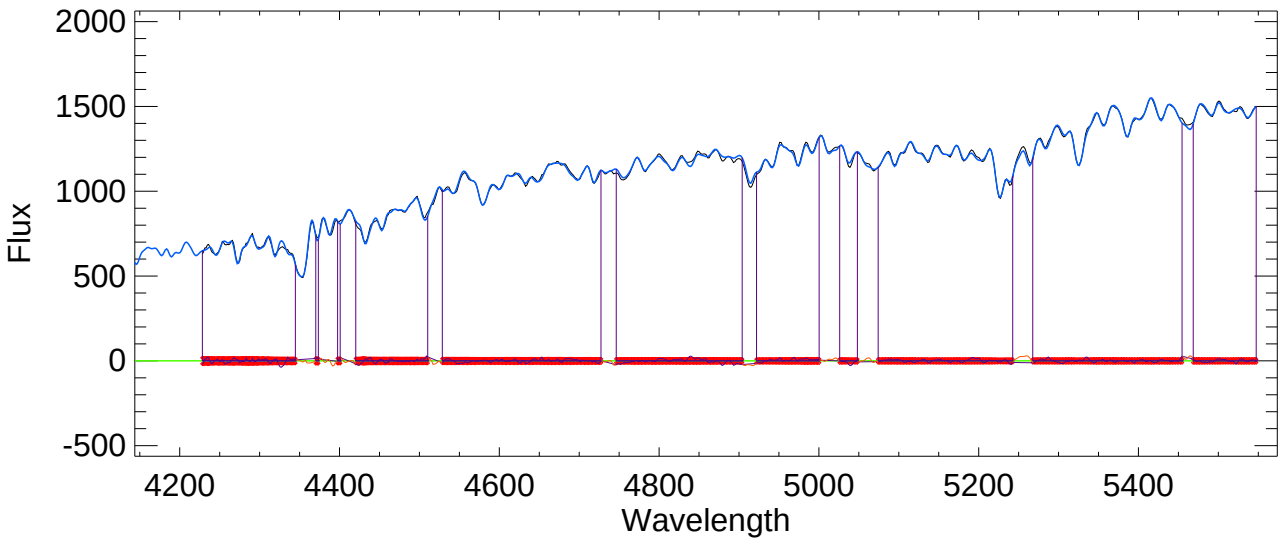

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

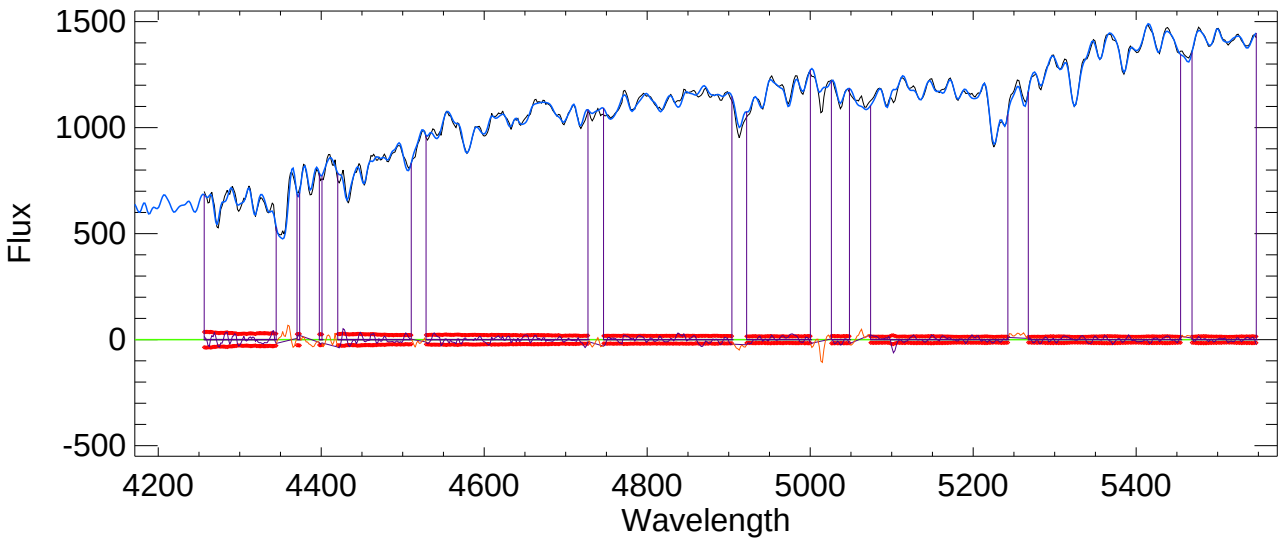

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

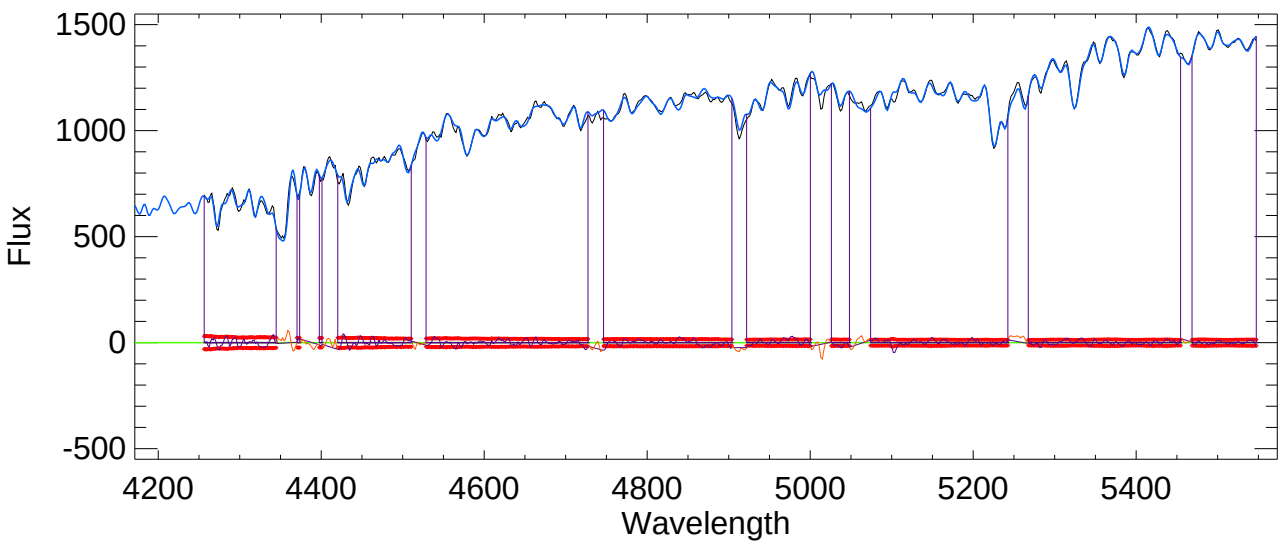

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

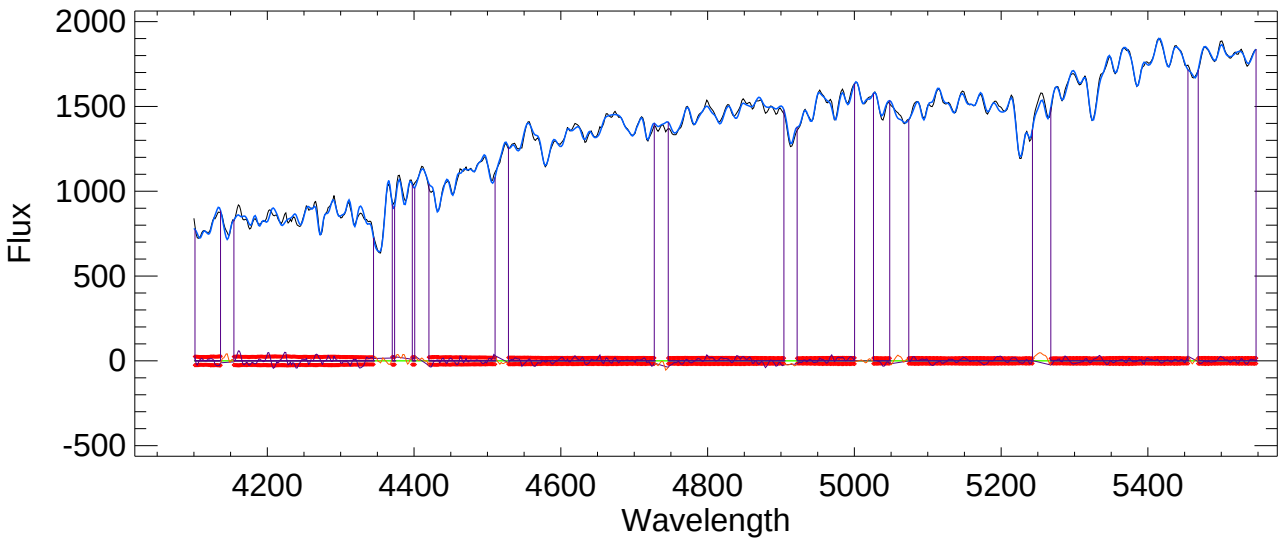

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

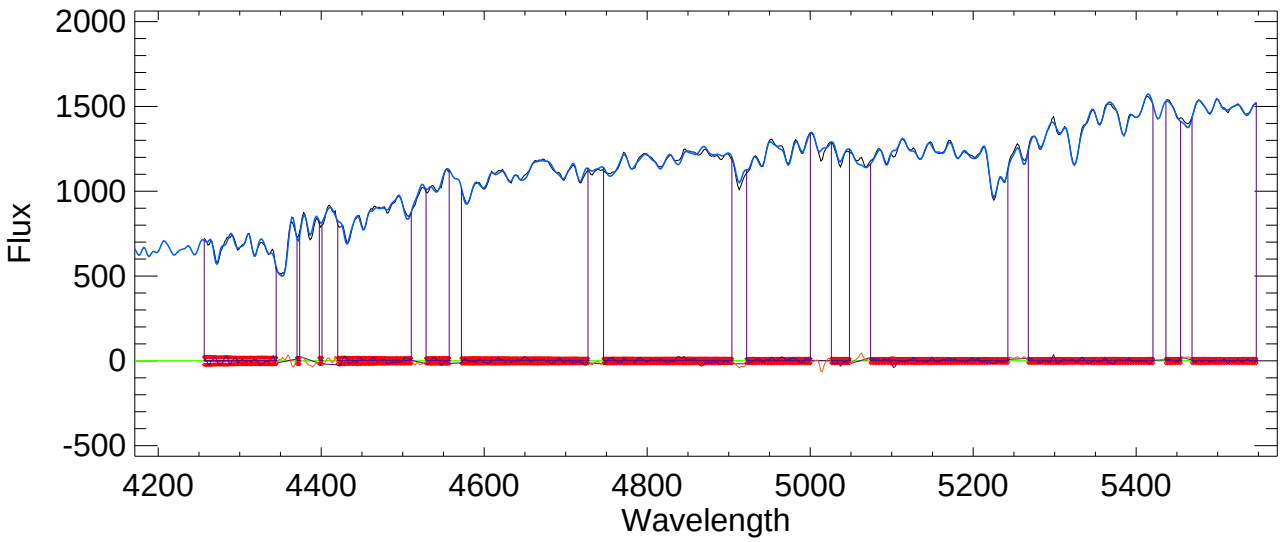

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

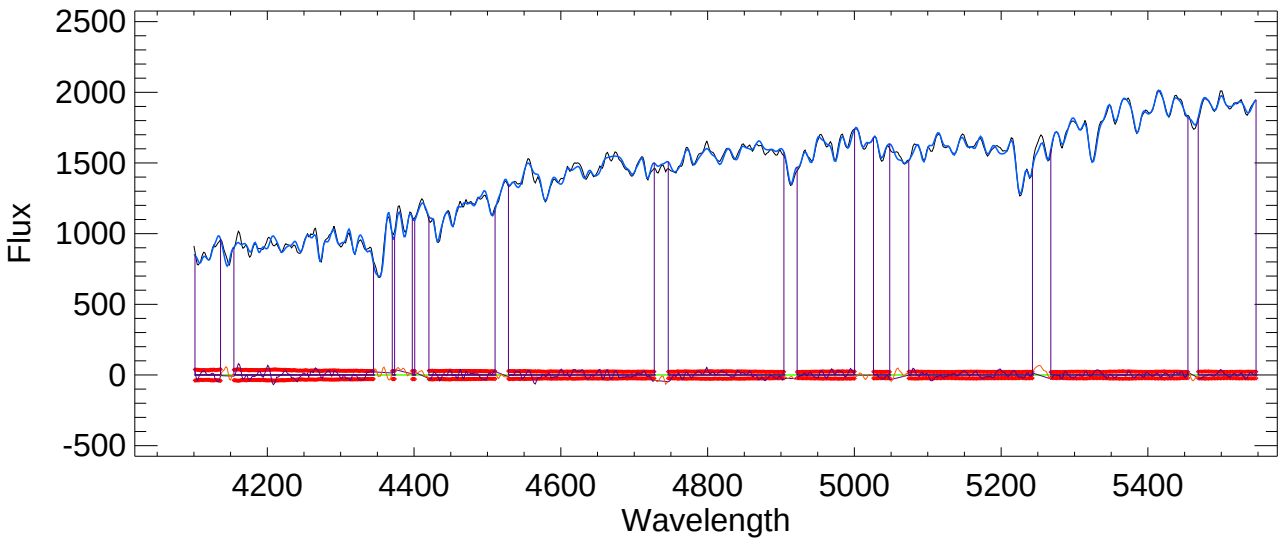

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

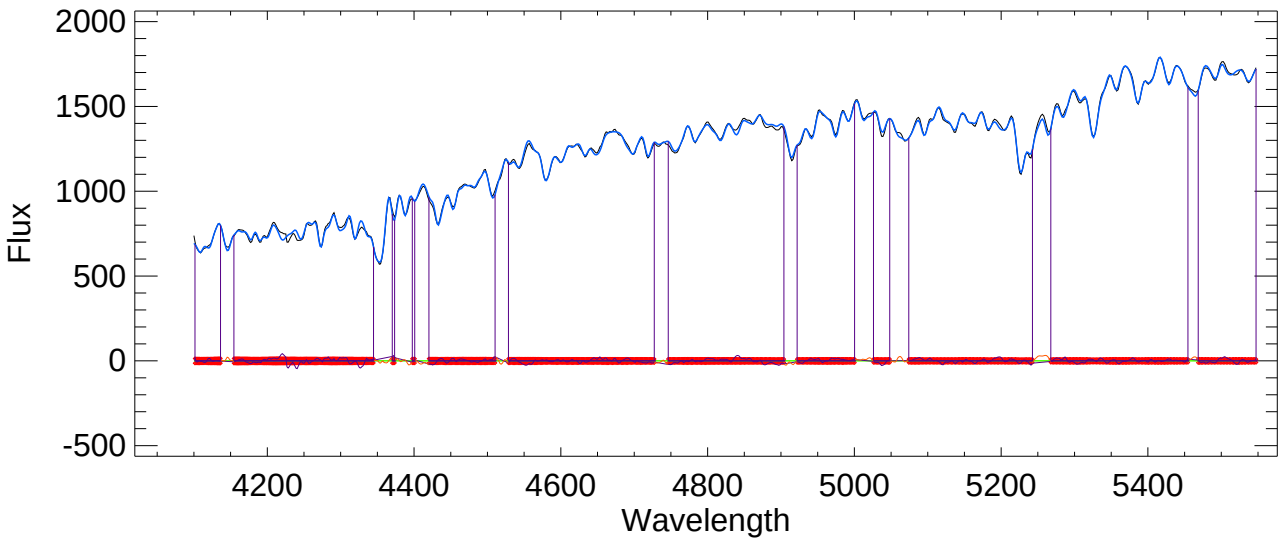

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

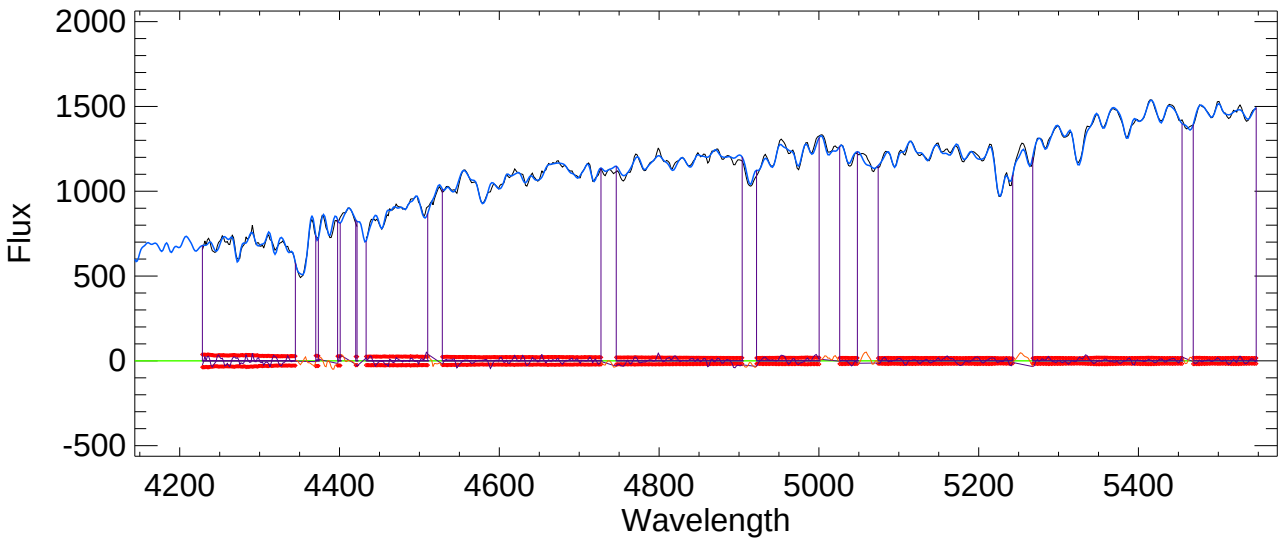

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

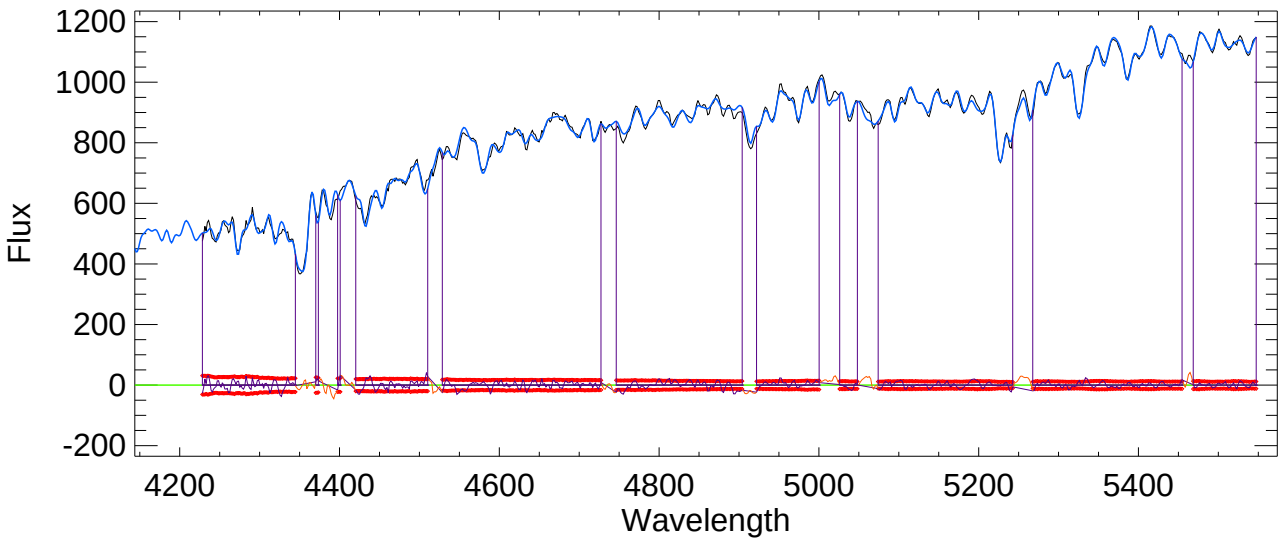

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

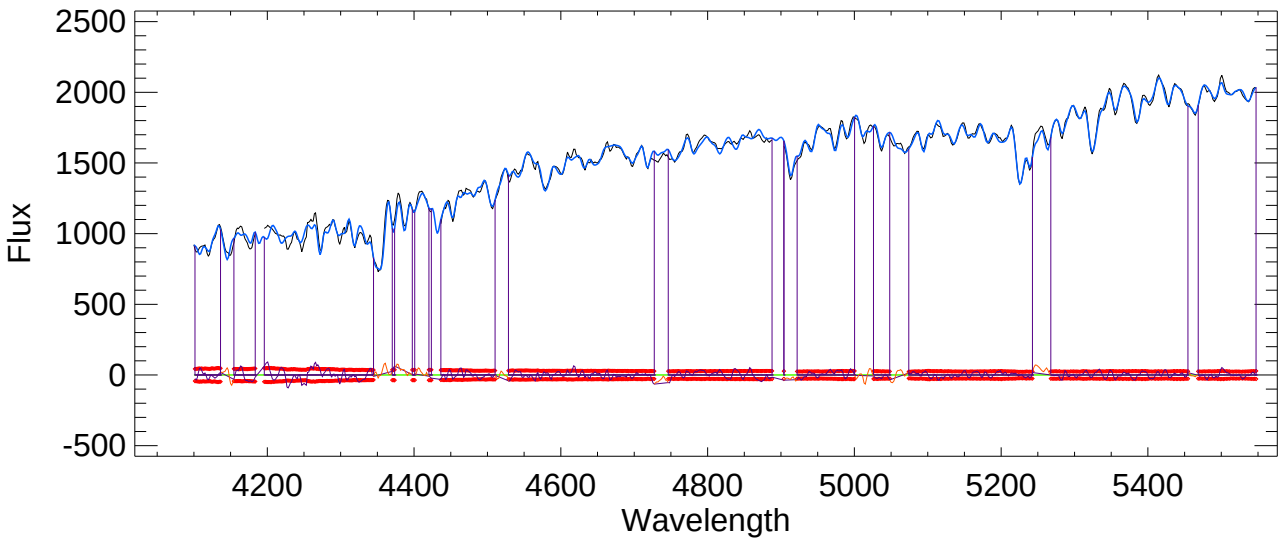

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

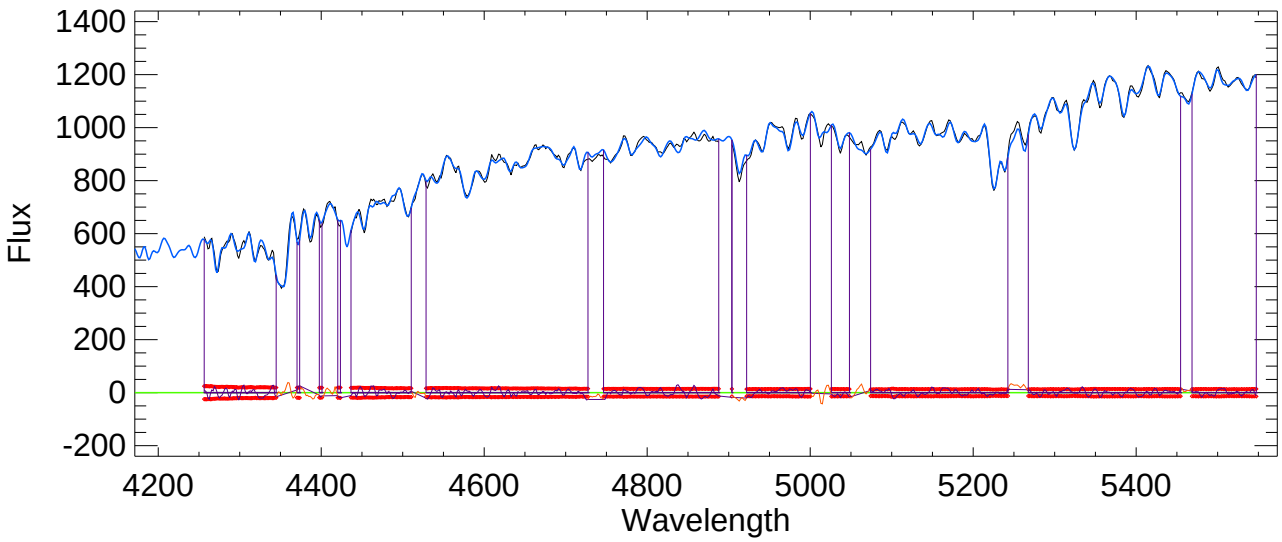

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

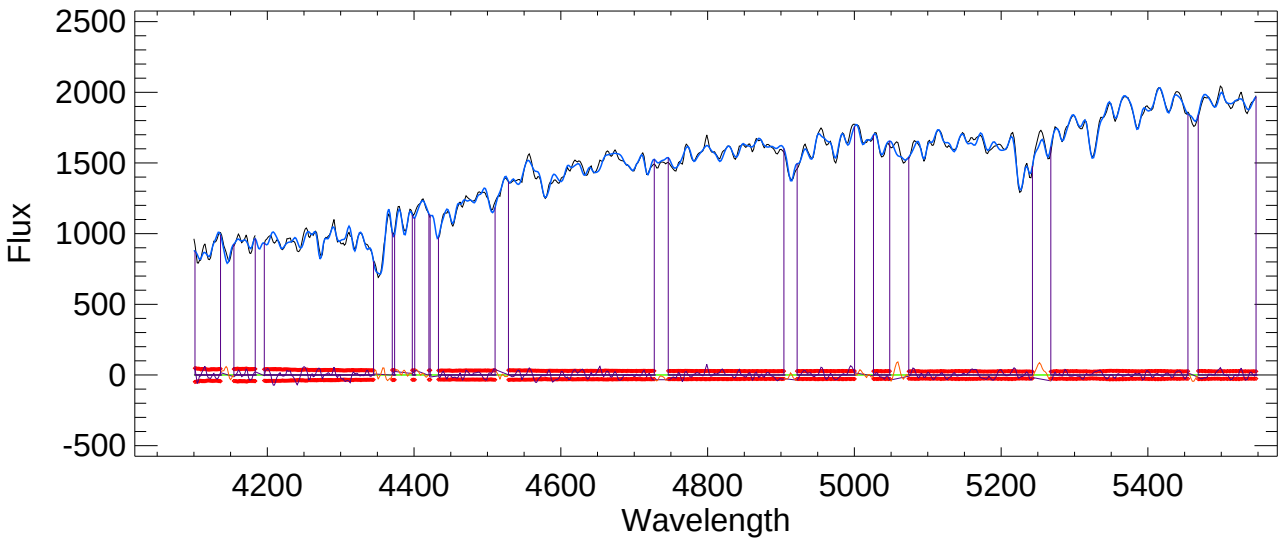

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

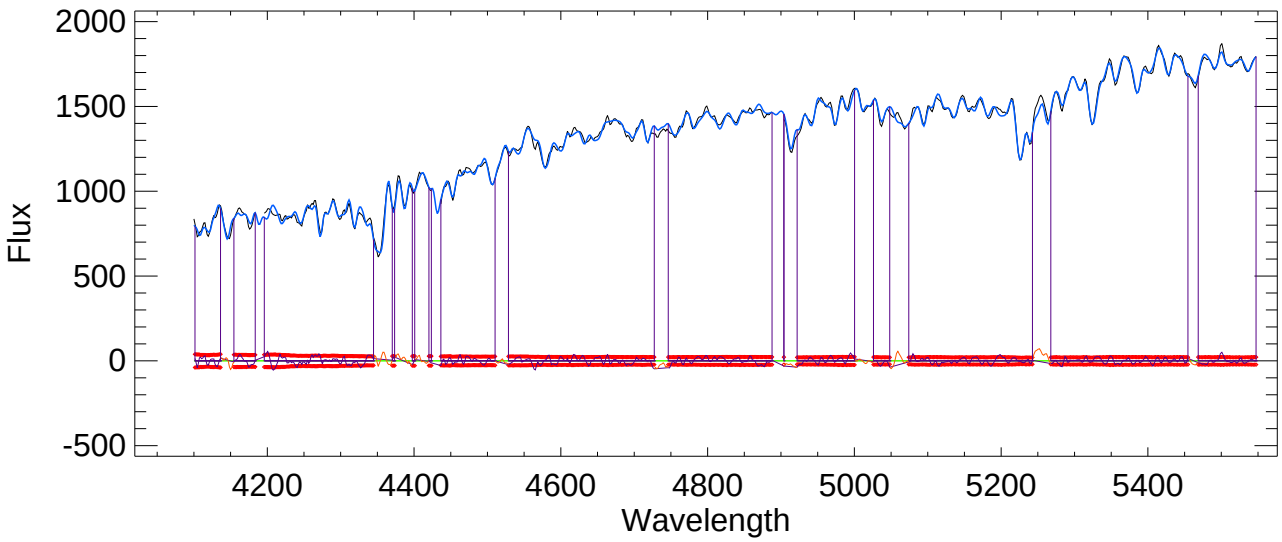

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

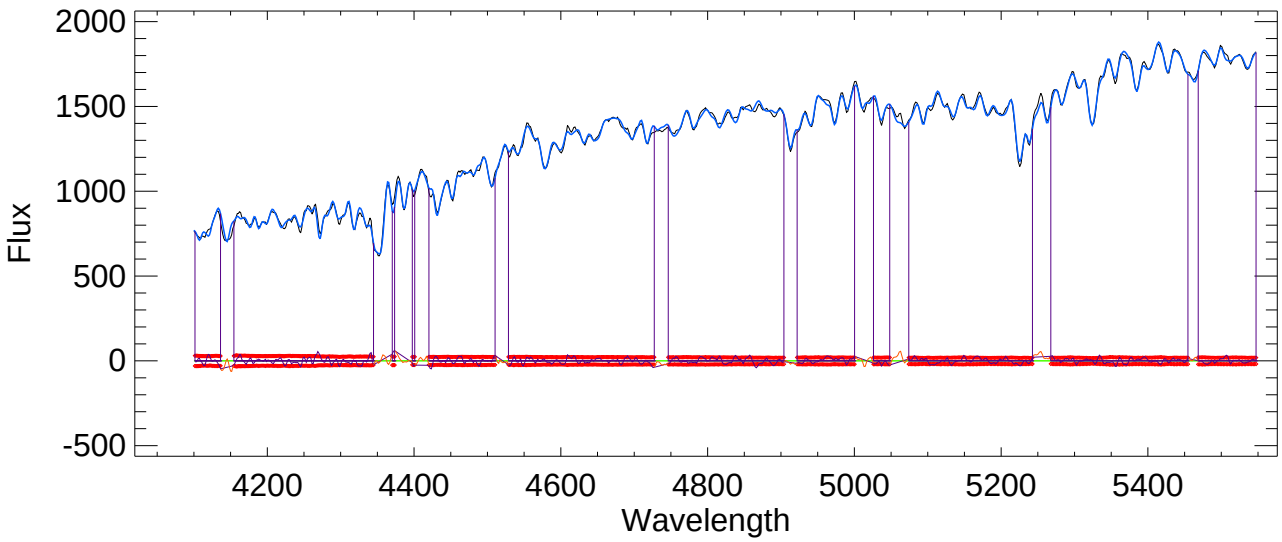

1200
1000
800
600
400
200
0
-200
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

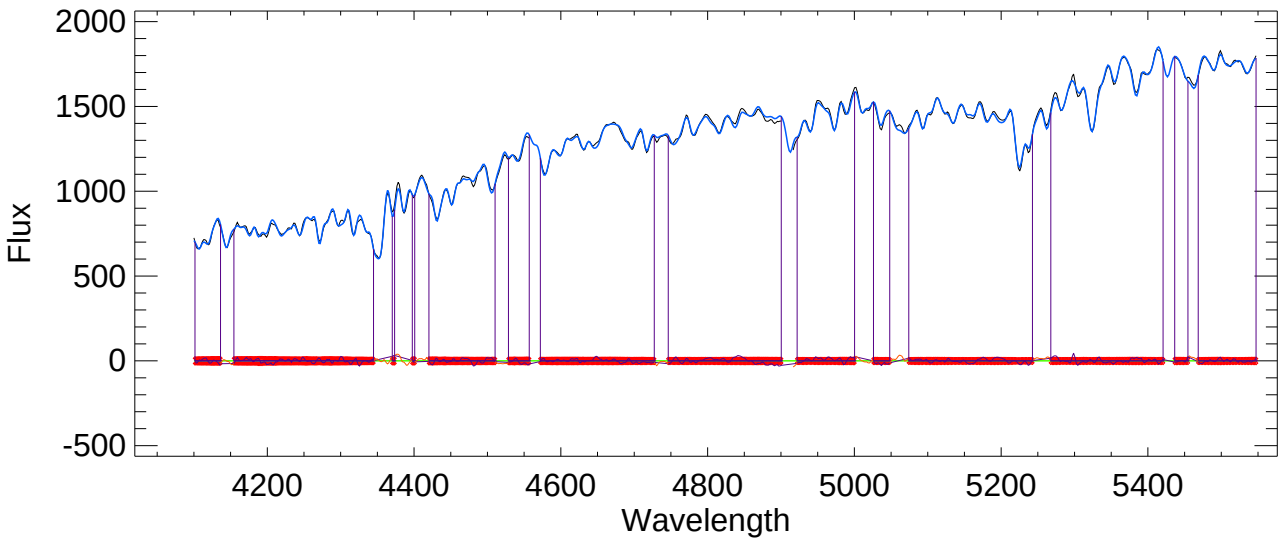

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

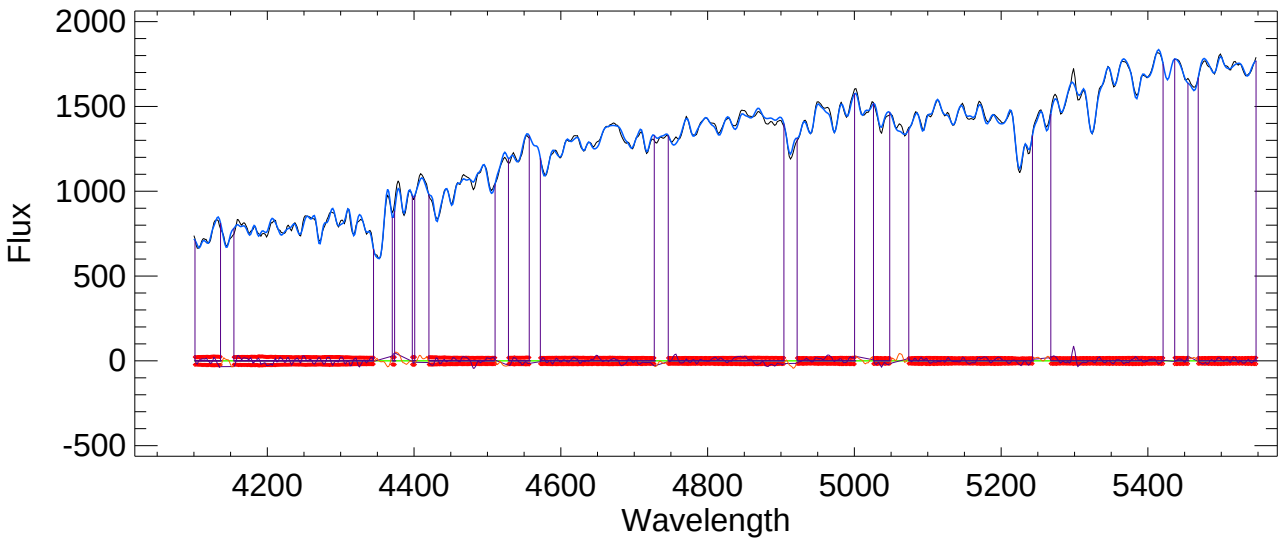

1400
1200
1000
800
600
400
200
0
-200
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

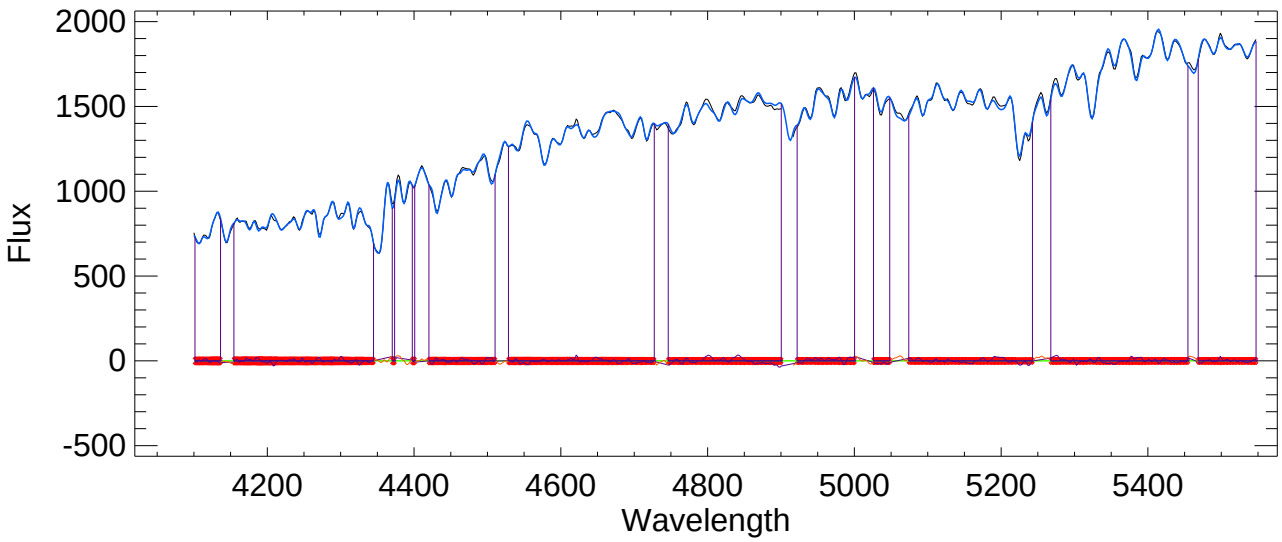

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

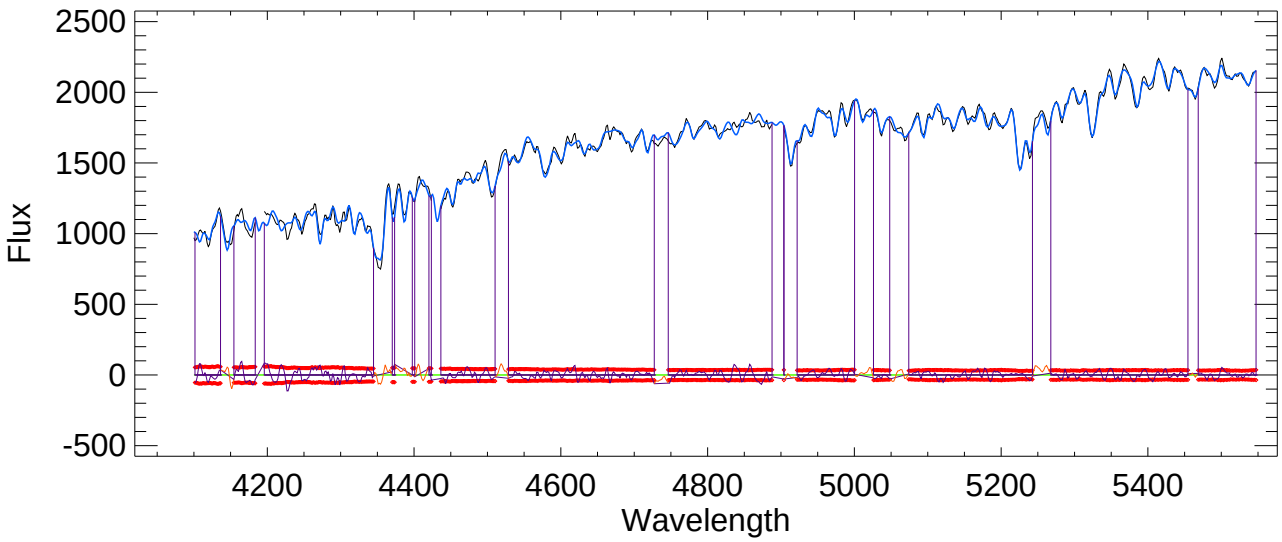

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

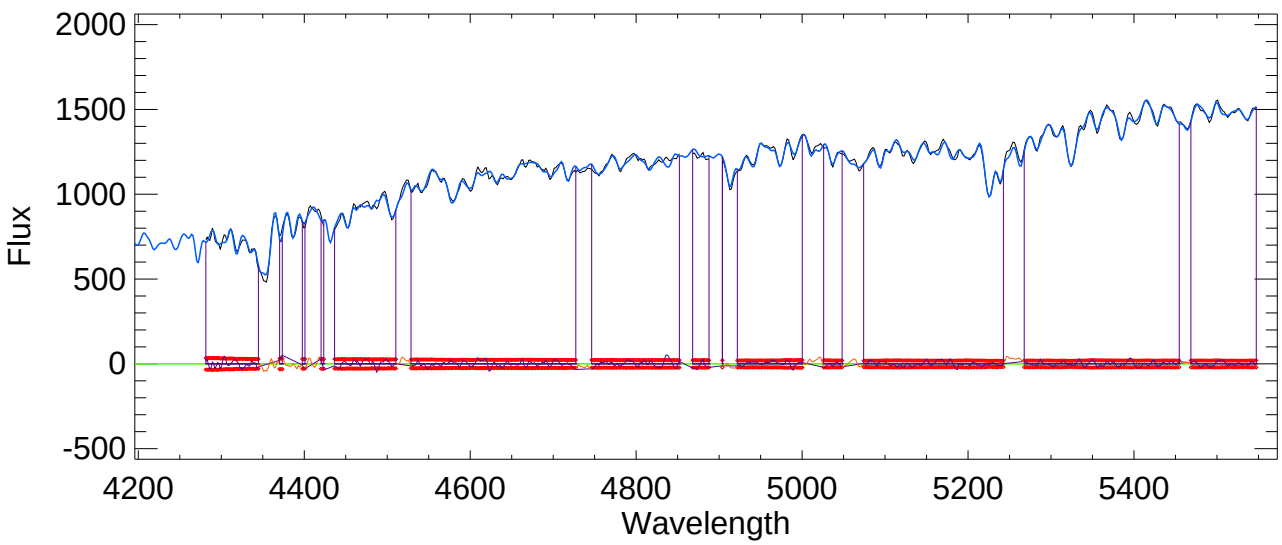

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

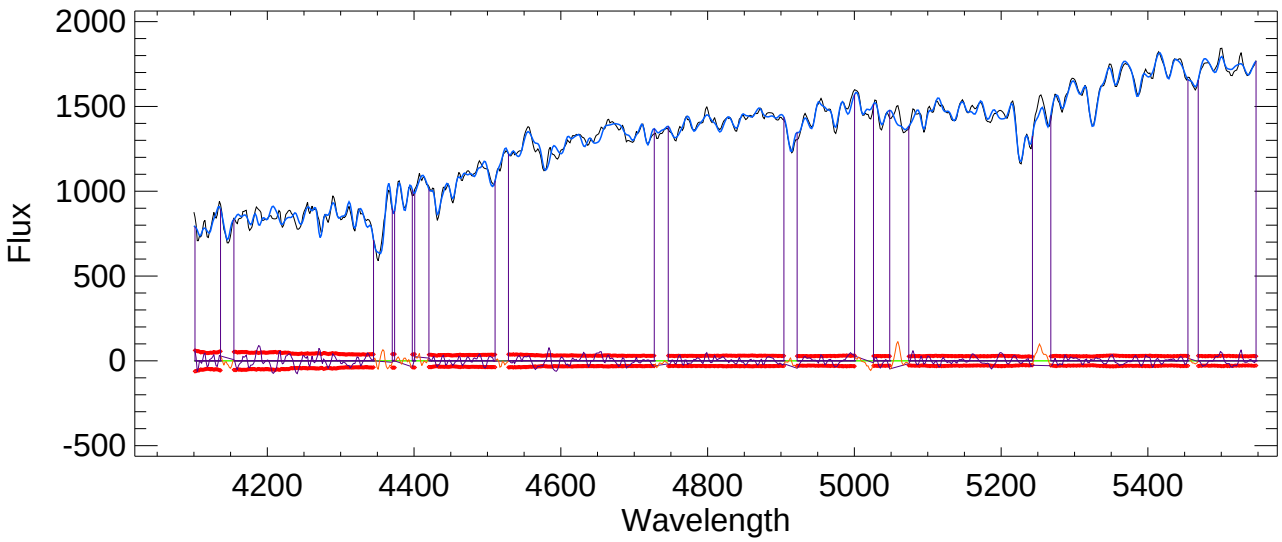

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

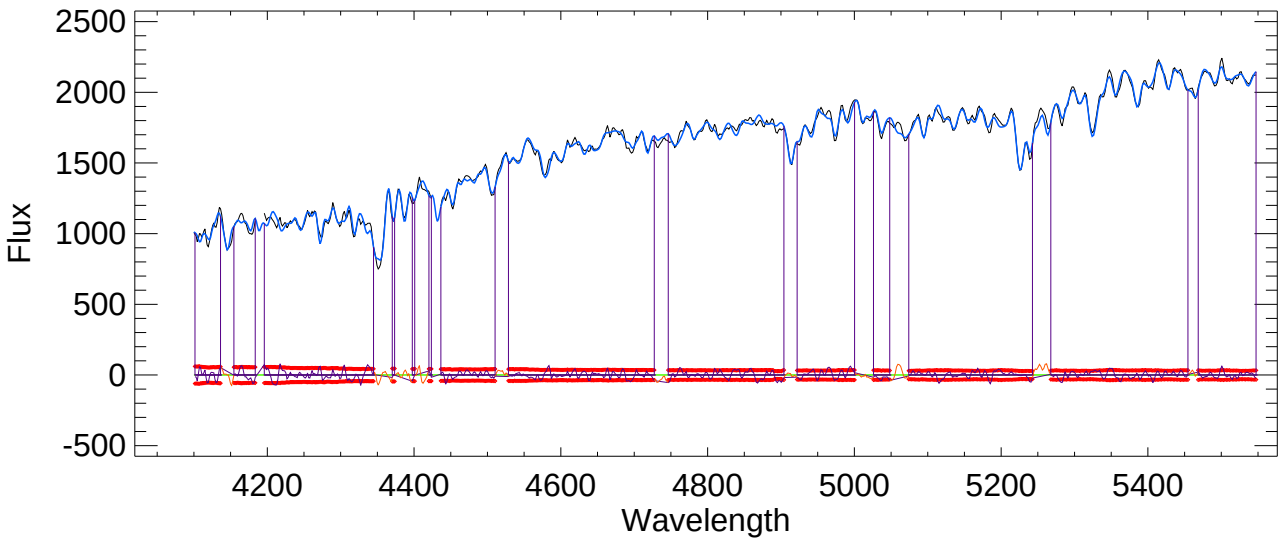

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

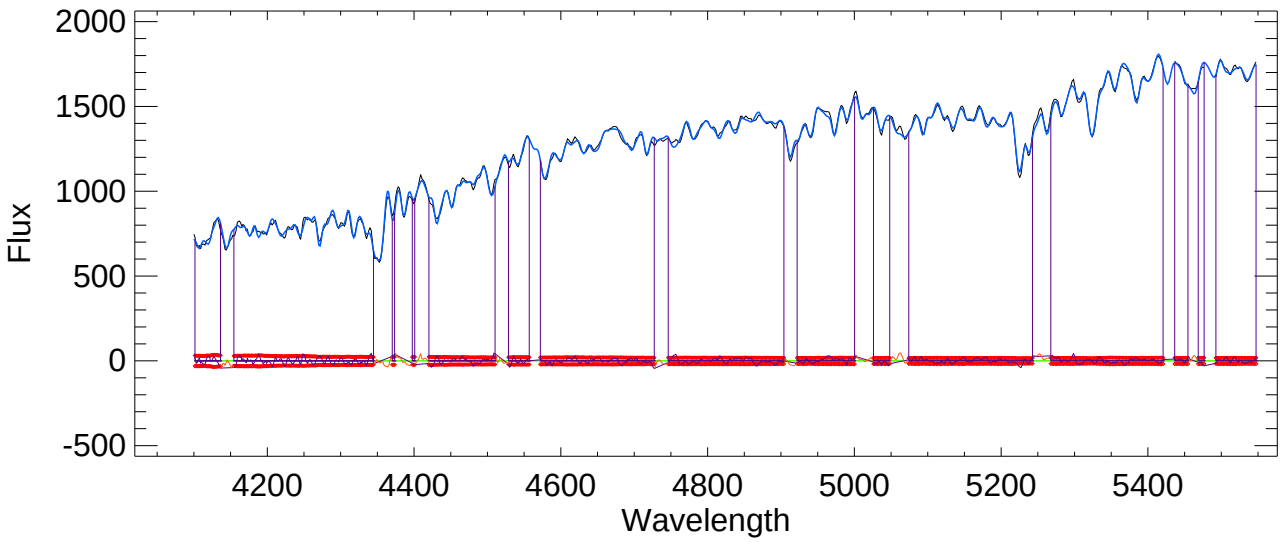

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

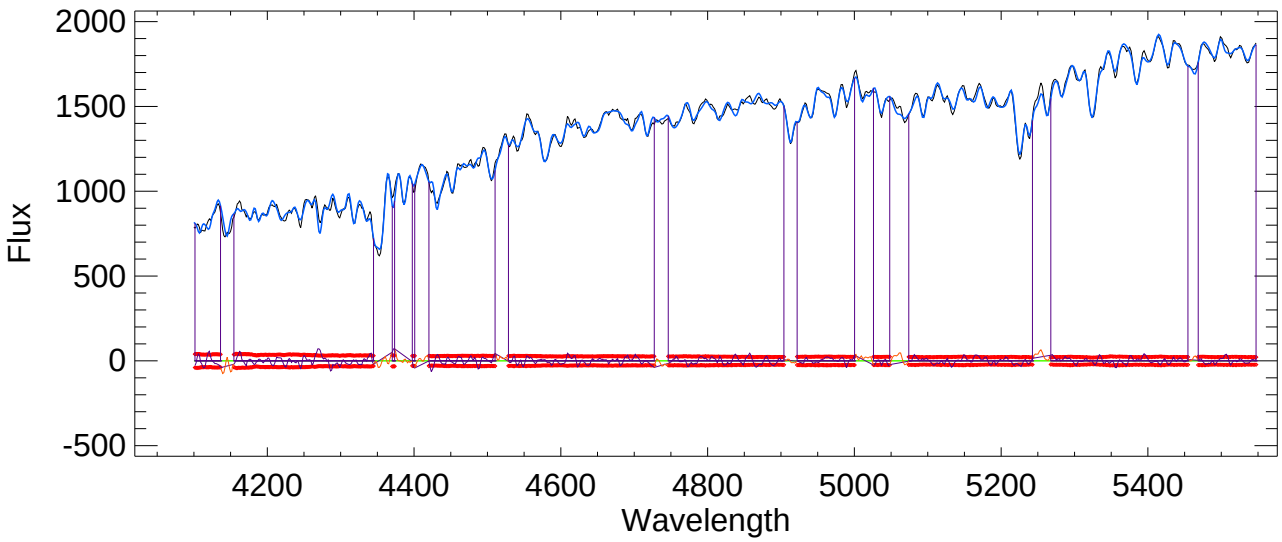

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

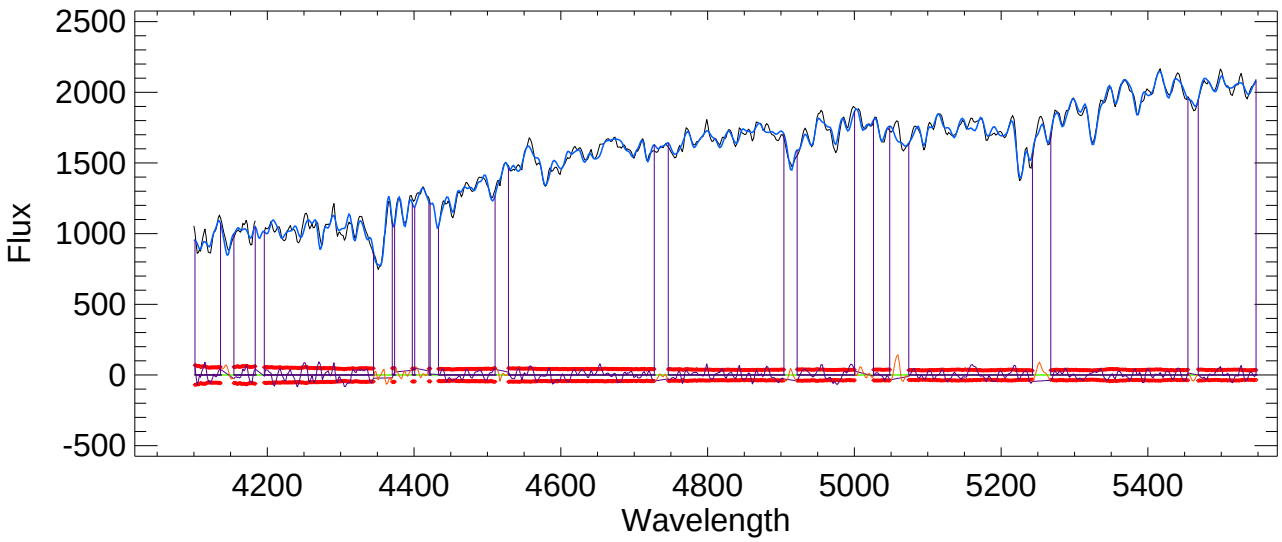

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

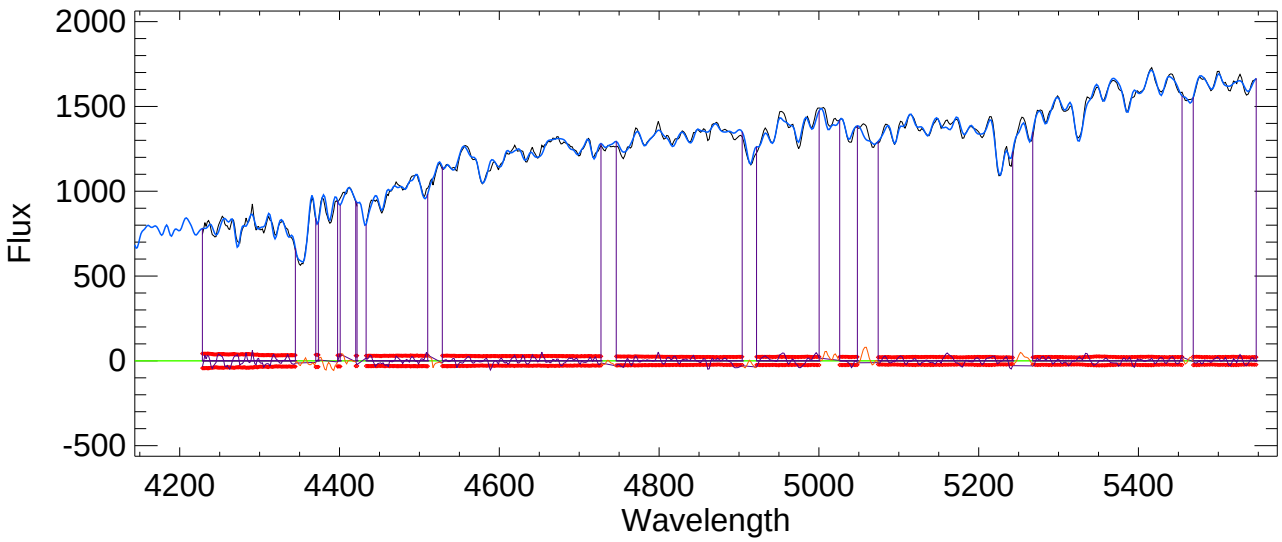

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

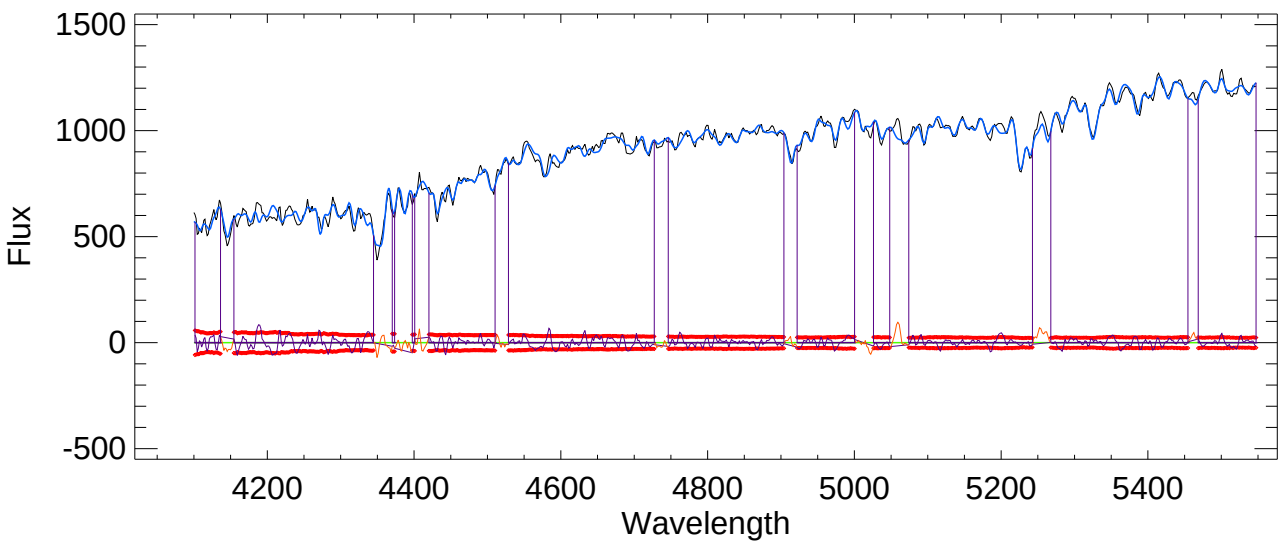

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

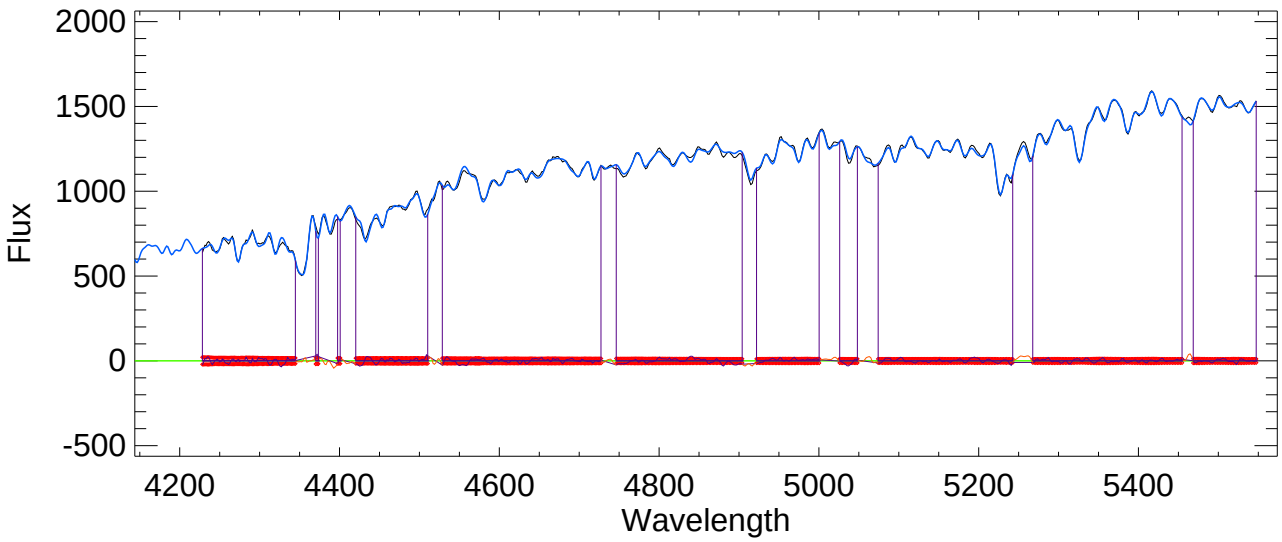

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

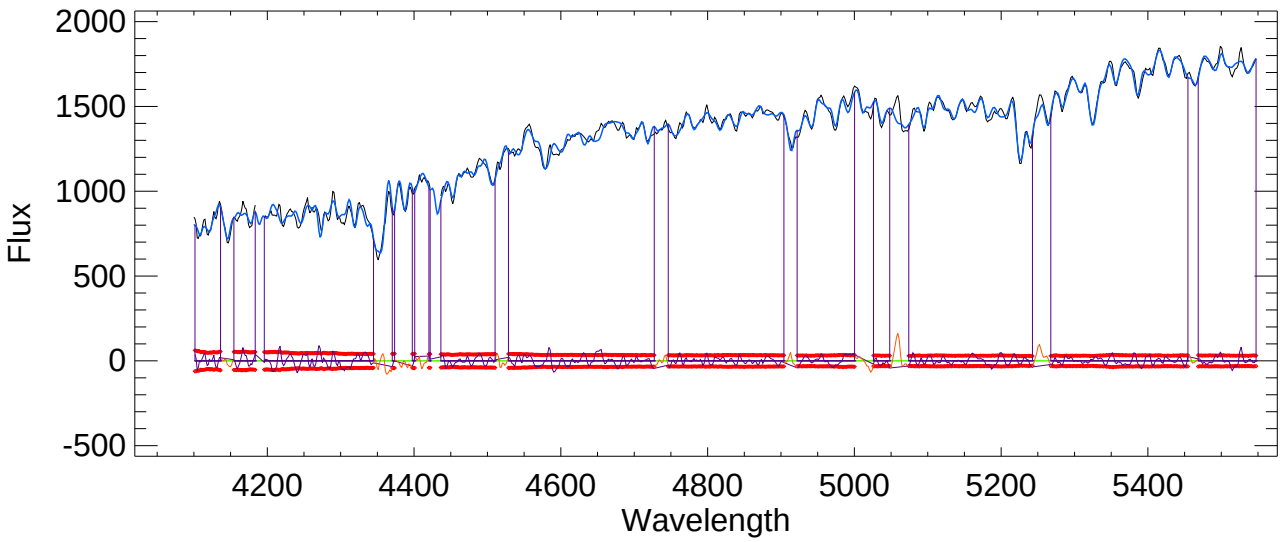

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

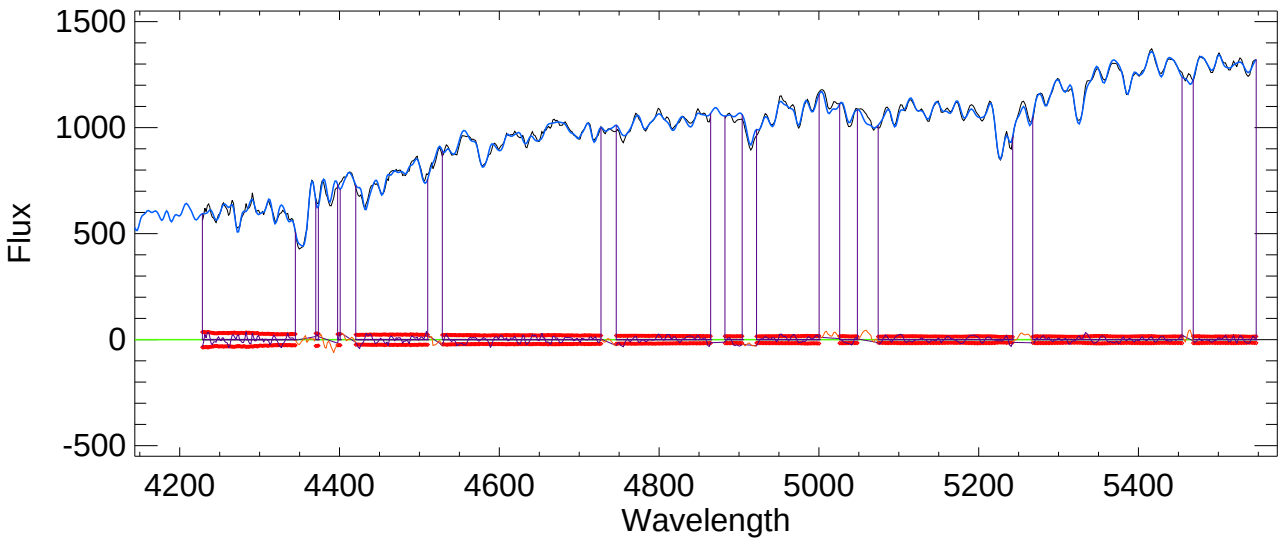

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

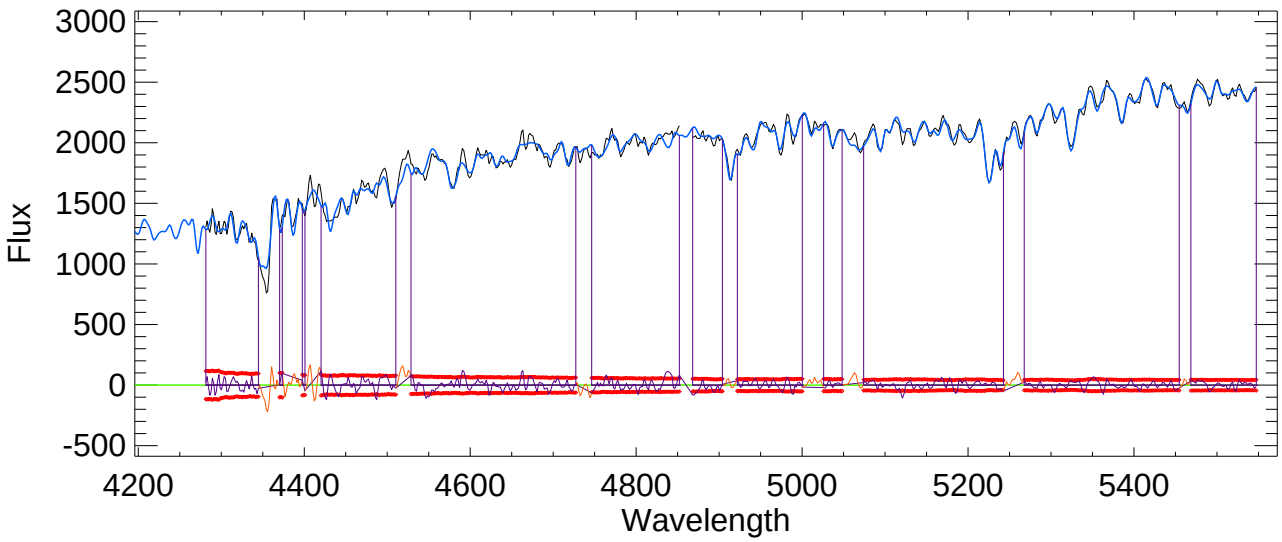

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

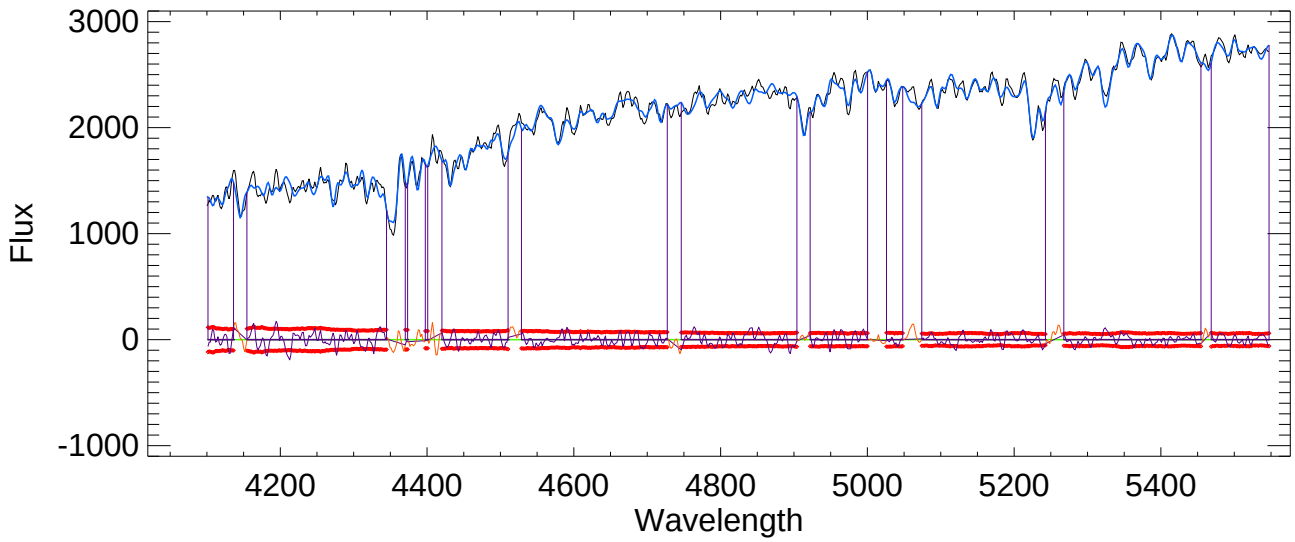

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

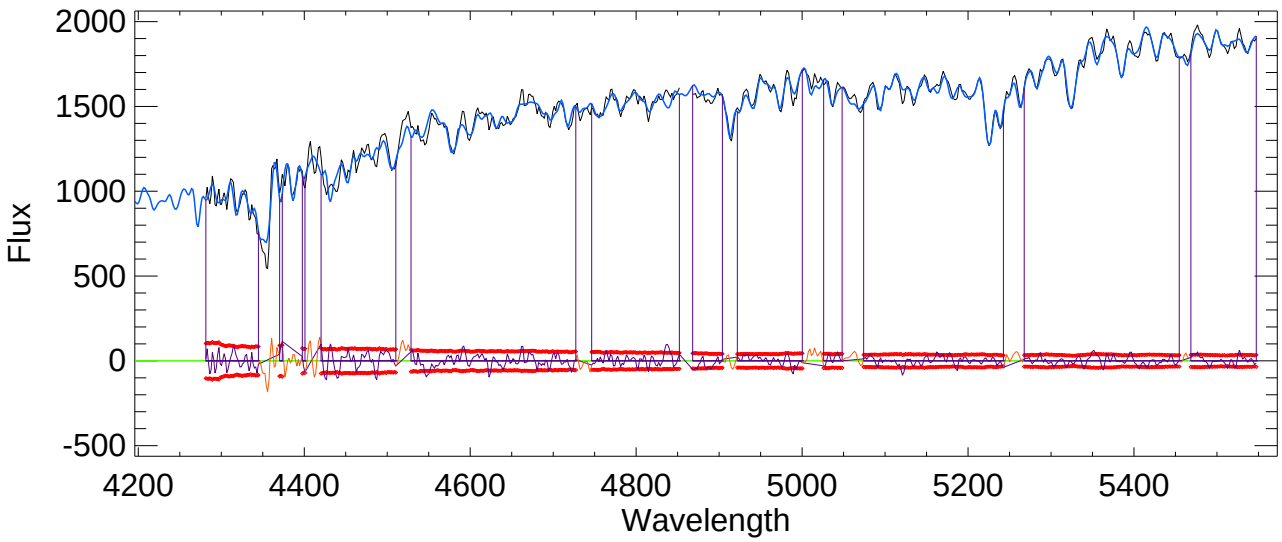

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

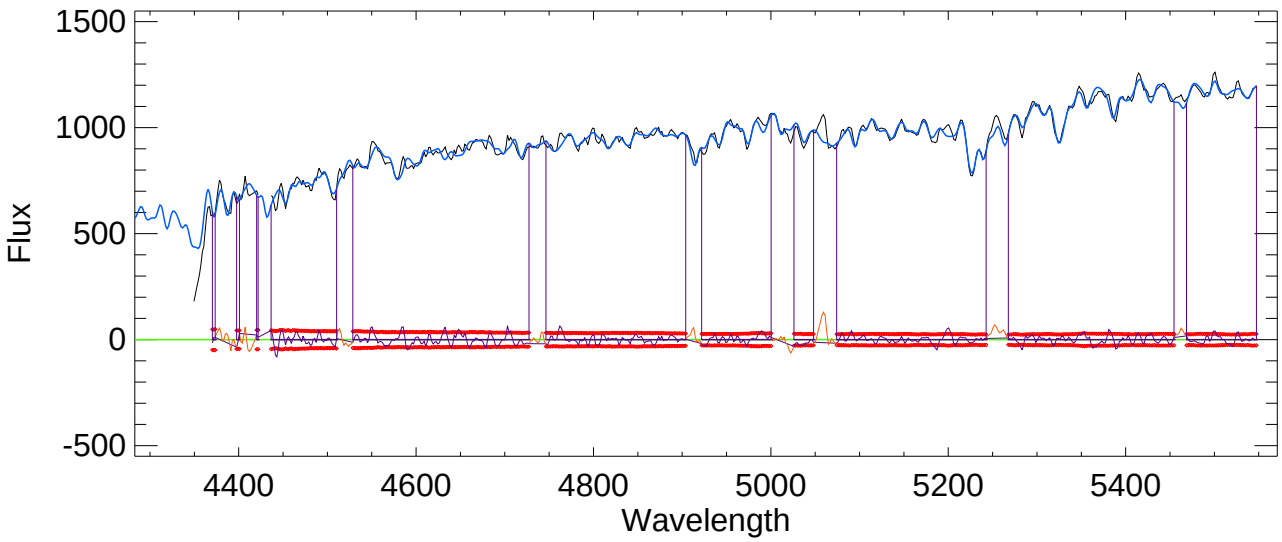

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

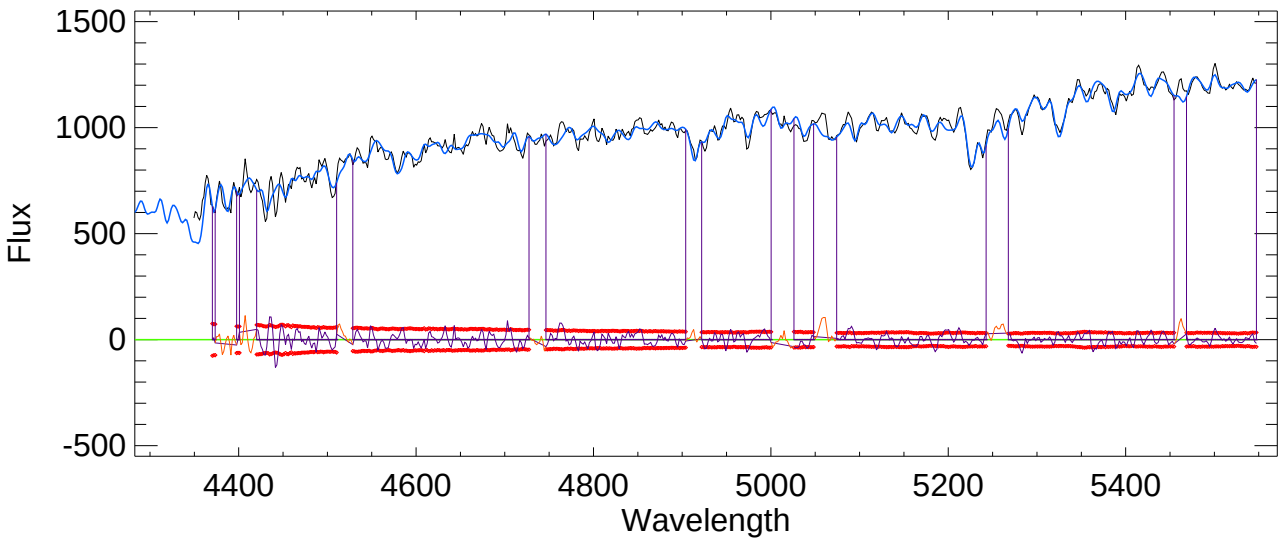

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

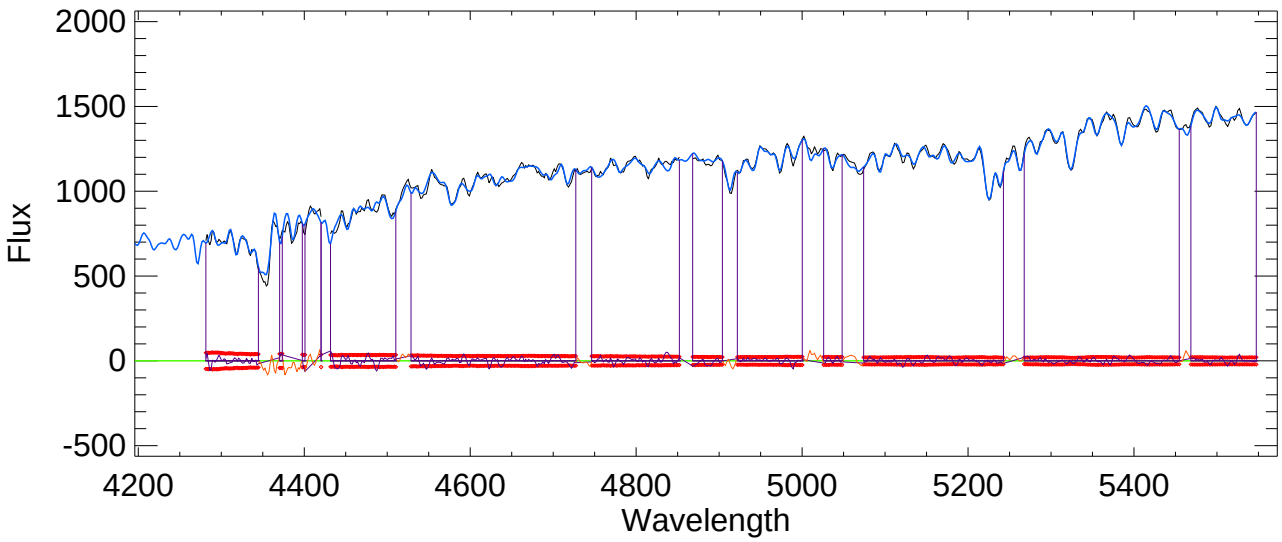

3000
2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

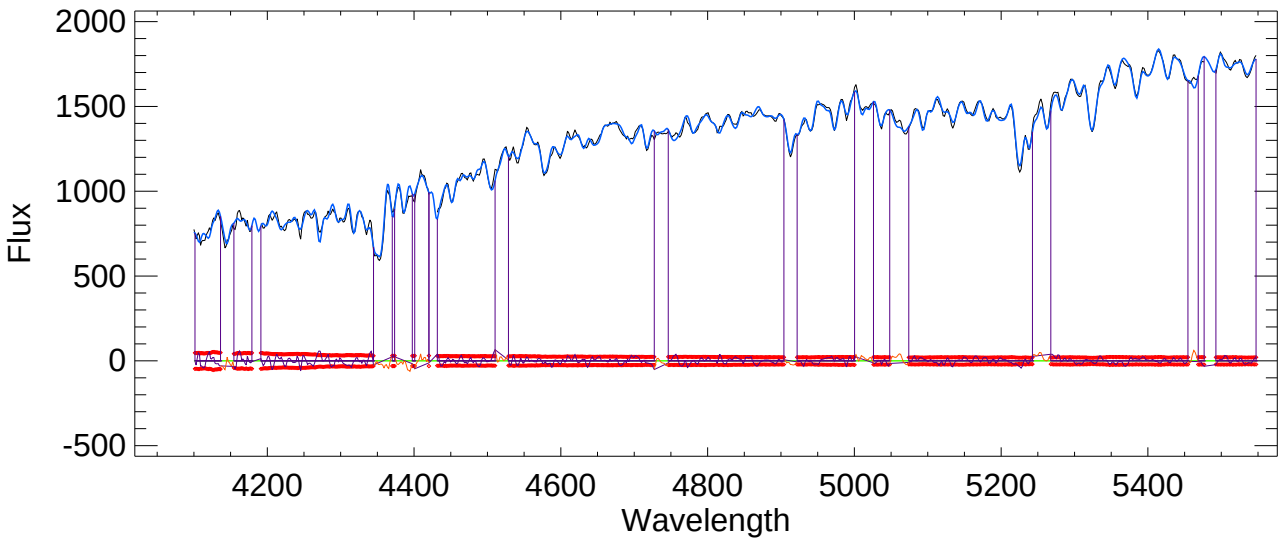

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

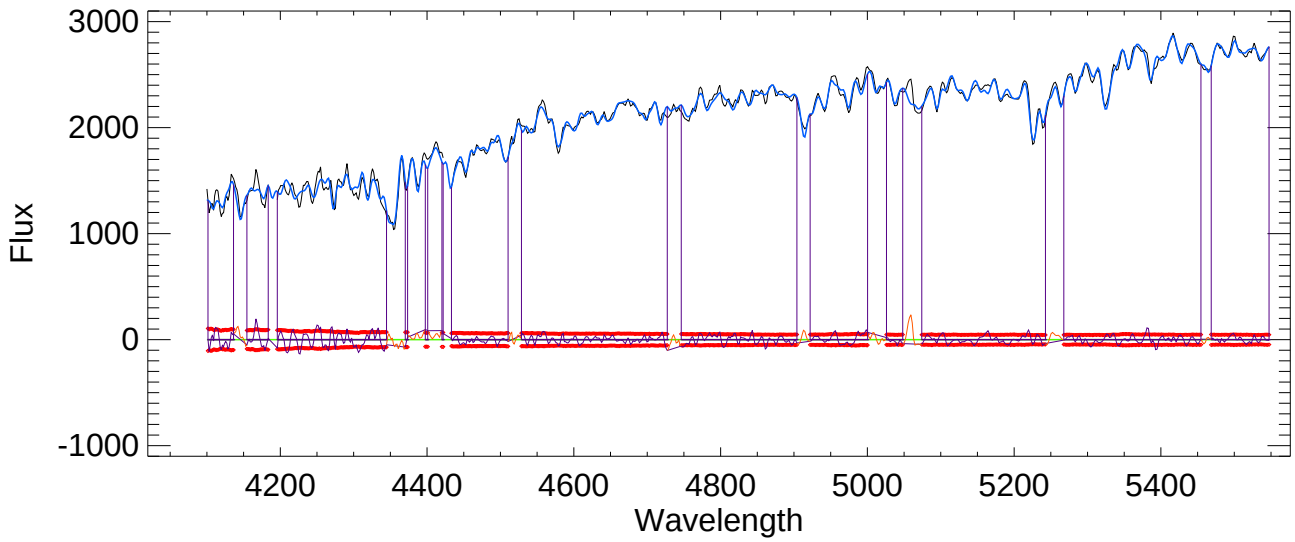

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

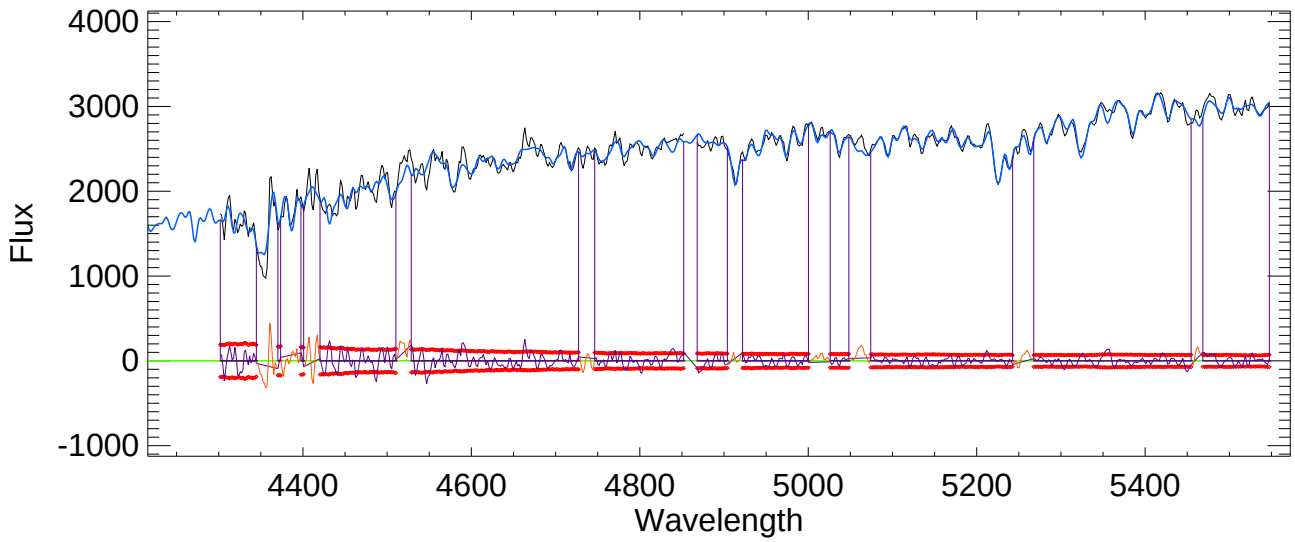

1500
1000
500
0
-500
Flux
4400
4600
4800
5000
5200
5400
Wavelength

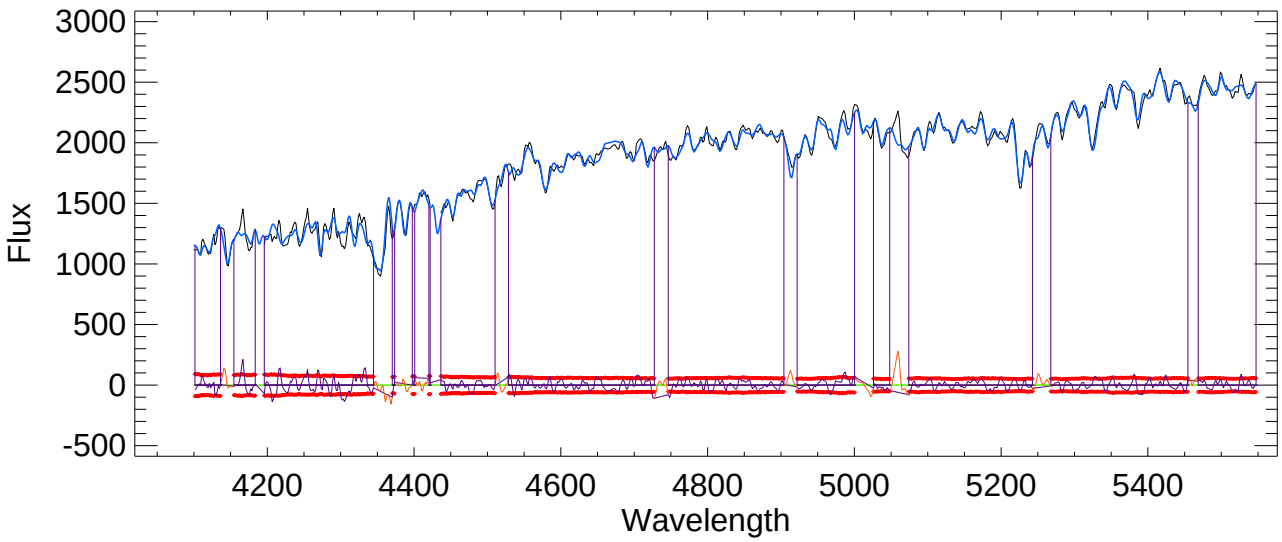

1500
1000
500
0
-500
Flux
4400
4600
4800
5000
5200
5400
Wavelength

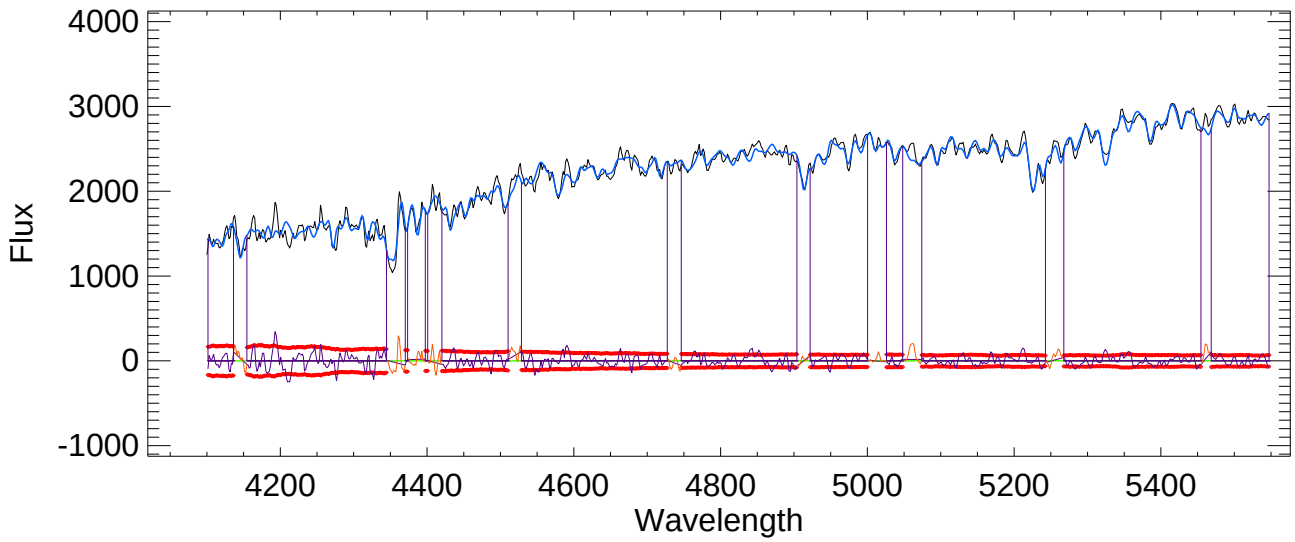

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

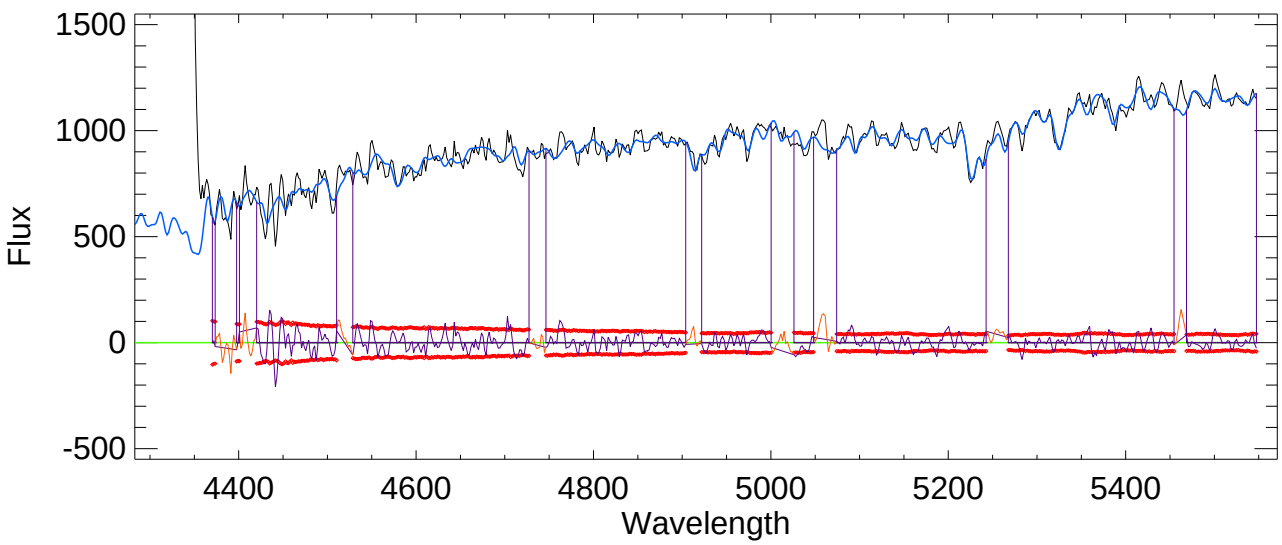

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

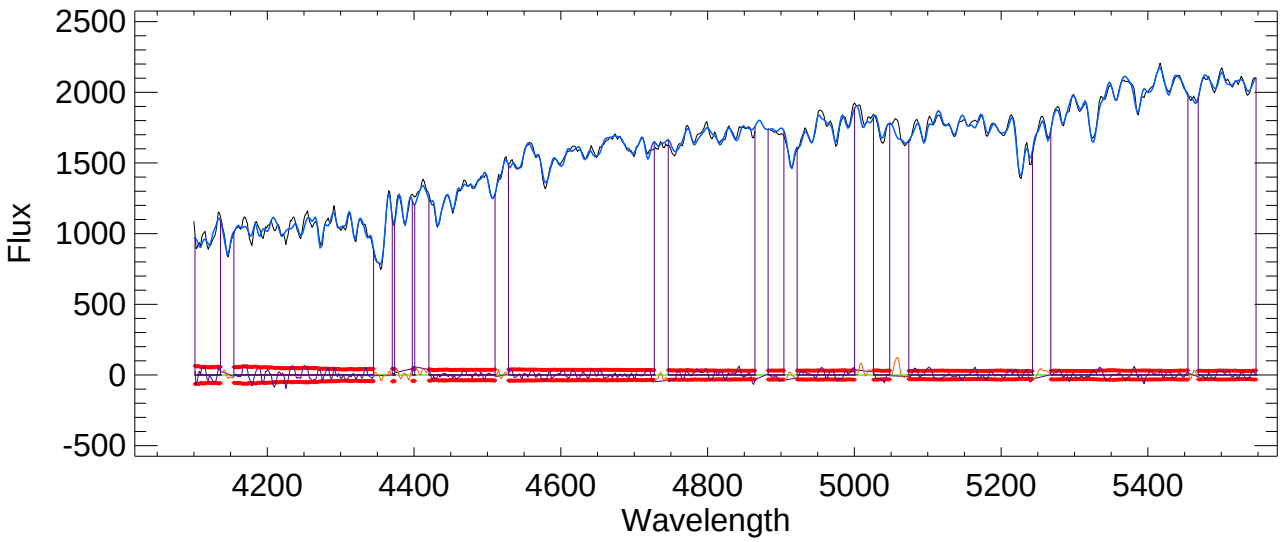

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

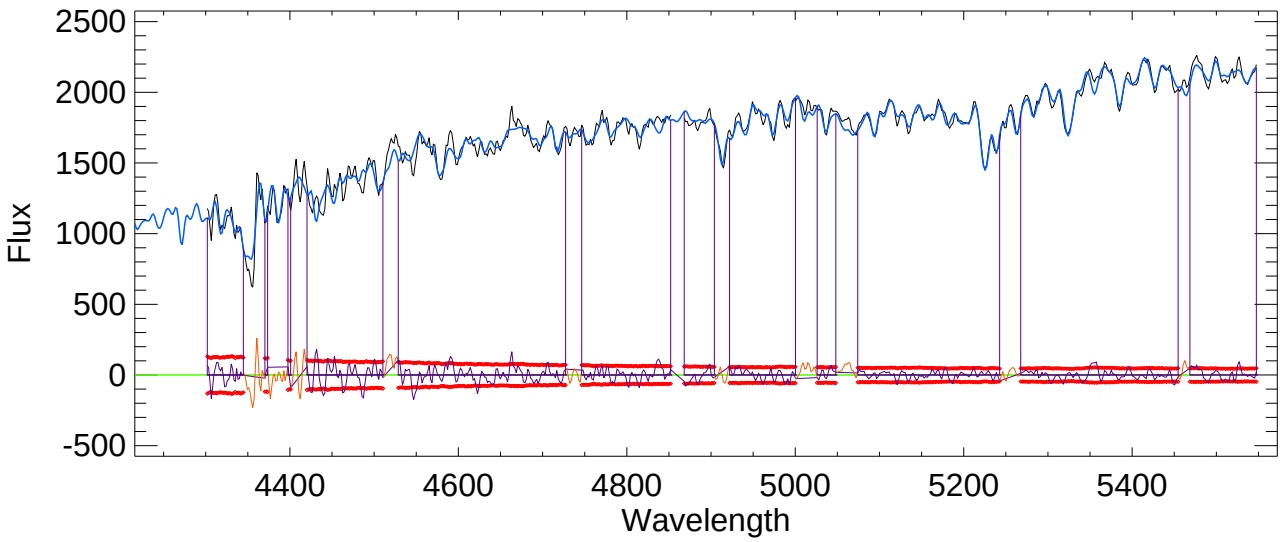

4000
3000
2000
1000
0
-1000
Flux
4400
4600
4800
5000
5200
5400
Wavelength

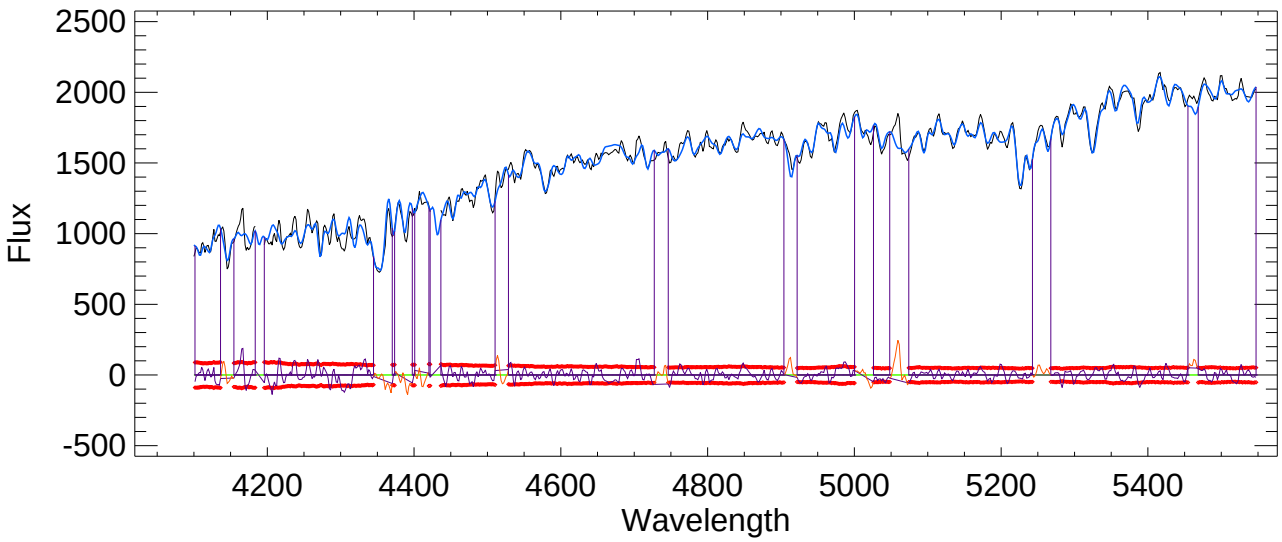

3000
2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

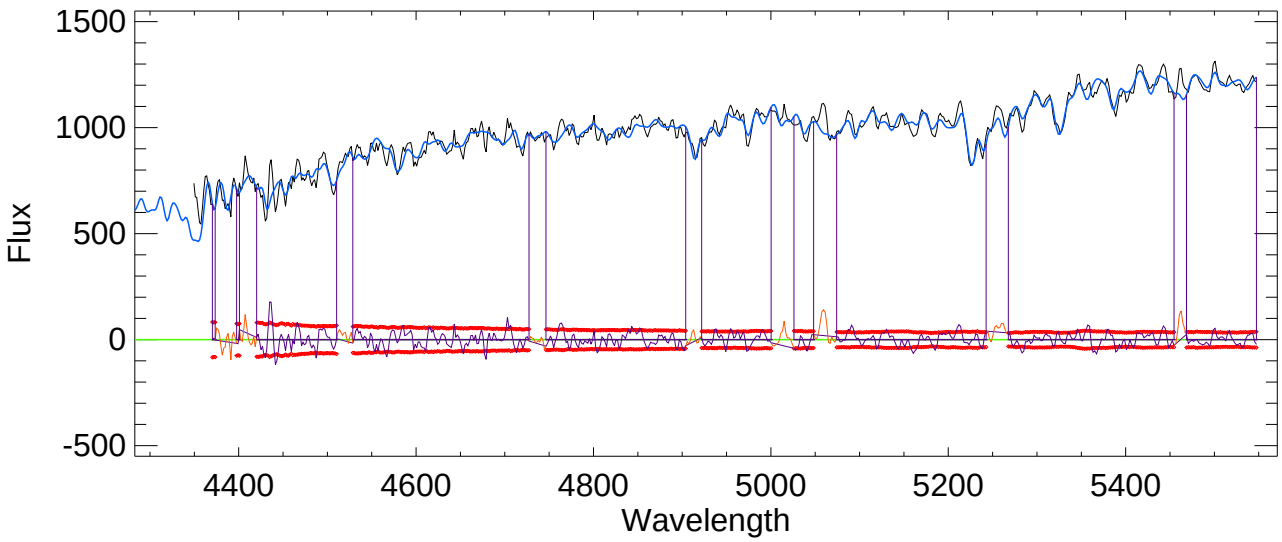

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

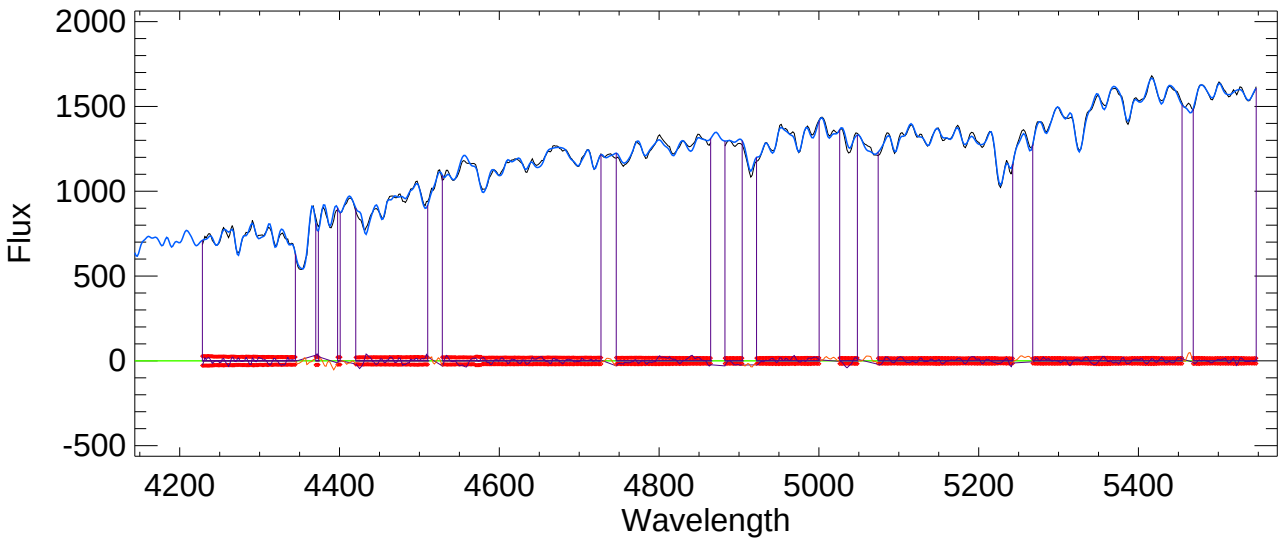

1500
1000
500
0
-500
Flux
4400
4600
4800
5000
5200
5400
Wavelength

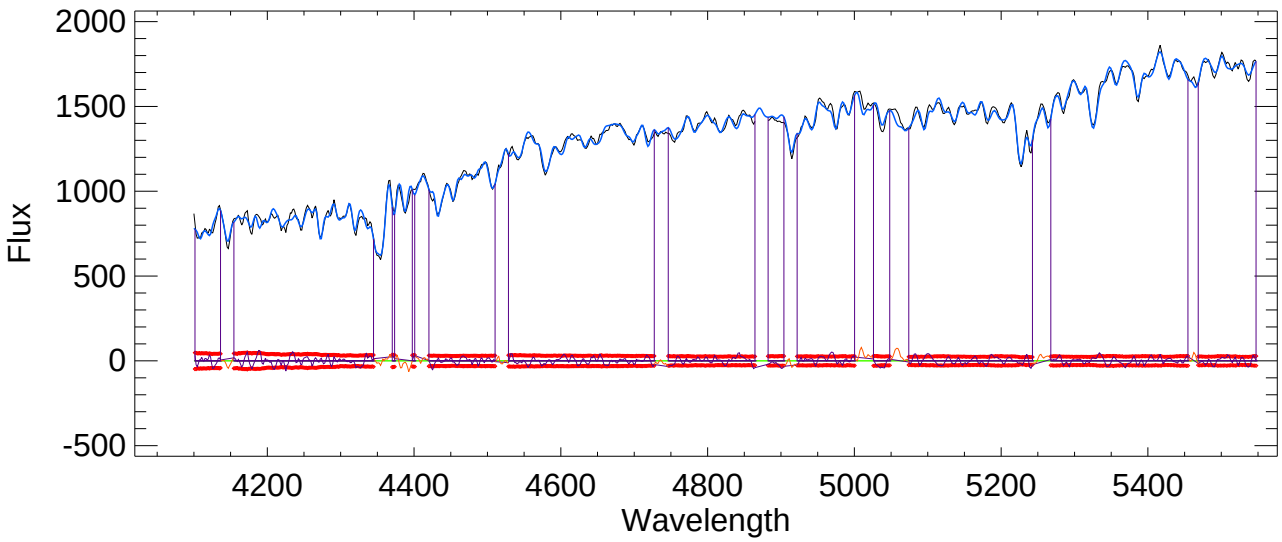

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

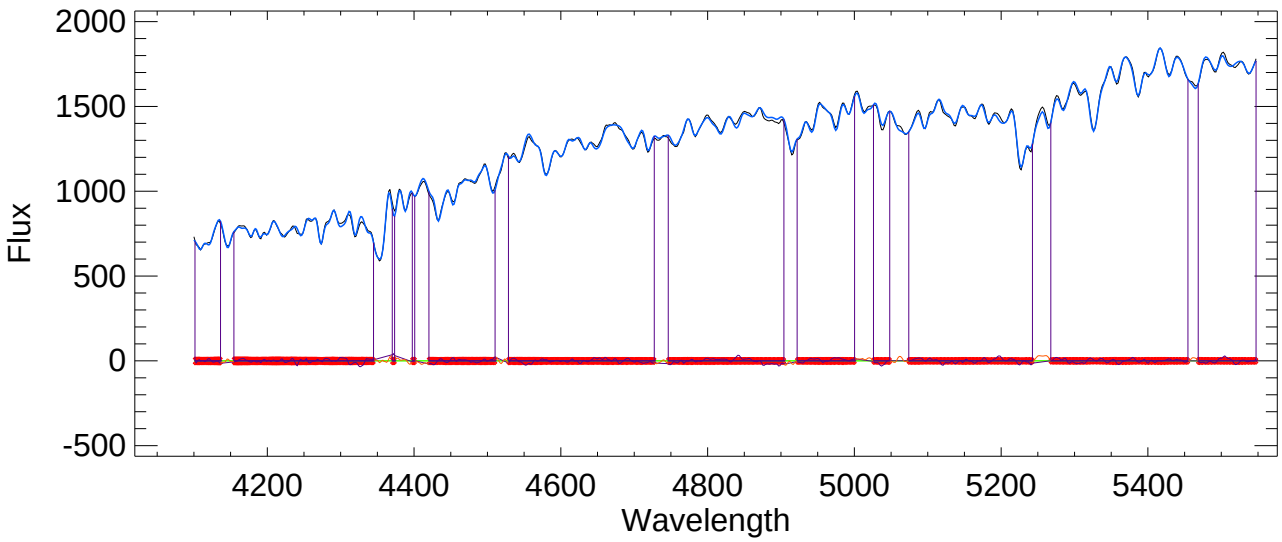

2500
2000
1500
1000
500
0
-500
Flux
4400
4600
4800
5000
5200
5400
Wavelength

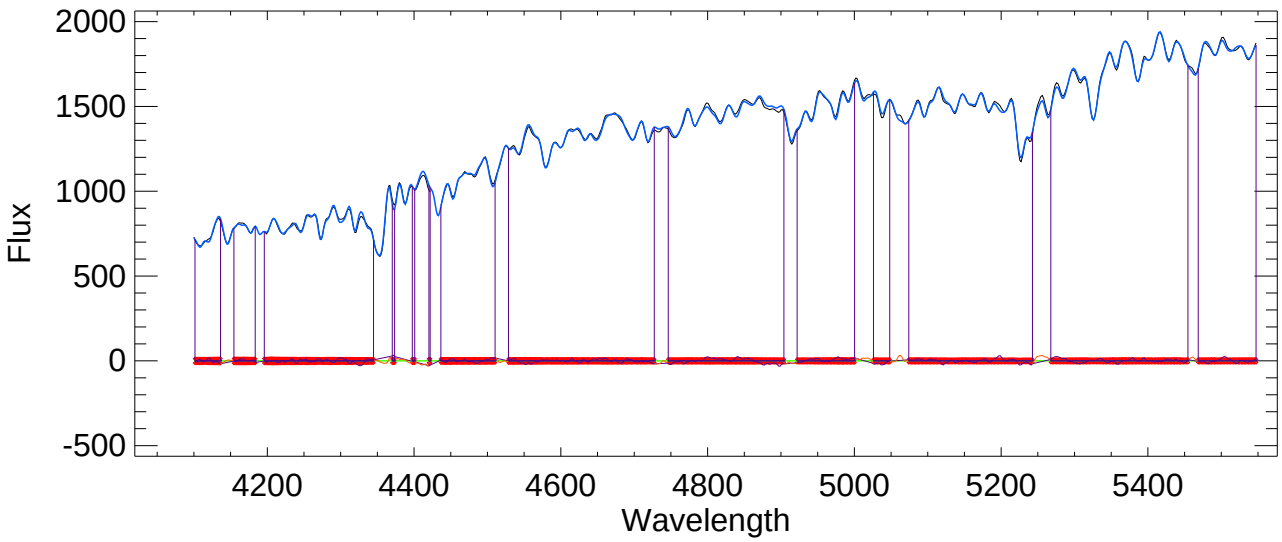

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

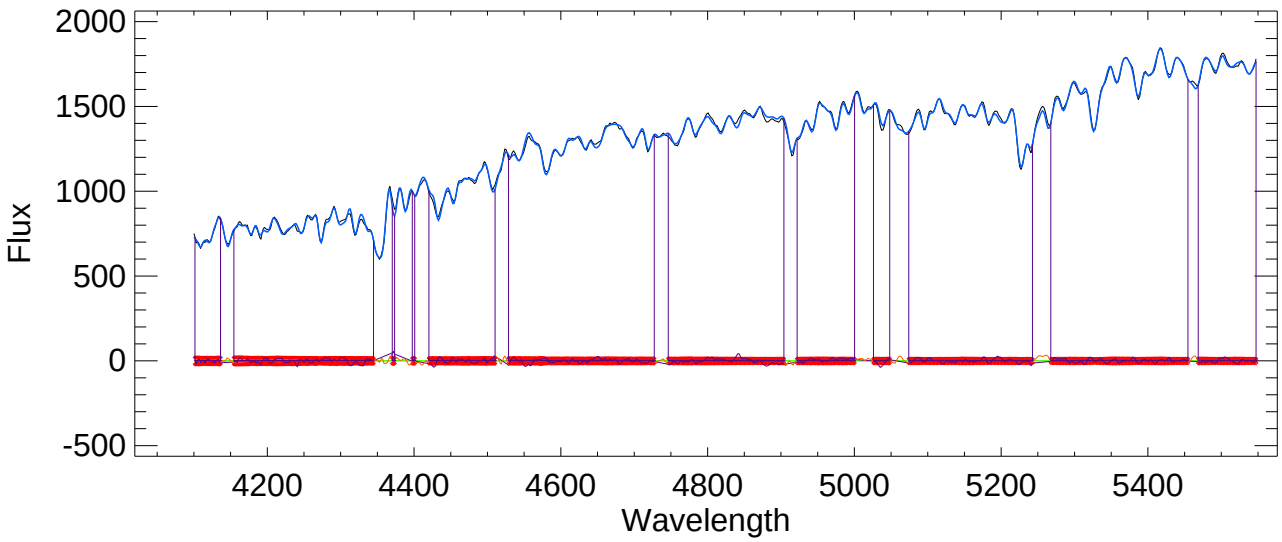

1500
1000
500
0
-500
Flux
4400
4600
4800
5000
5200
5400
Wavelength

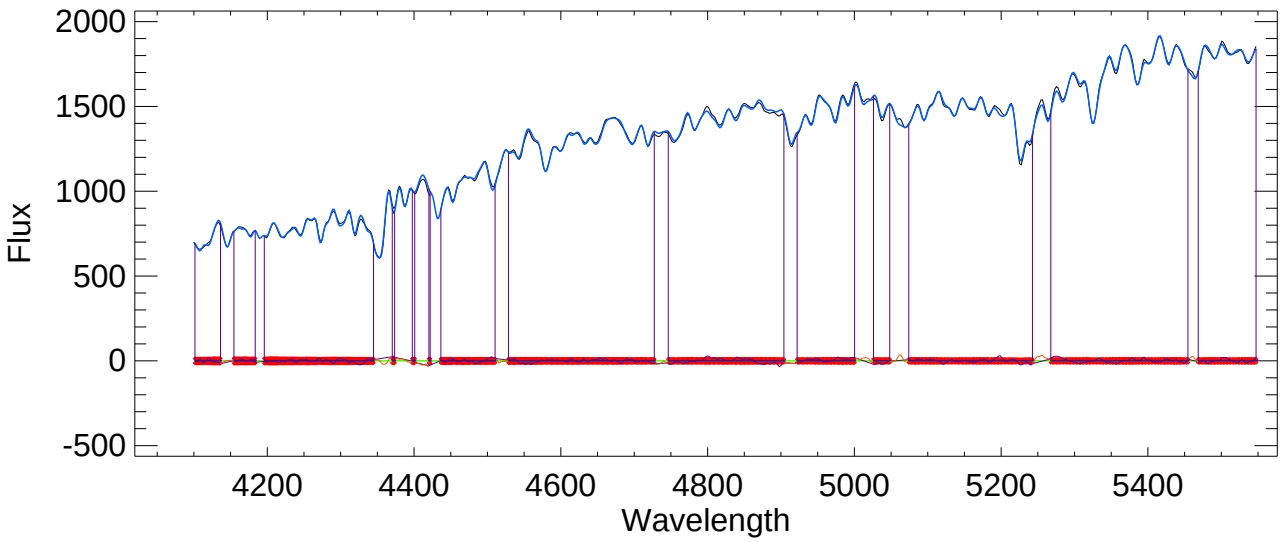

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

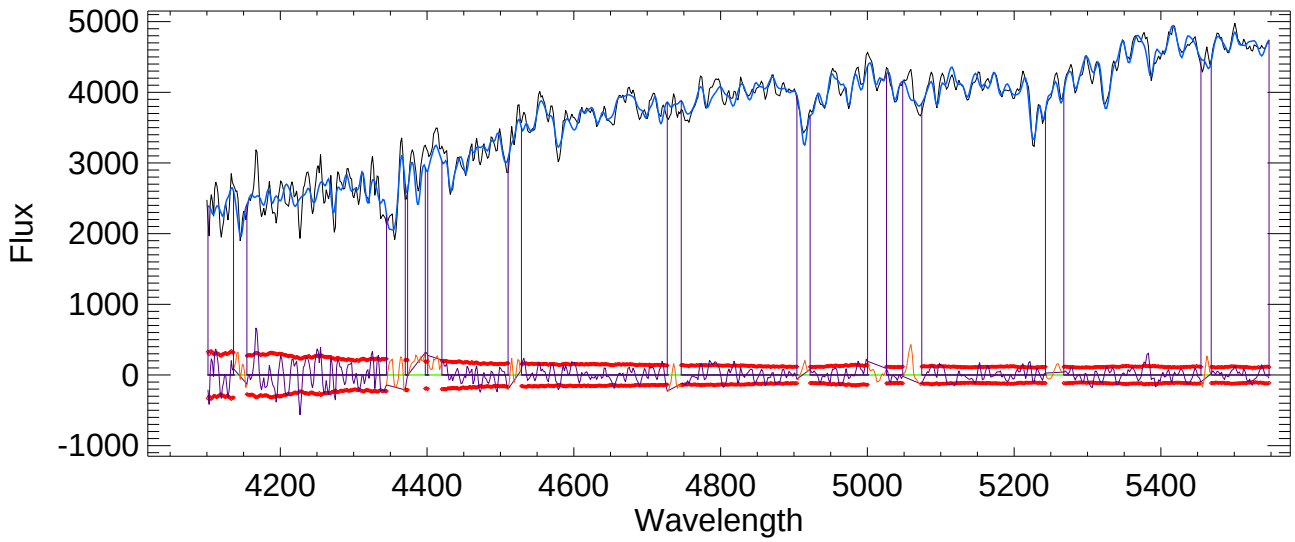

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

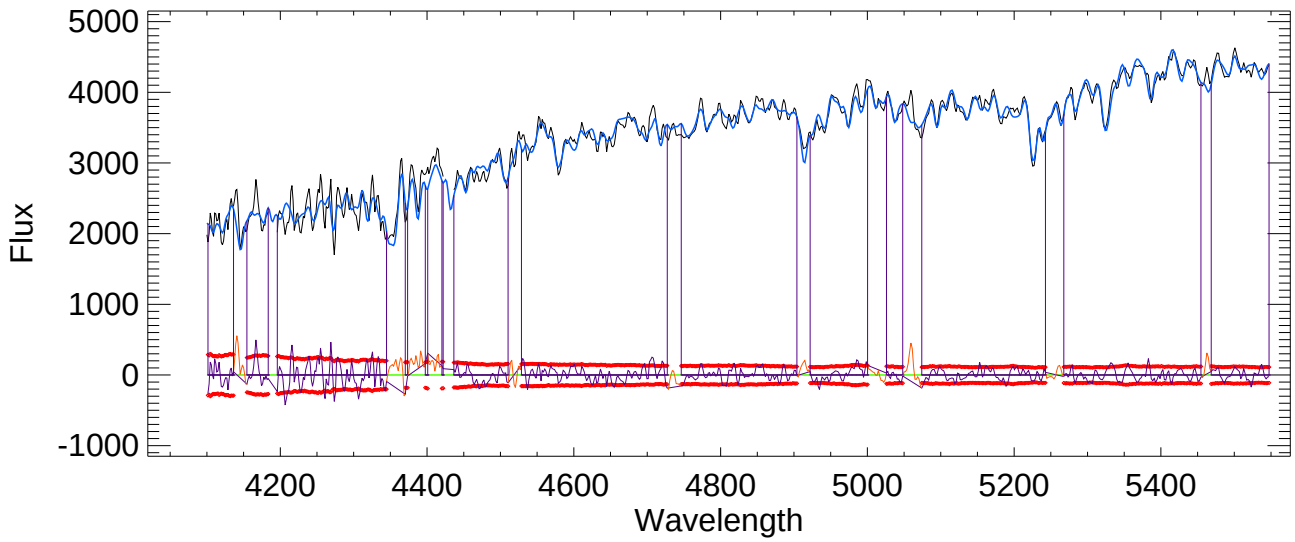

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

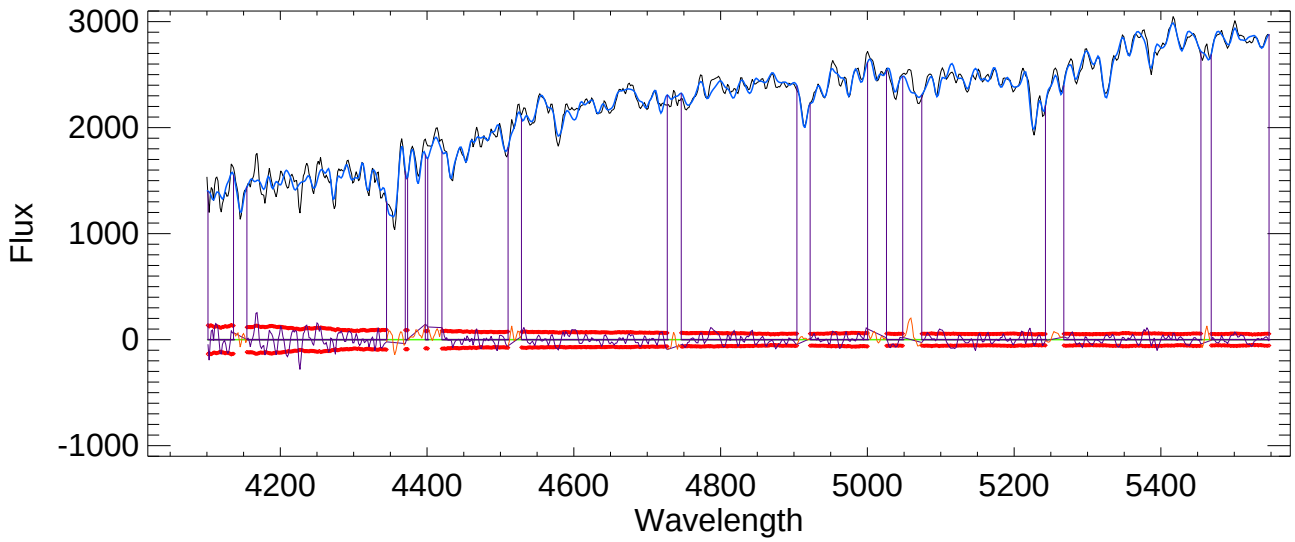

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

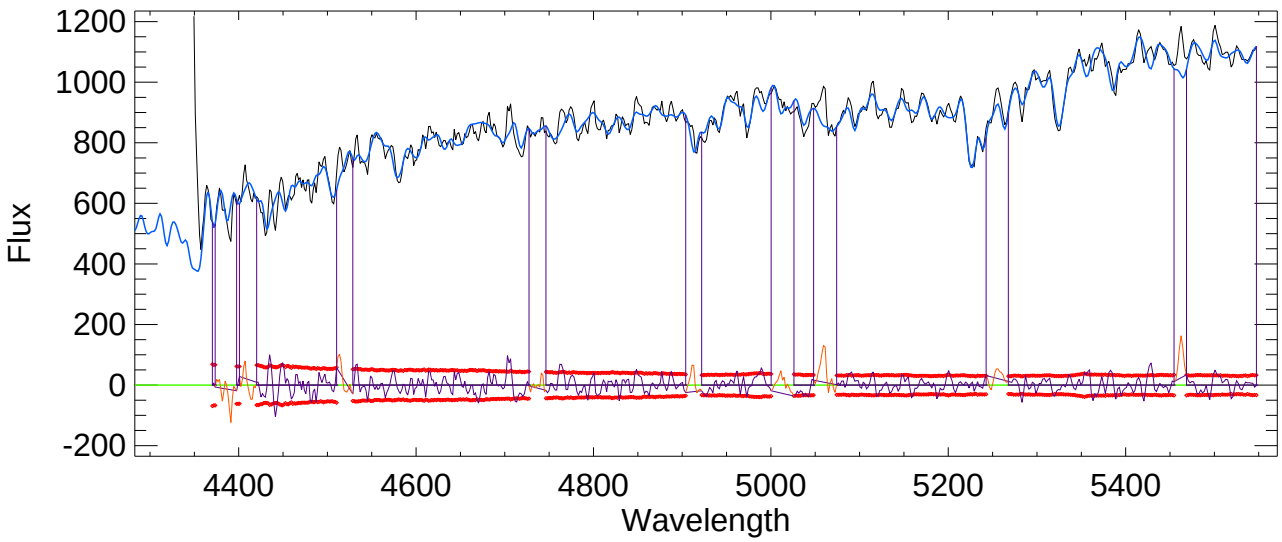

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

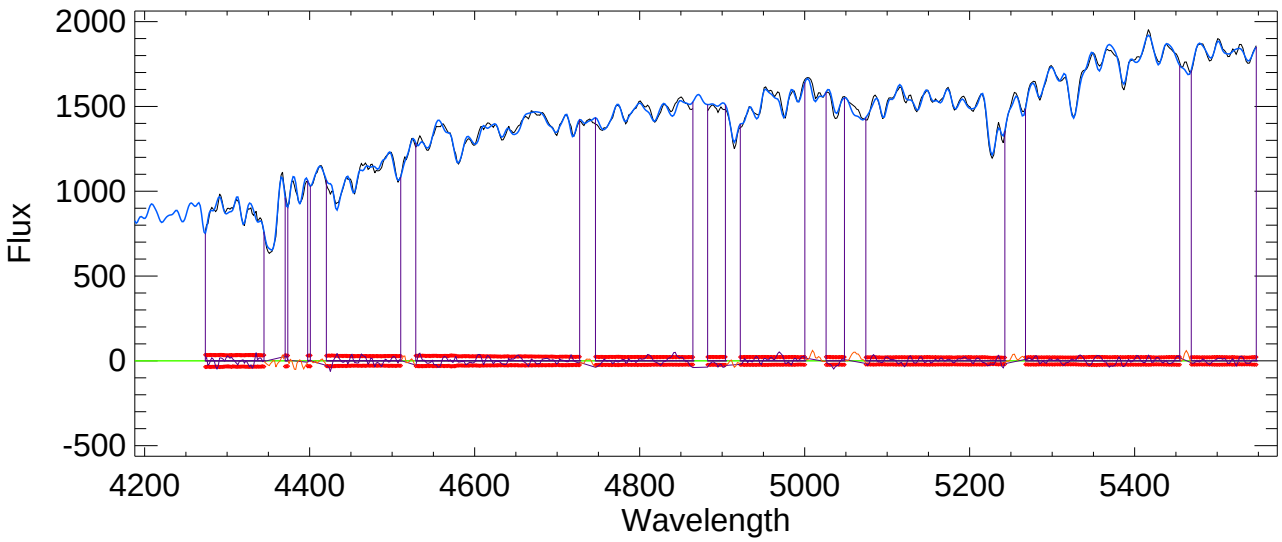

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

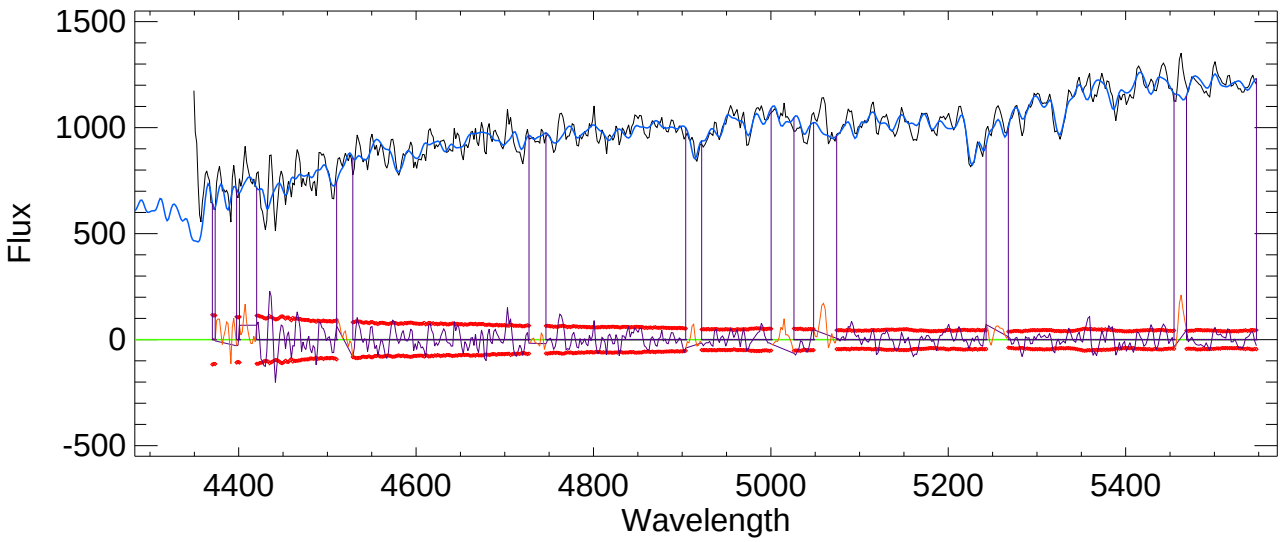

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

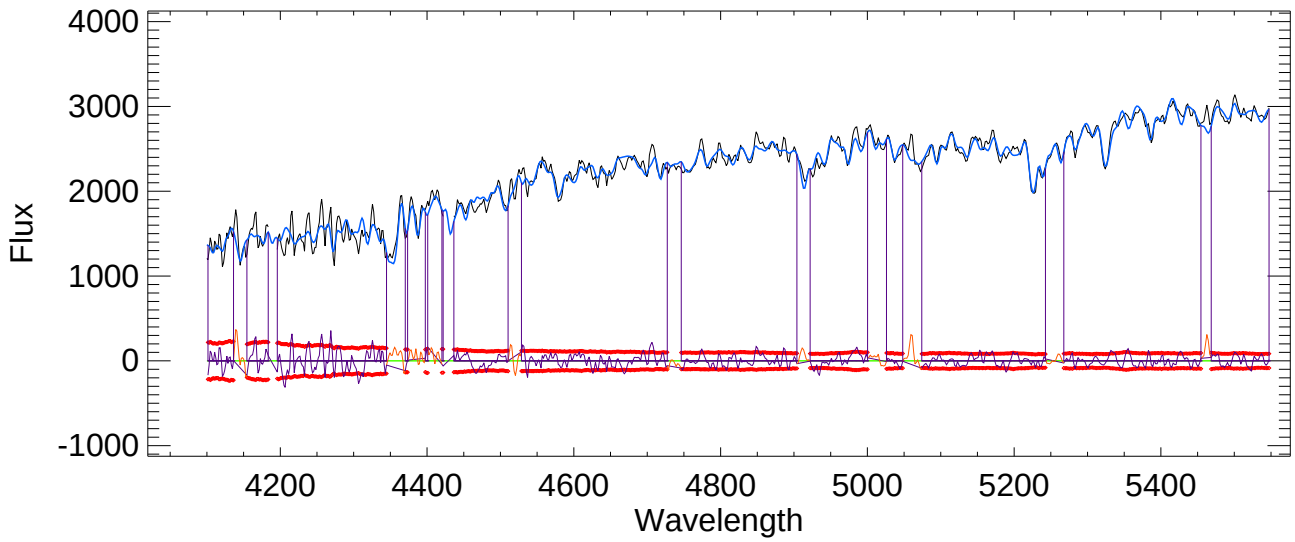

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

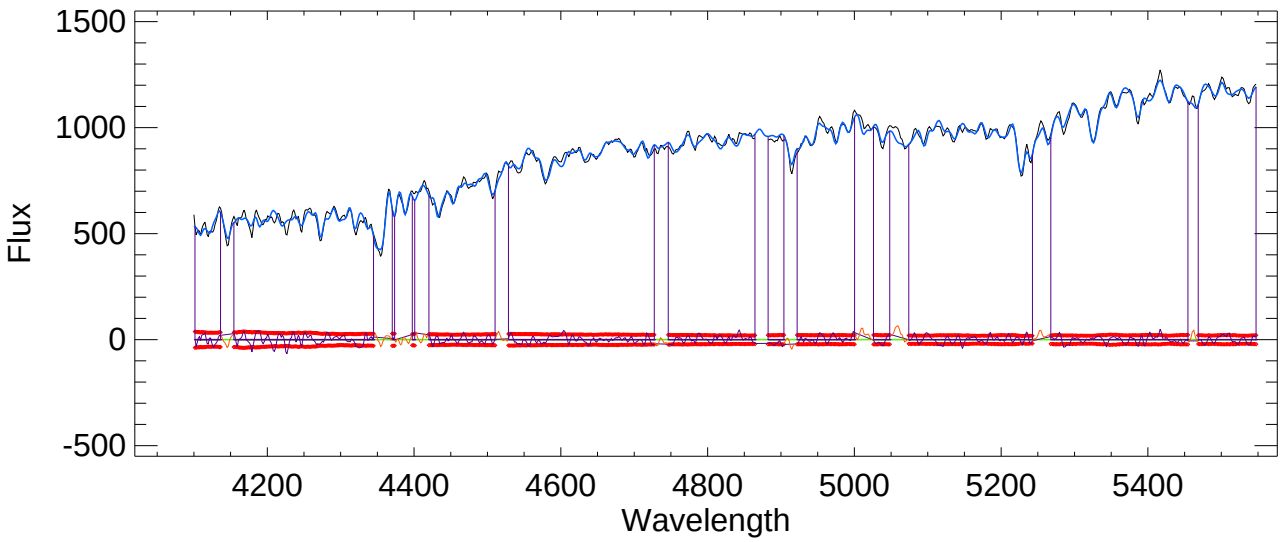

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

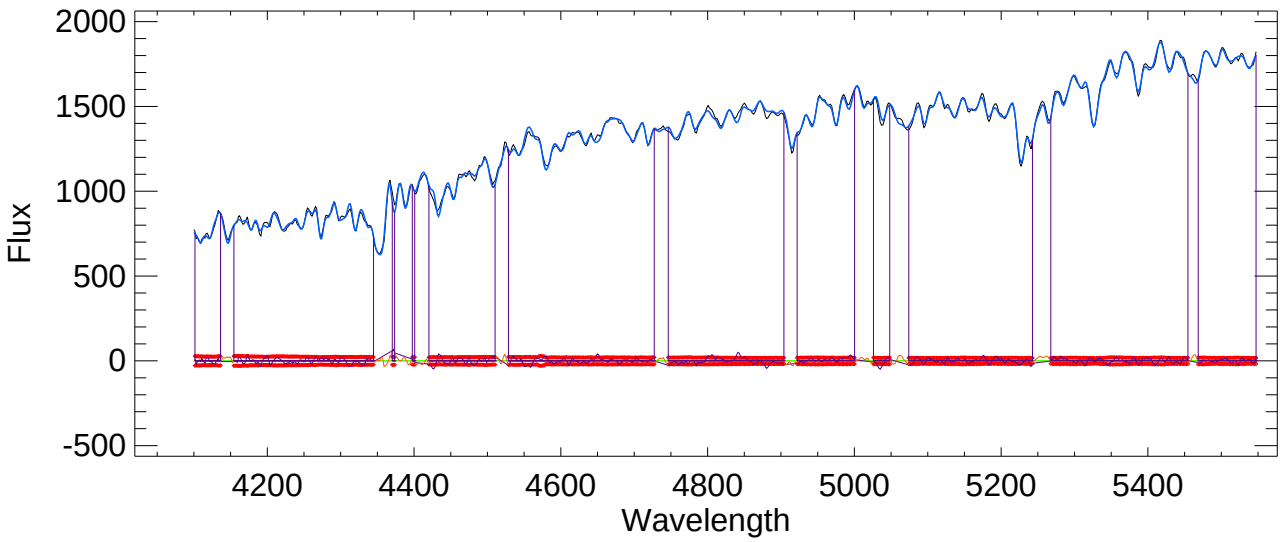

1200
1000
800
600
400
200
0
-200
Flux
4400
4600
4800
5000
5200
5400
Wavelength

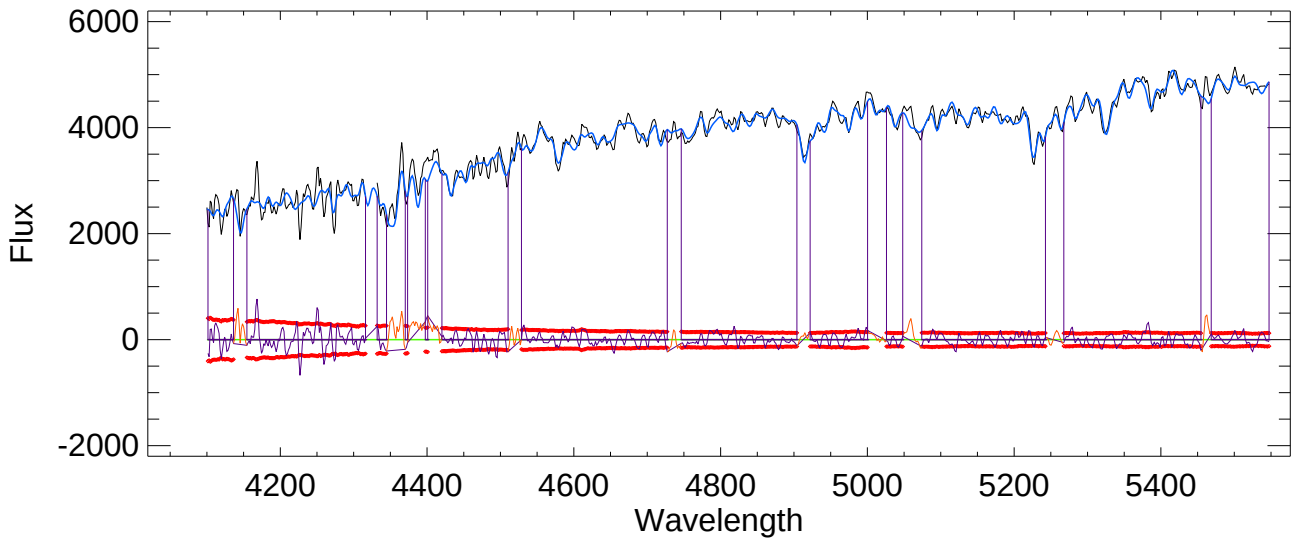

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

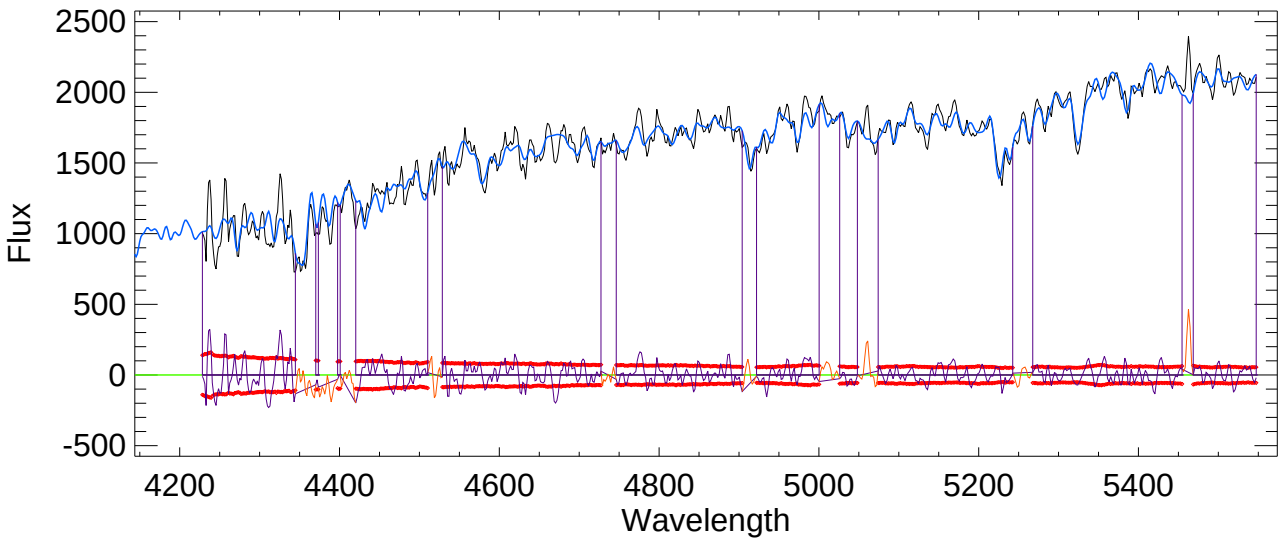

1500
1000
500
0
-500
Flux
4400
4600
4800
5000
5200
5400
Wavelength

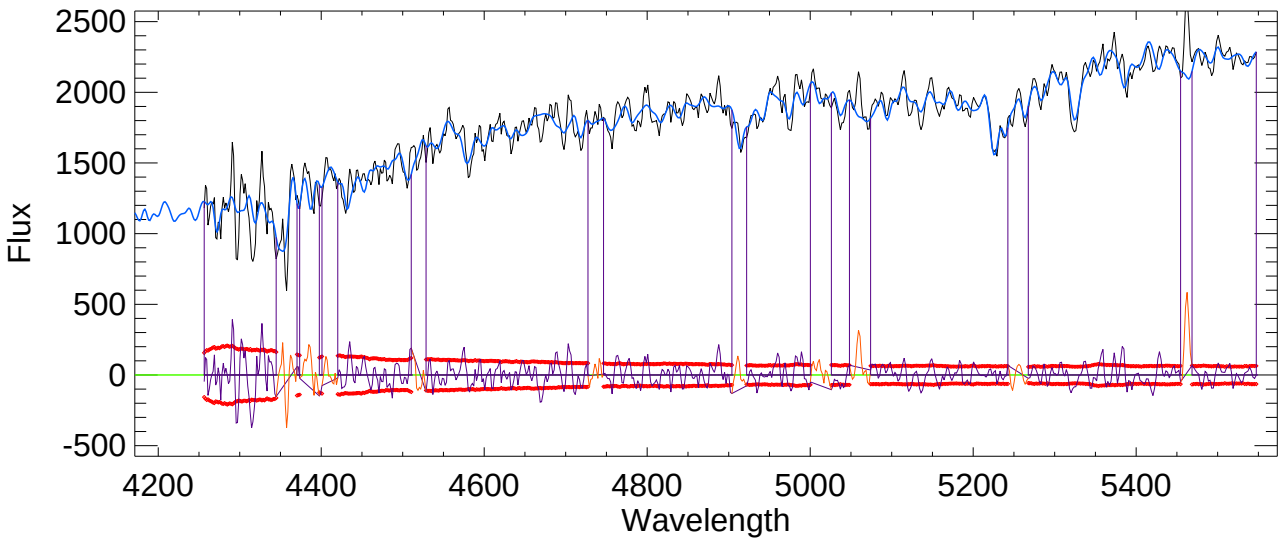

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

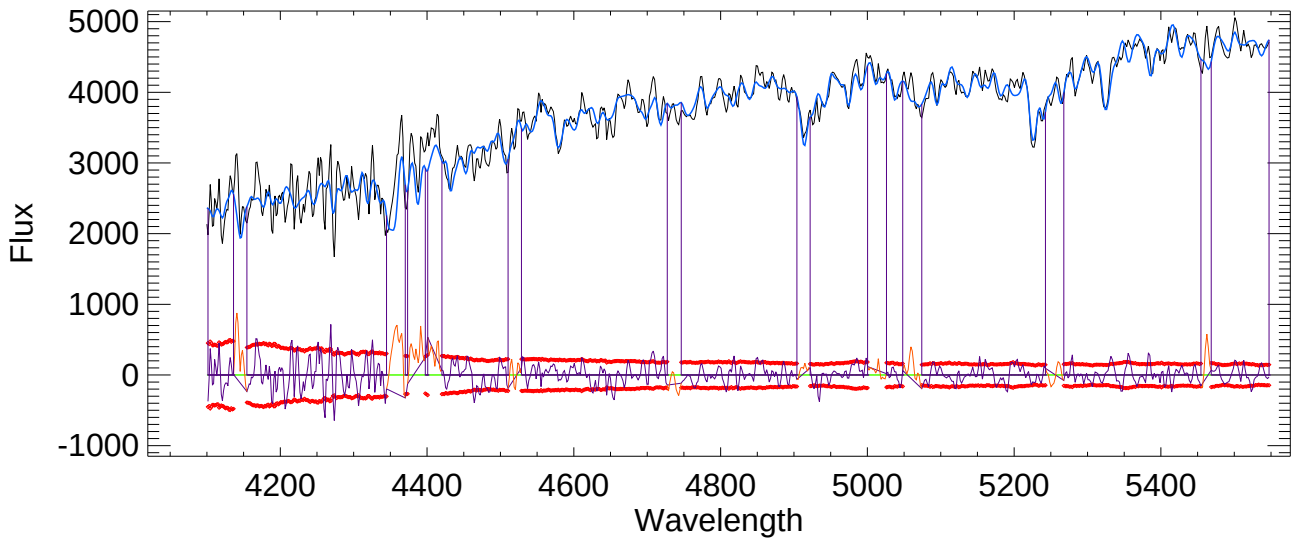

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

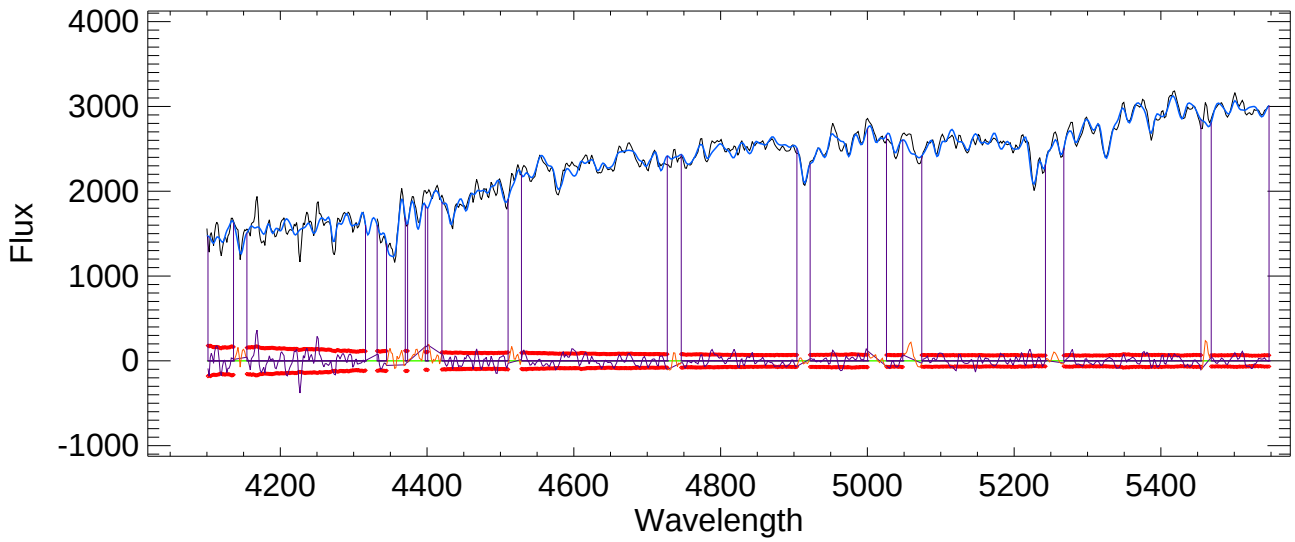

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

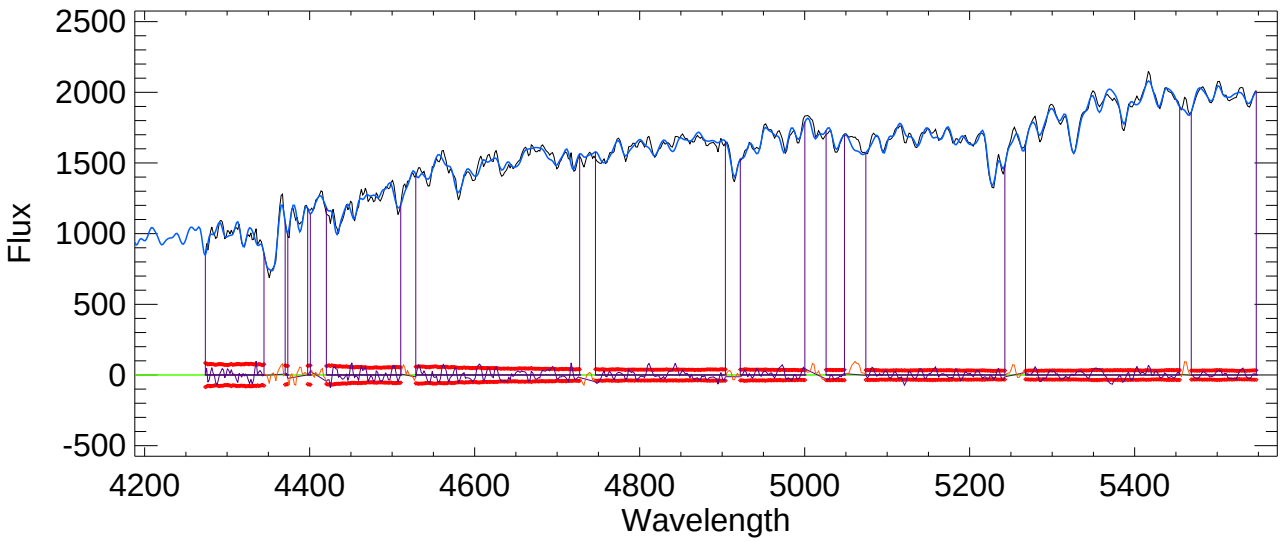

6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

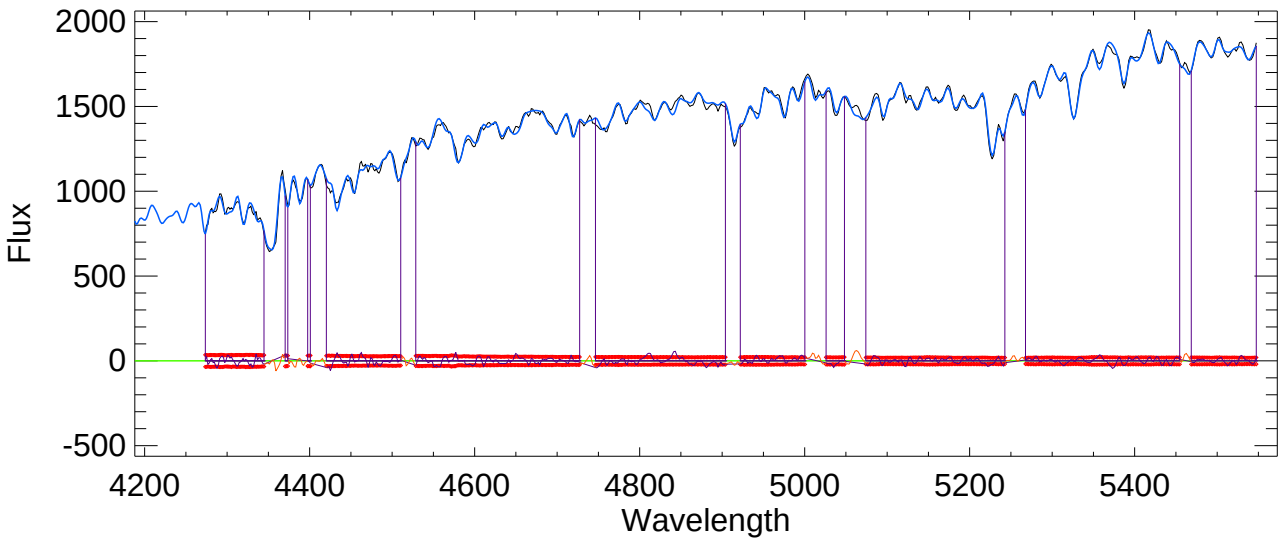

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

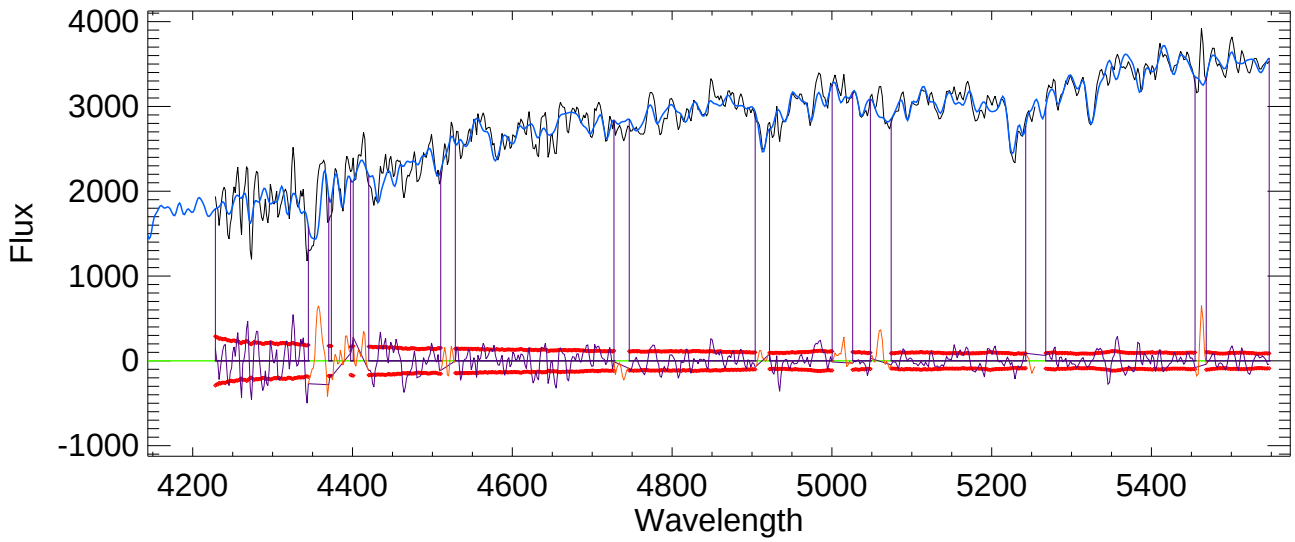

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

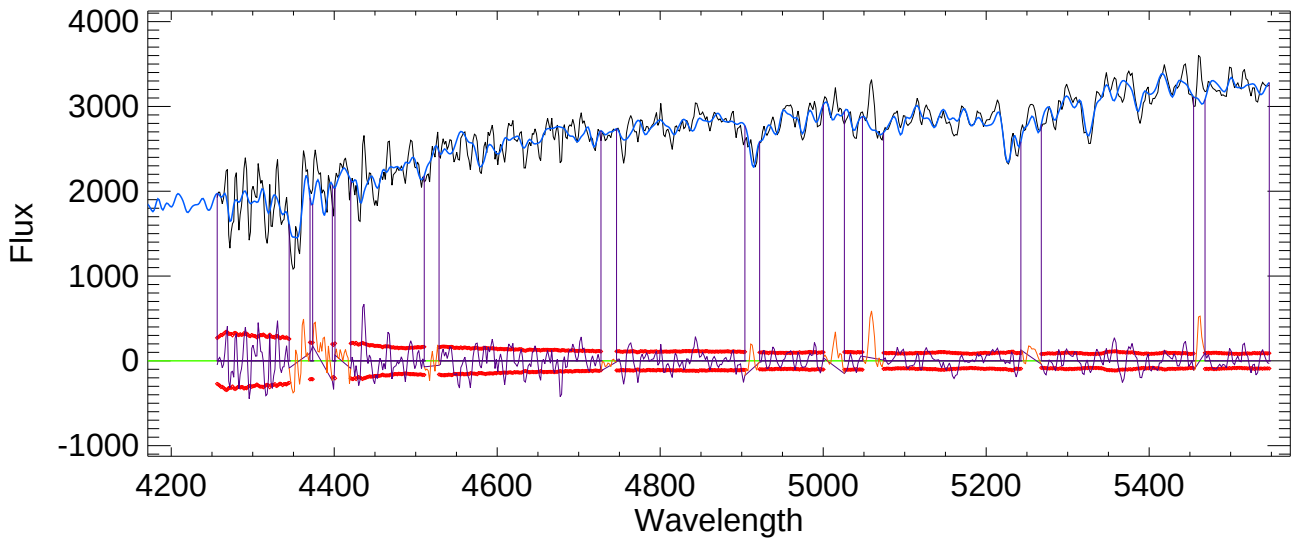

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

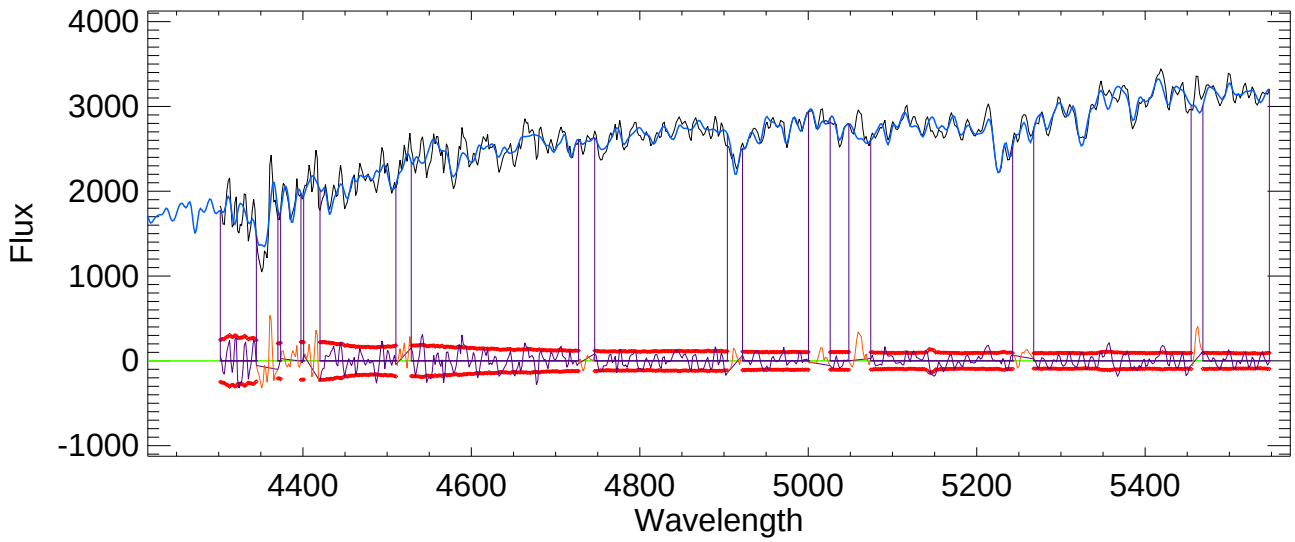

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

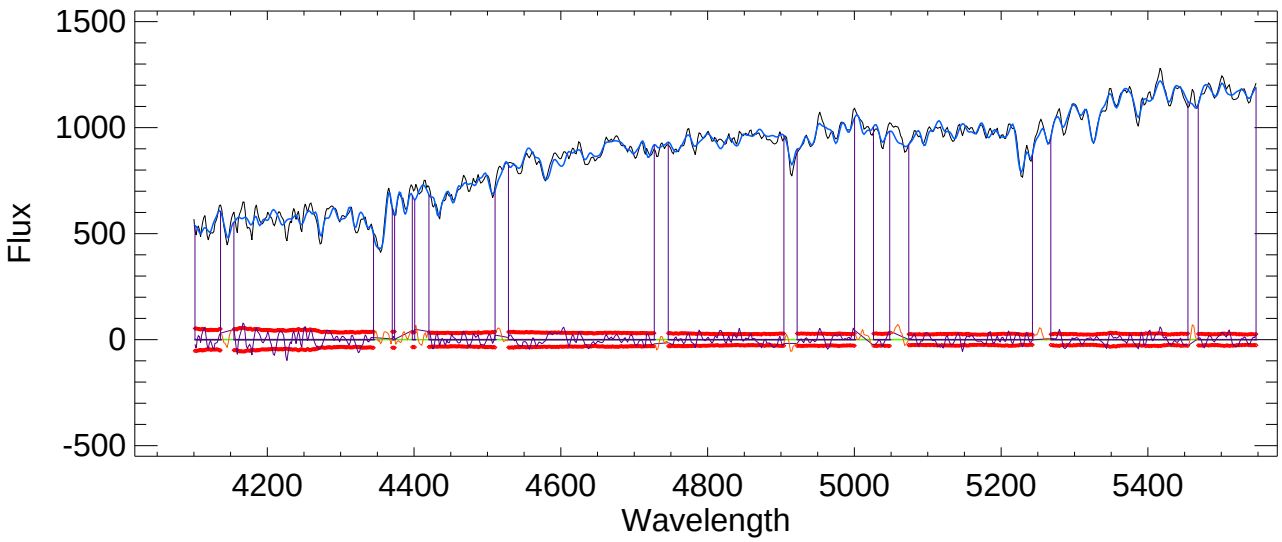

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

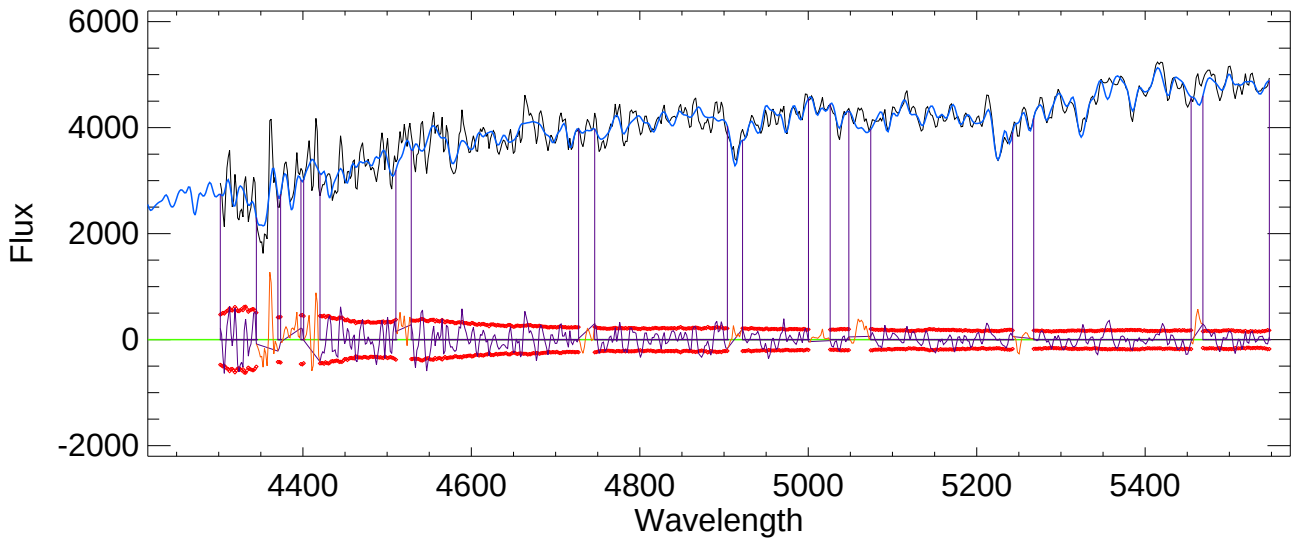

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

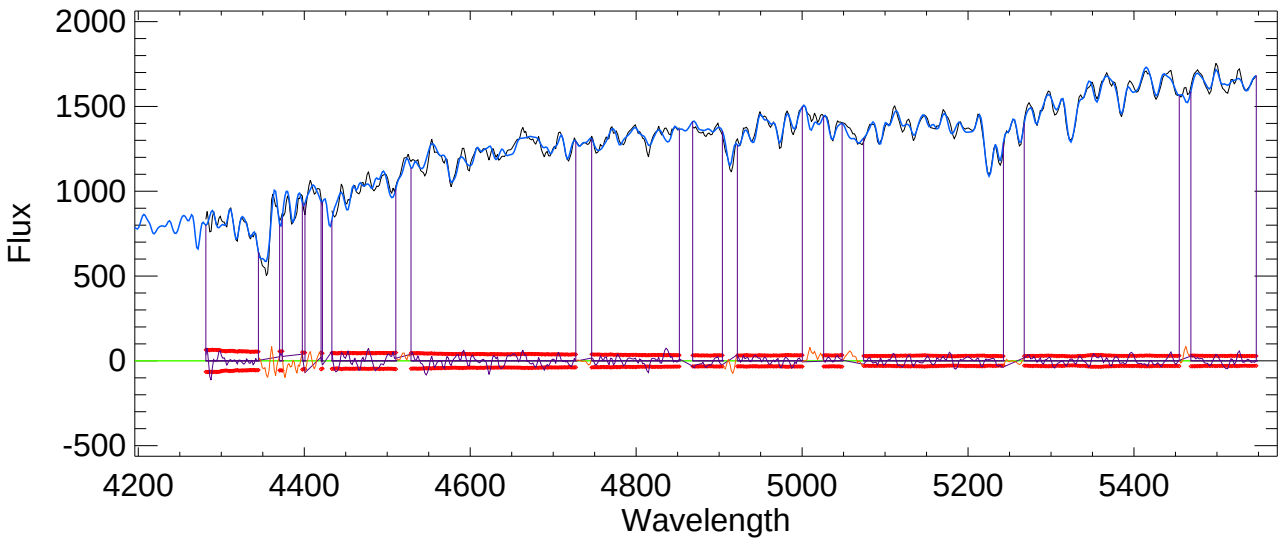

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

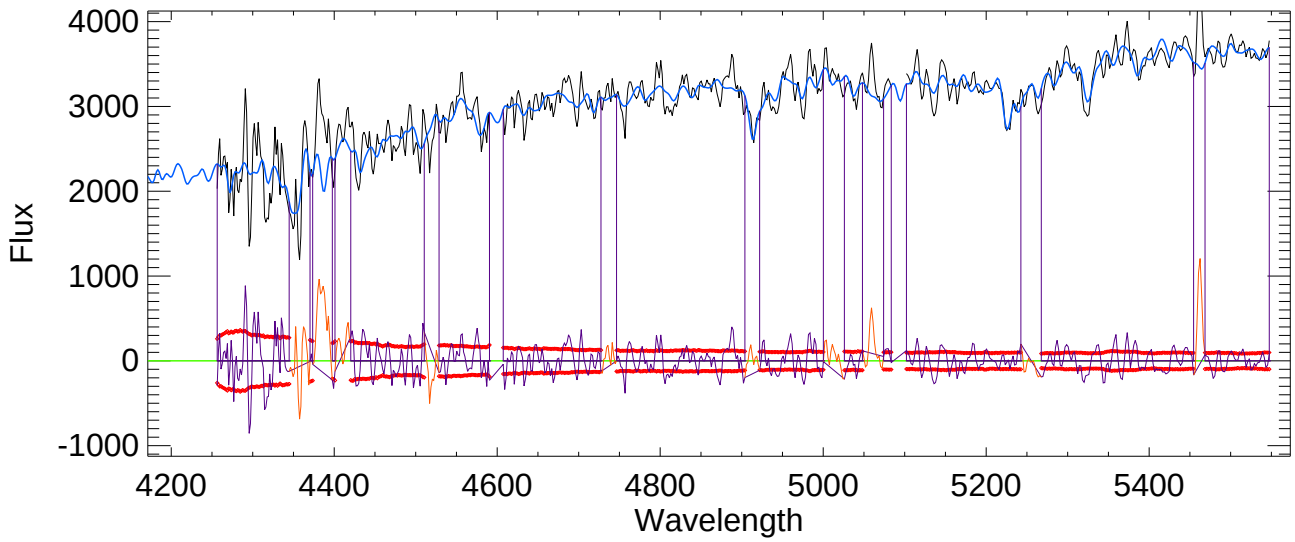

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

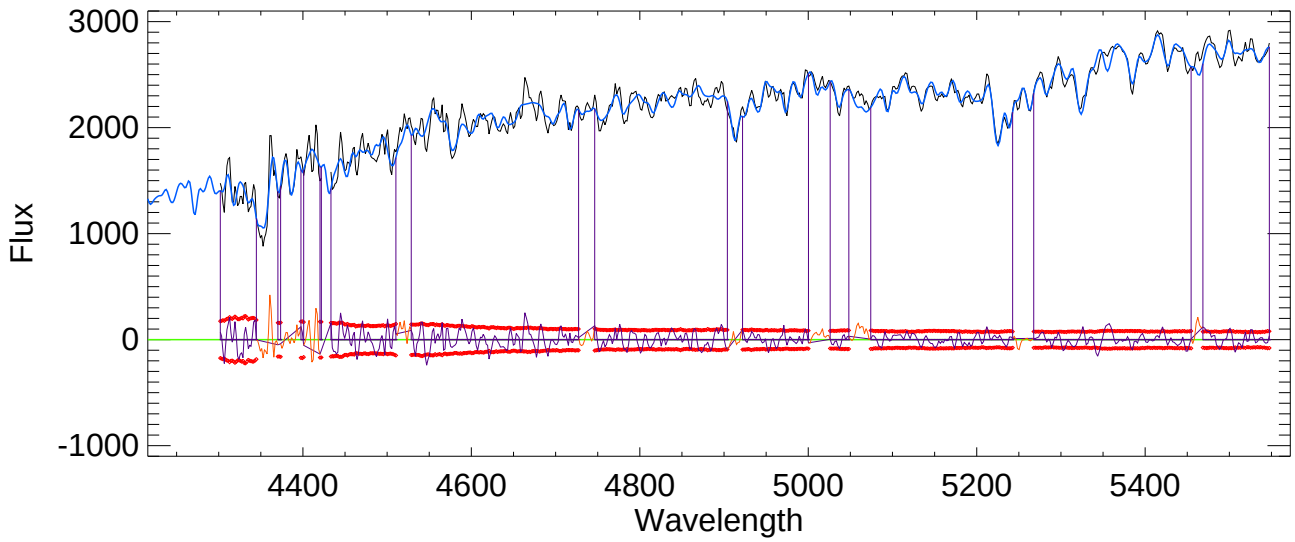

4000
3000
2000
1000
0
-1000
Flux
4400
4600
4800
5000
5200
5400
Wavelength

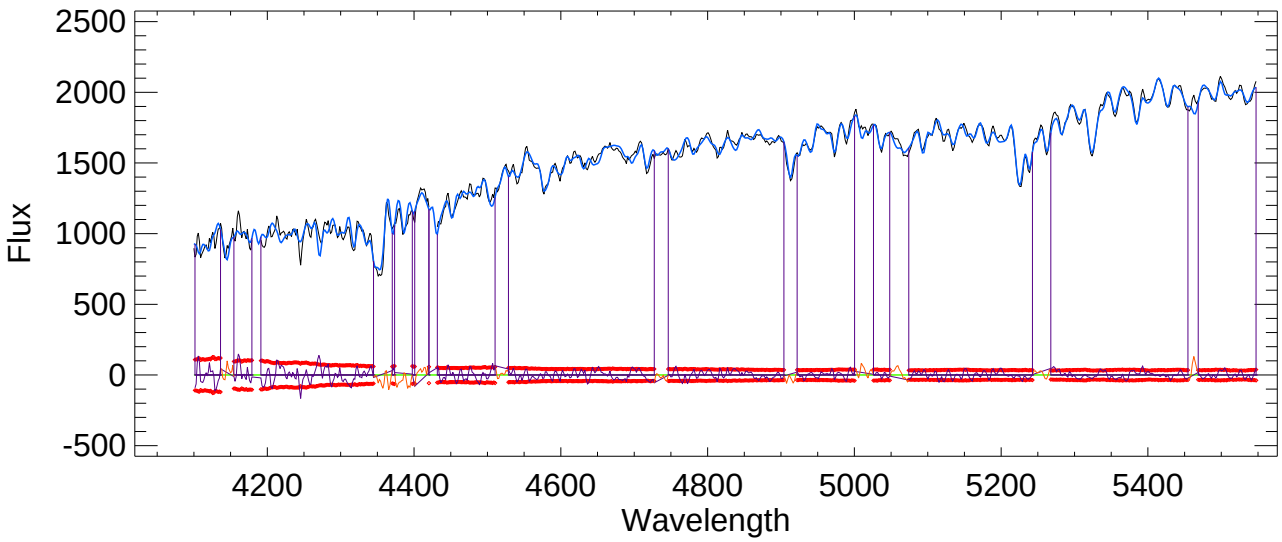

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

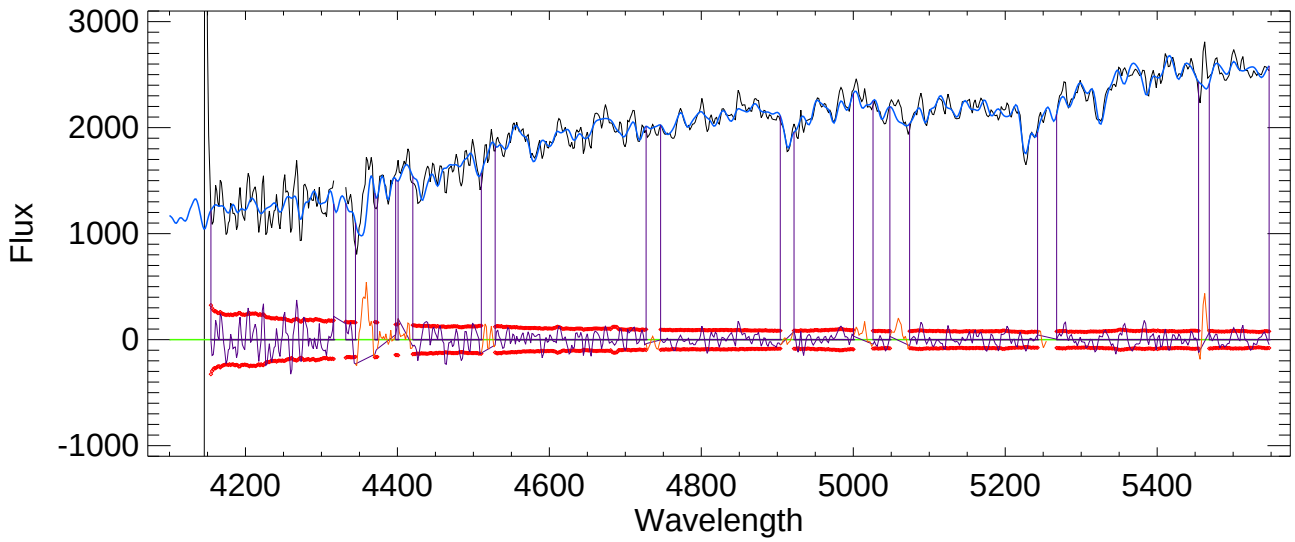

6000
4000
2000
0
-2000
Flux
4400
4600
4800
5000
5200
5400
Wavelength

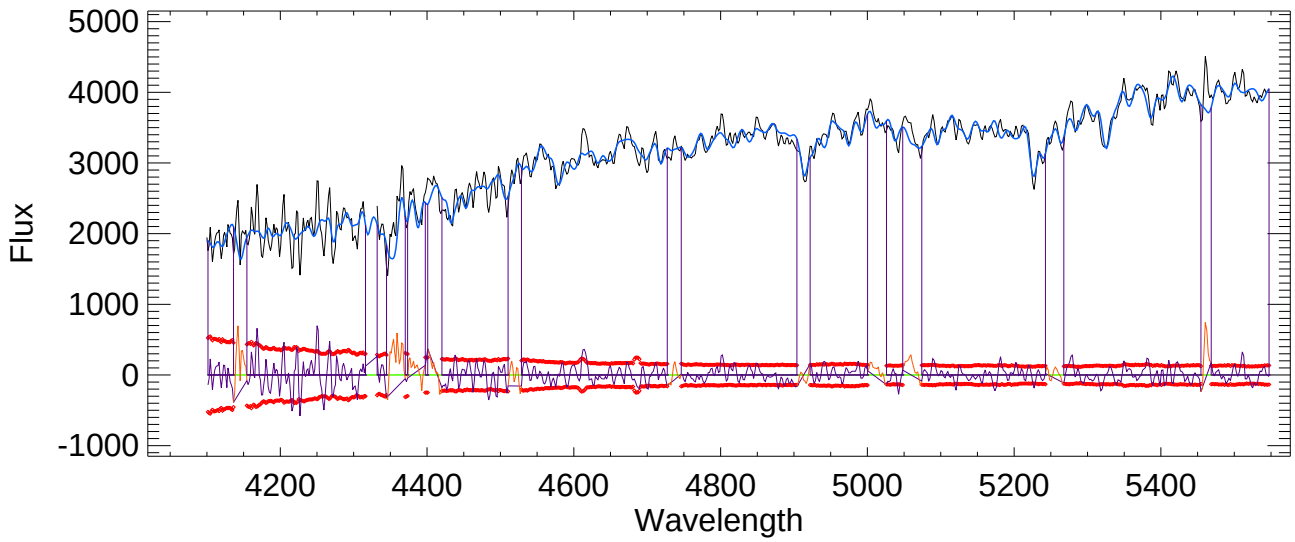

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

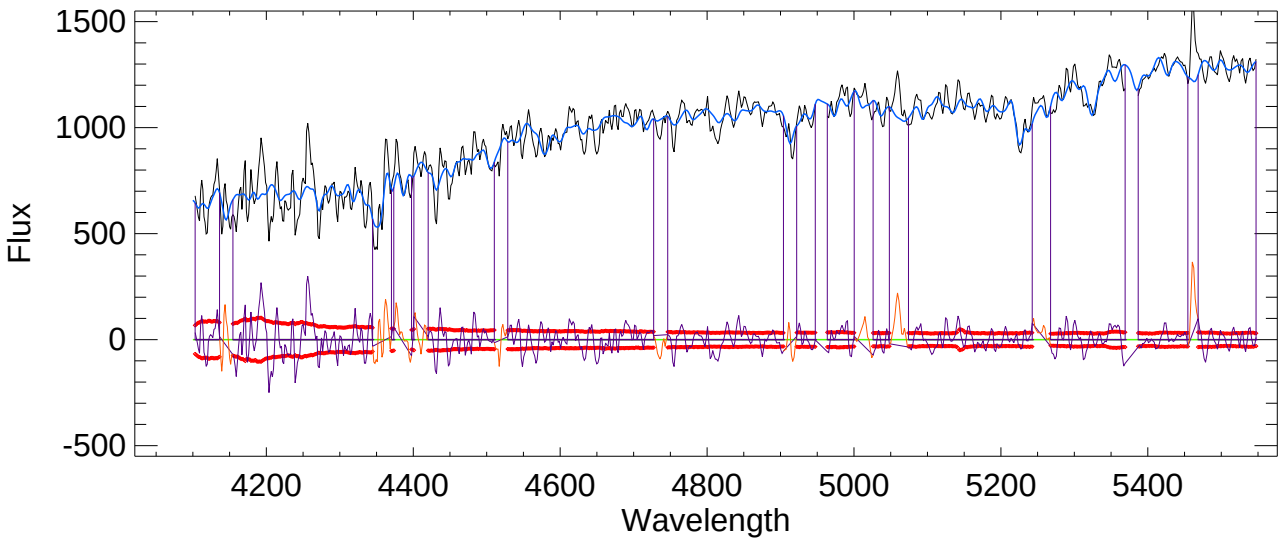

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

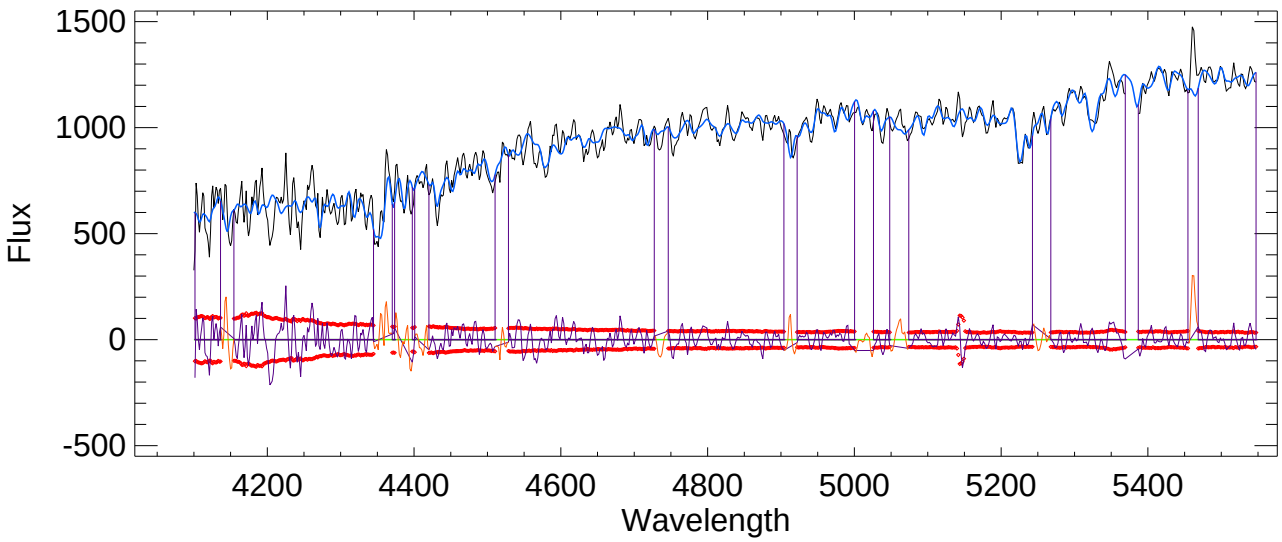

3000
2000
1000
0
-1000
Flux
4400
4600
4800
5000
5200
5400
Wavelength

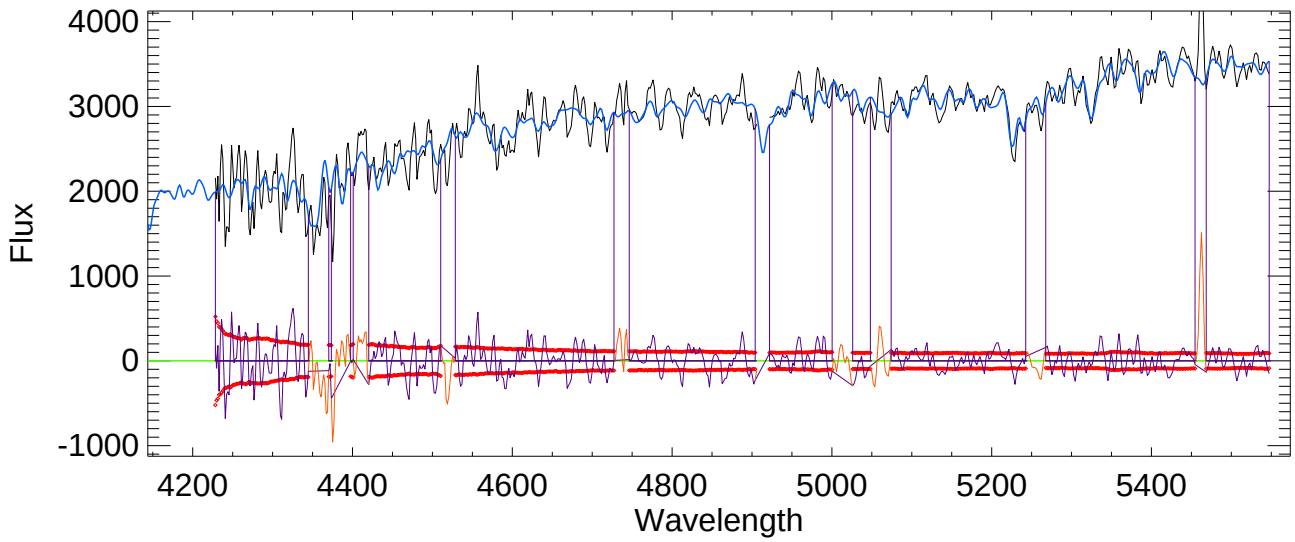

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

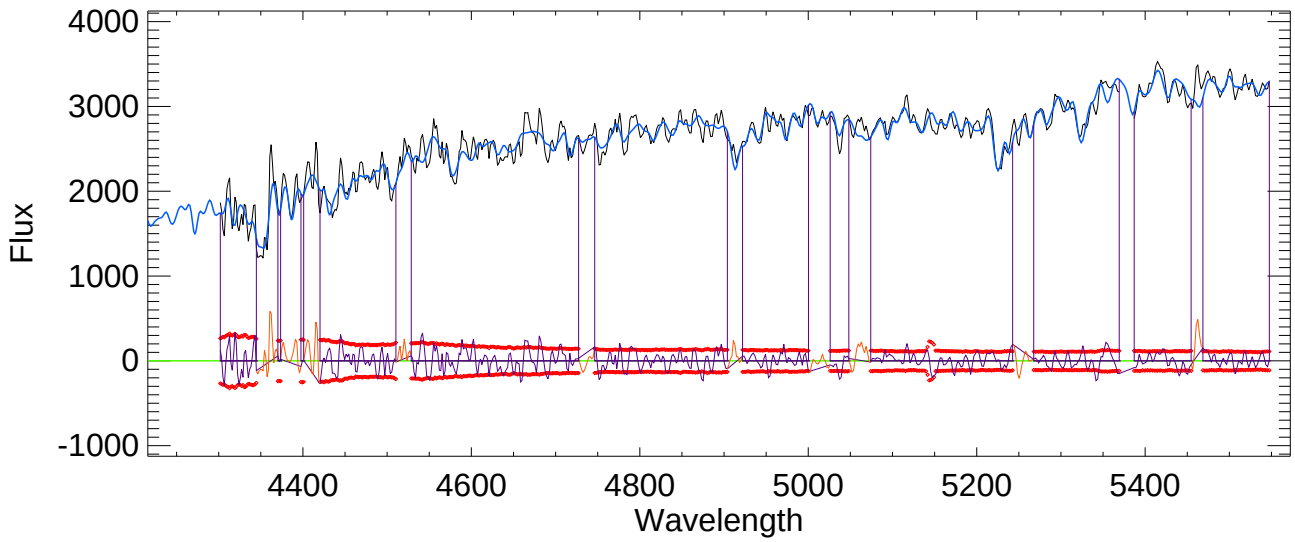

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

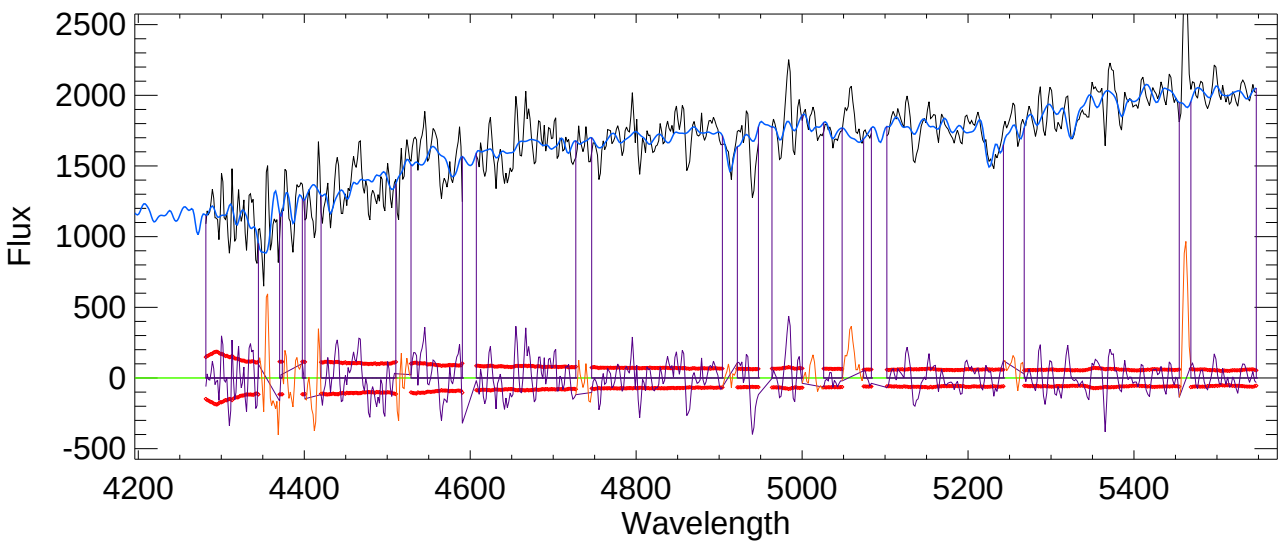

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

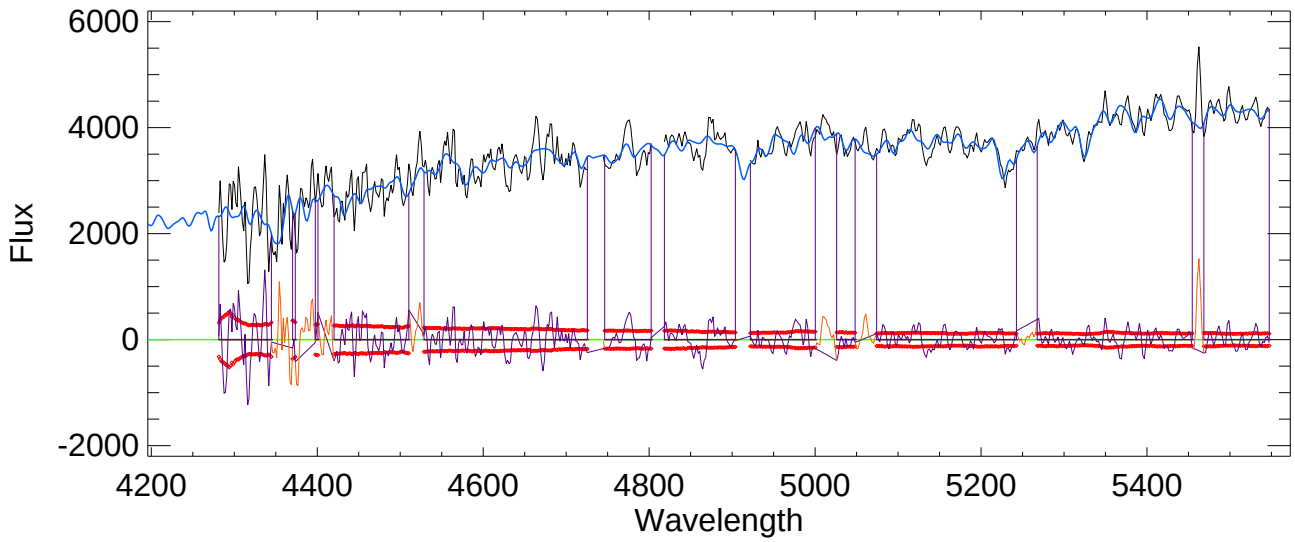

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

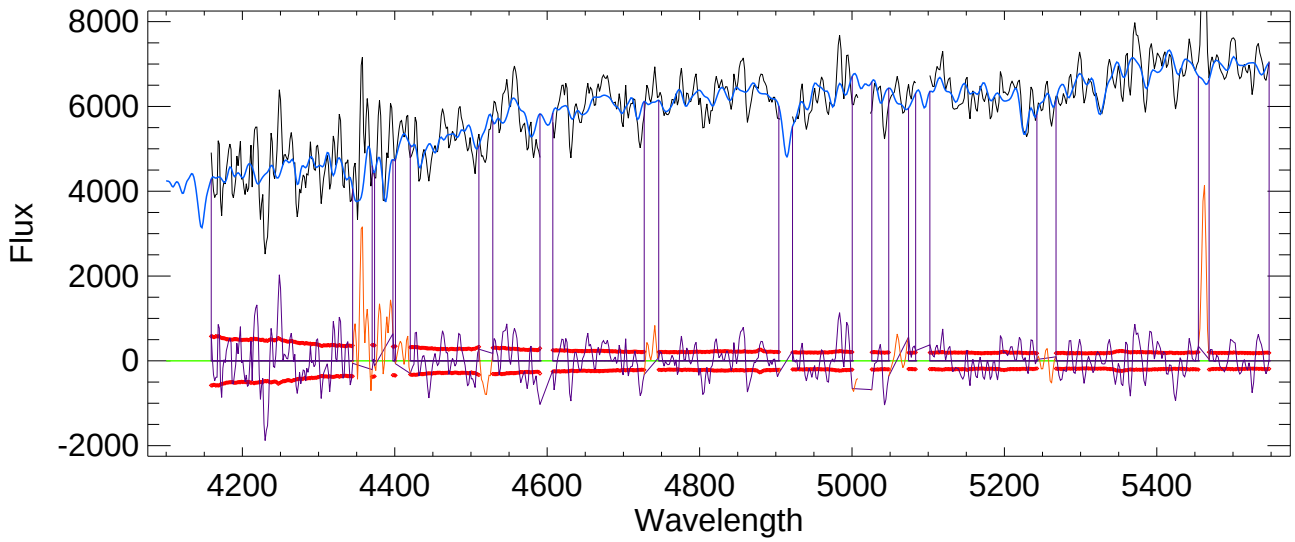

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

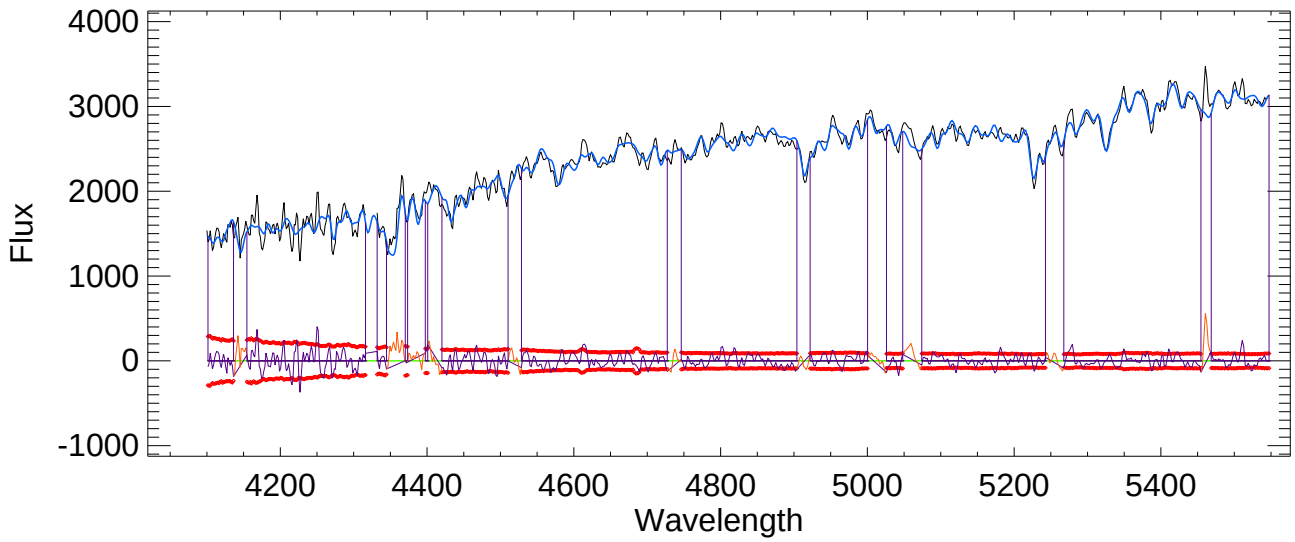

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

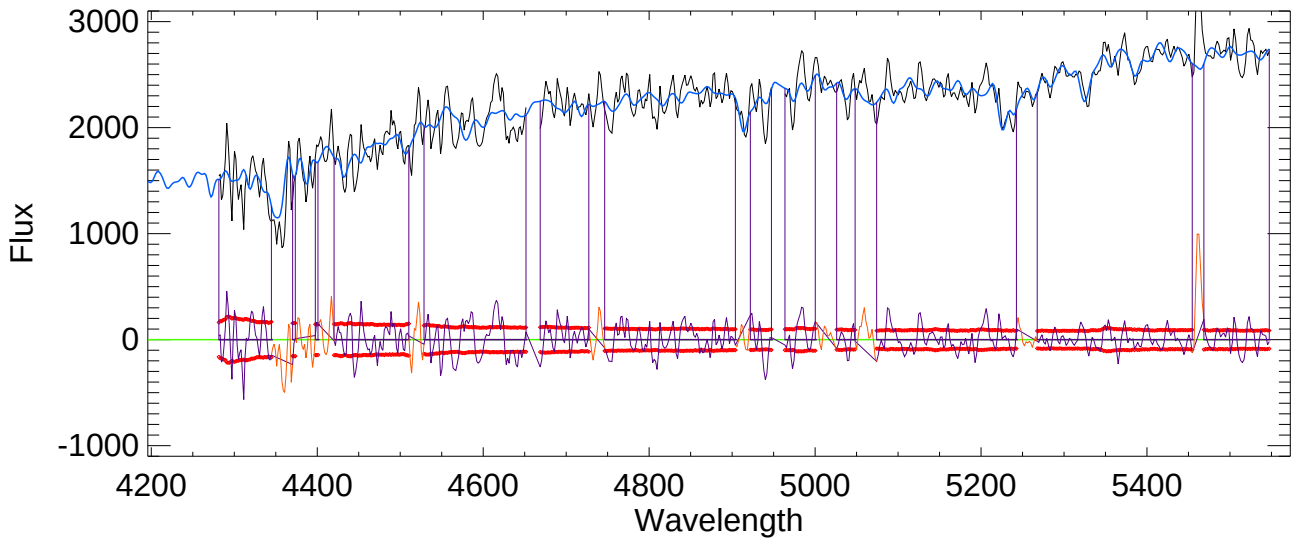

4000
3000
2000
1000
0
-1000
Flux
4400
4600
4800
5000
5200
5400
Wavelength

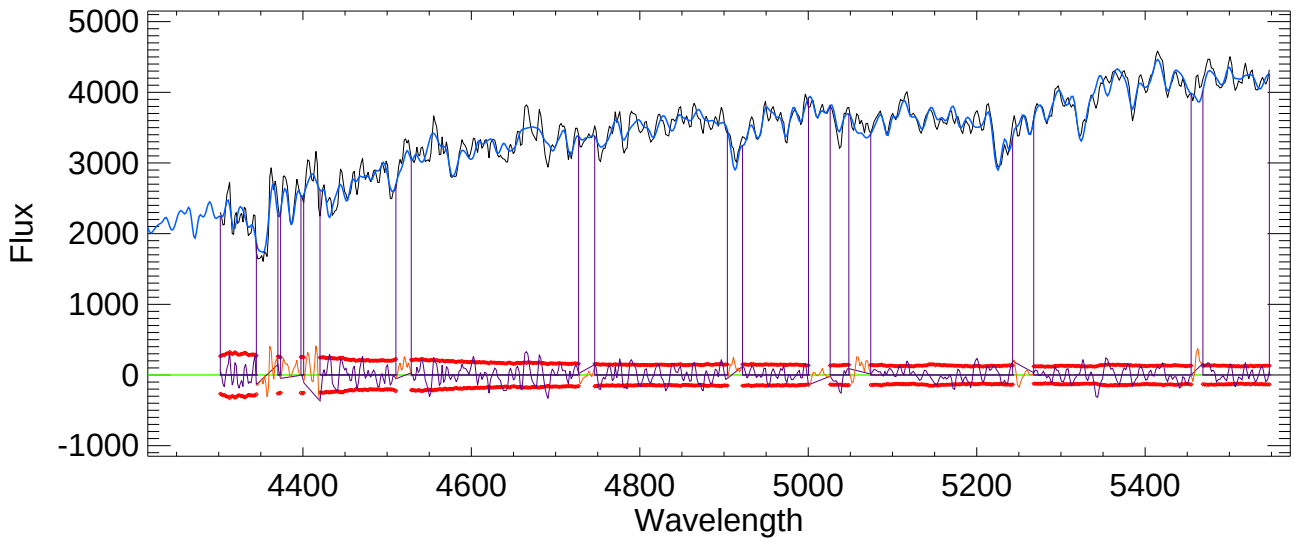

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

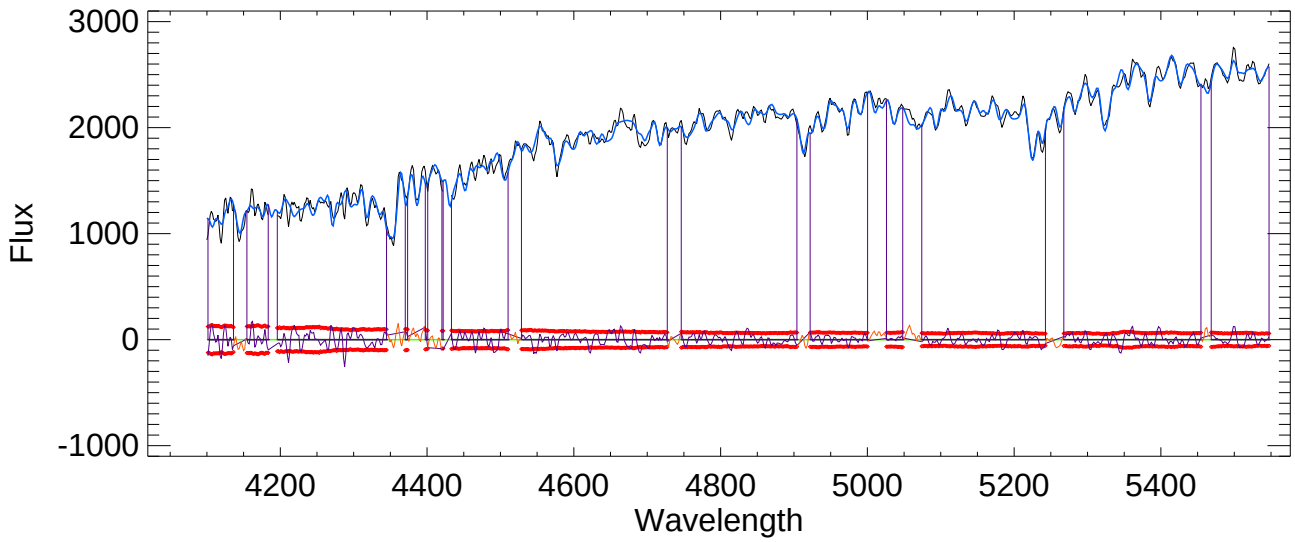

6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

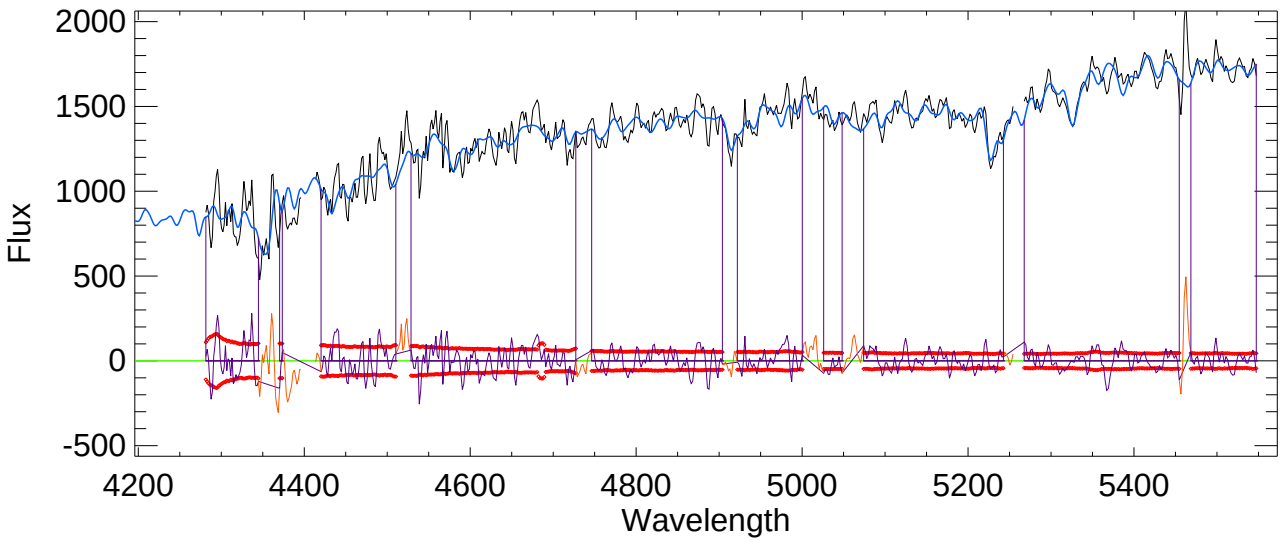

8000
6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

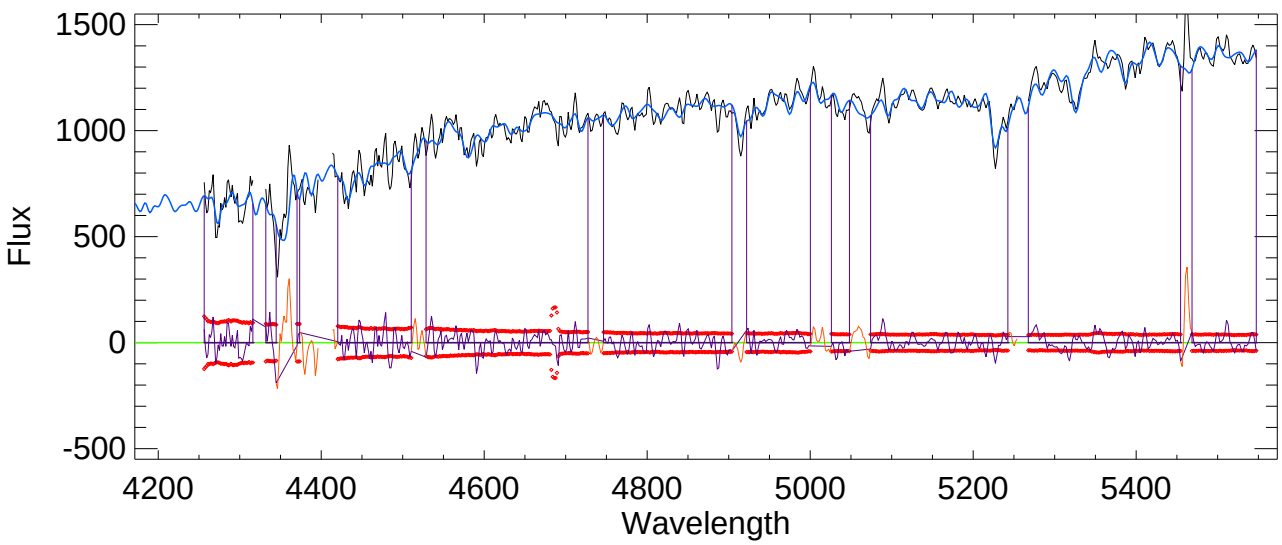

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

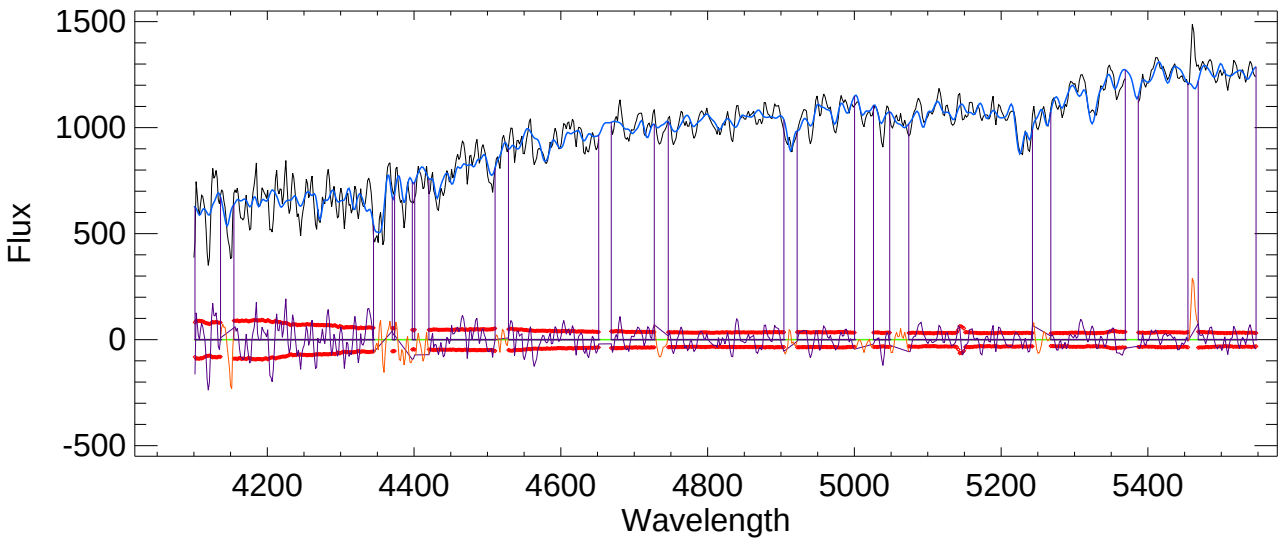

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

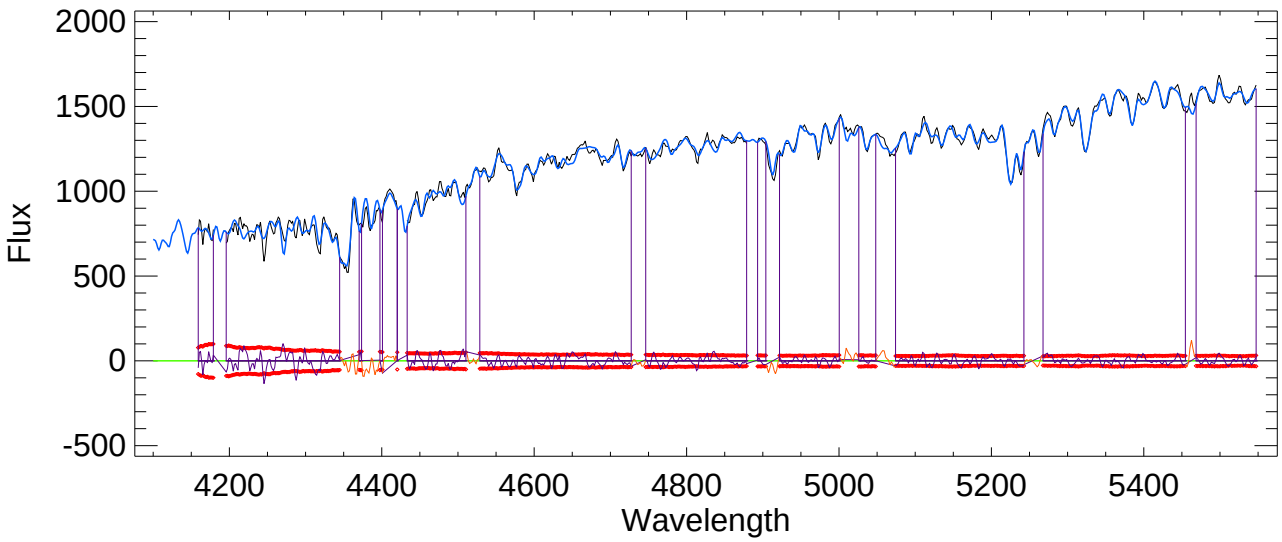

5000
4000
3000
2000
1000
0
-1000
Flux
4400
4600
4800
5000
5200
5400
Wavelength

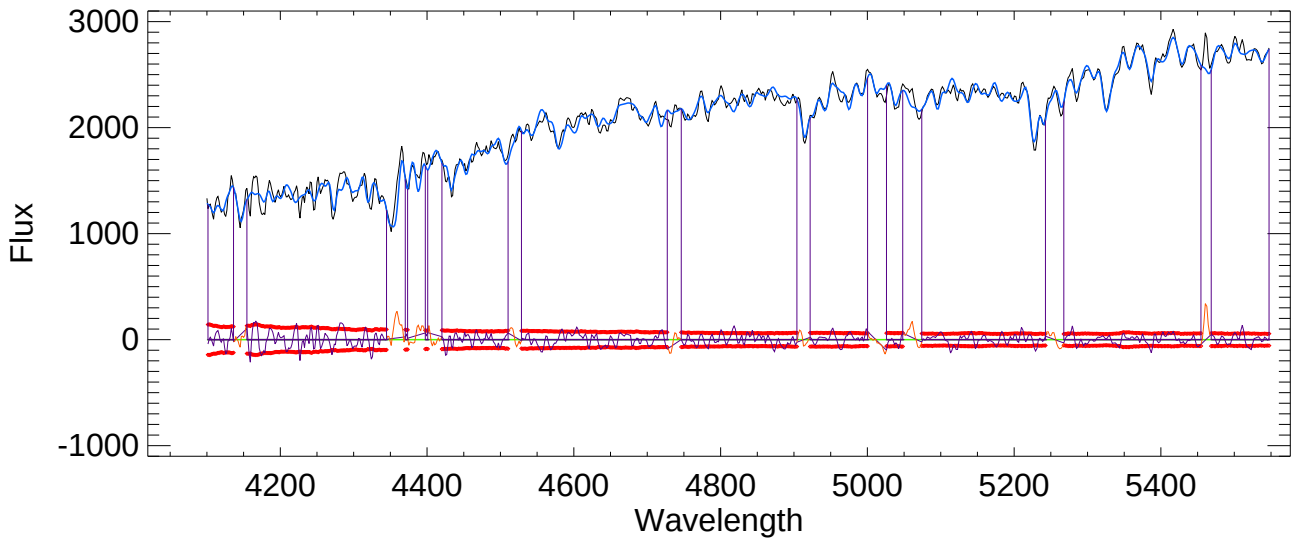

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

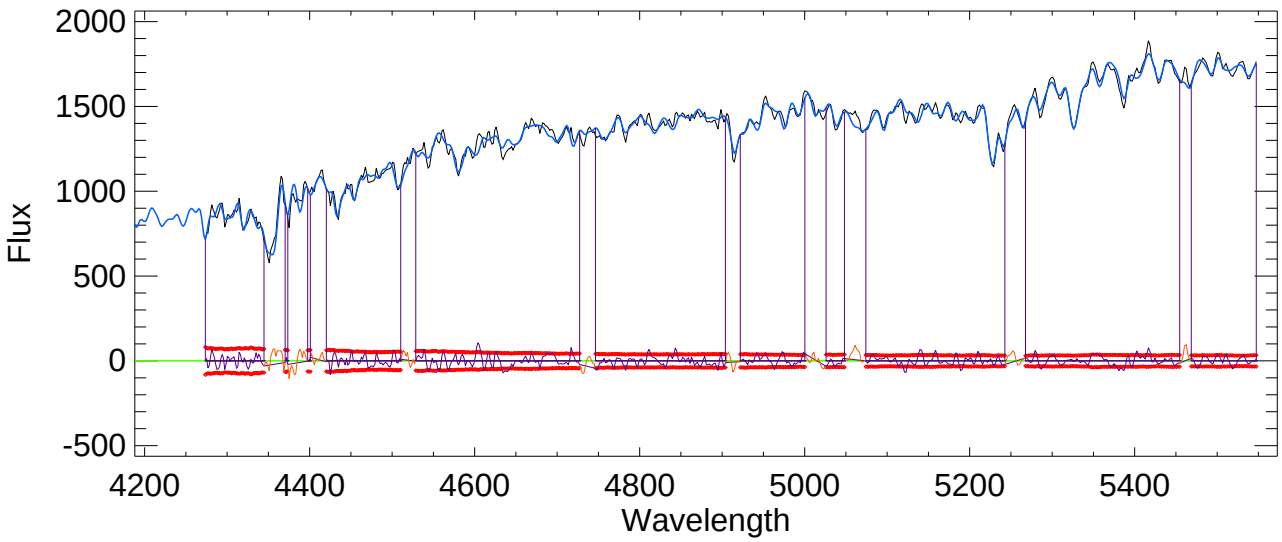

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

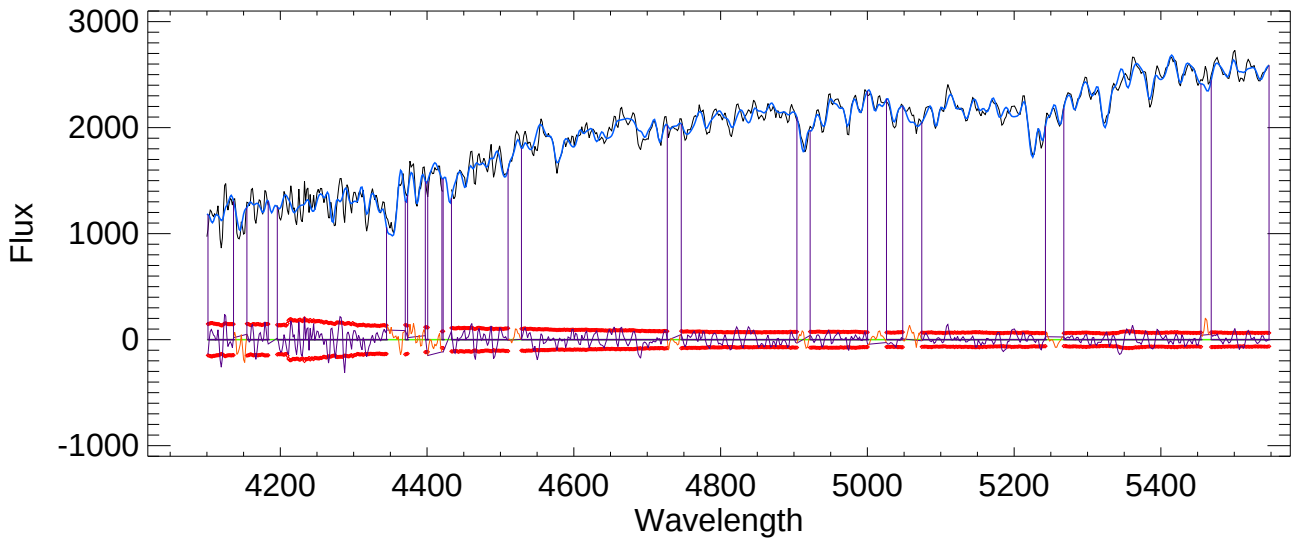

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

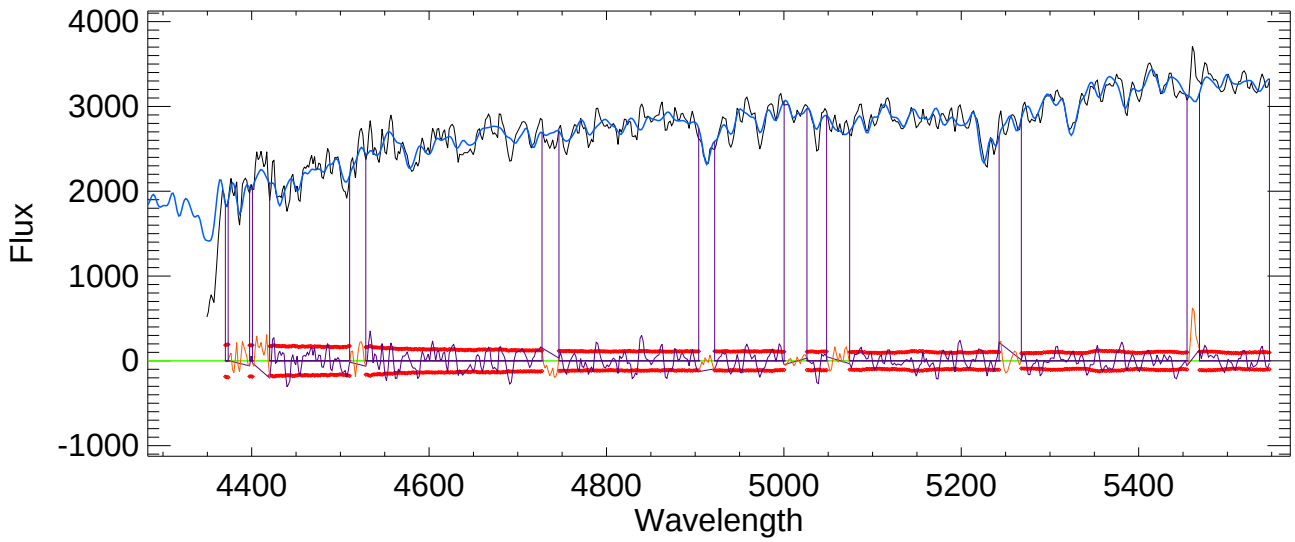

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

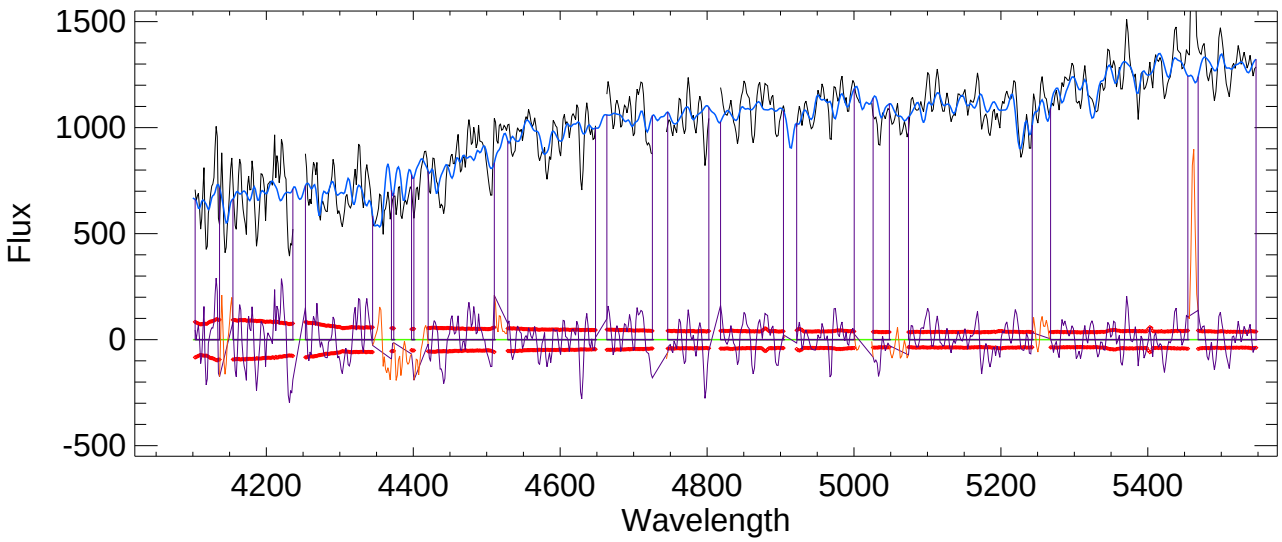

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

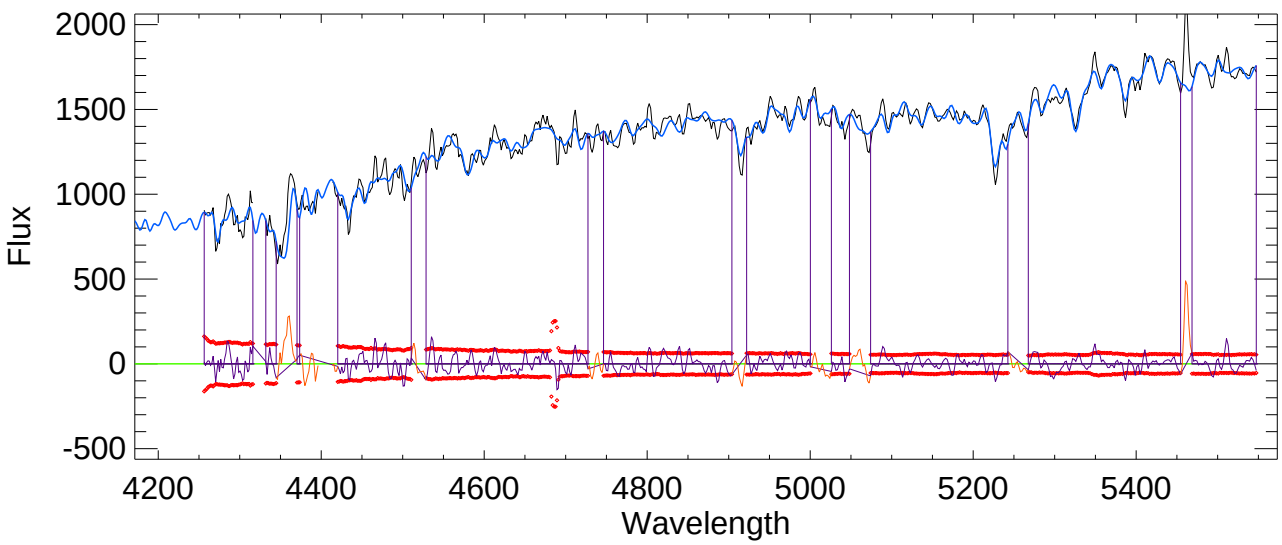

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

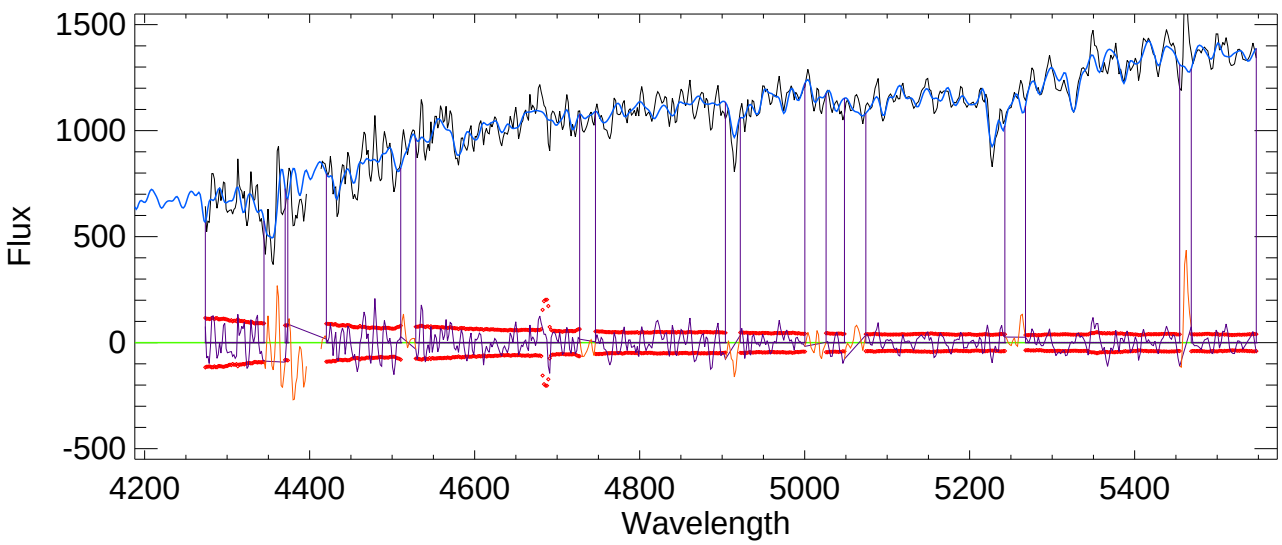

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

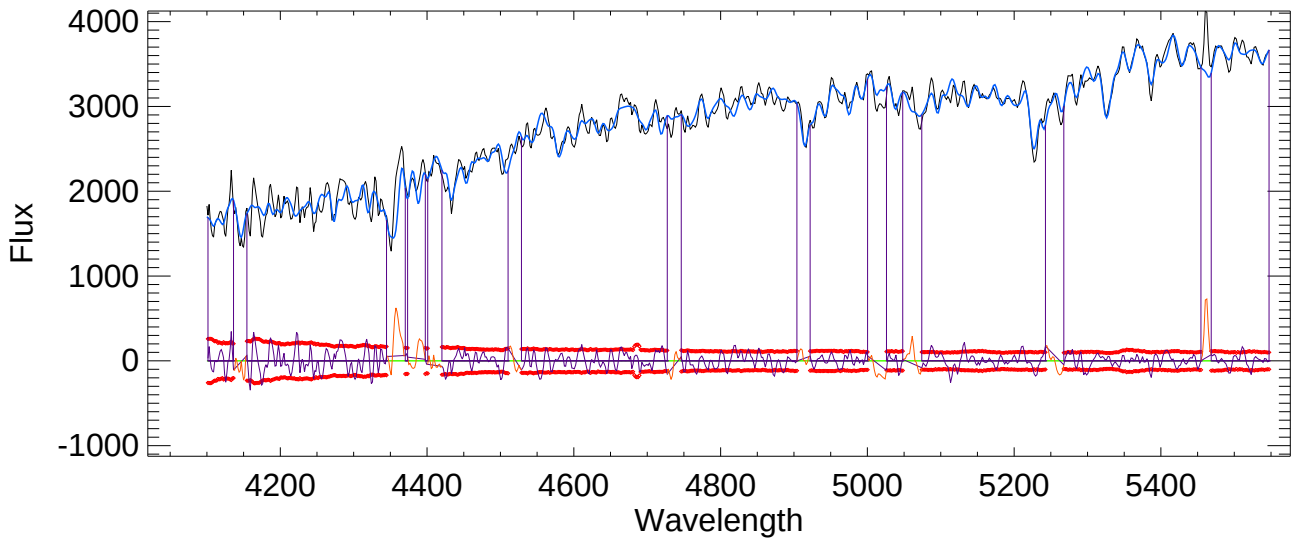

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

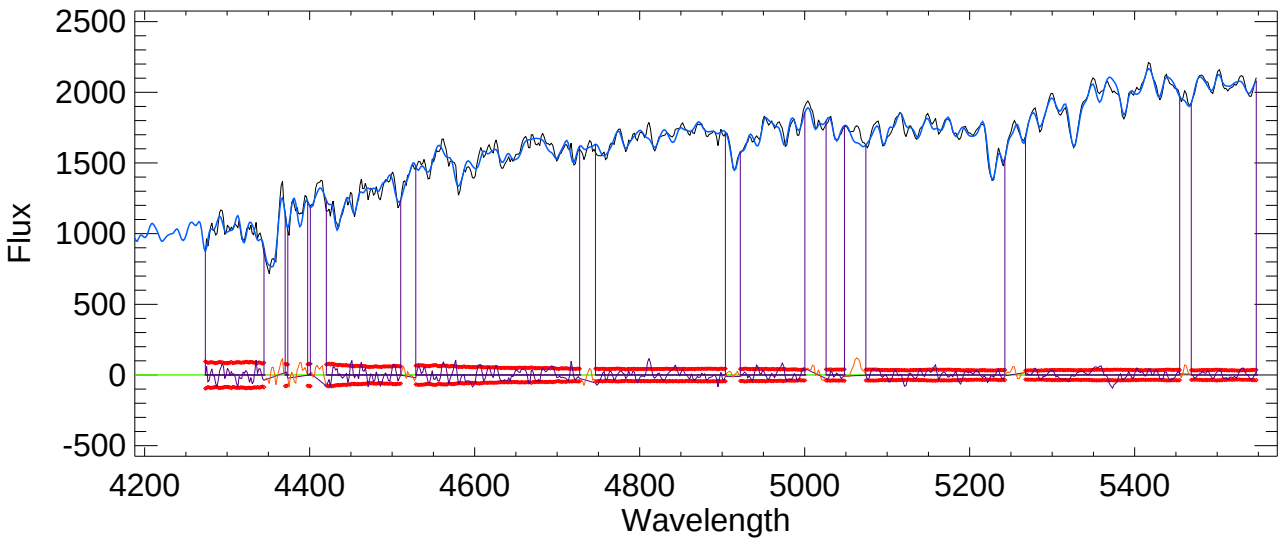

4000
3000
2000
1000
0
-1000
Flux
4400
4600
4800
5000
5200
5400
Wavelength

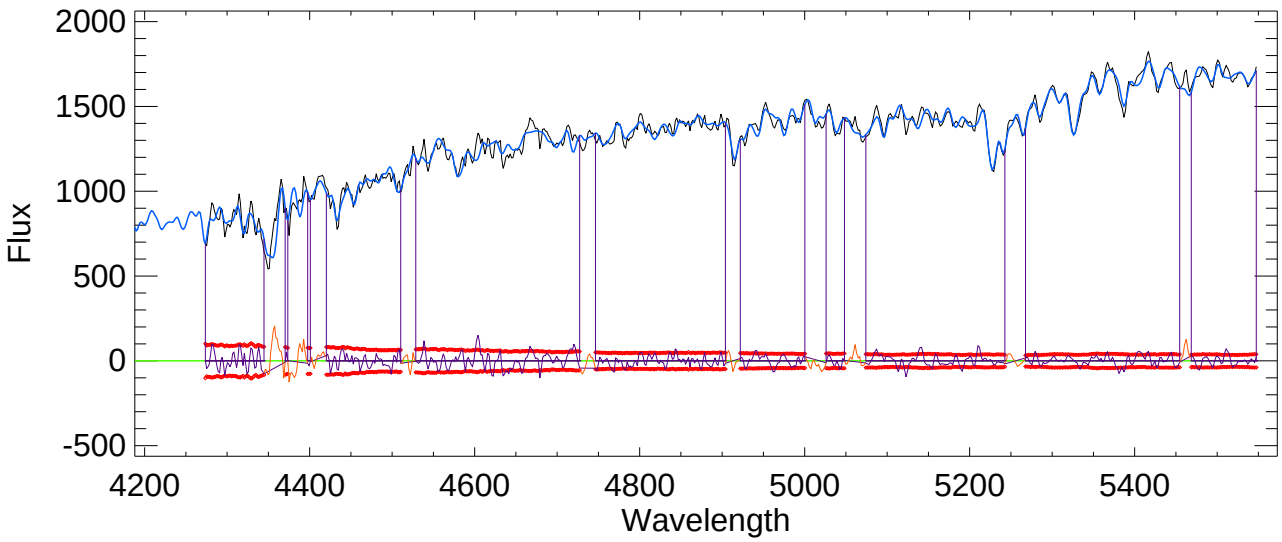

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

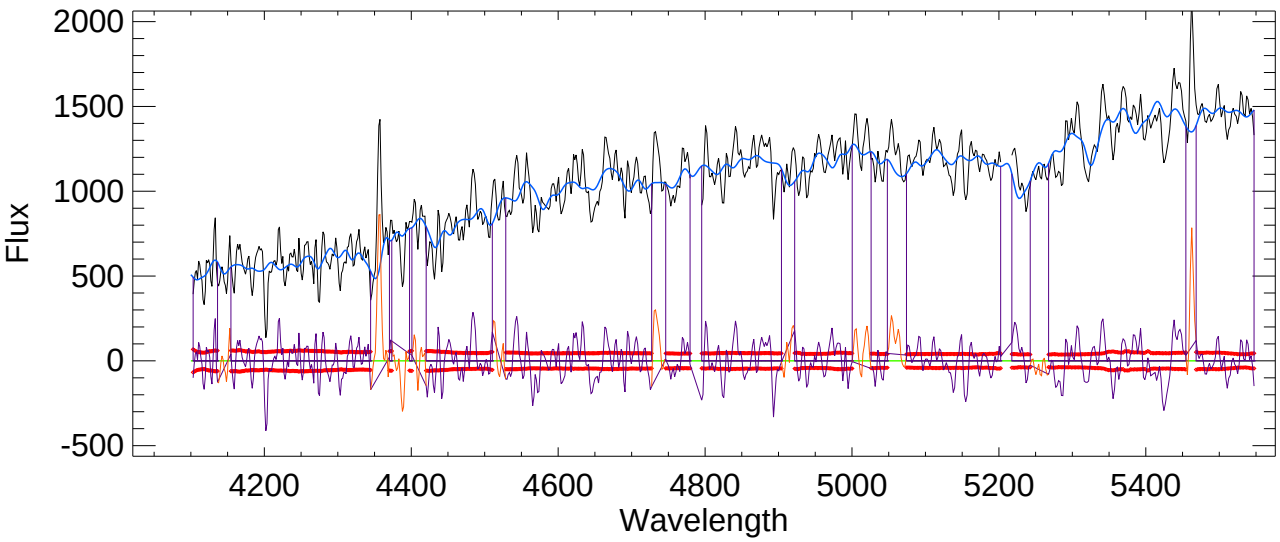

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

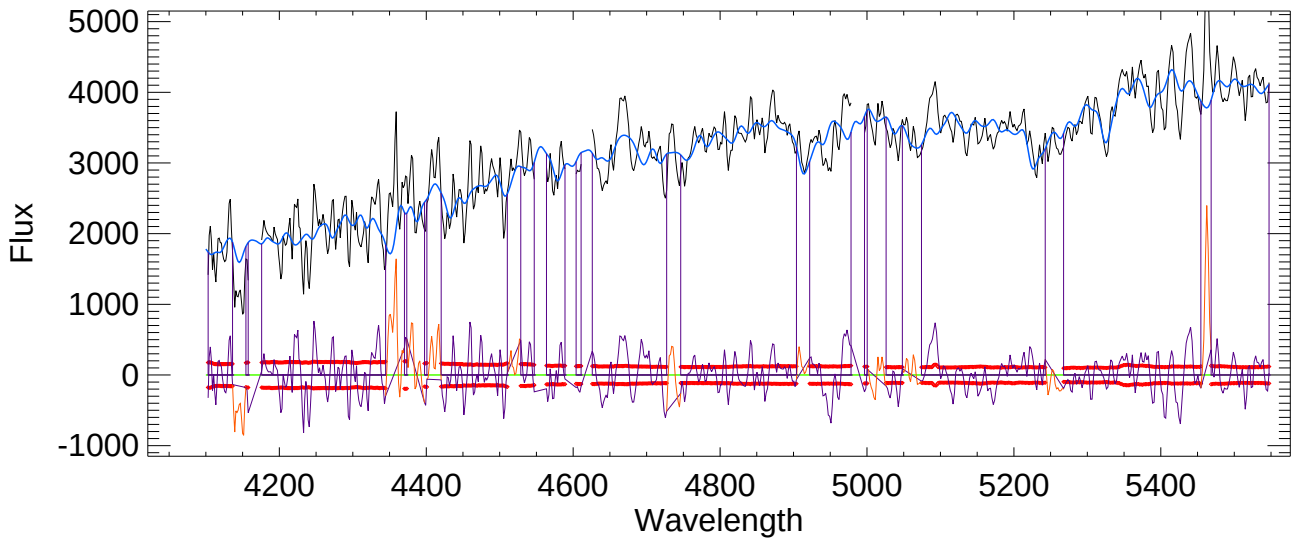

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

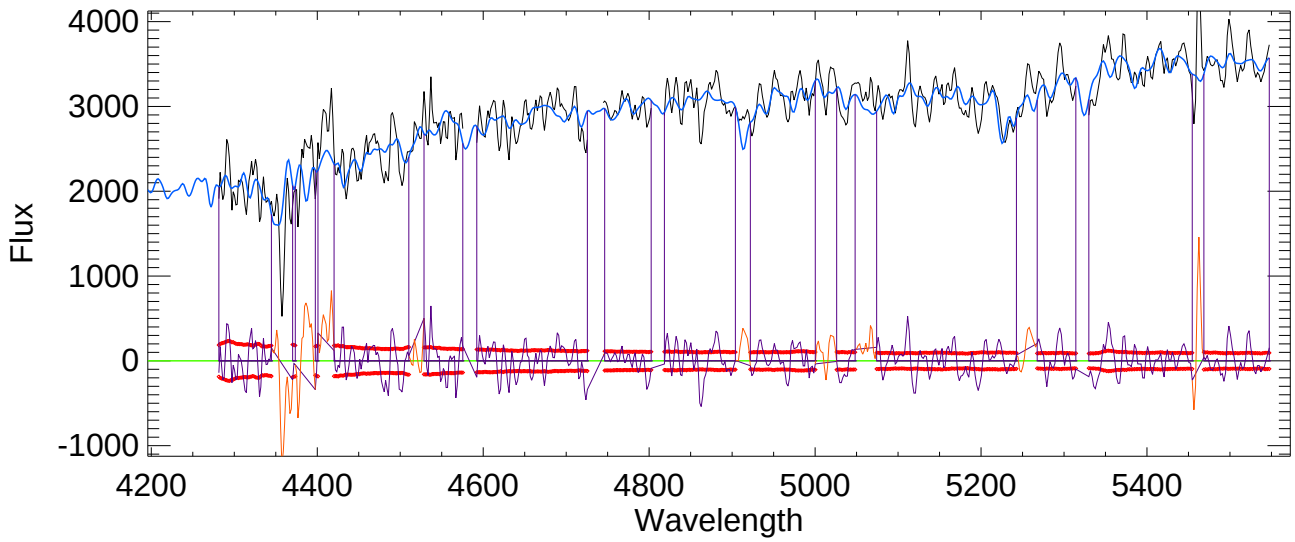

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

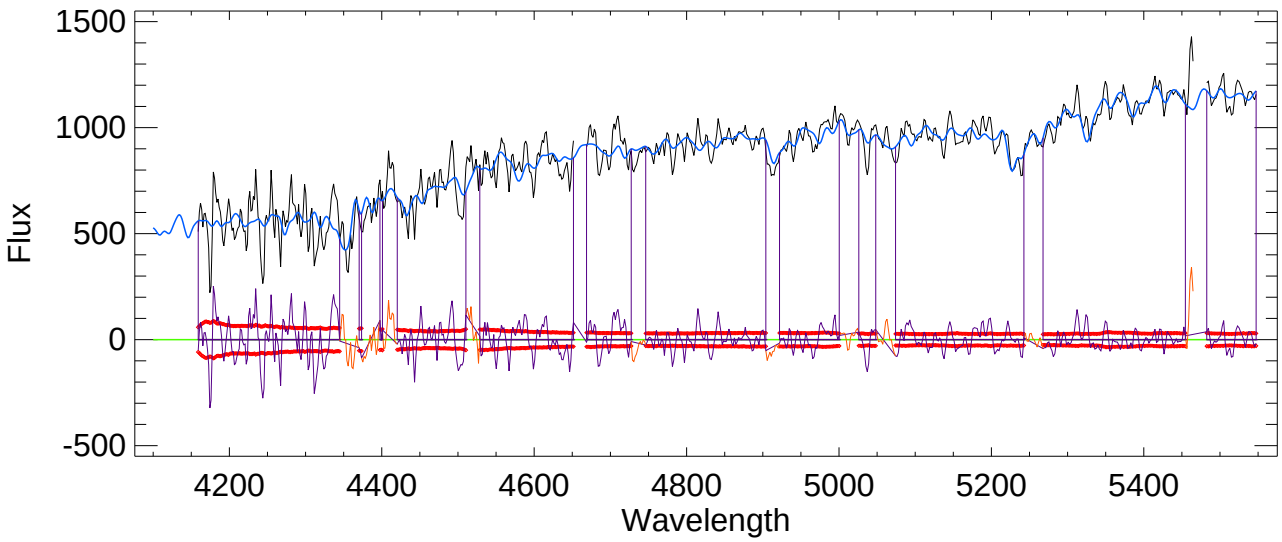

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

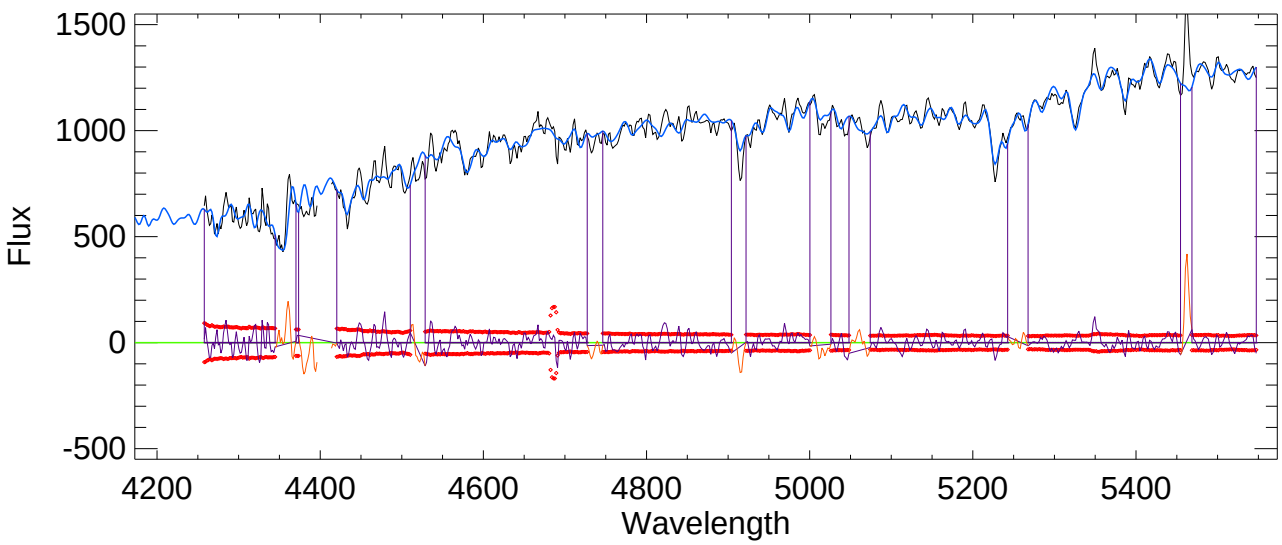

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

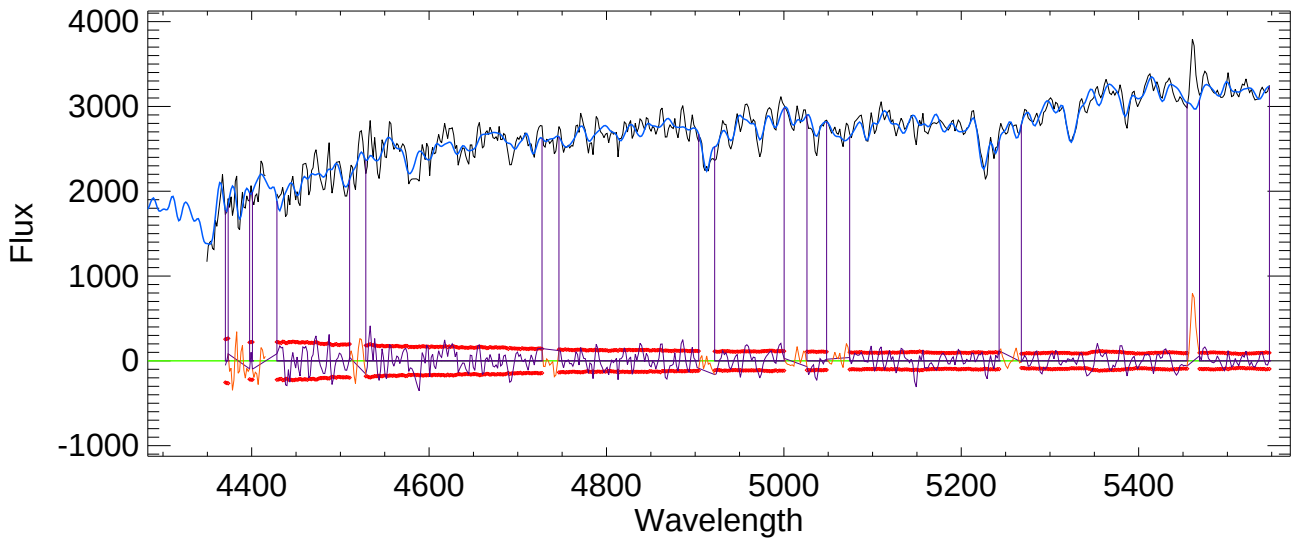

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

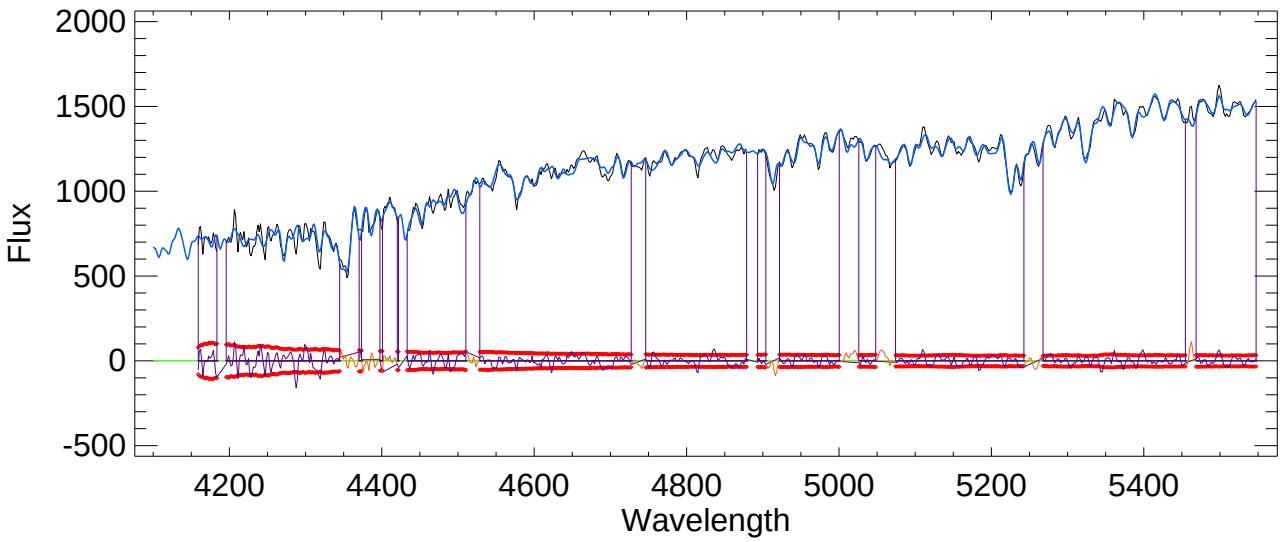

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

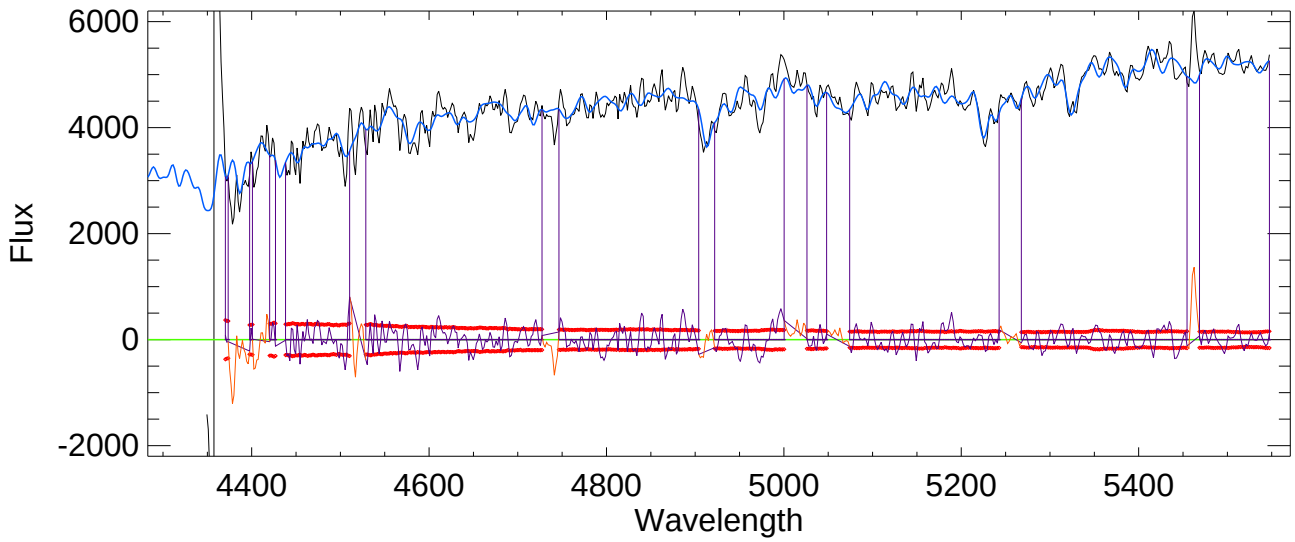

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

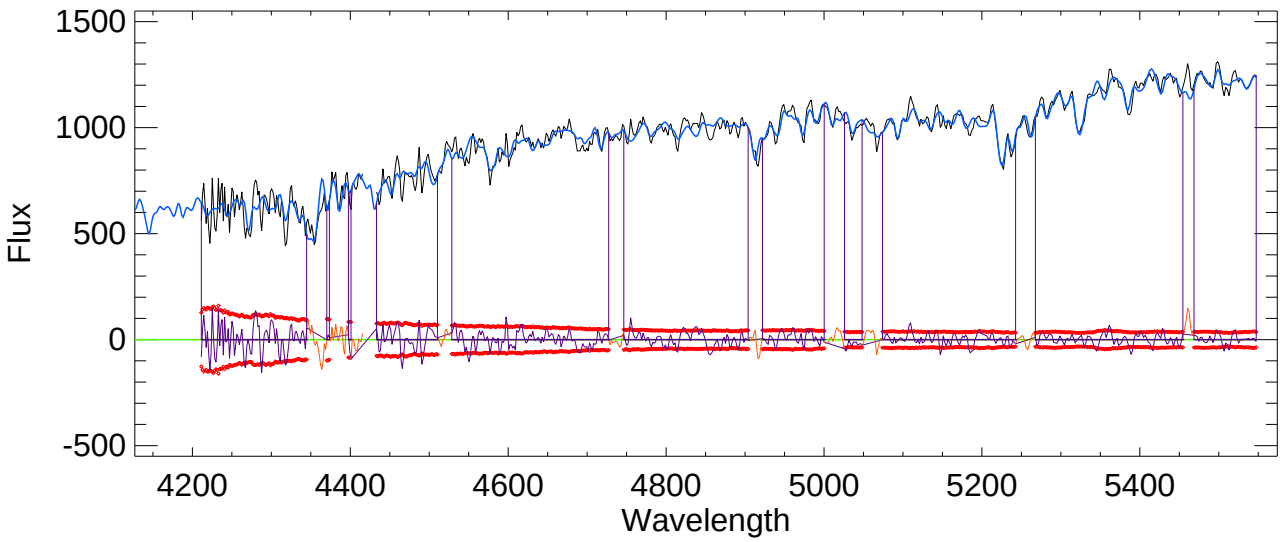

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

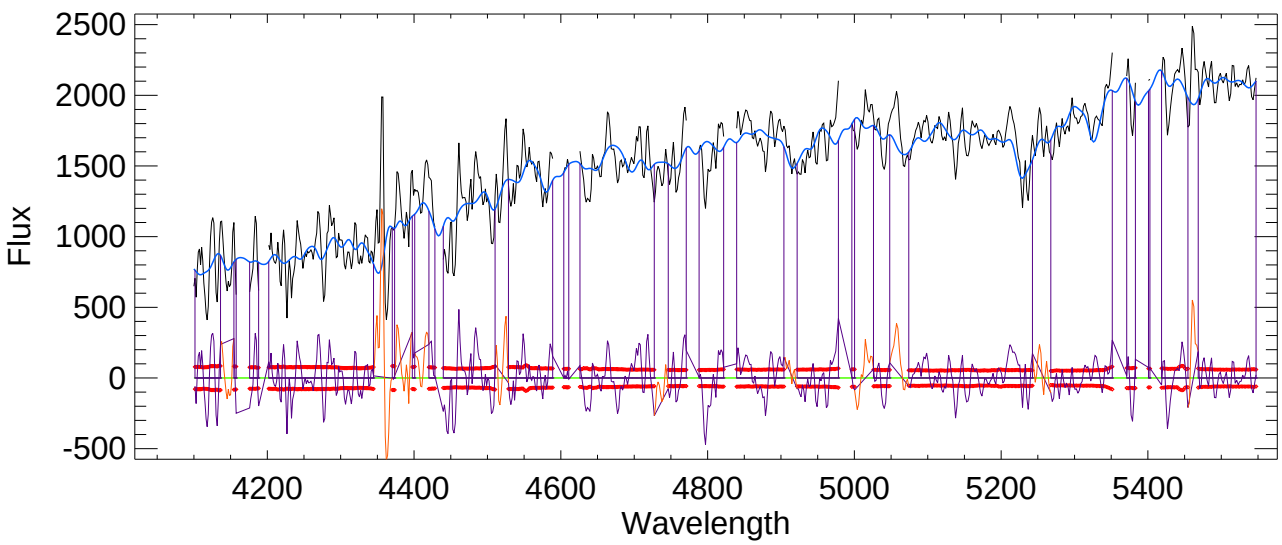

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

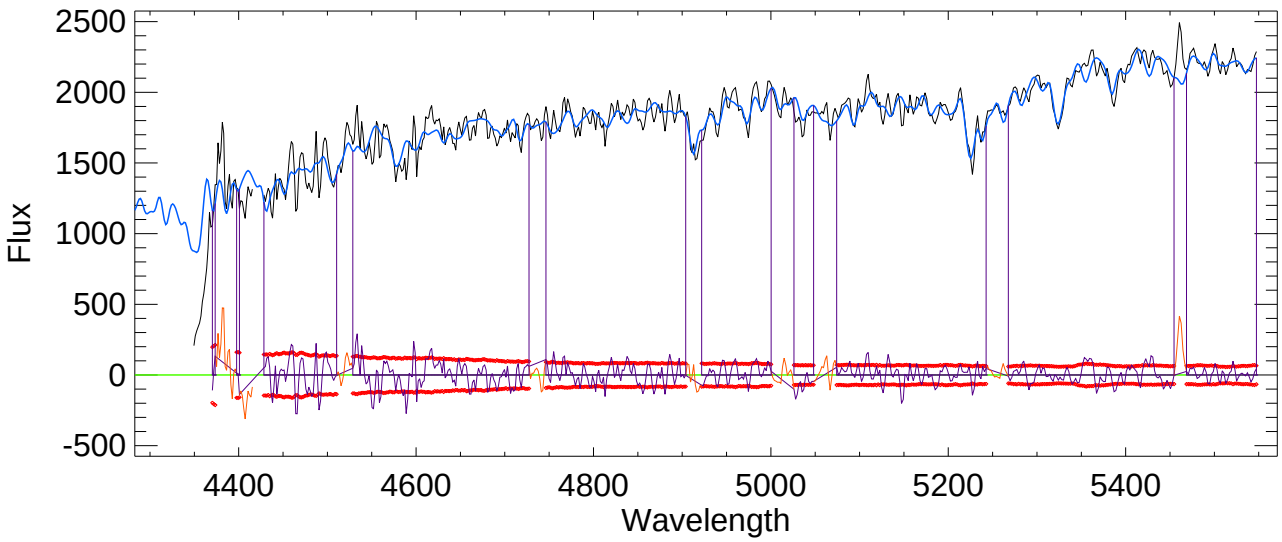

4000
3000
2000
1000
0
-1000
Flux
4400
4600
4800
5000
5200
5400
Wavelength

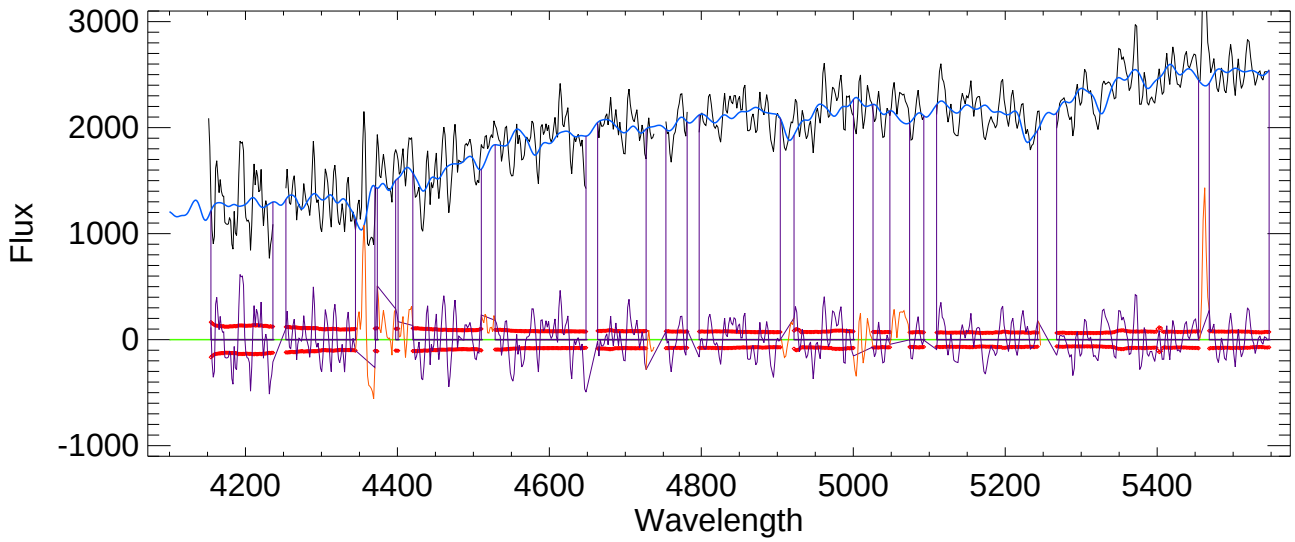

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

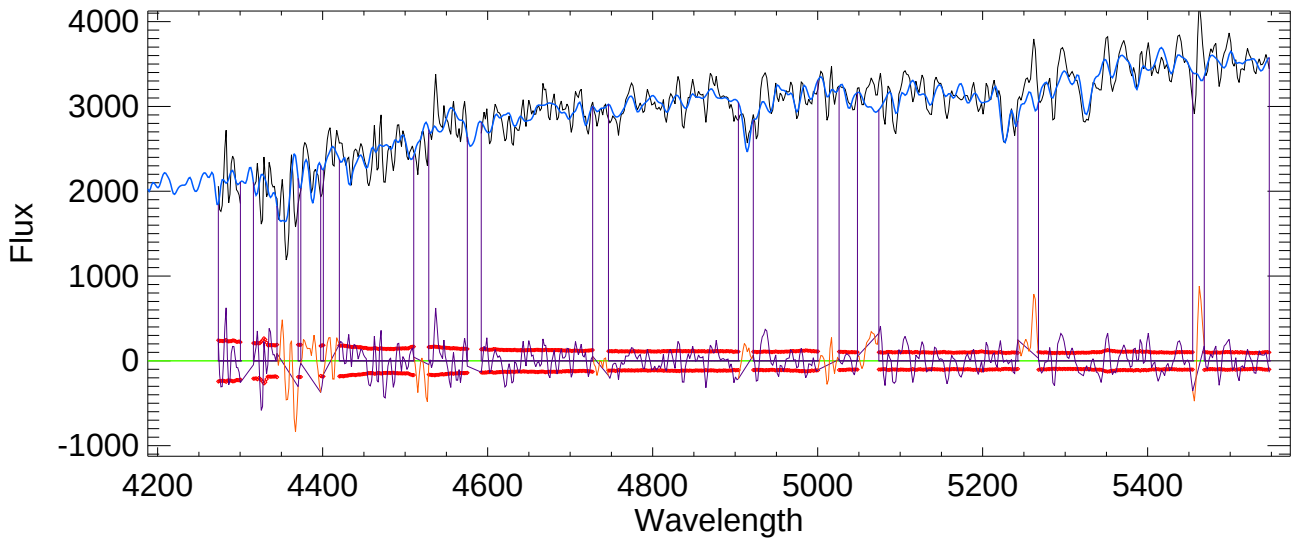

6000
4000
2000
0
-2000
Flux
4400
4600
4800
5000
5200
5400
Wavelength

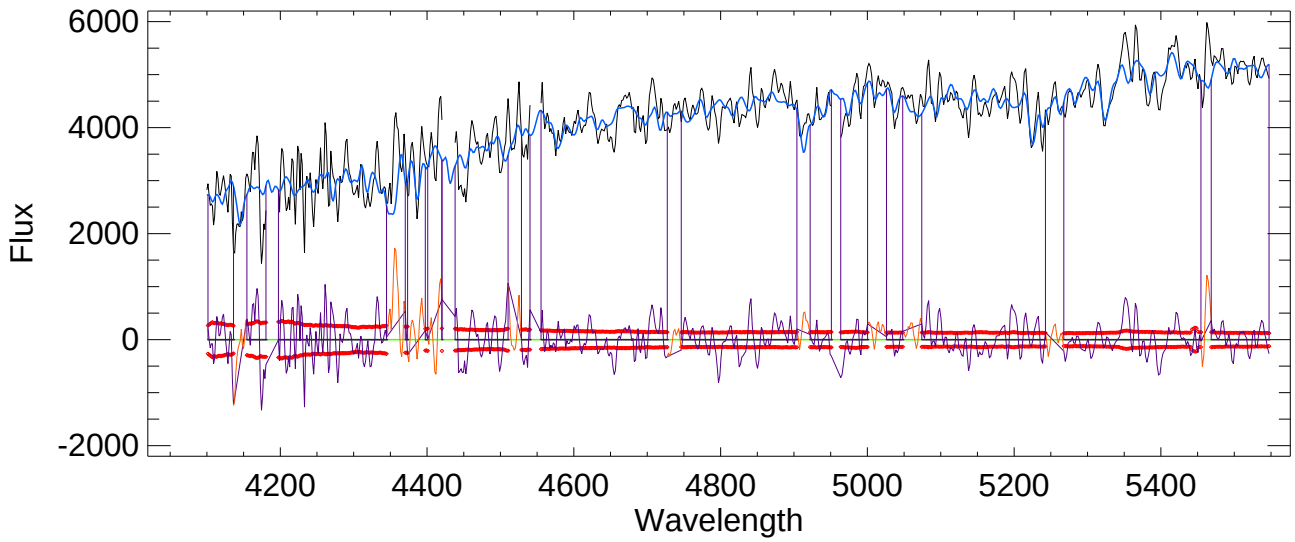

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

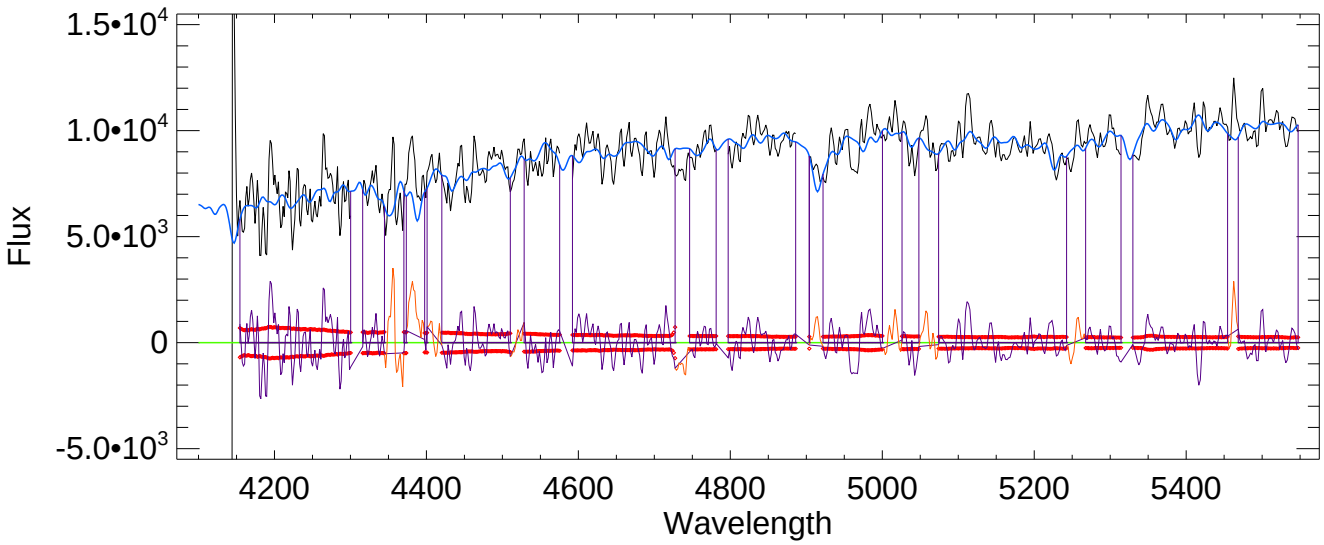

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

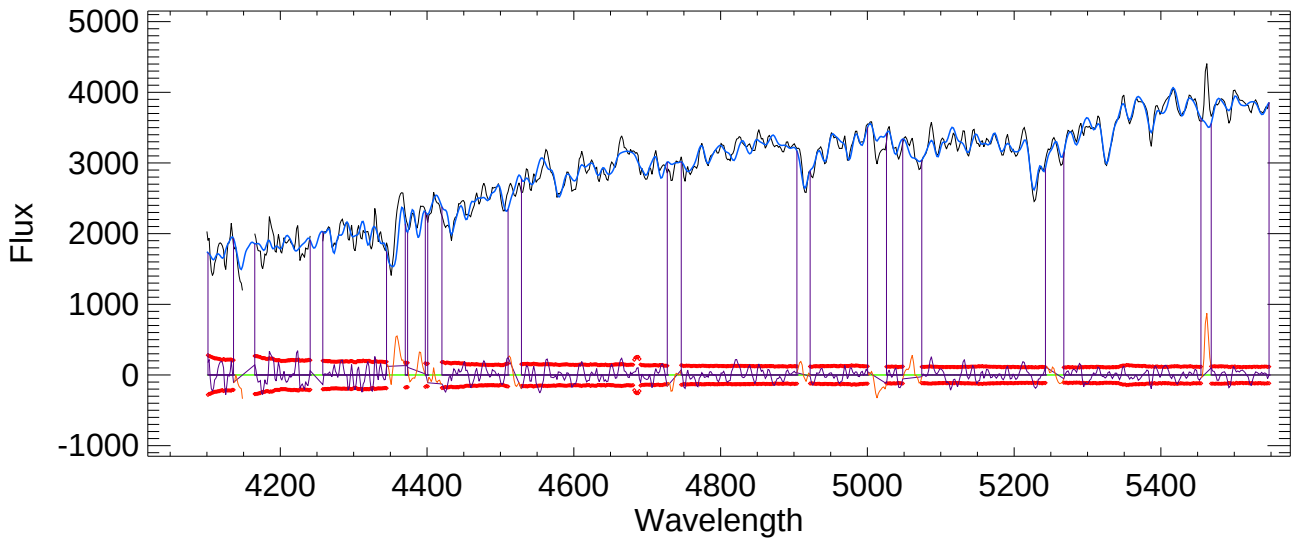

2500
2000
1500
1000
500
0
-500
Flux
4400
4600
4800
5000
5200
5400
Wavelength

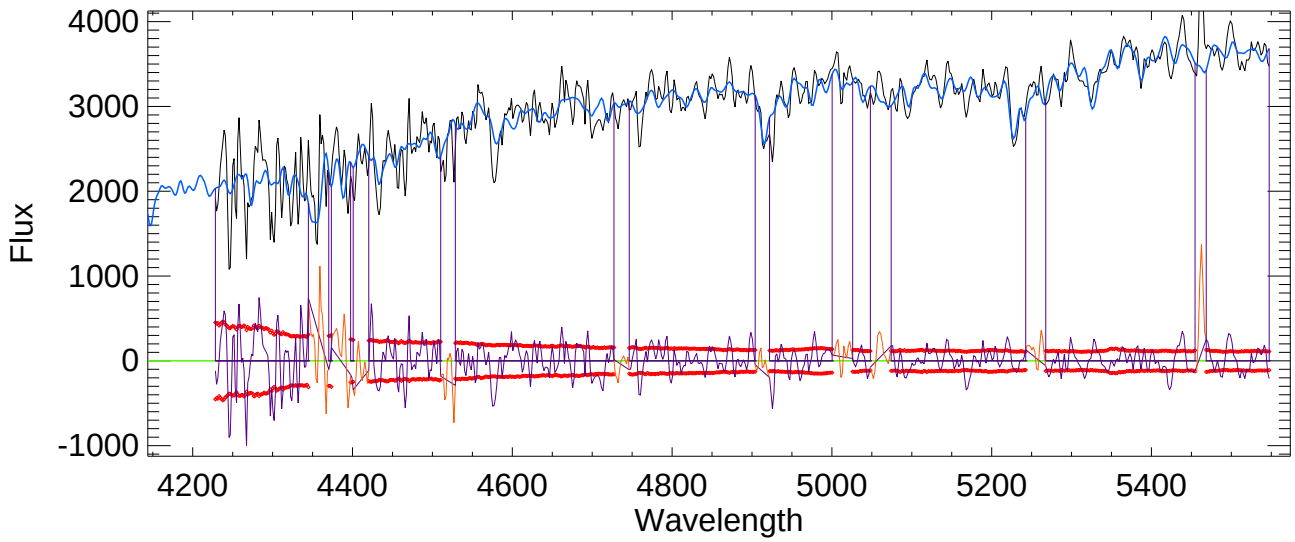

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

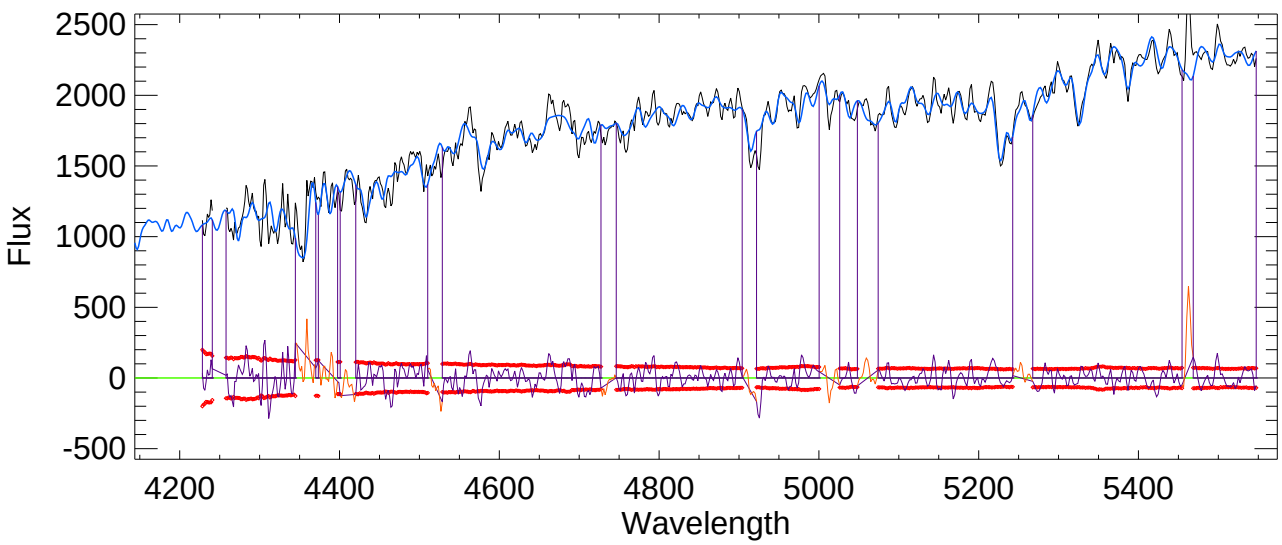

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

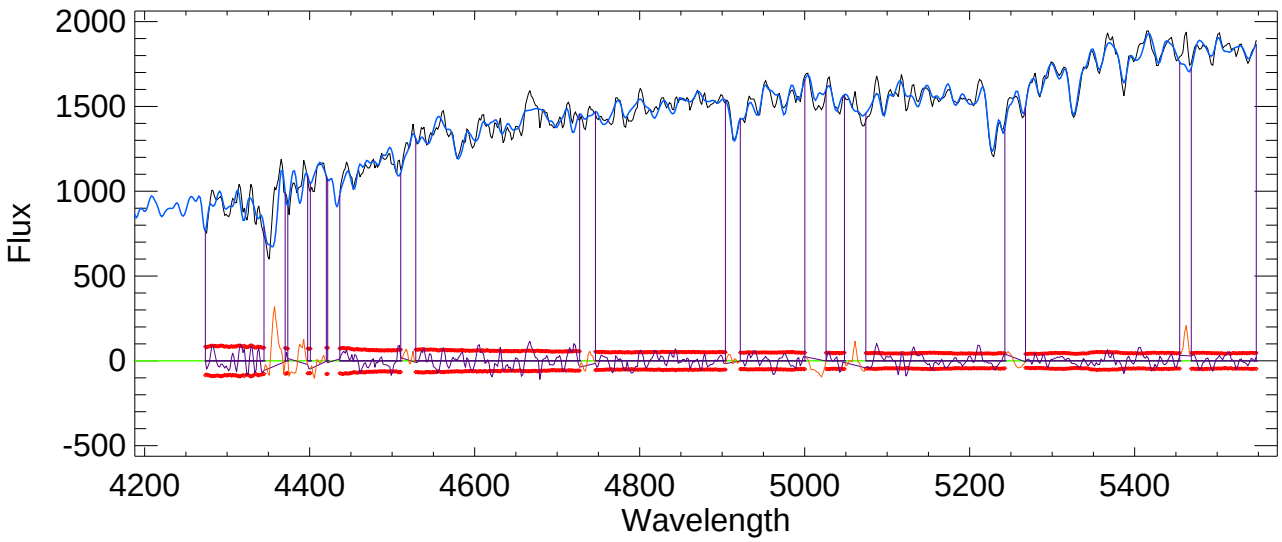

6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

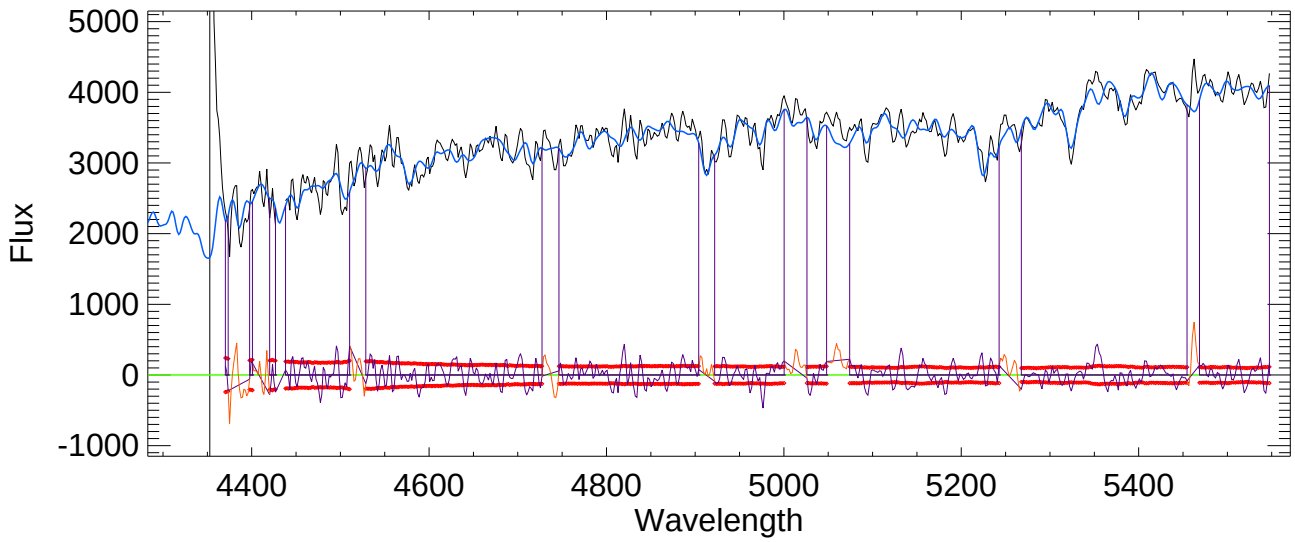

1.5•10^4
1.0•10^4
5.0•10^3
0
-5.0•10^3
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

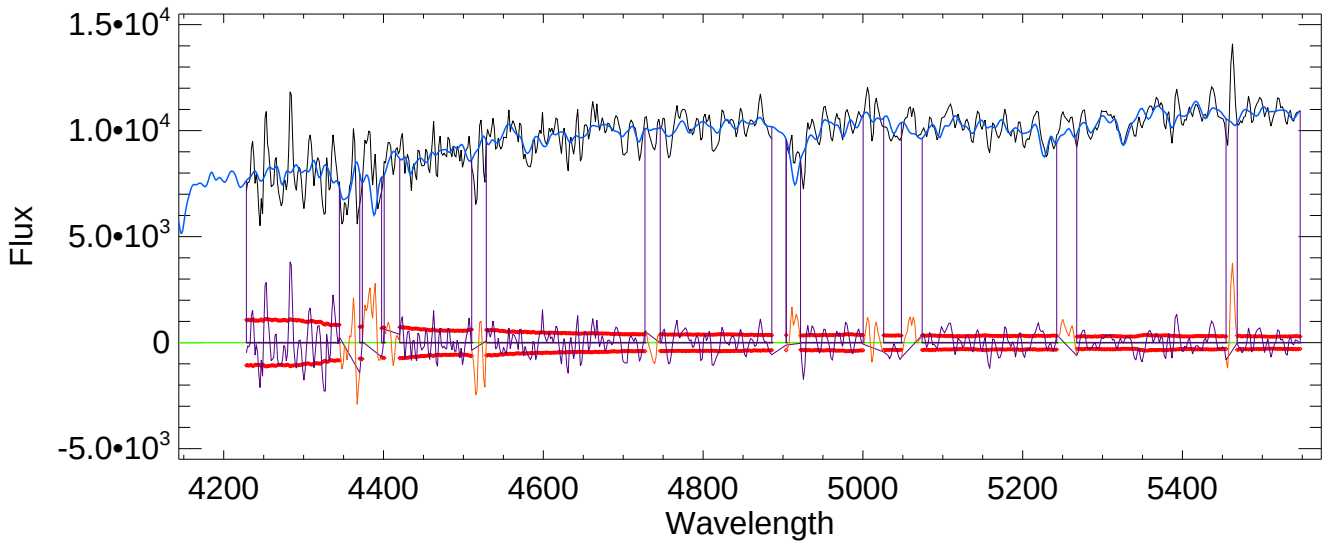

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

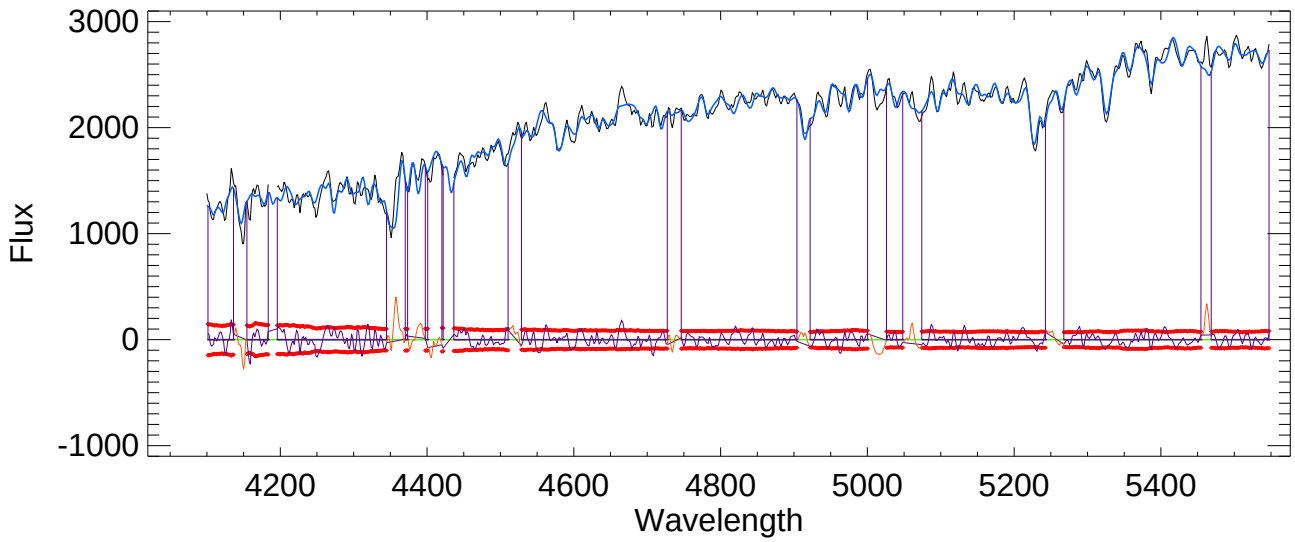

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

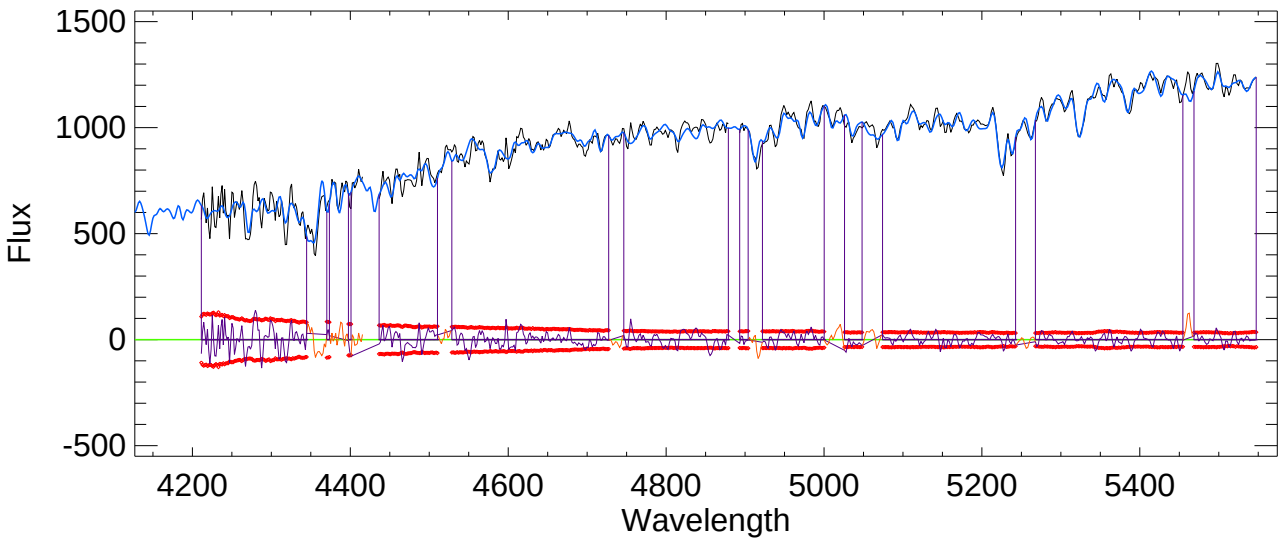

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

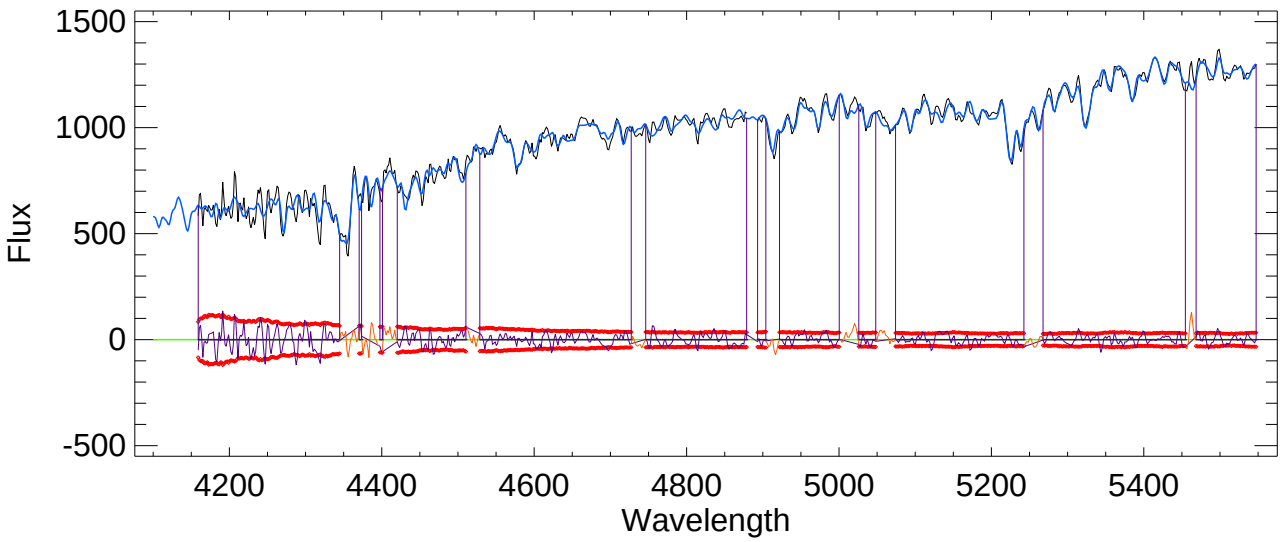

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

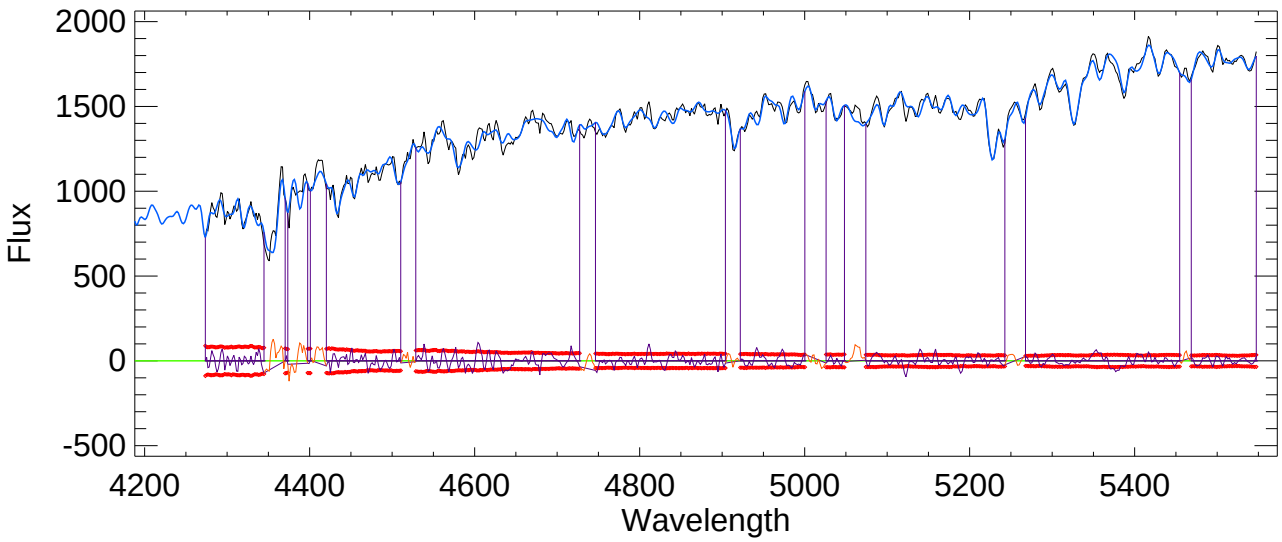

5000
4000
3000
2000
1000
0
-1000
Flux
4400
4600
4800
5000
5200
5400
Wavelength

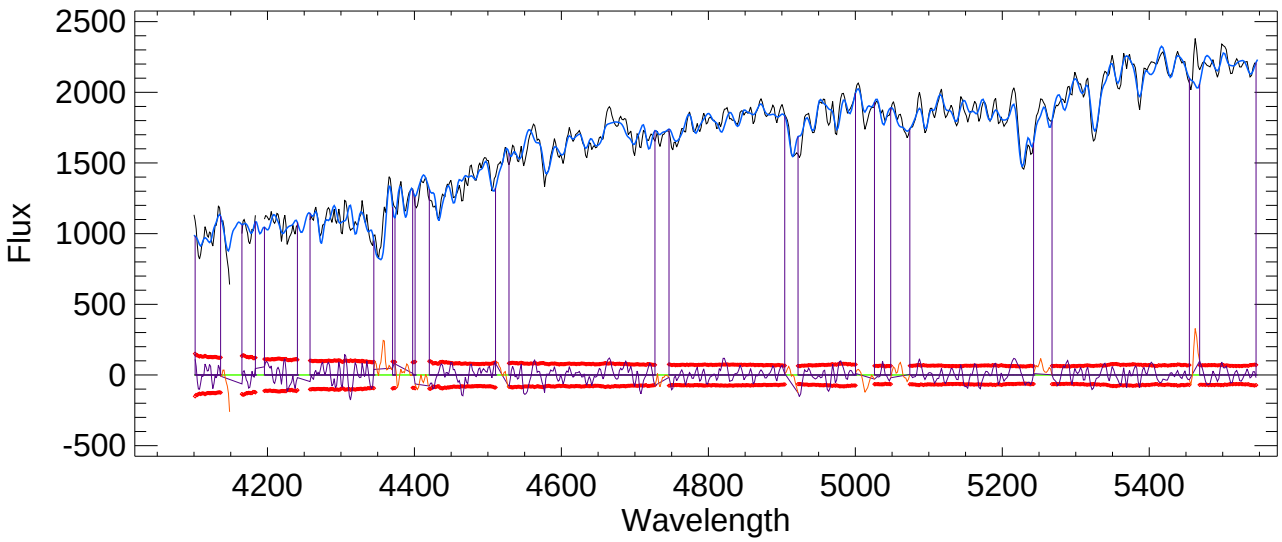

1.5•10^4
1.0•10^4
5.0•10^3
0
-5.0•10^3
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

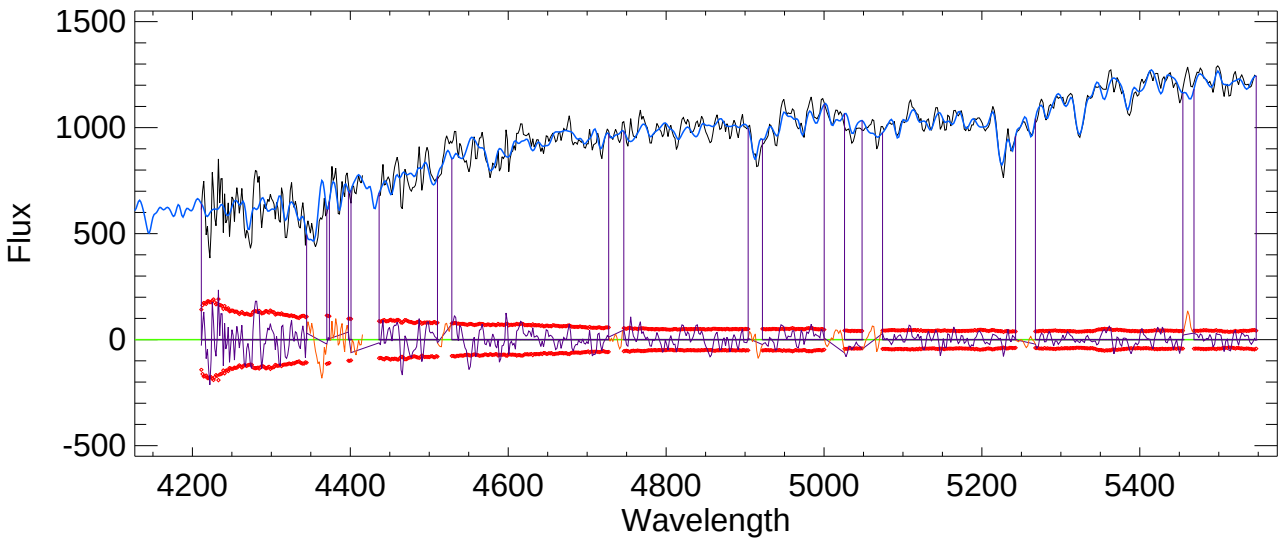

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

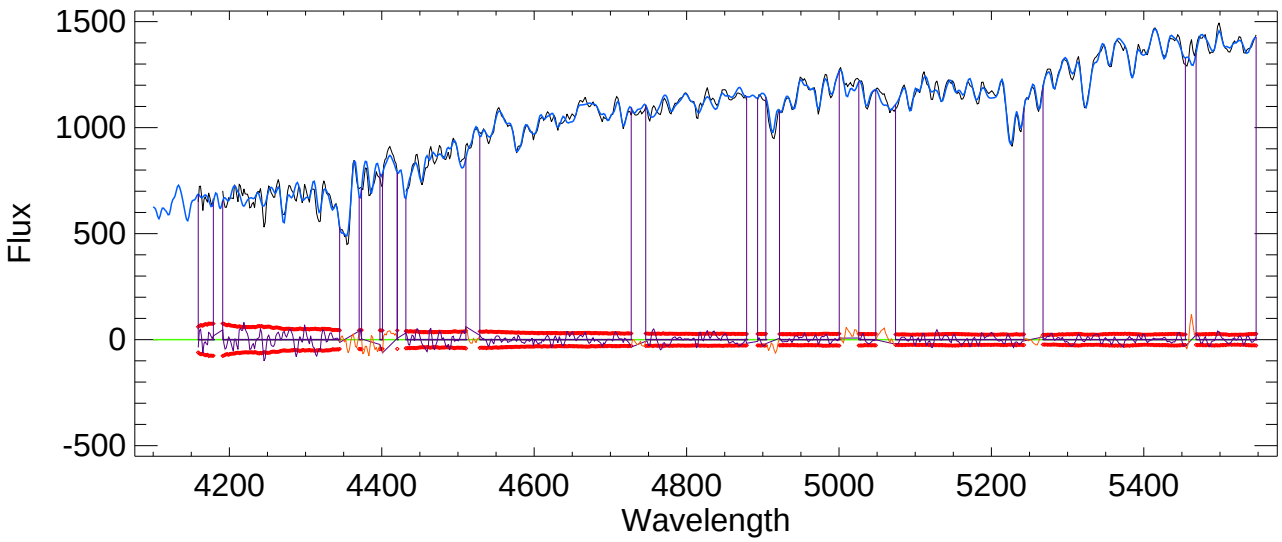

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

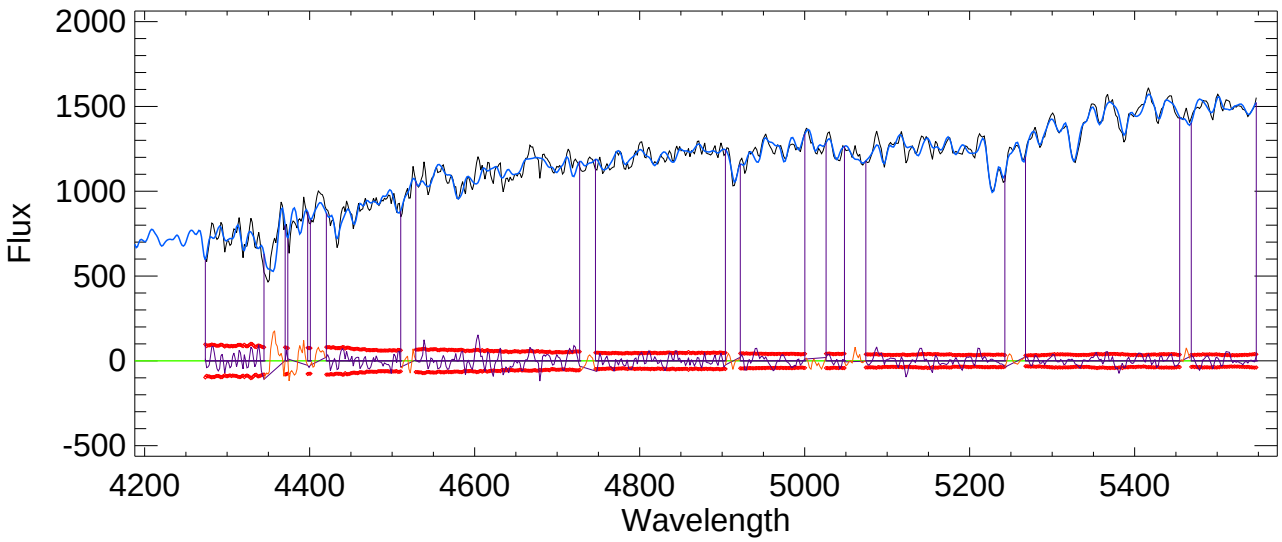

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

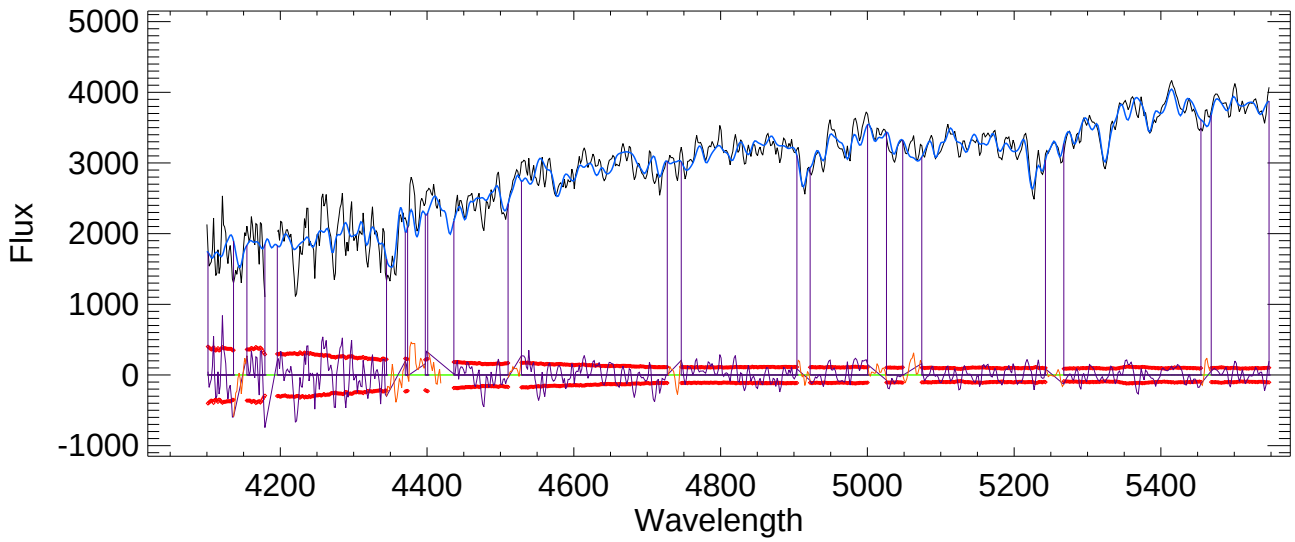

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

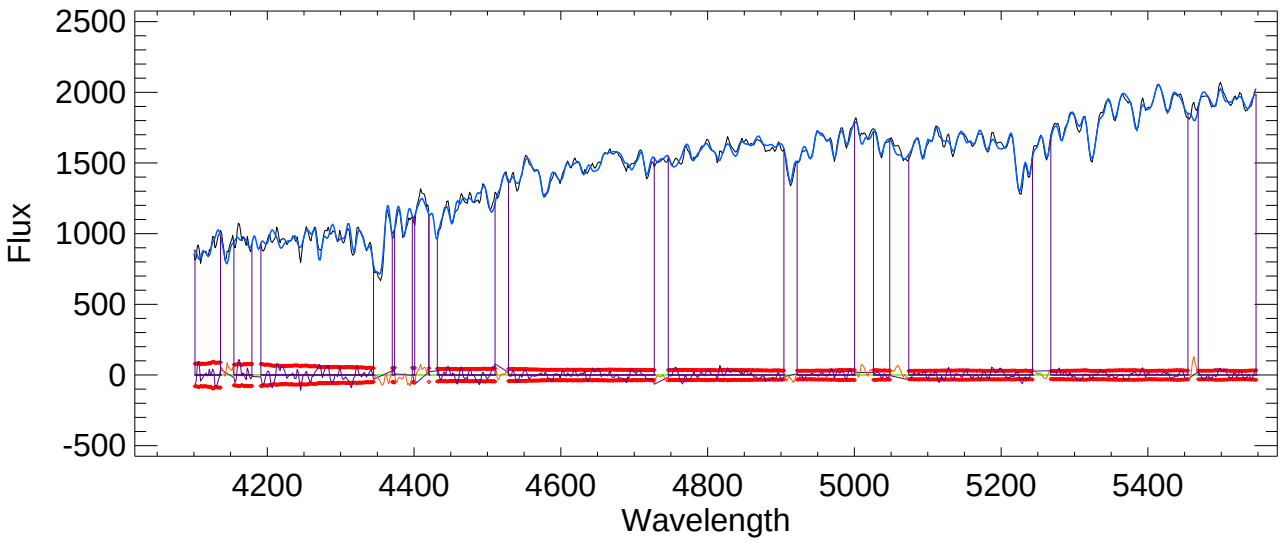

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

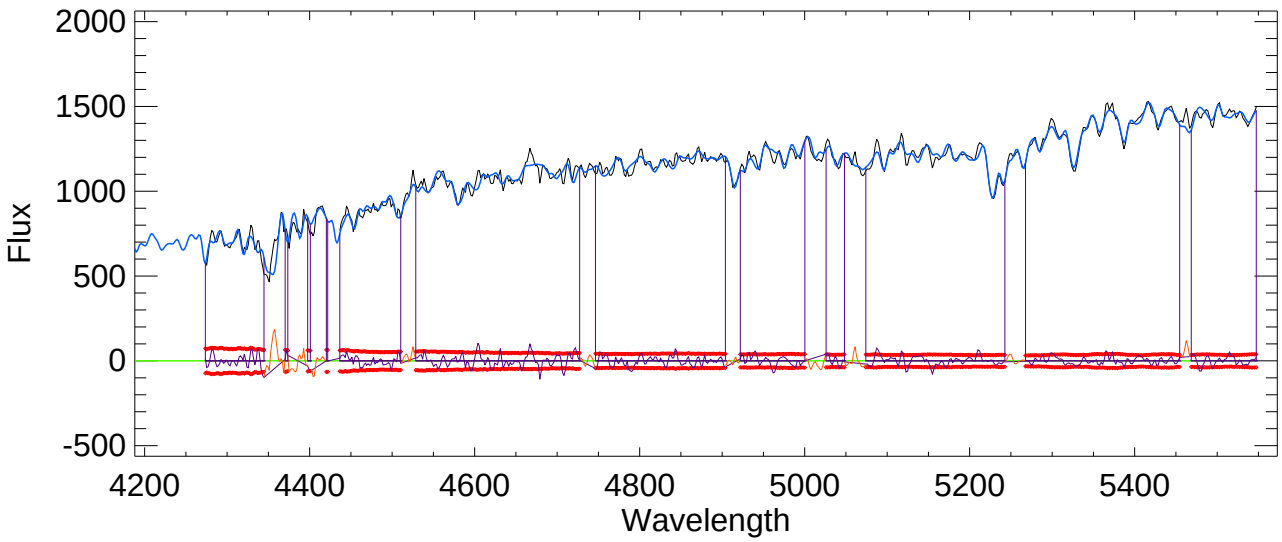

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

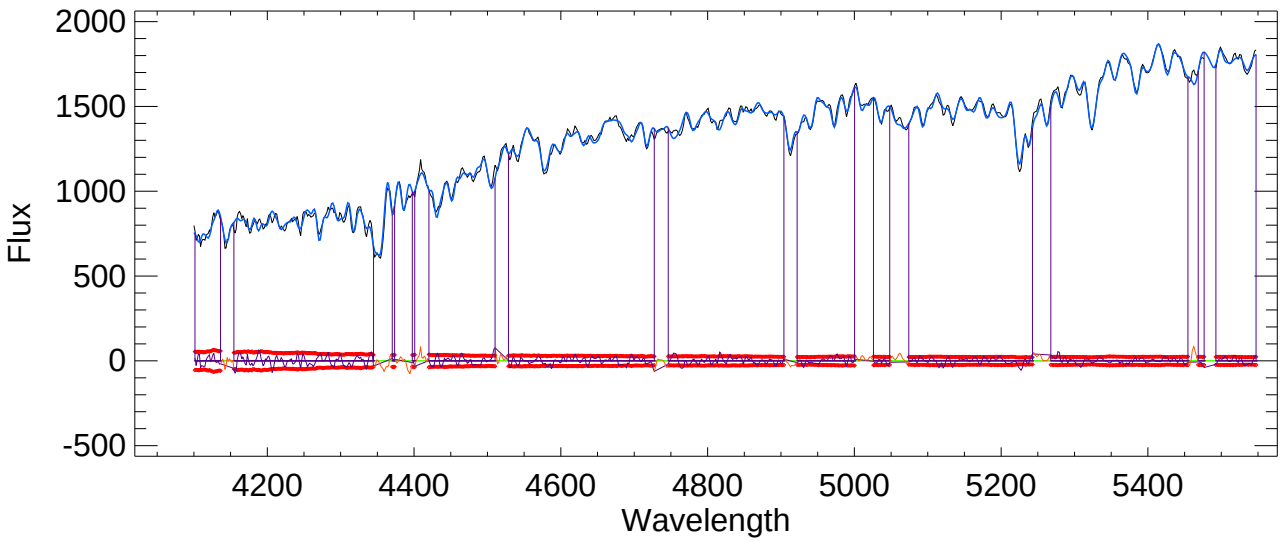

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

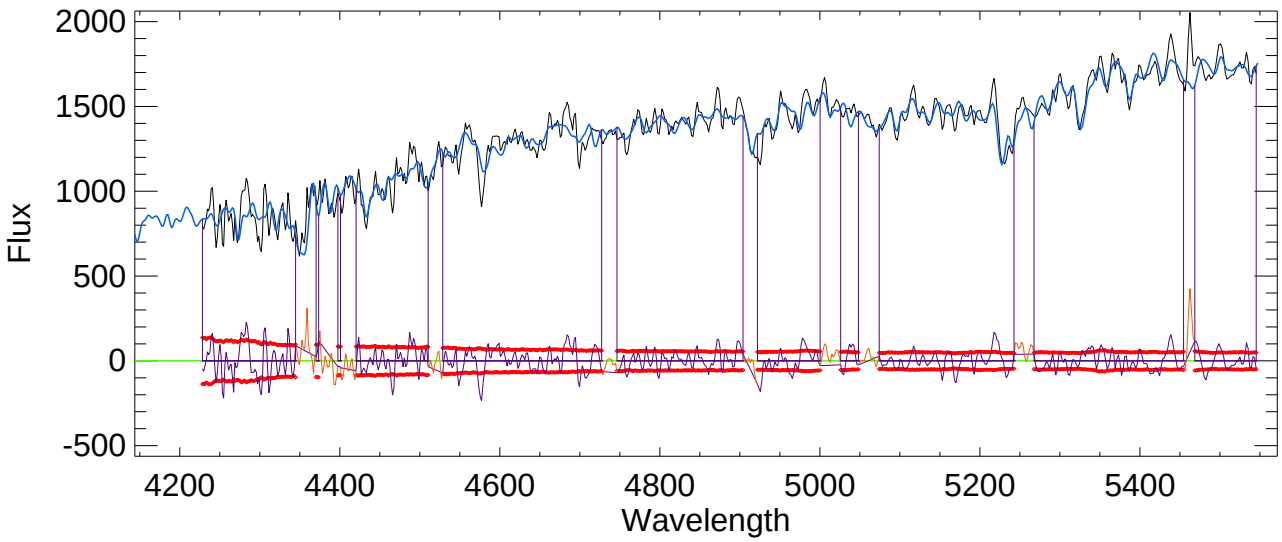

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

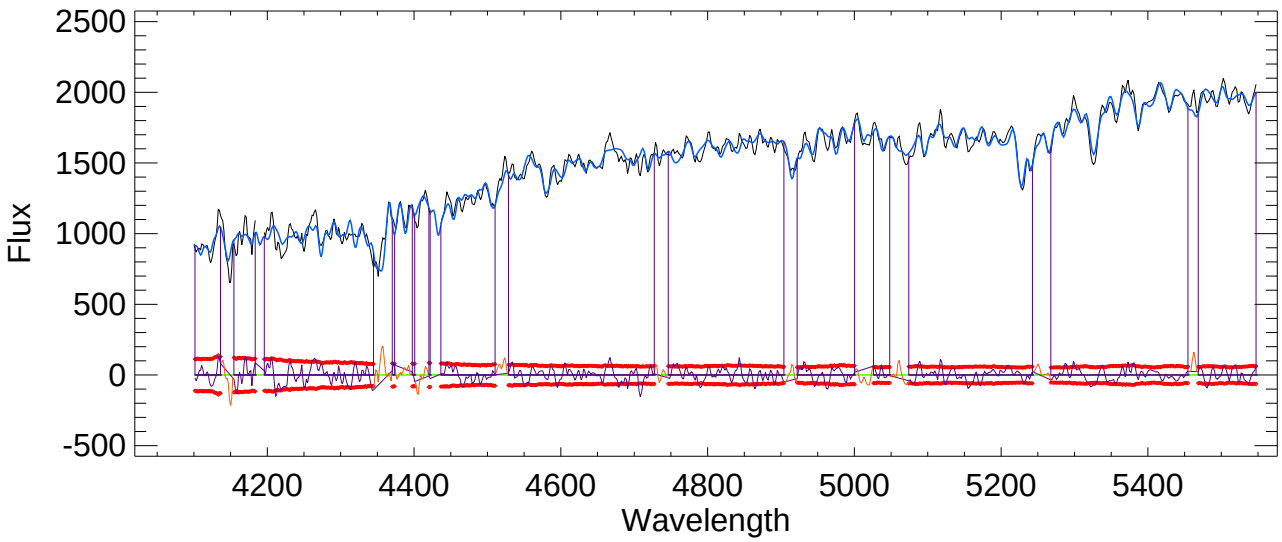

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

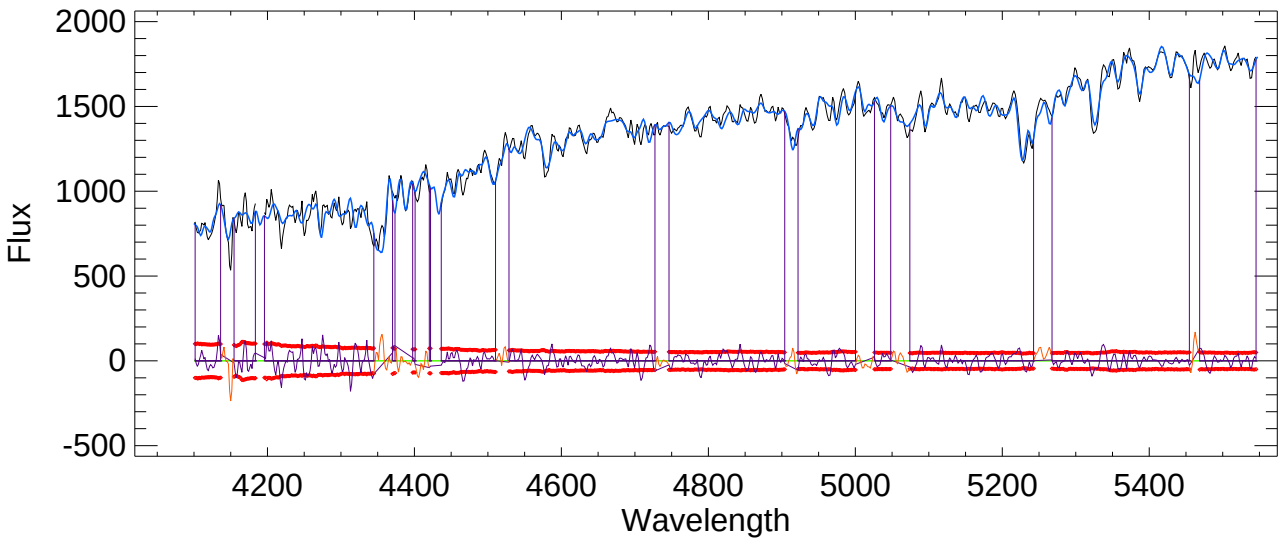

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

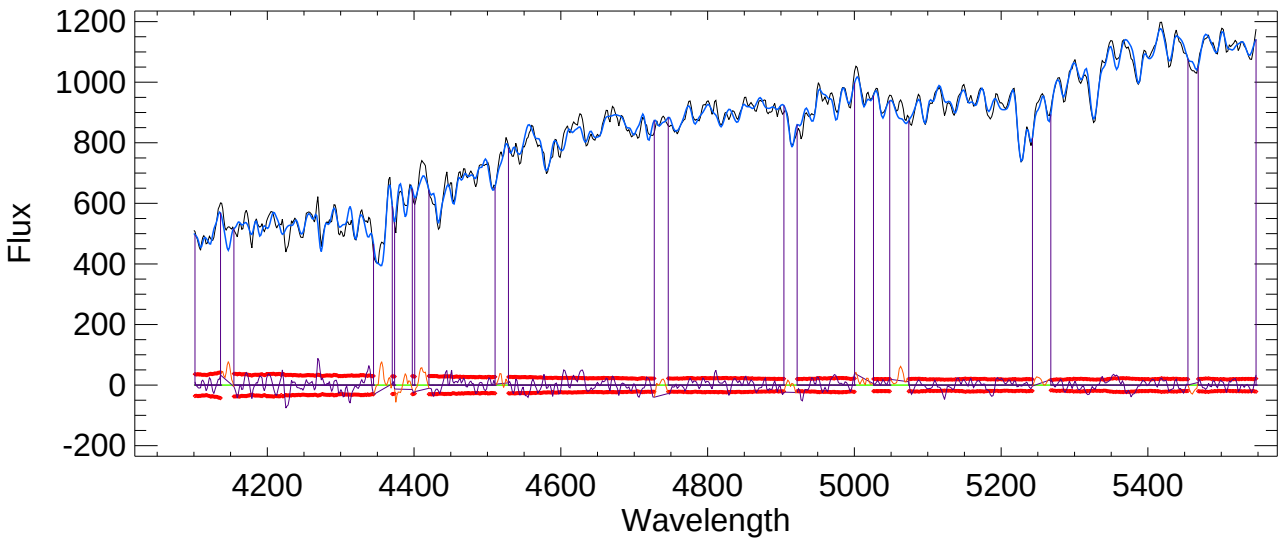

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

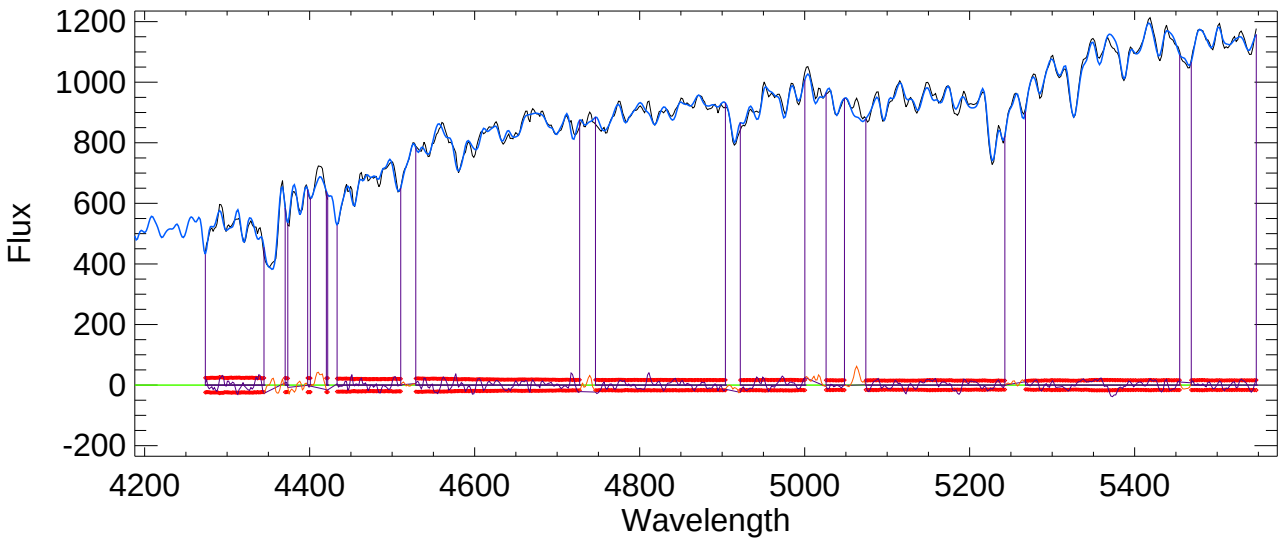

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

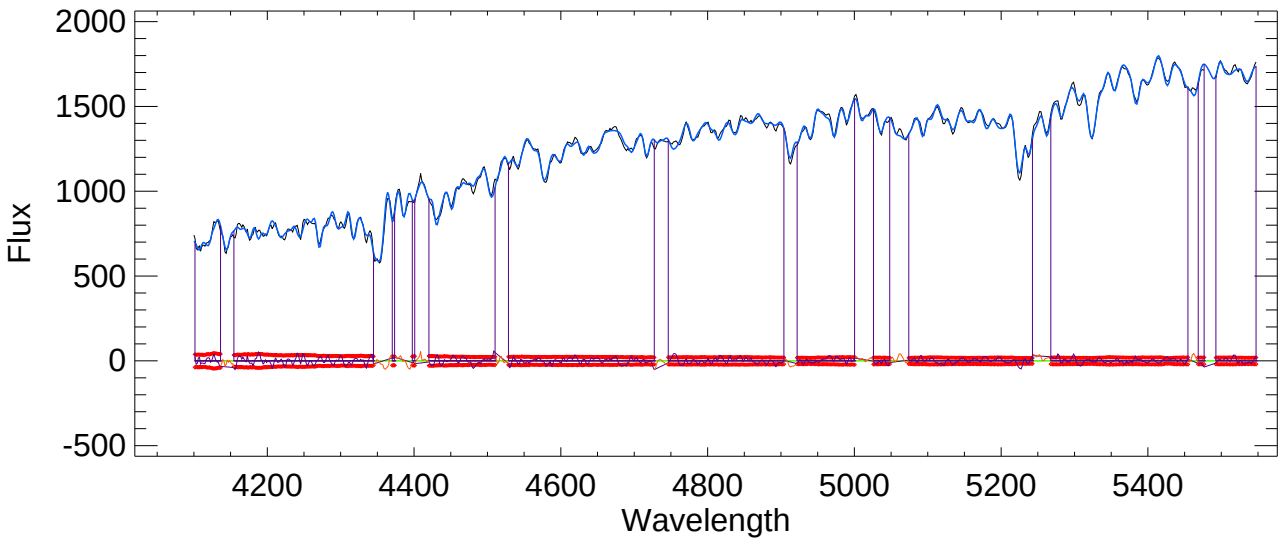

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

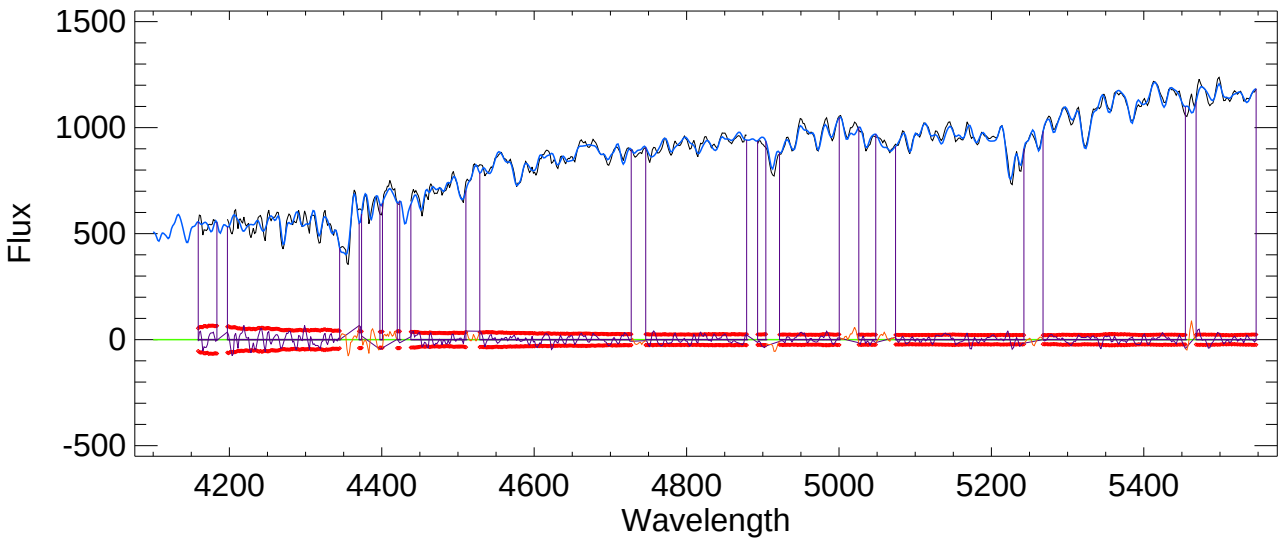

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

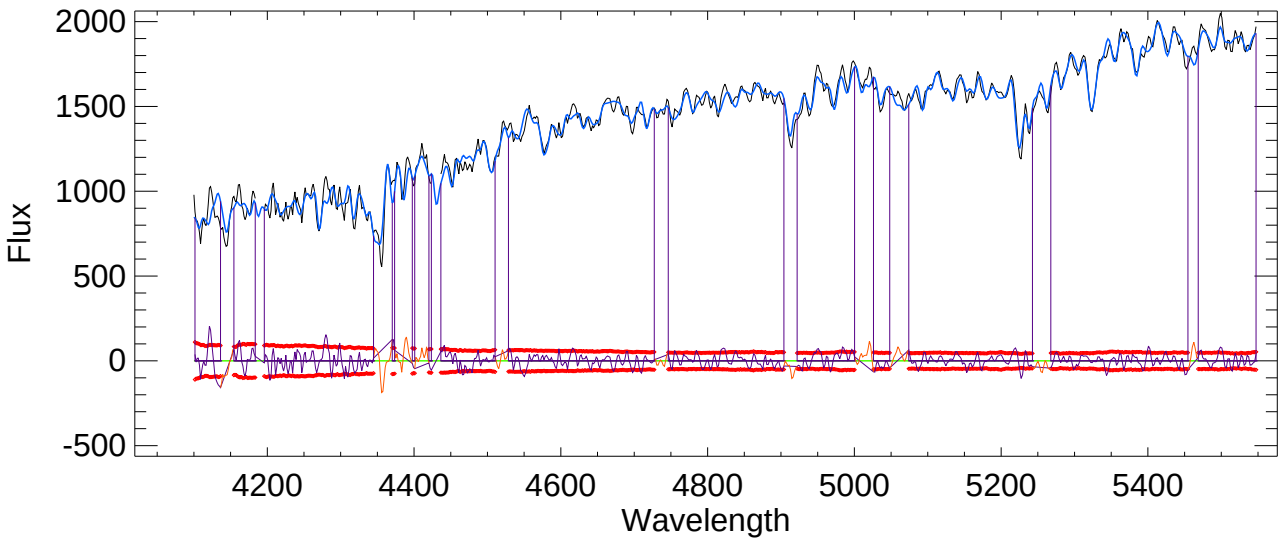

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

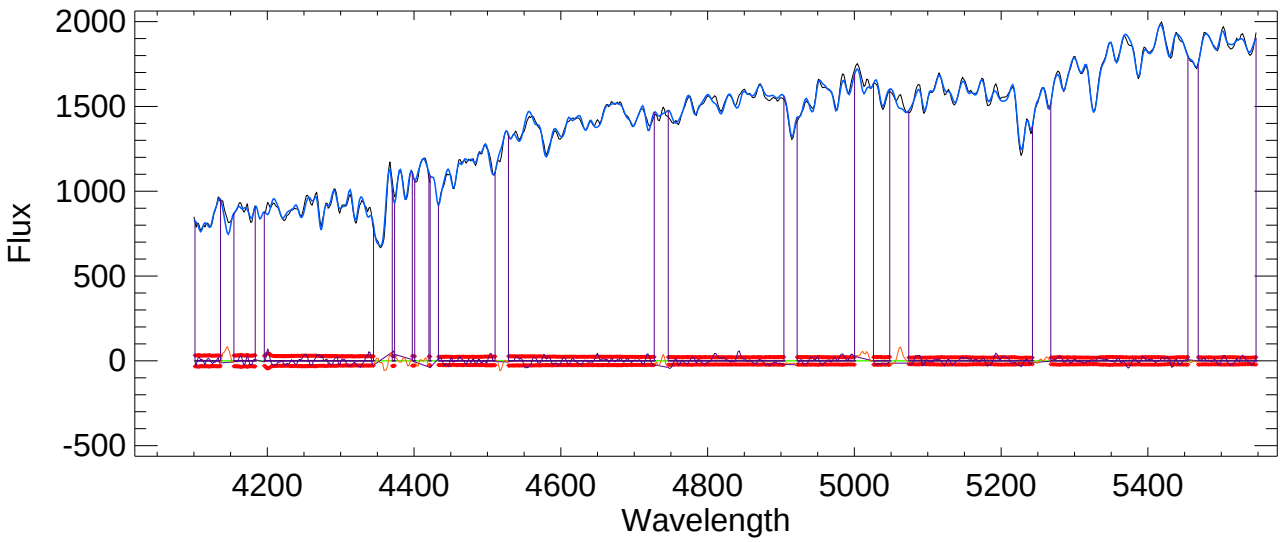

1200
1000
800
600
400
200
0
-200
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

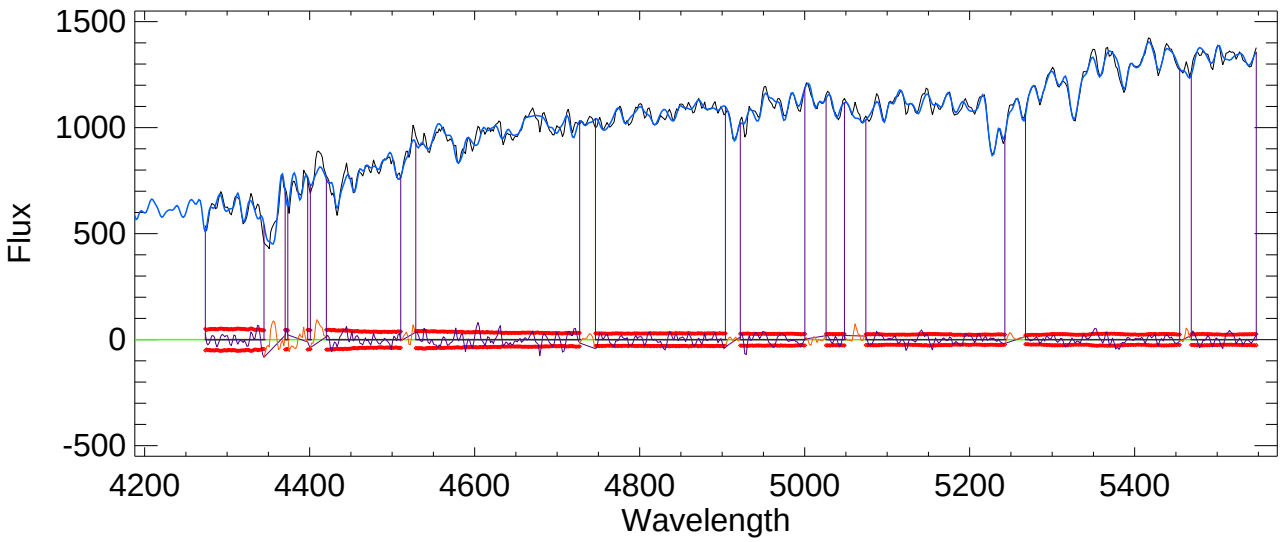

1200
1000
800
600
400
200
0
-200
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

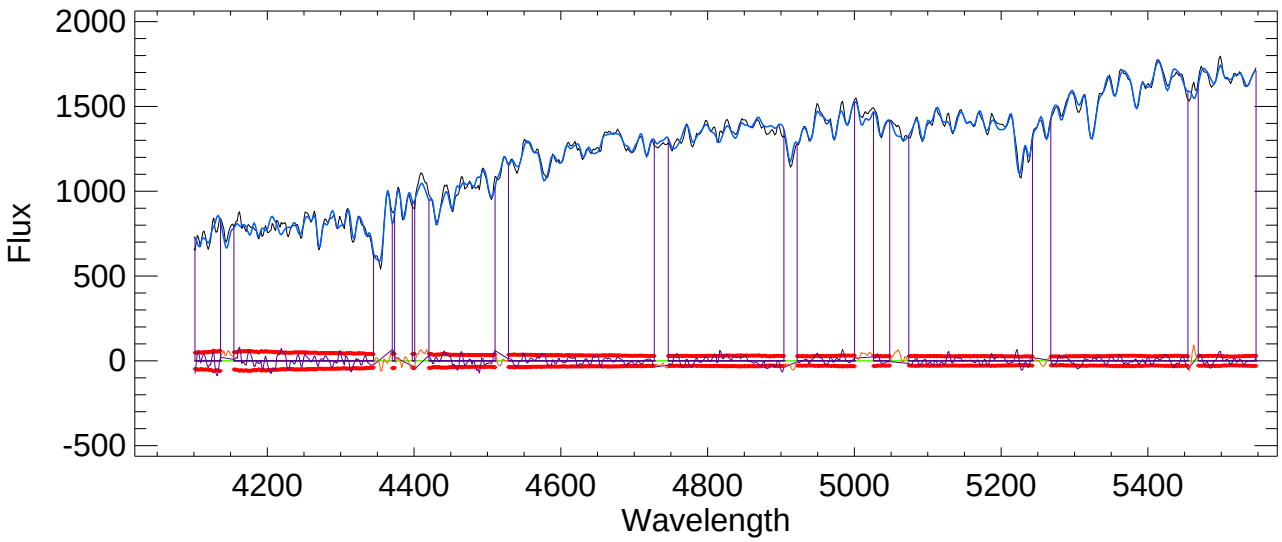

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

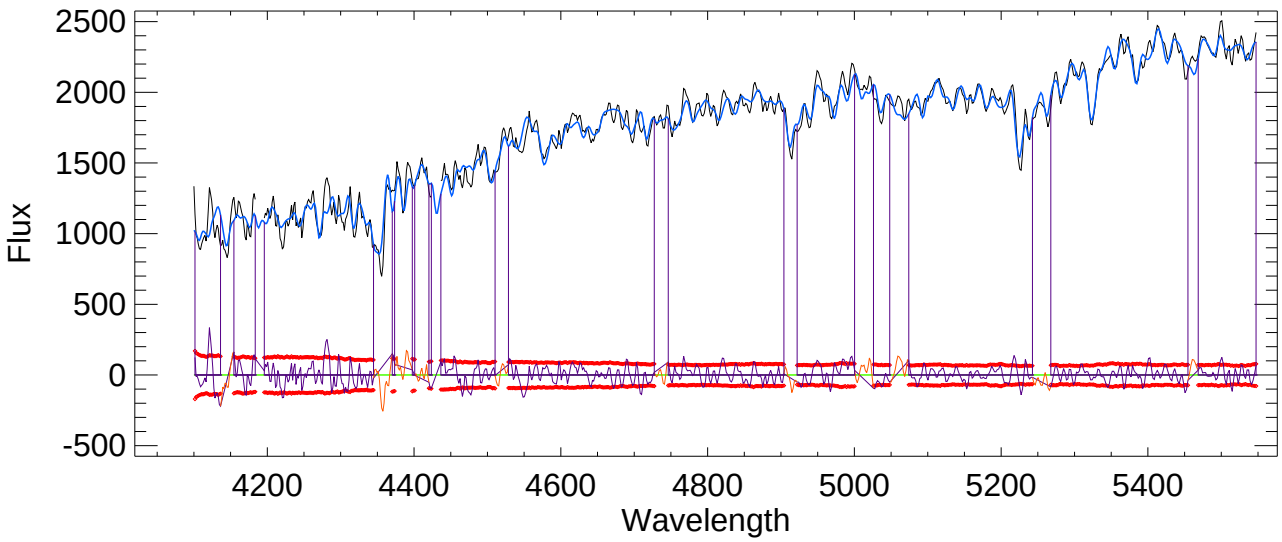

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

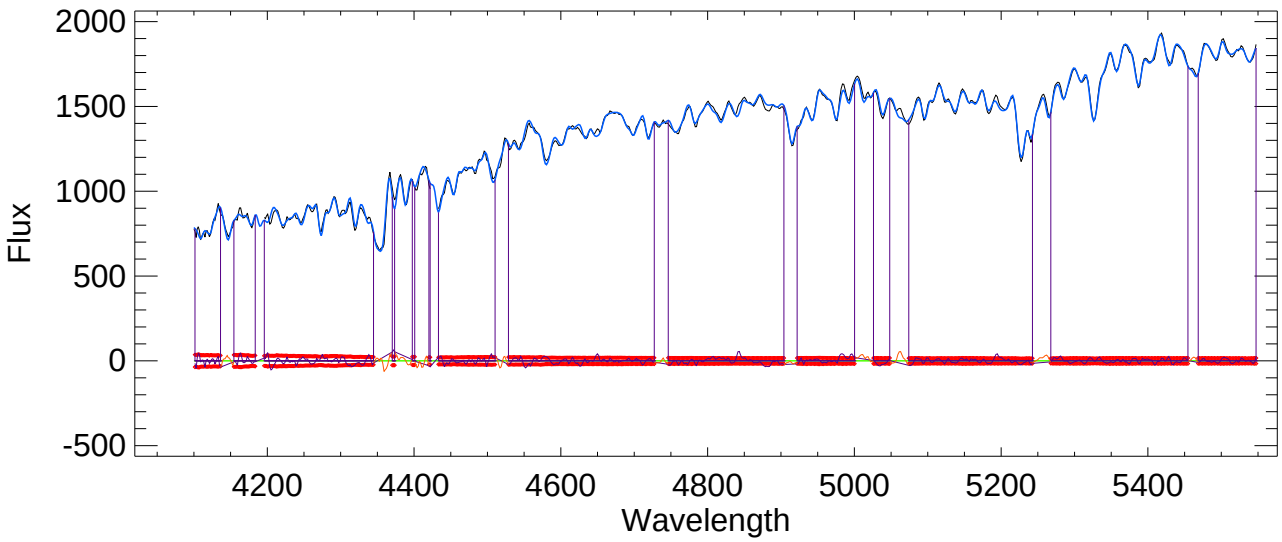

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

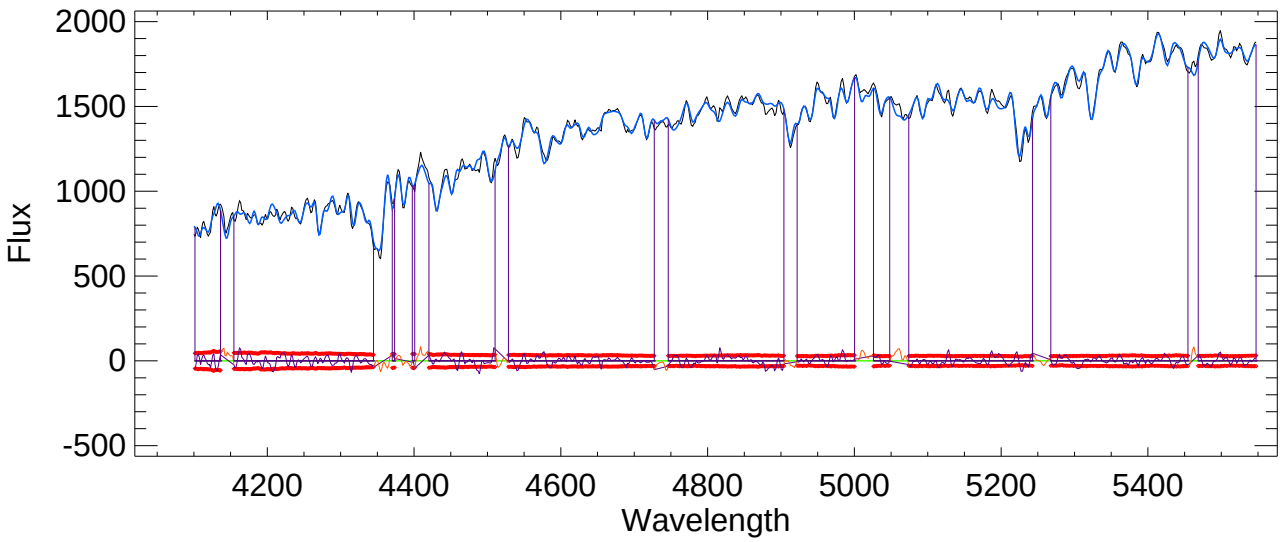

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

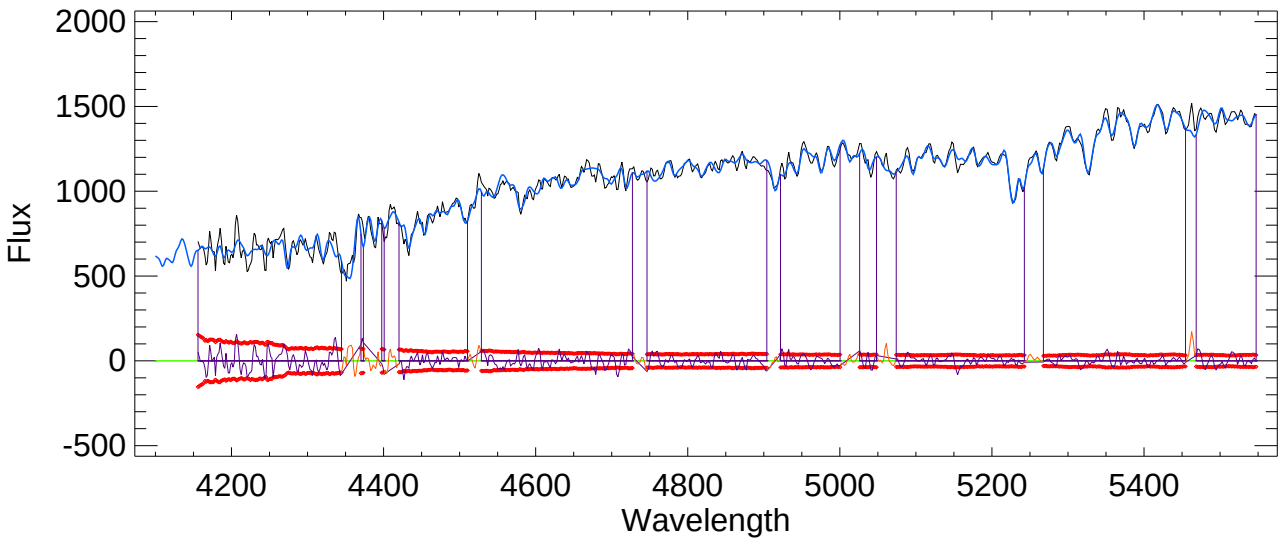

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

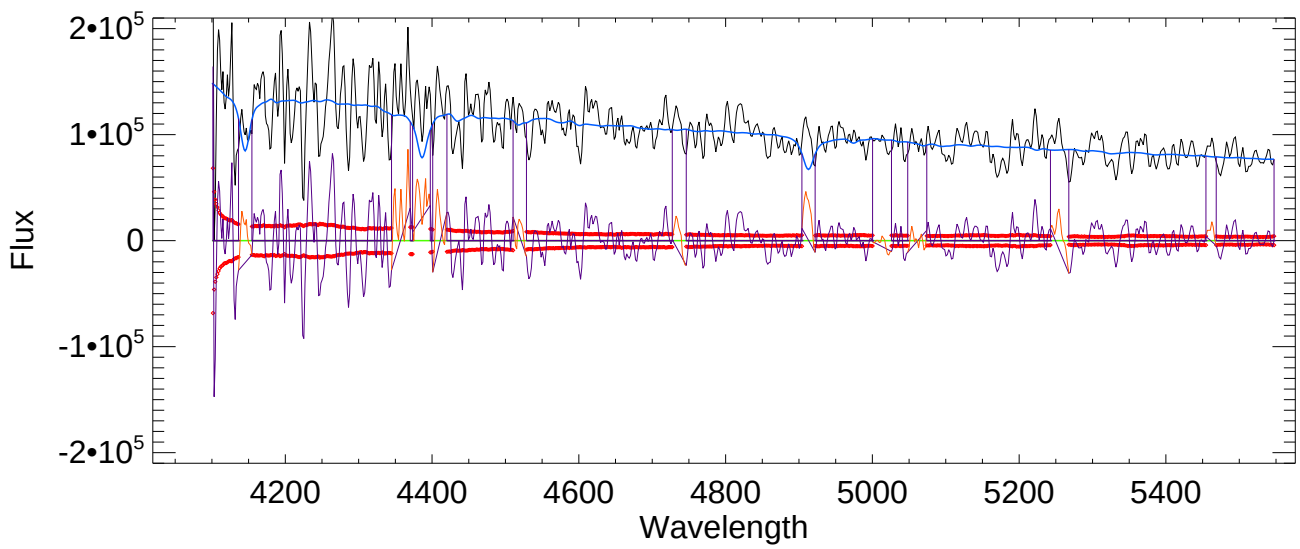

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

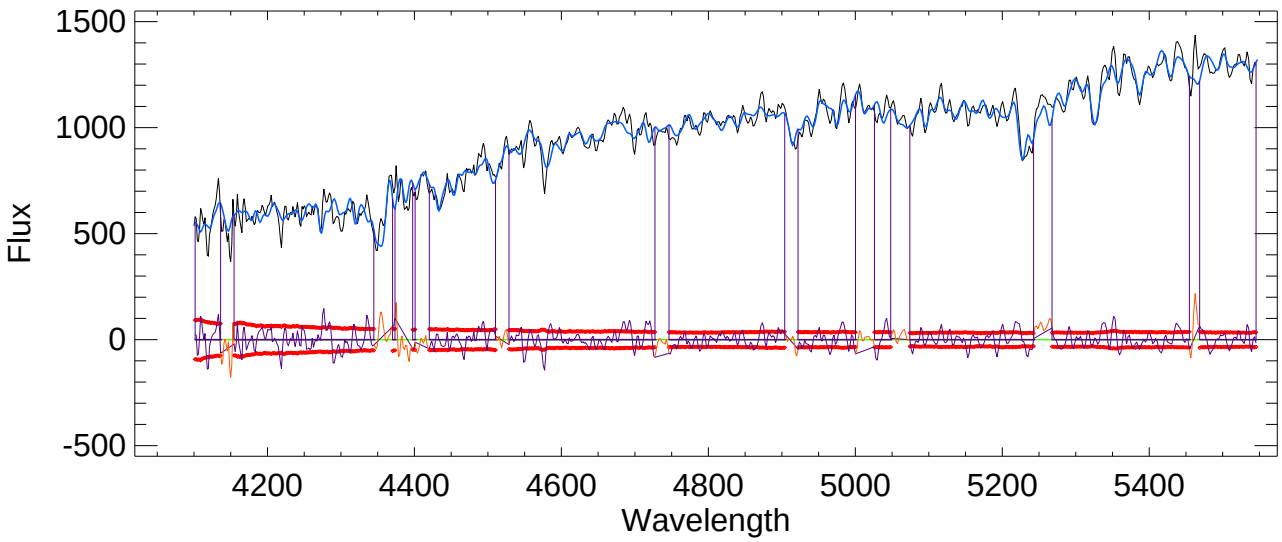

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

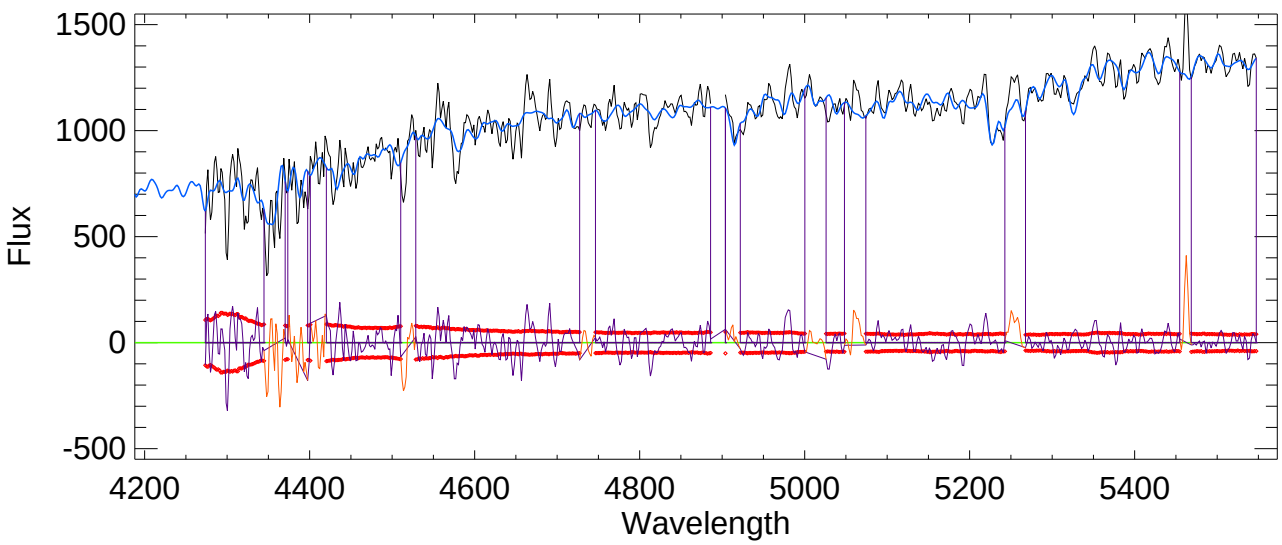

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

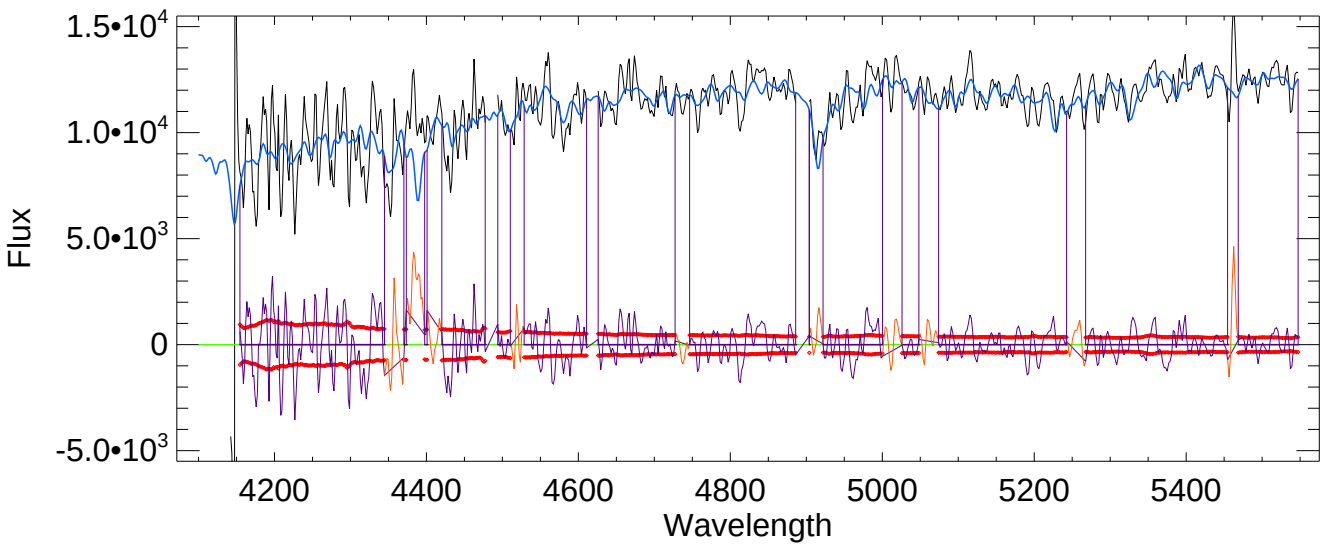

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

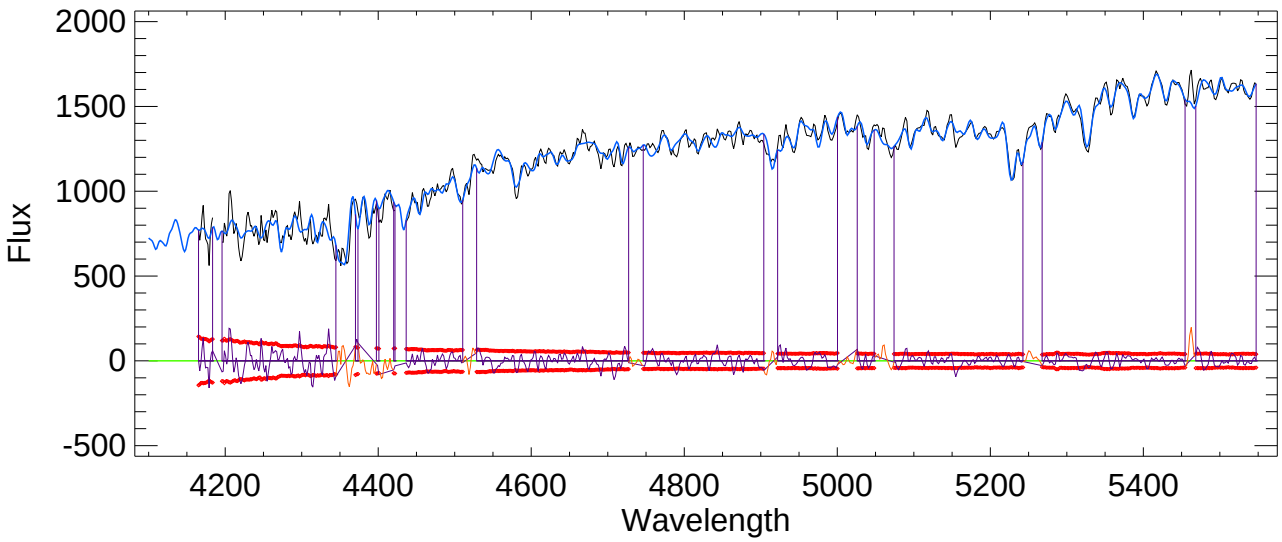

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

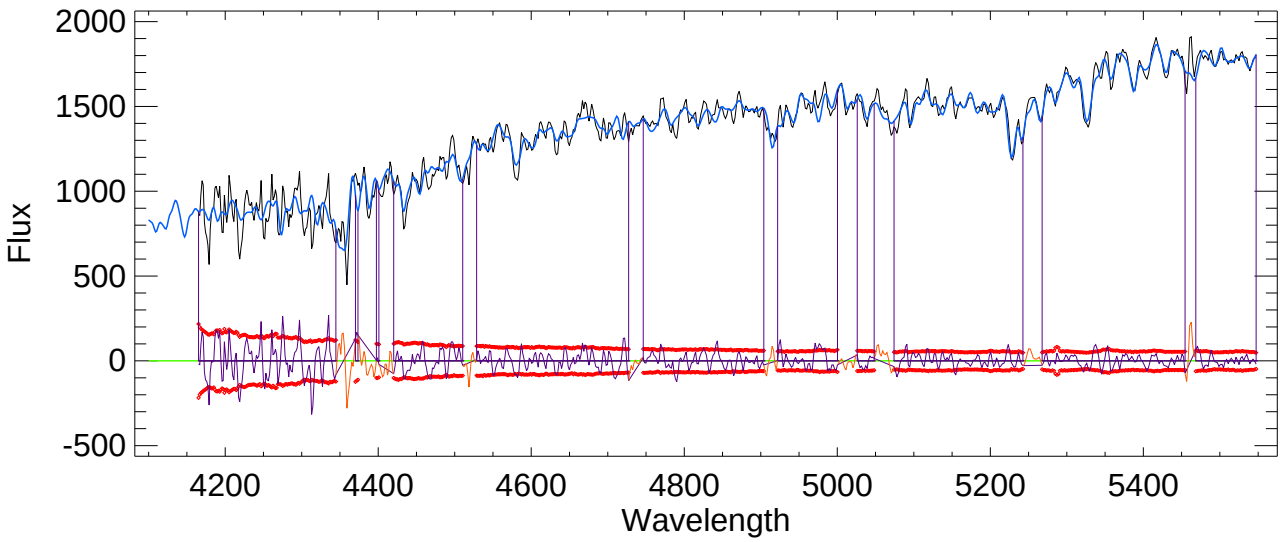

2•10^5
1•10^5
0
-1•10^5
-2•10^5
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

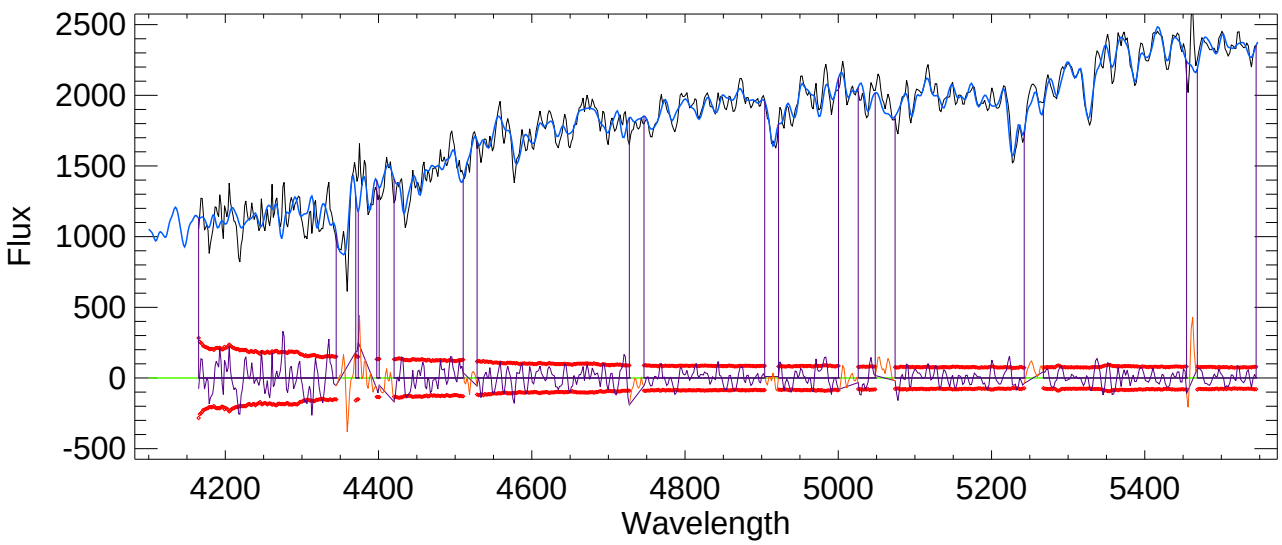

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

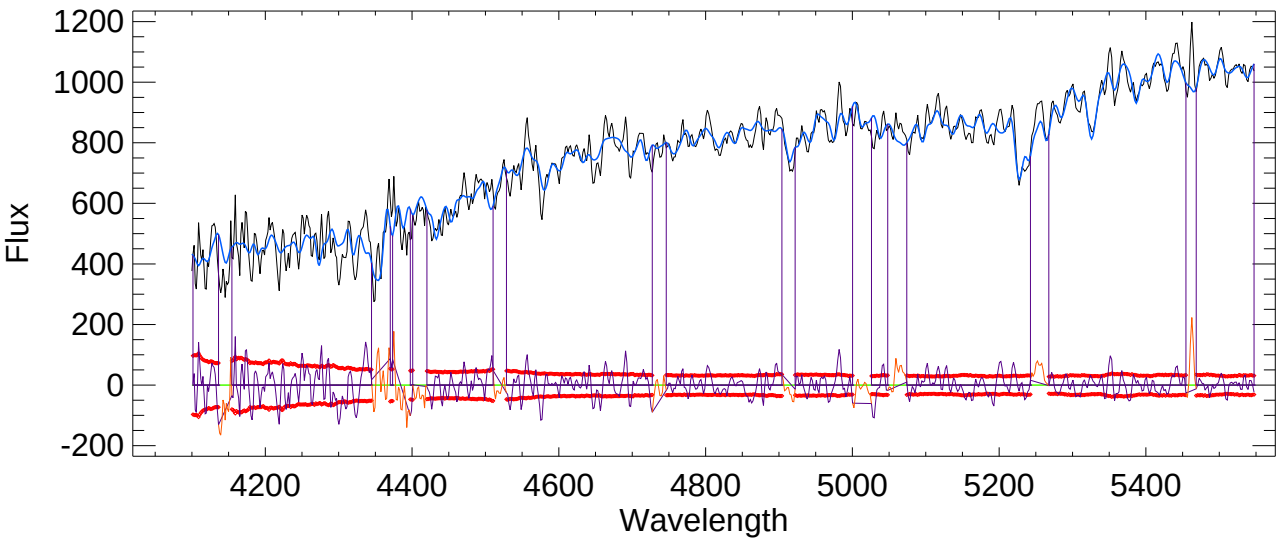

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

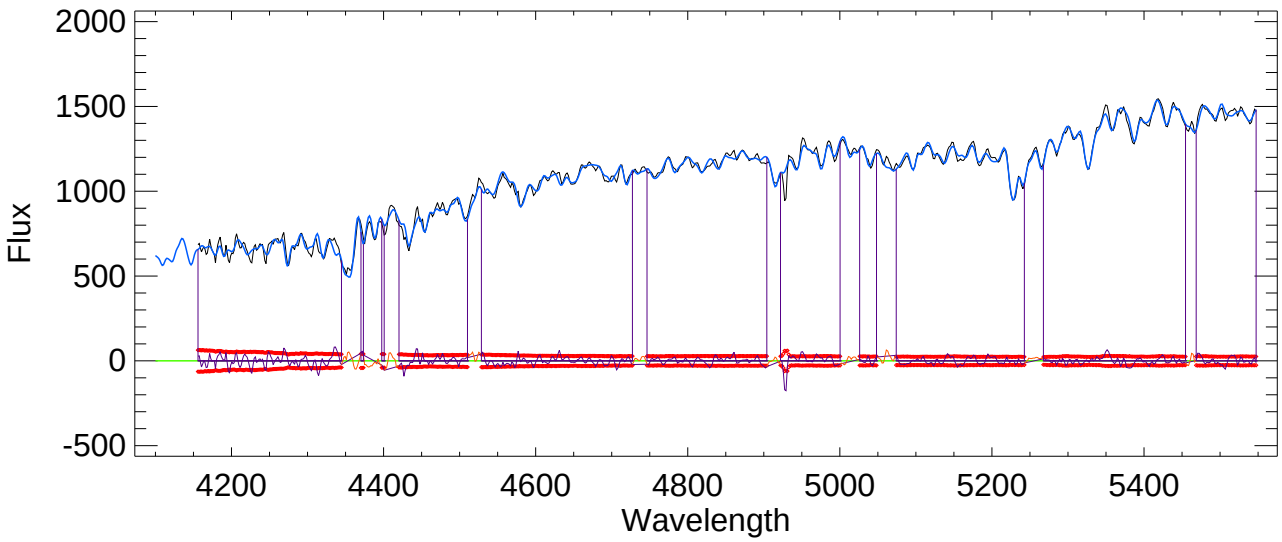

1.5•10^4
1.0•10^4
5.0•10^3
0
-5.0•10^3
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

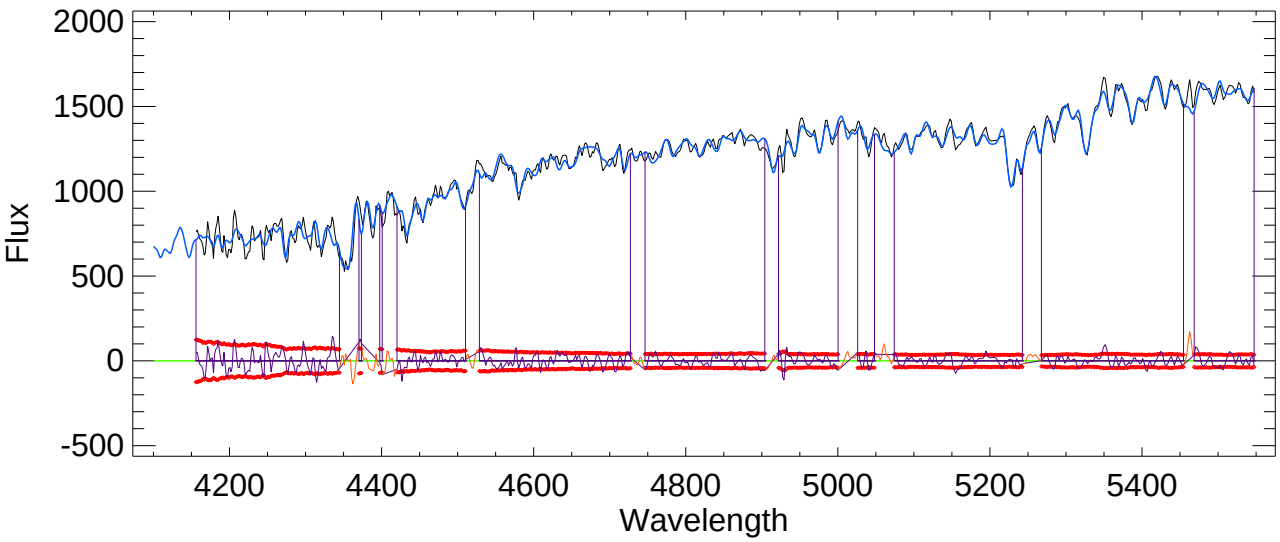

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

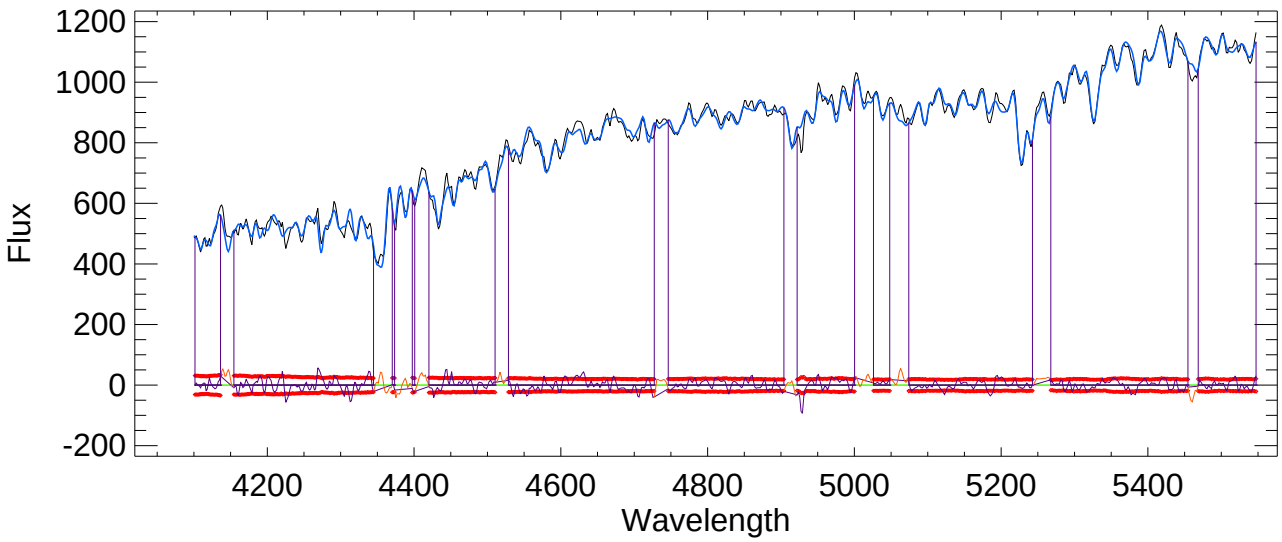

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

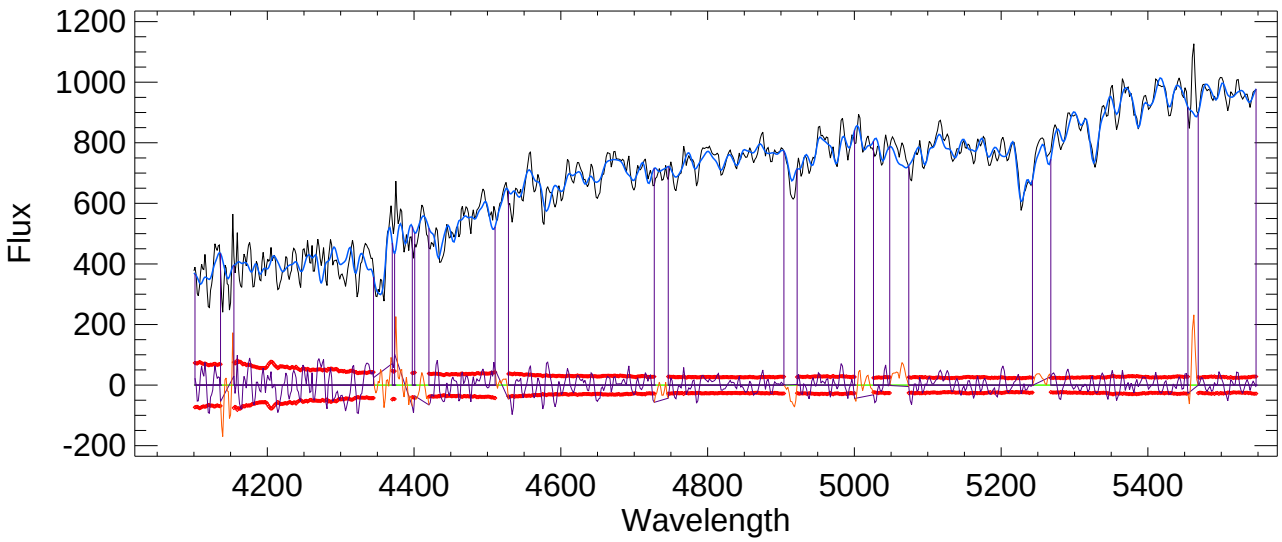

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

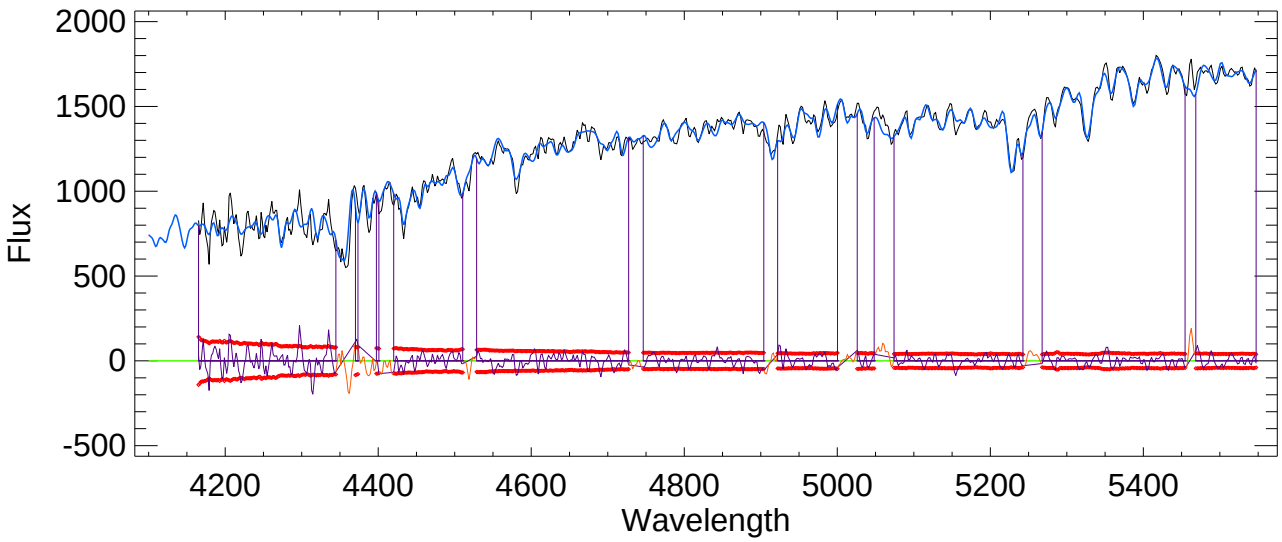

1200
1000
800
600
400
200
0
-200
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

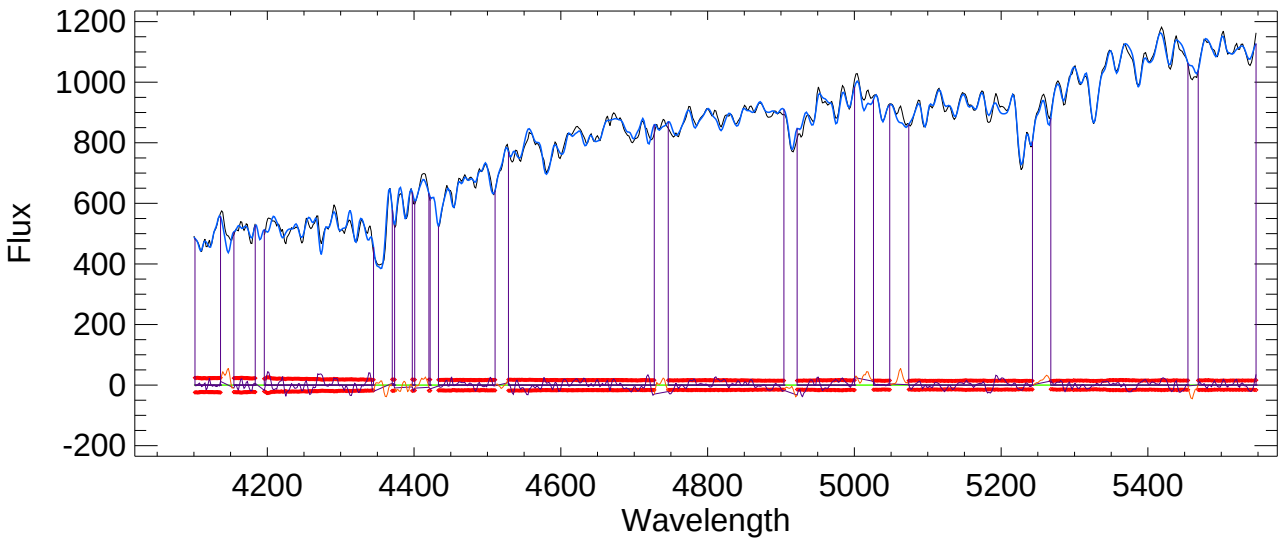

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

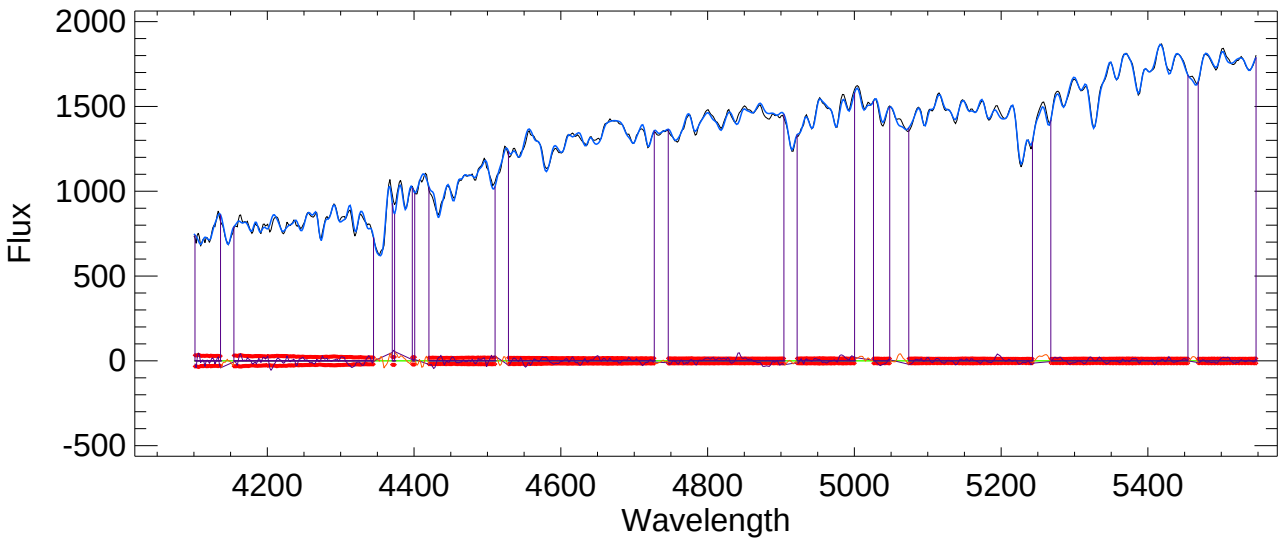

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

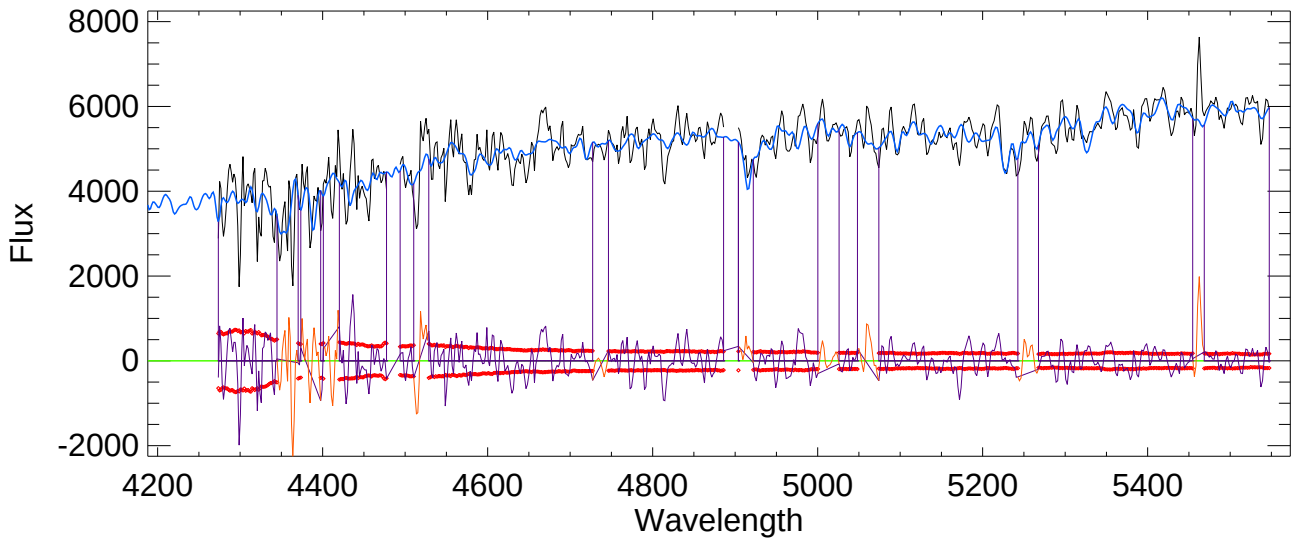

1200
1000
800
600
400
200
0
-200
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

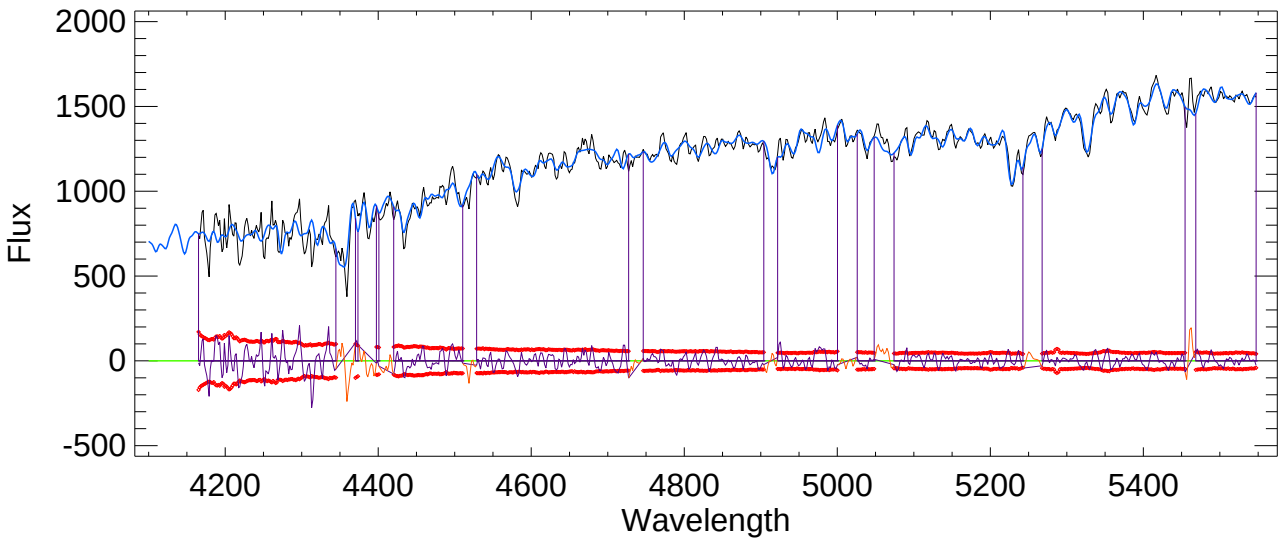

1200
1000
800
600
400
200
0
-200
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

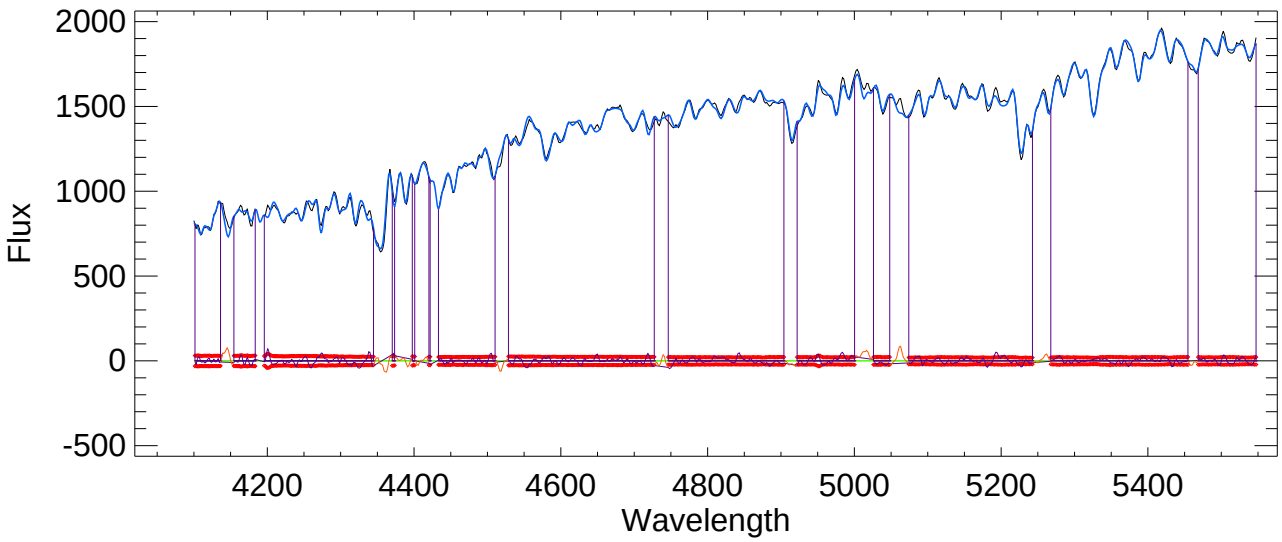

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

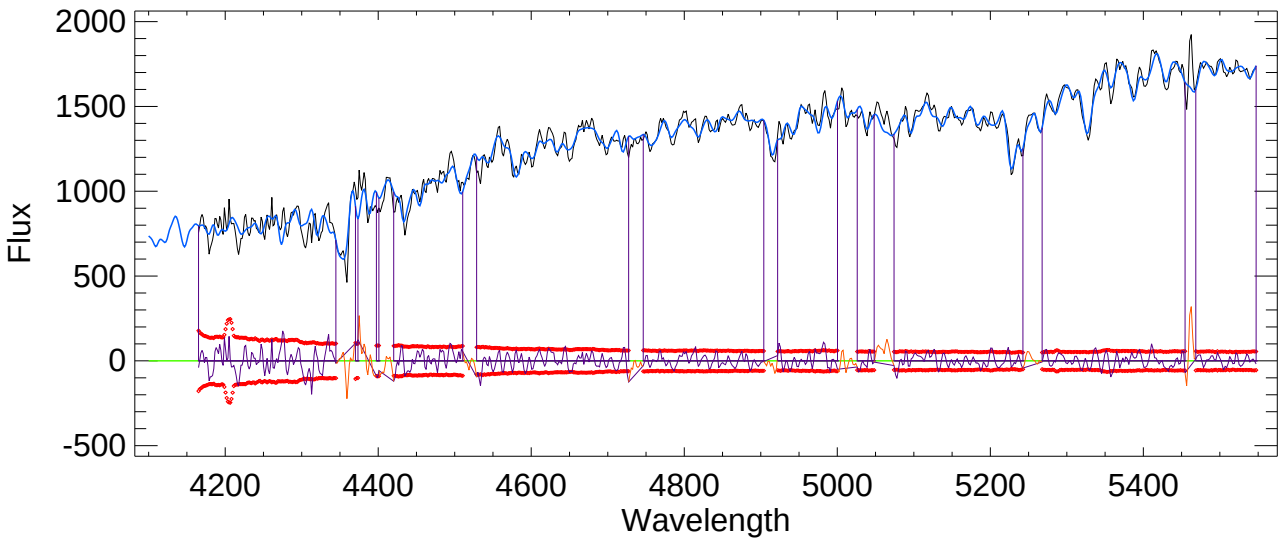

1200
1000
800
600
400
200
0
-200
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

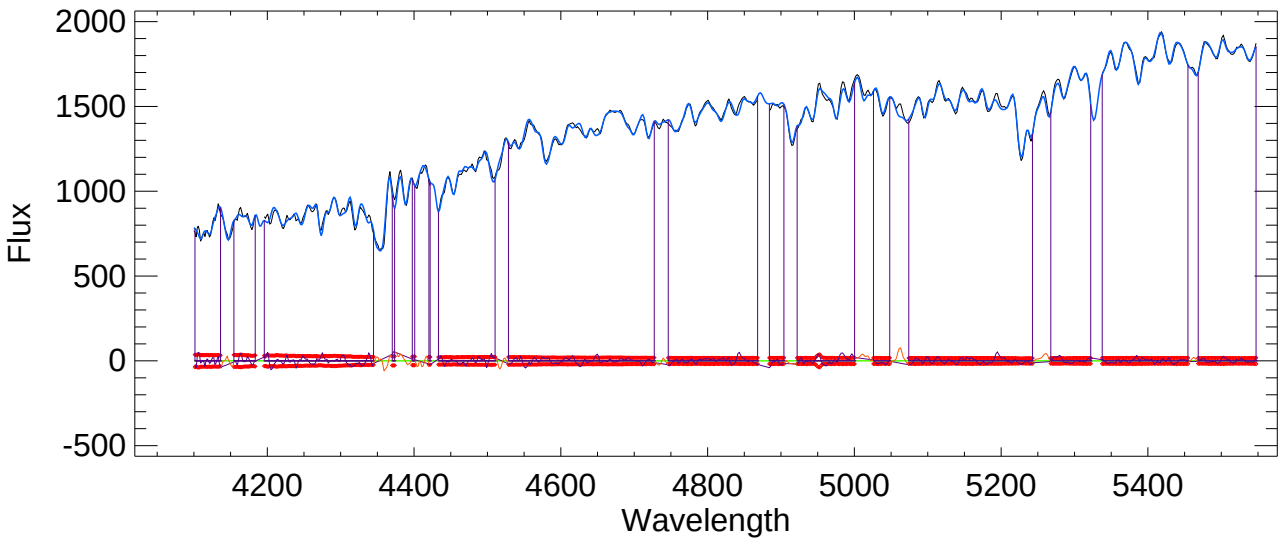

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

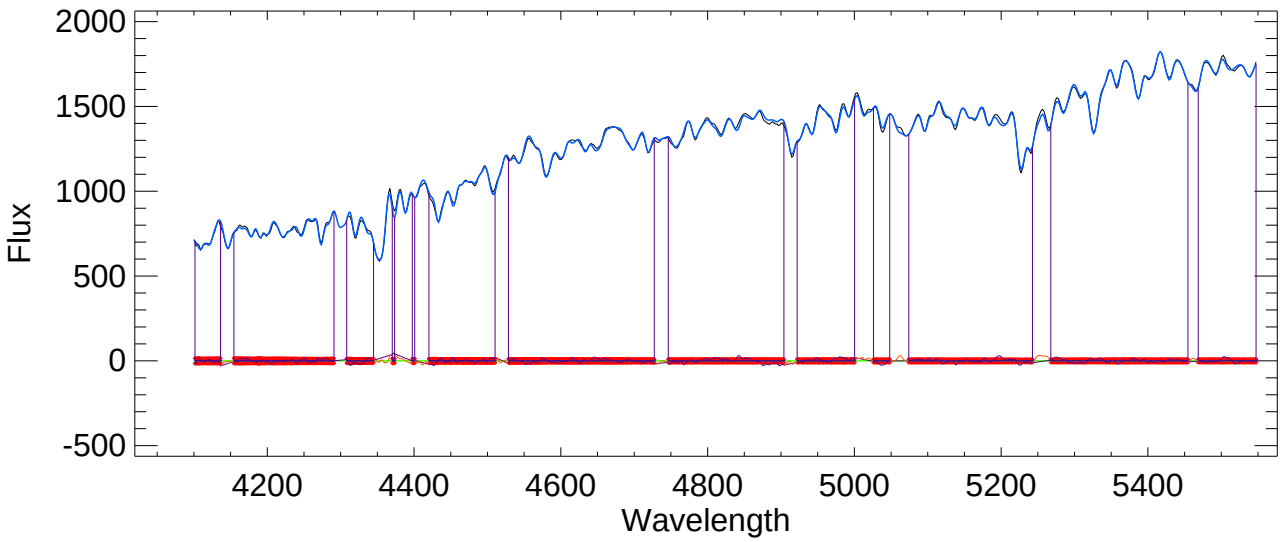

8000
6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

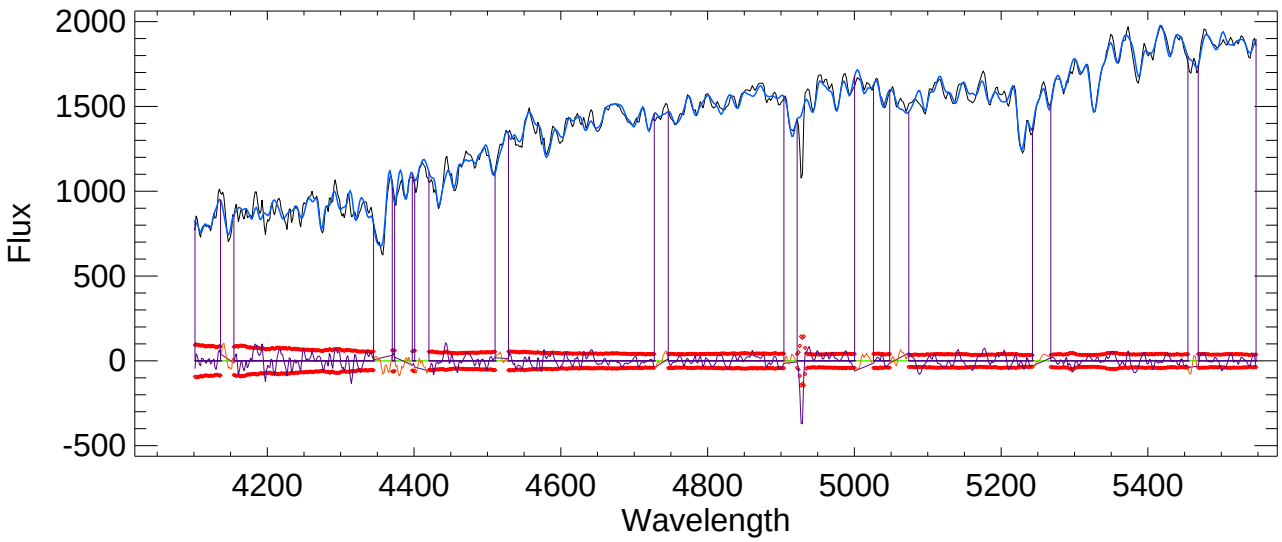

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

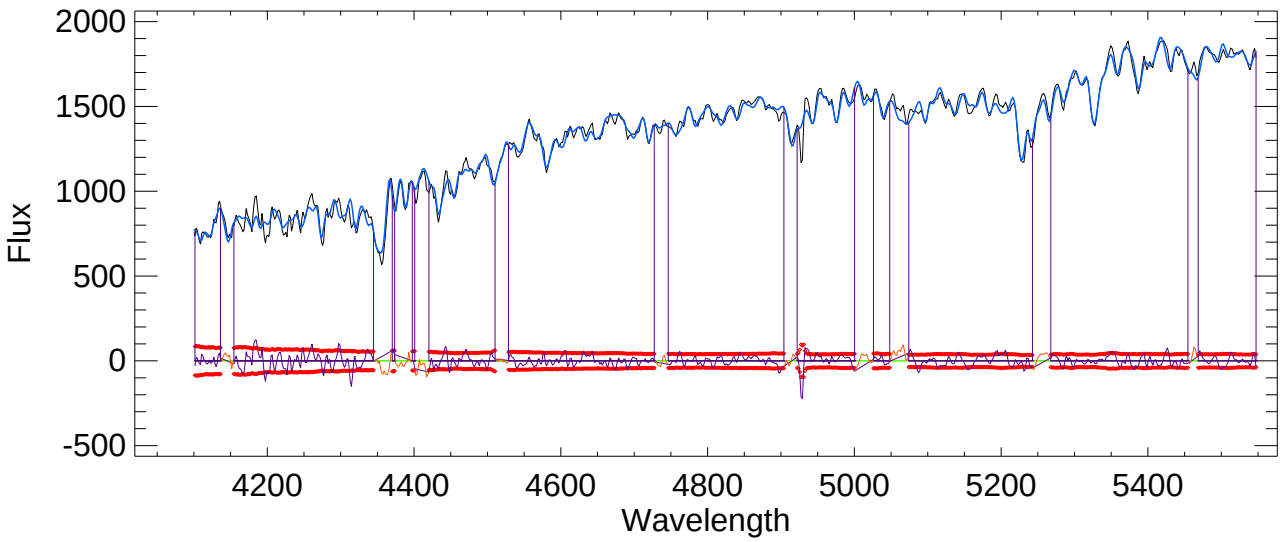

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

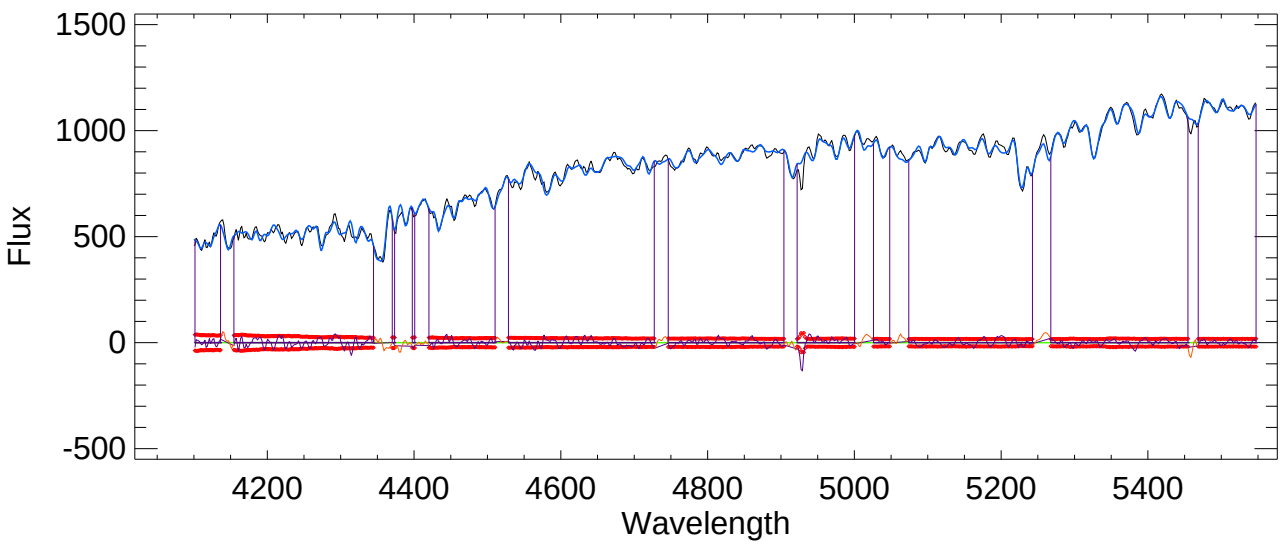

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

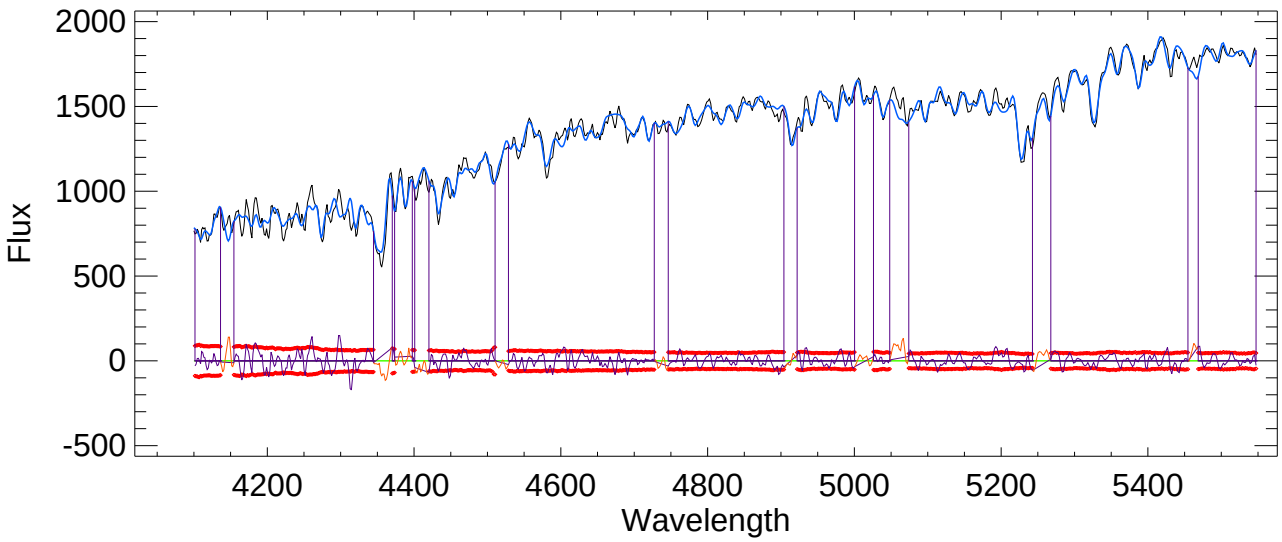

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

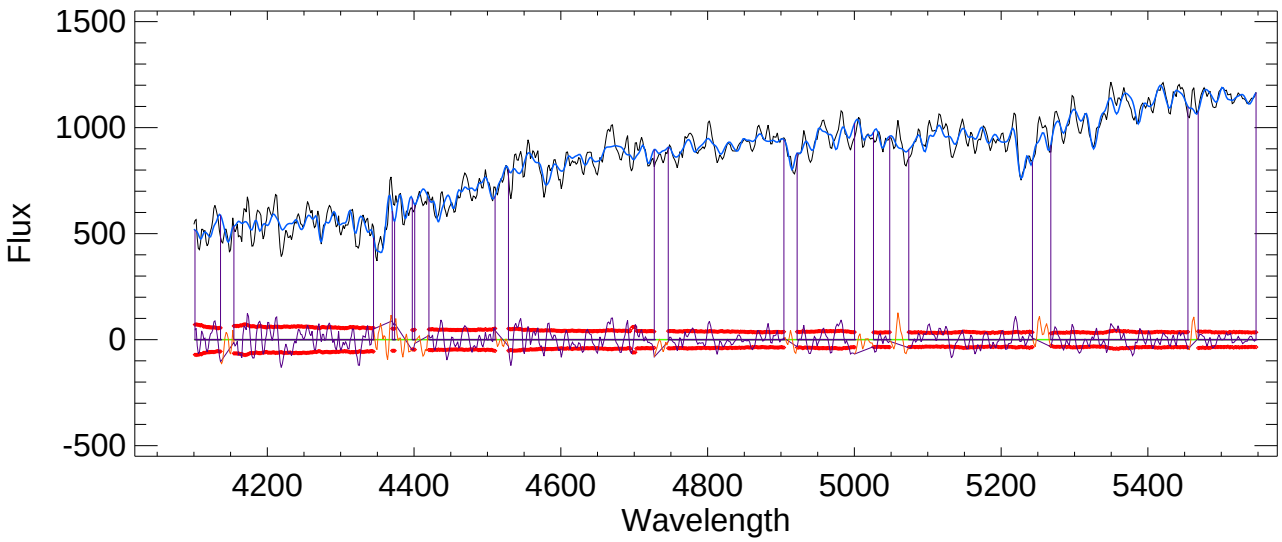

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

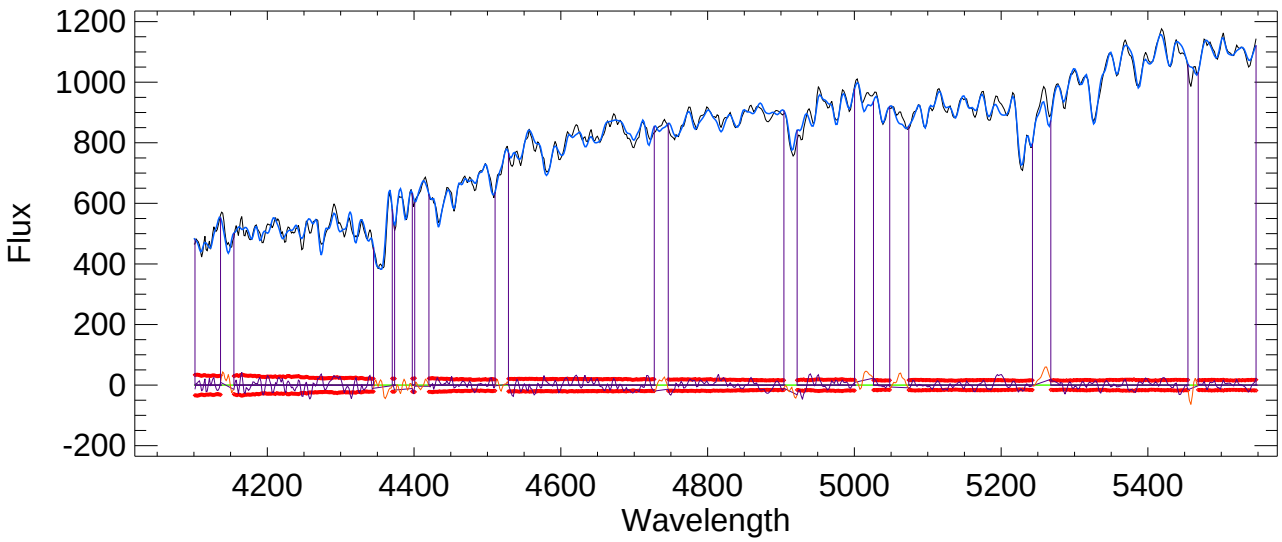

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

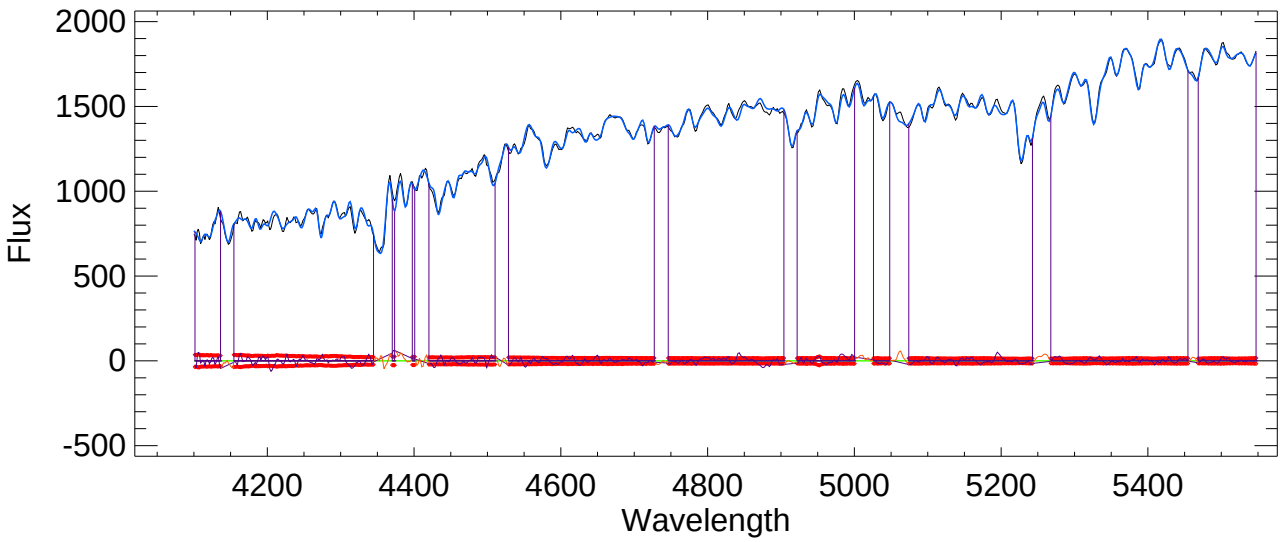

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

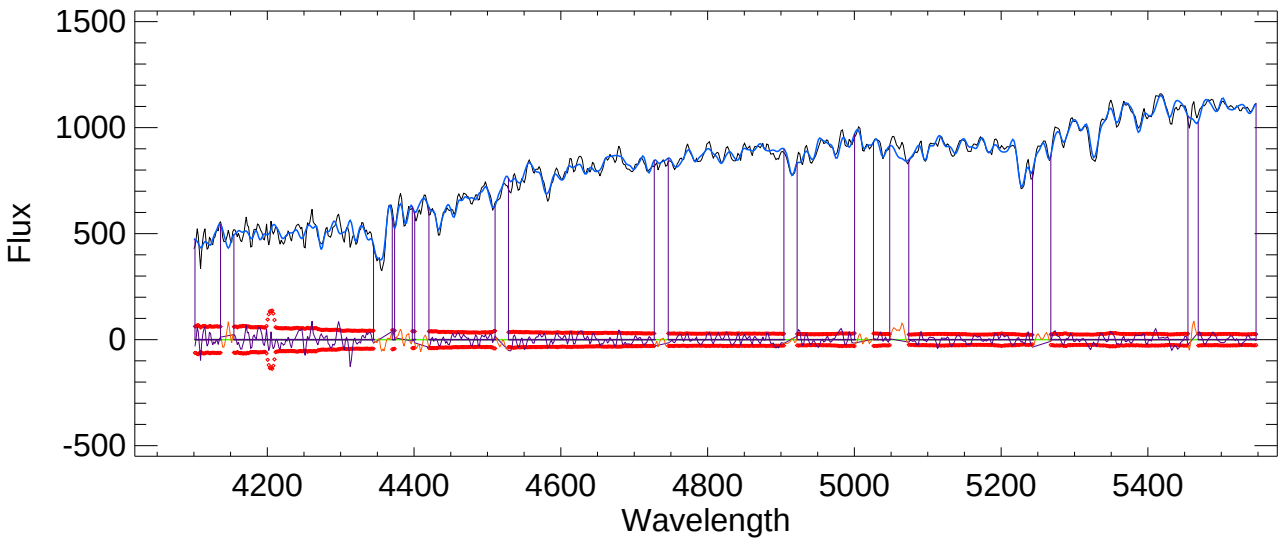

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

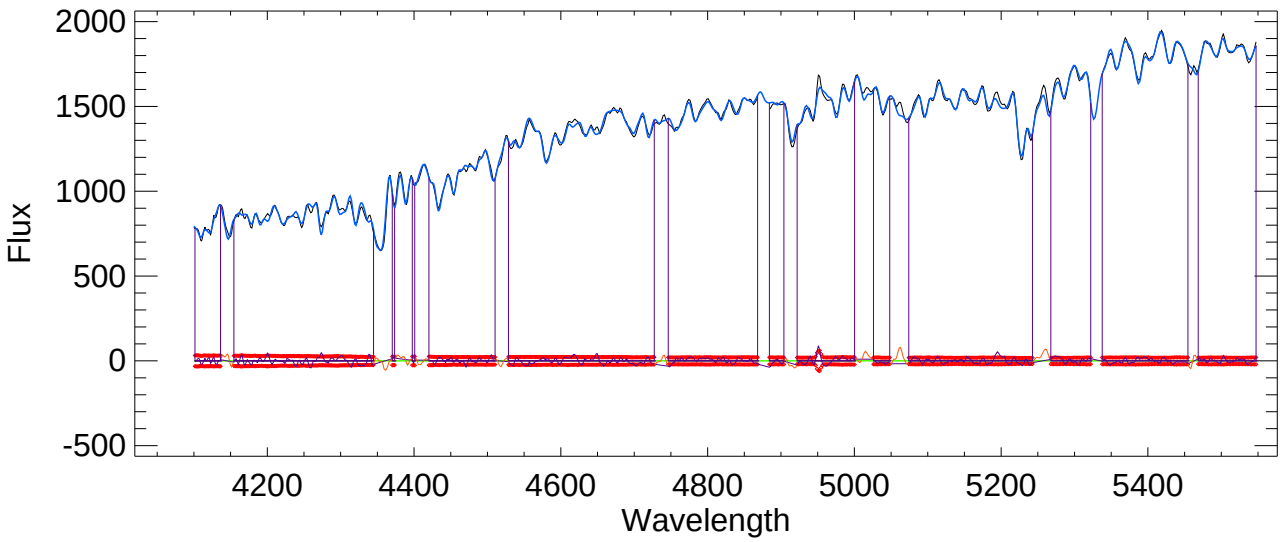

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

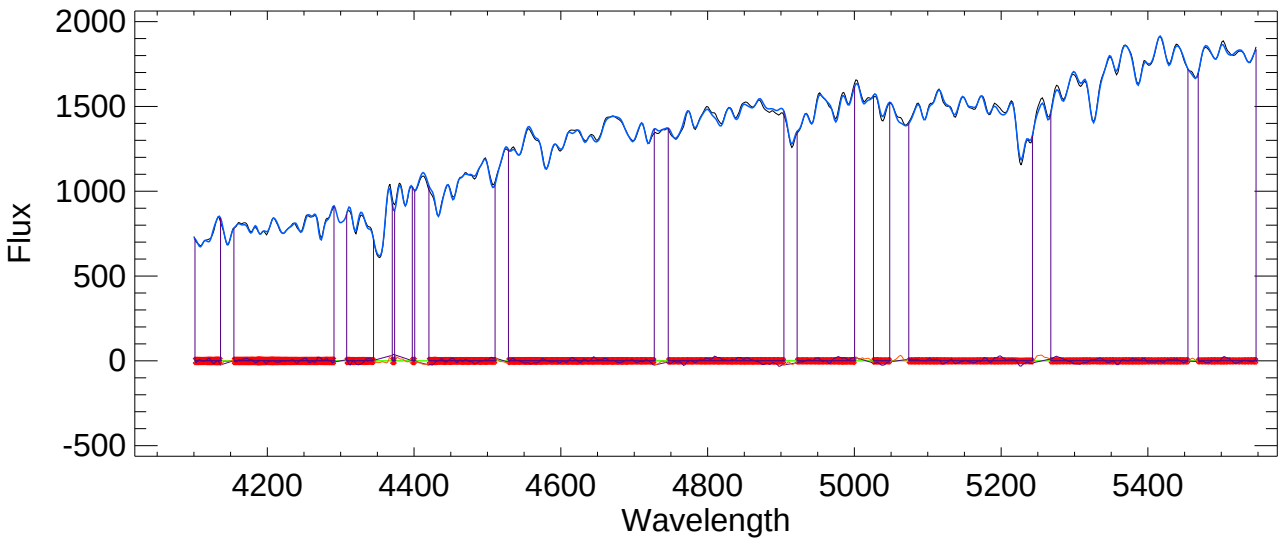

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

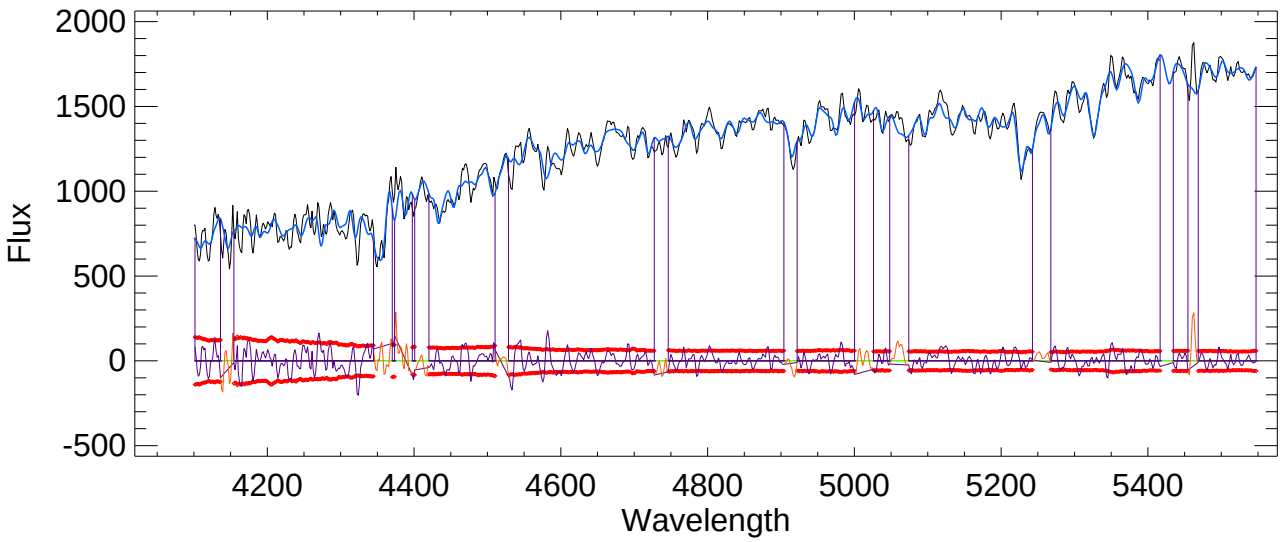

1200
1000
800
600
400
200
0
-200
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

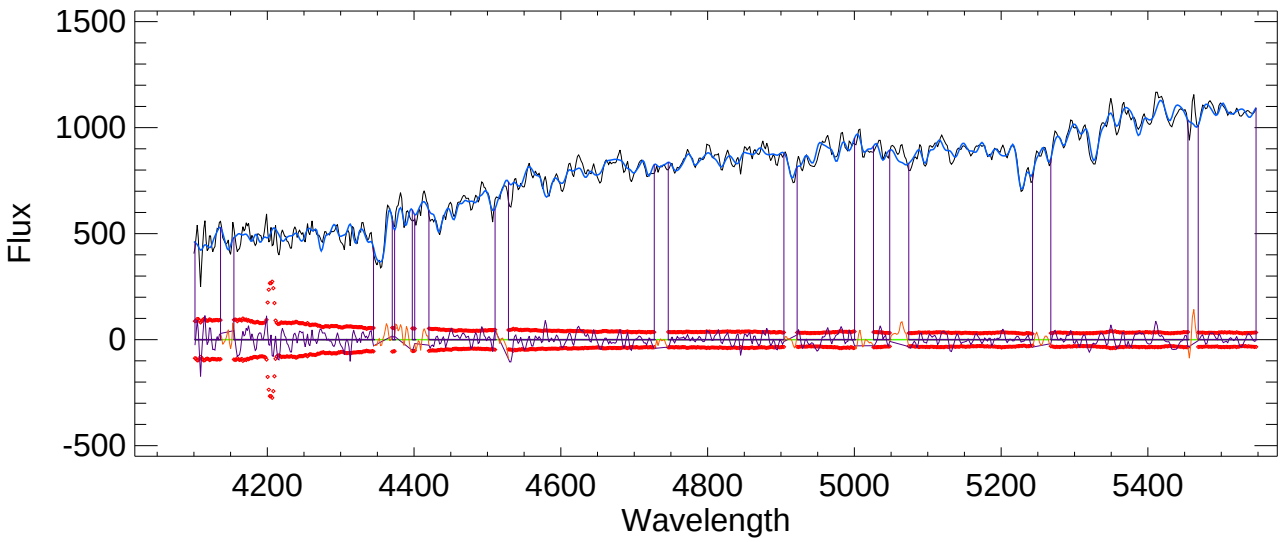

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

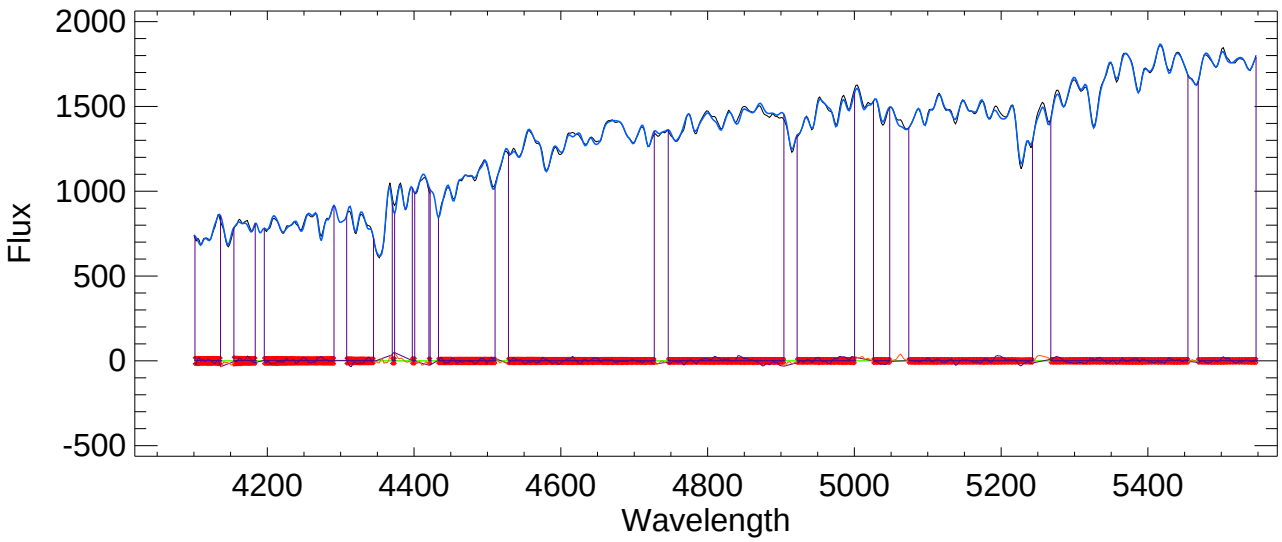

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

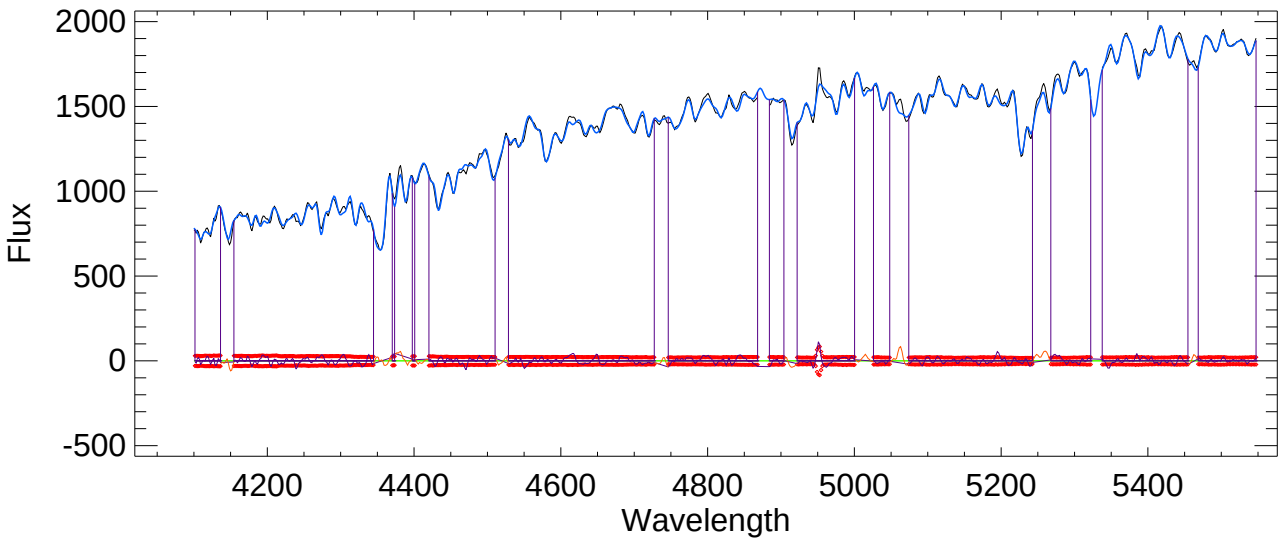

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

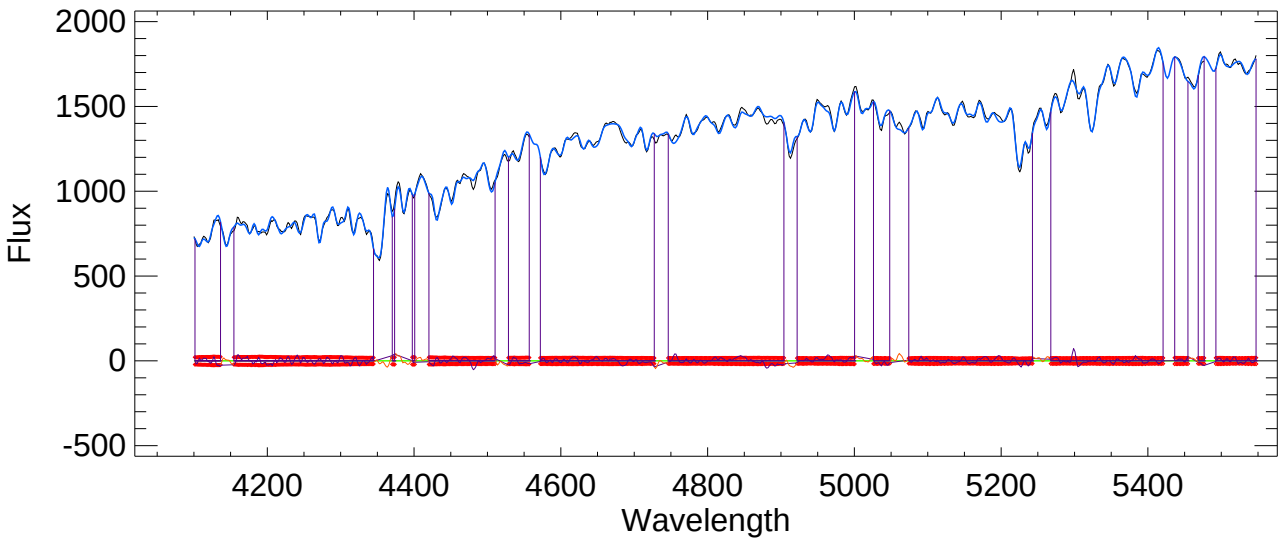

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

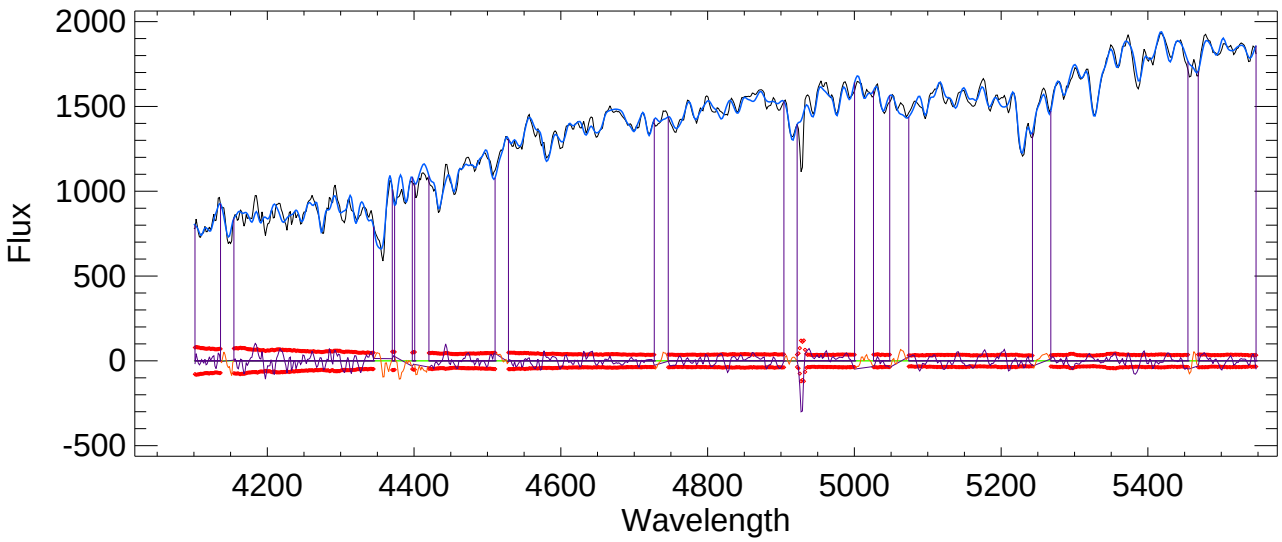

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

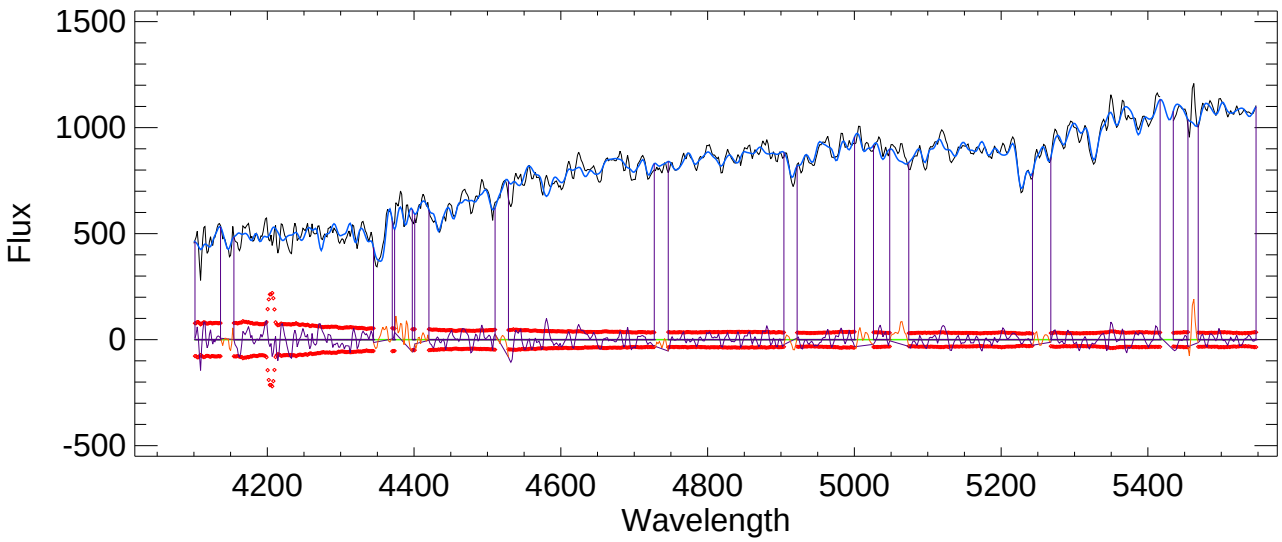

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

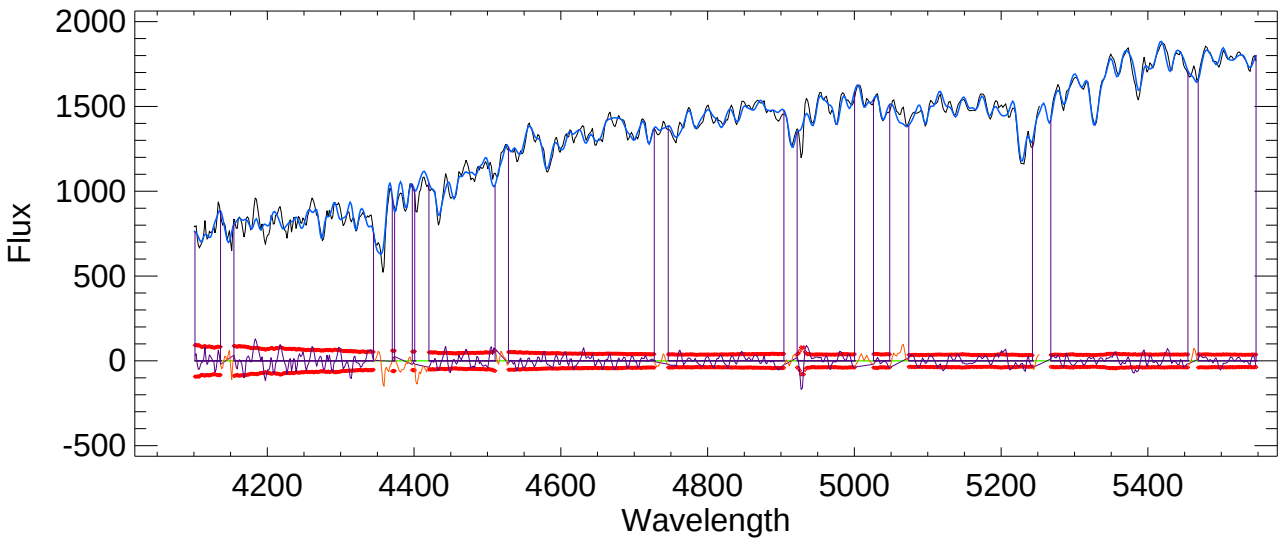

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

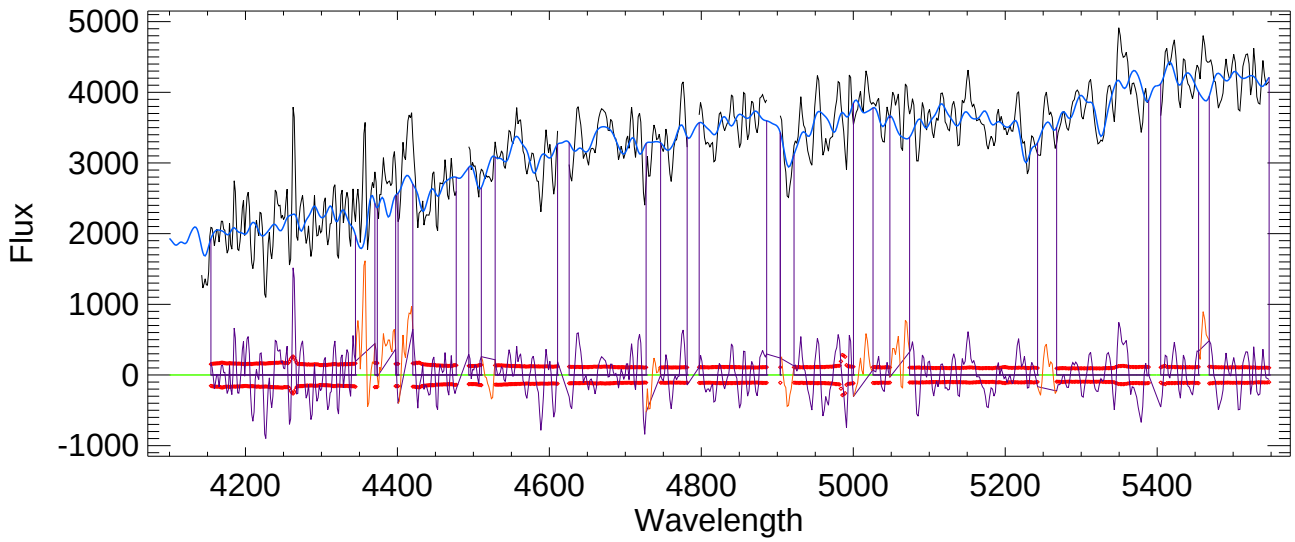

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

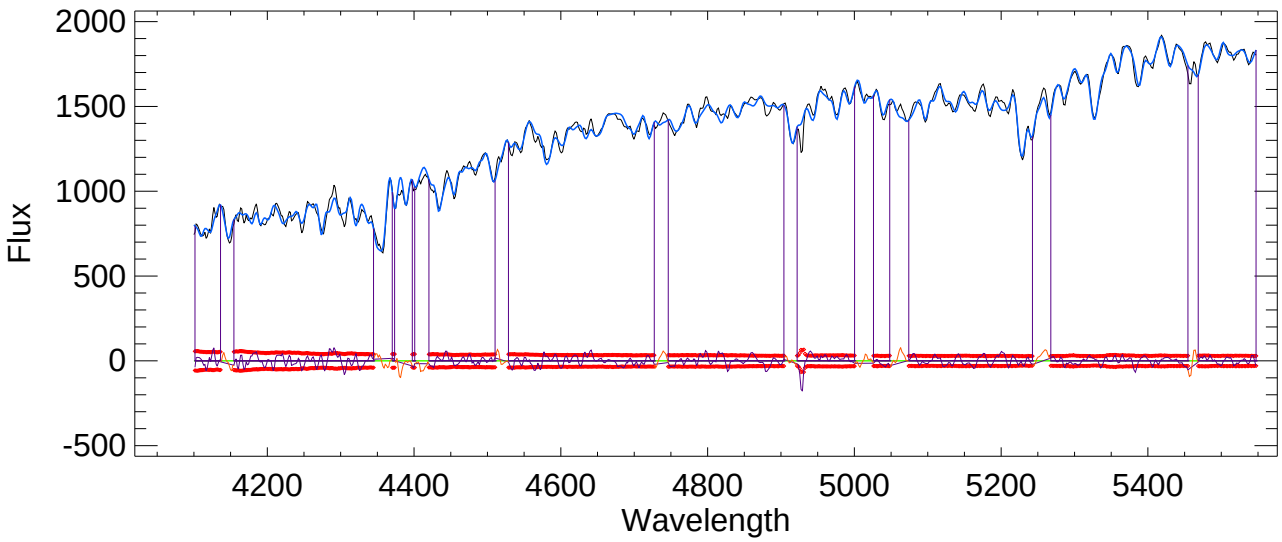

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

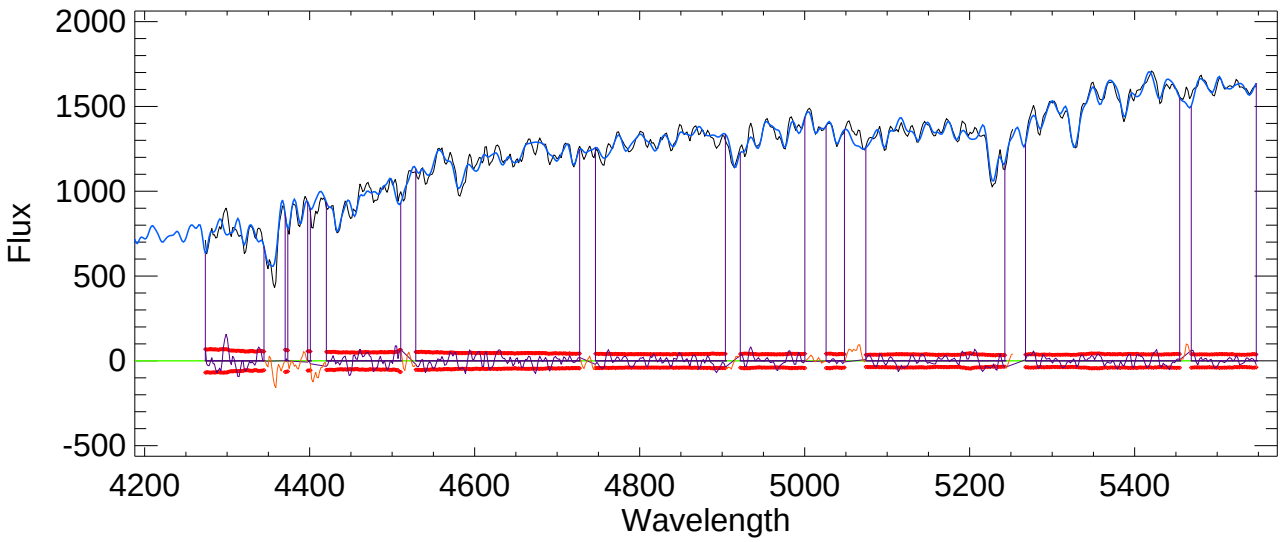

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

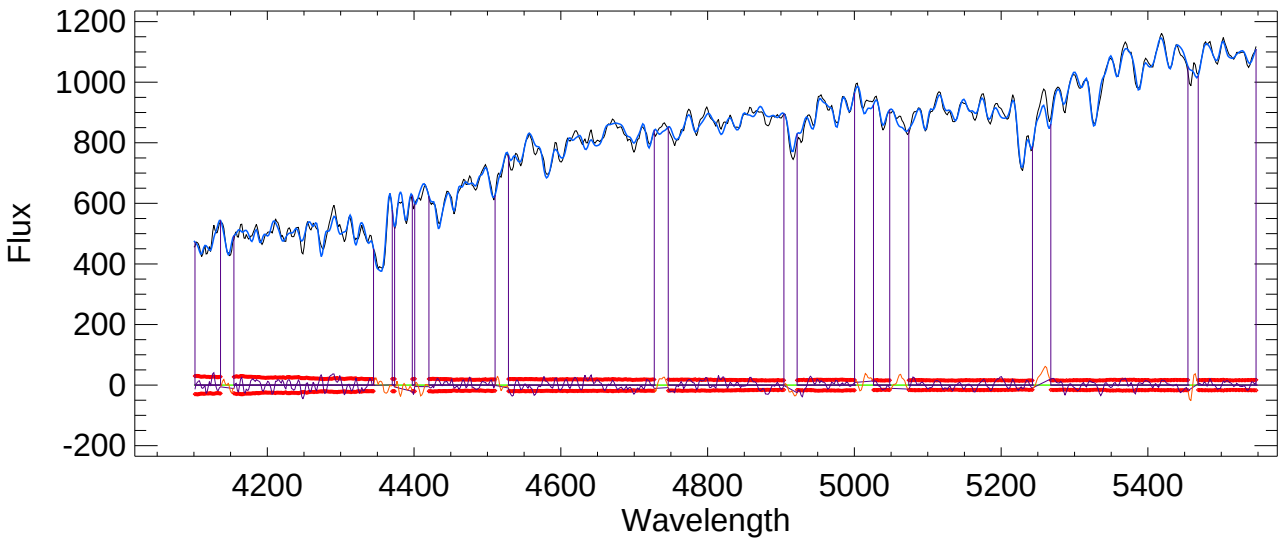

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

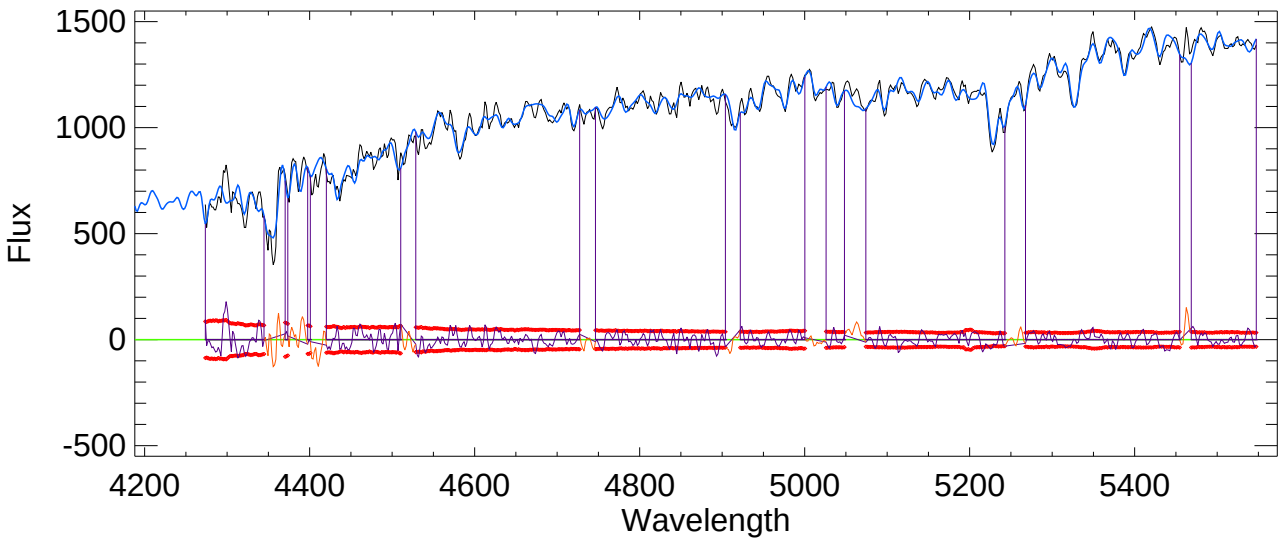

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

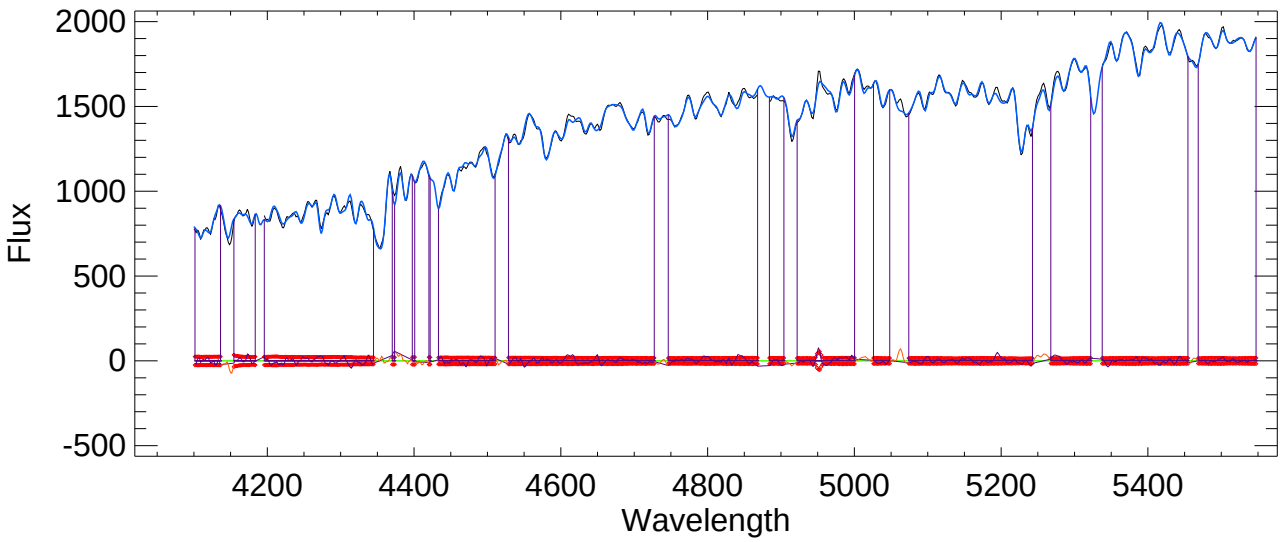

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

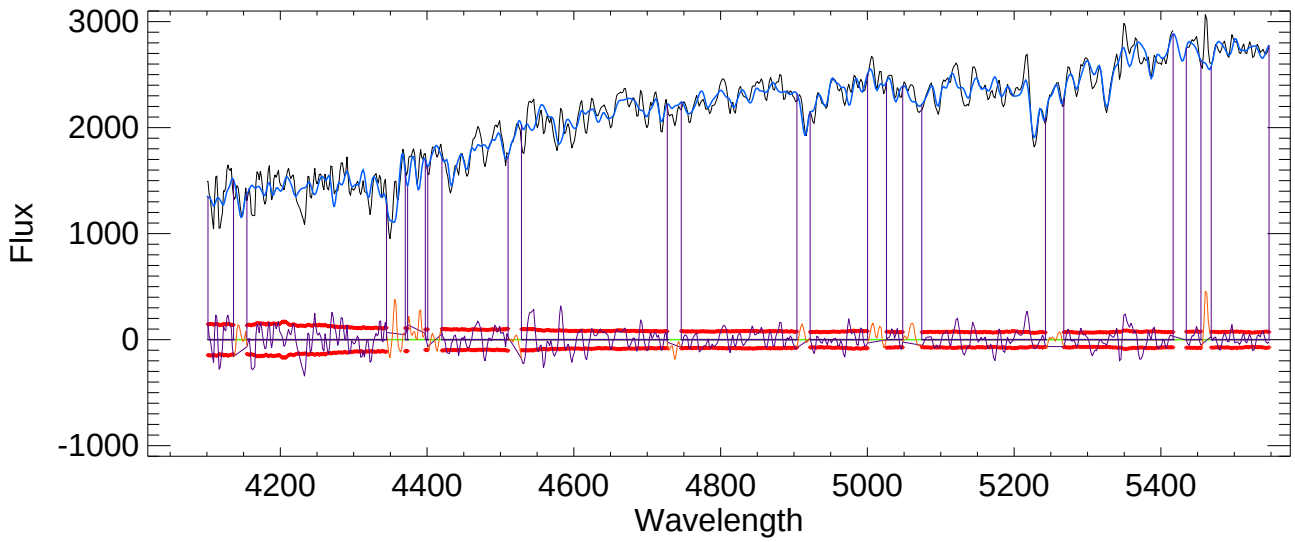

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

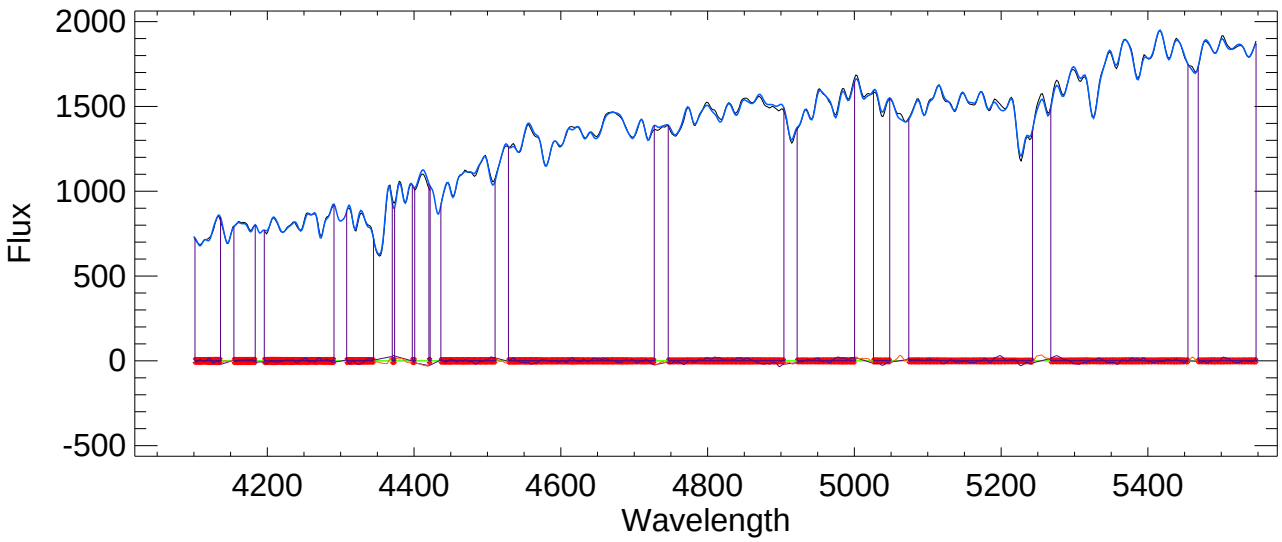

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

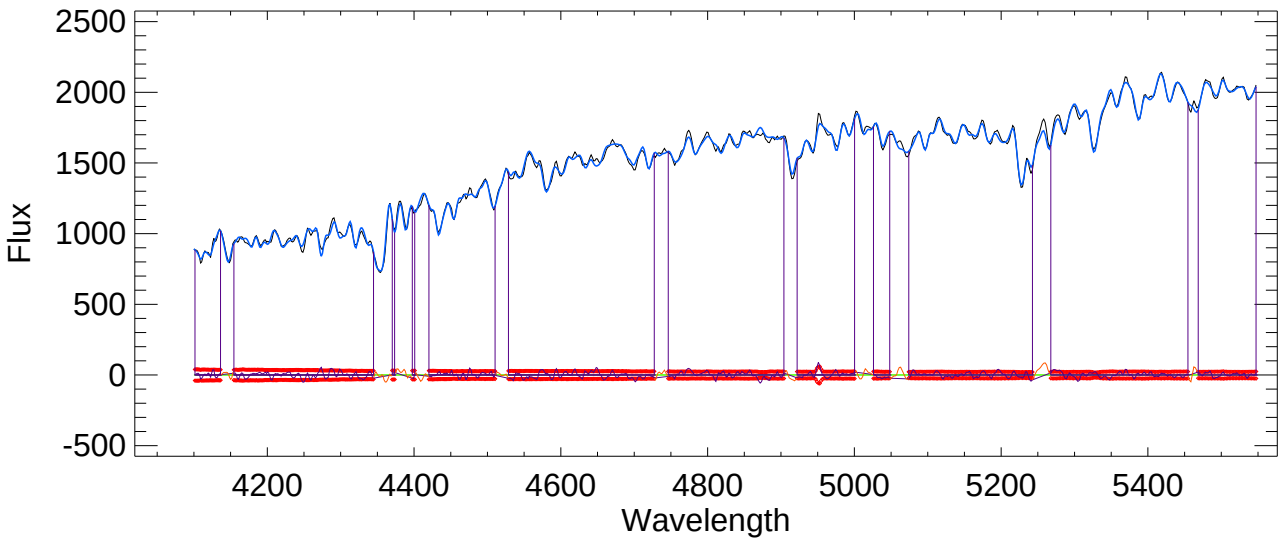

1200
1000
800
600
400
200
0
-200
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

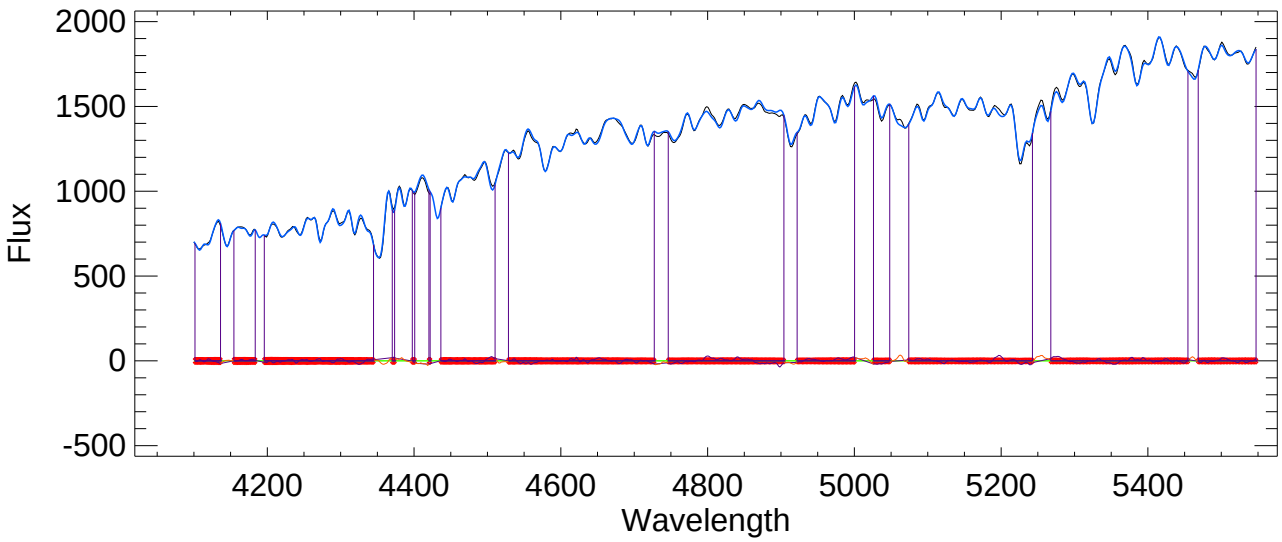

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

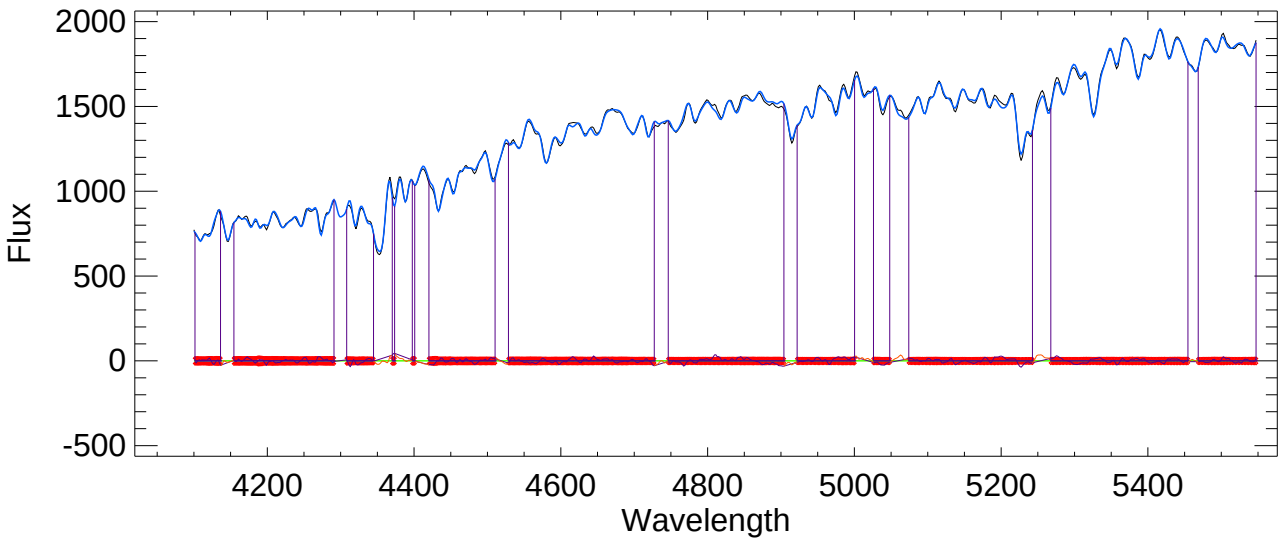

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

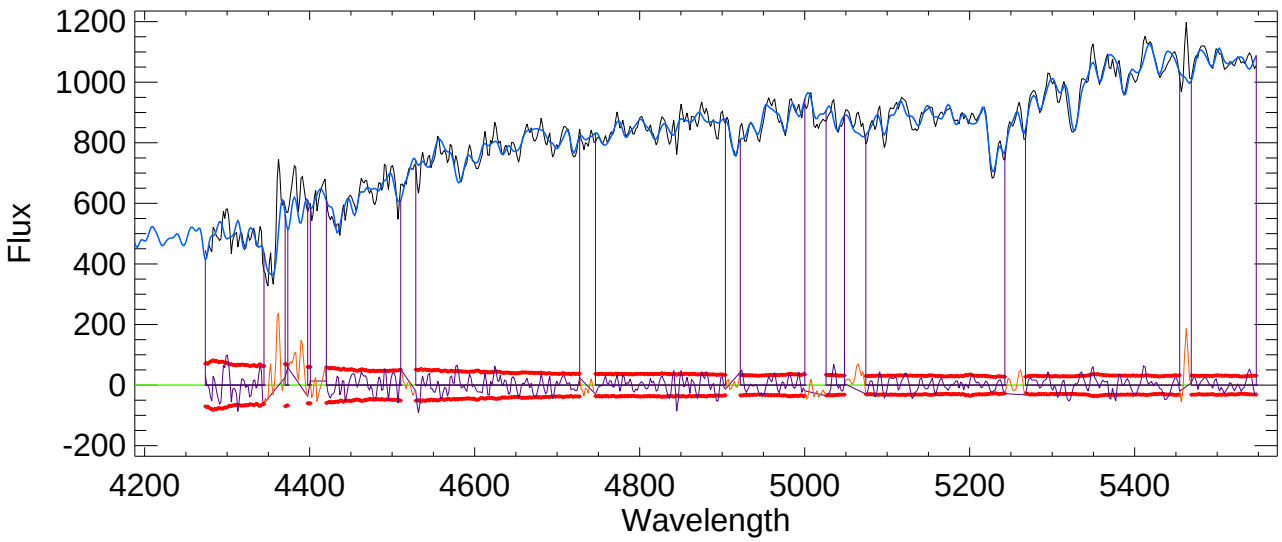

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

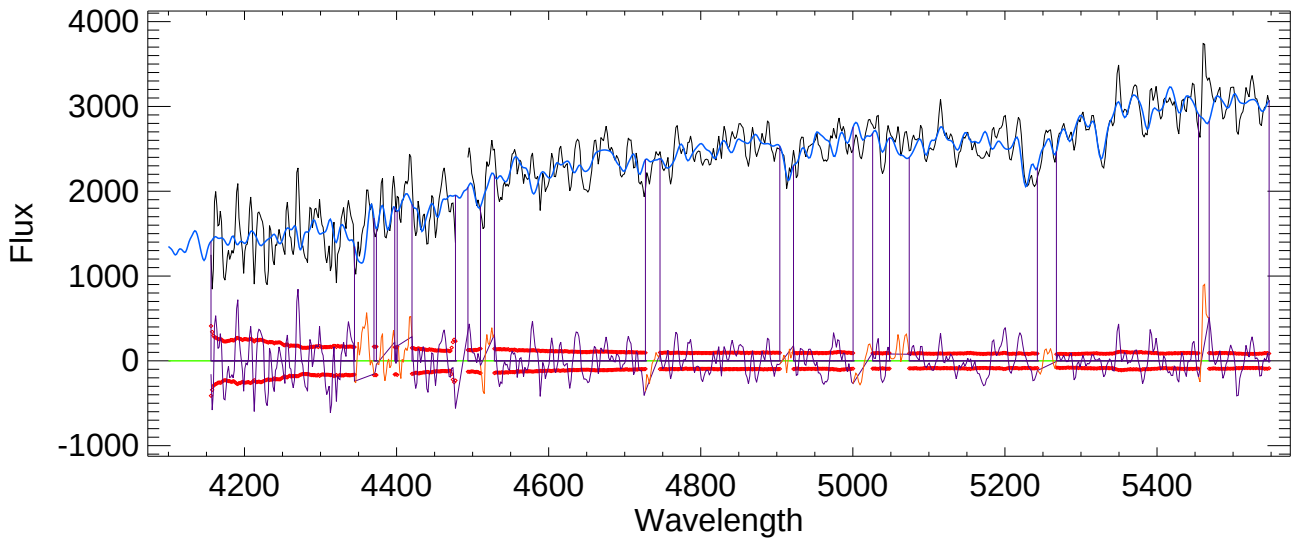

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

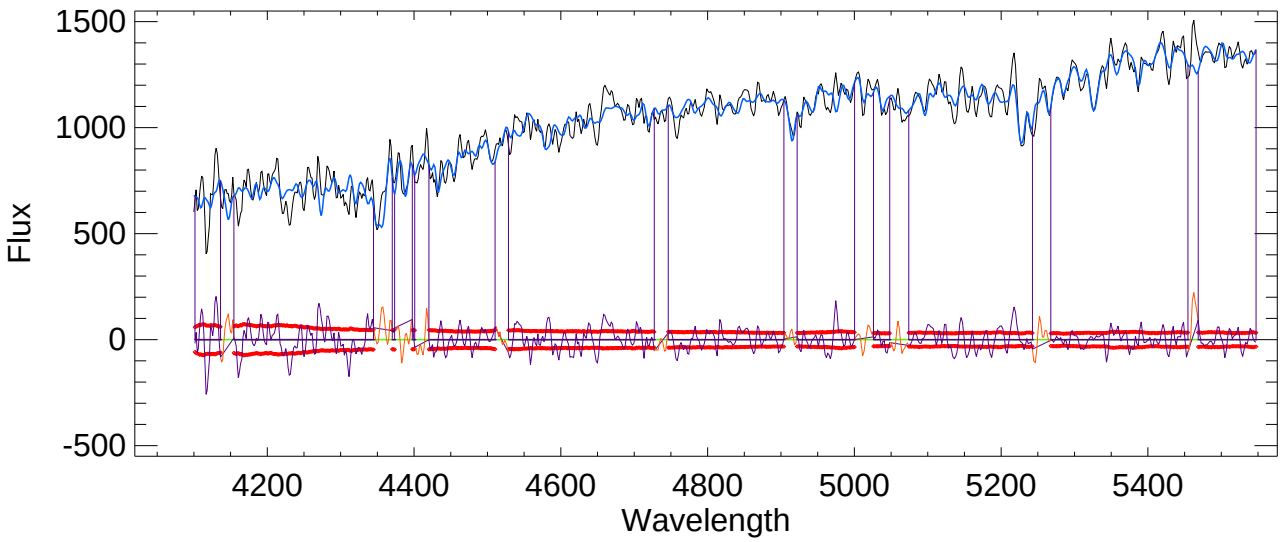

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

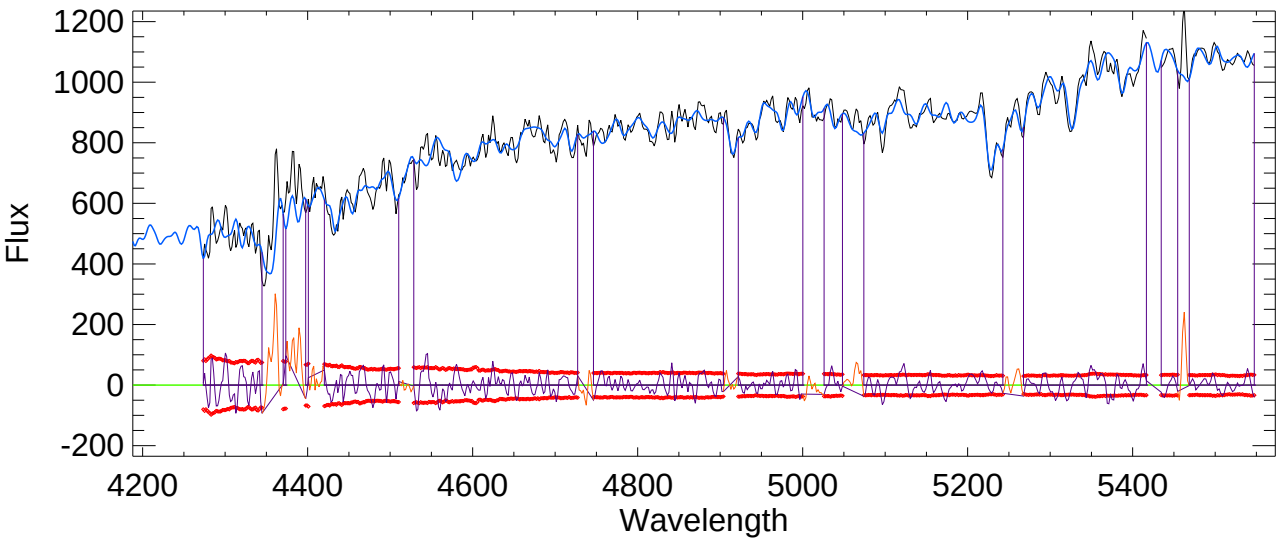

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

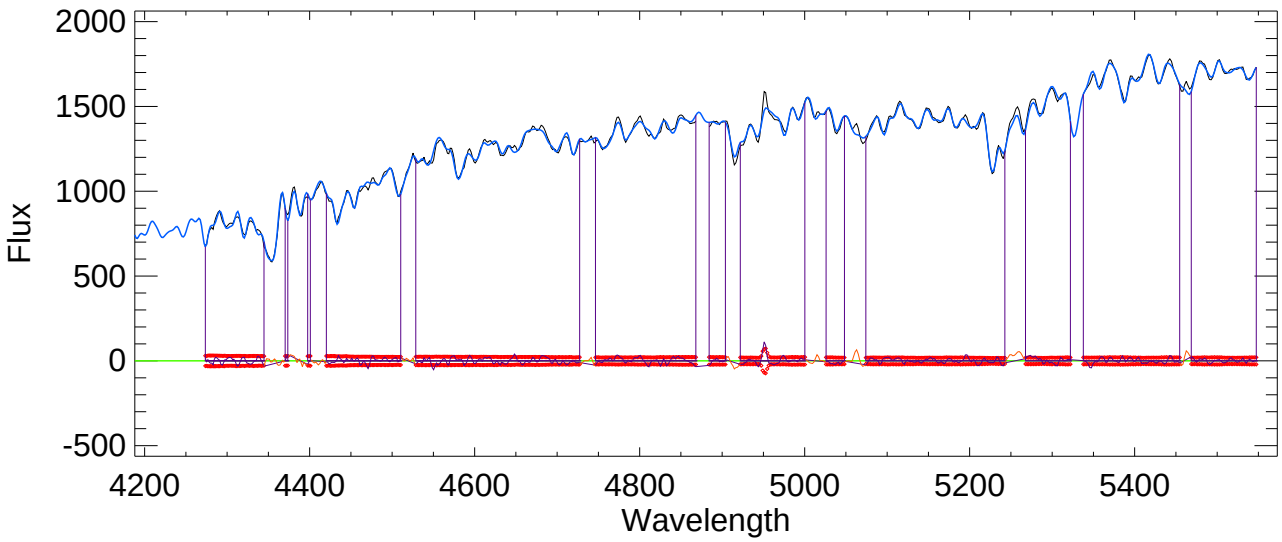

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

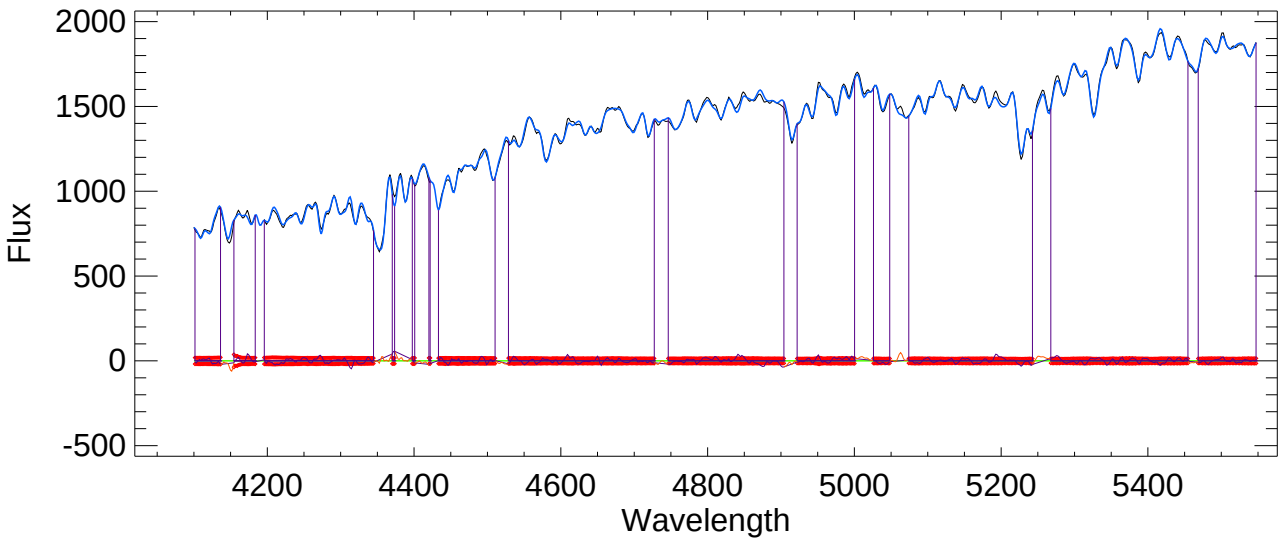

1200
1000
800
600
400
200
0
-200
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

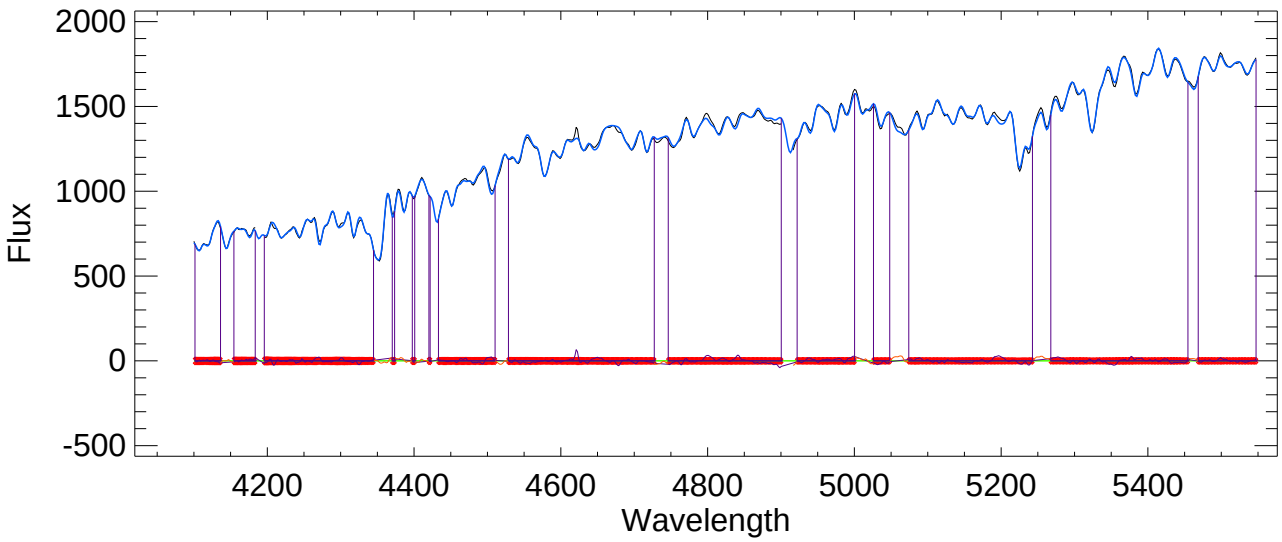

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

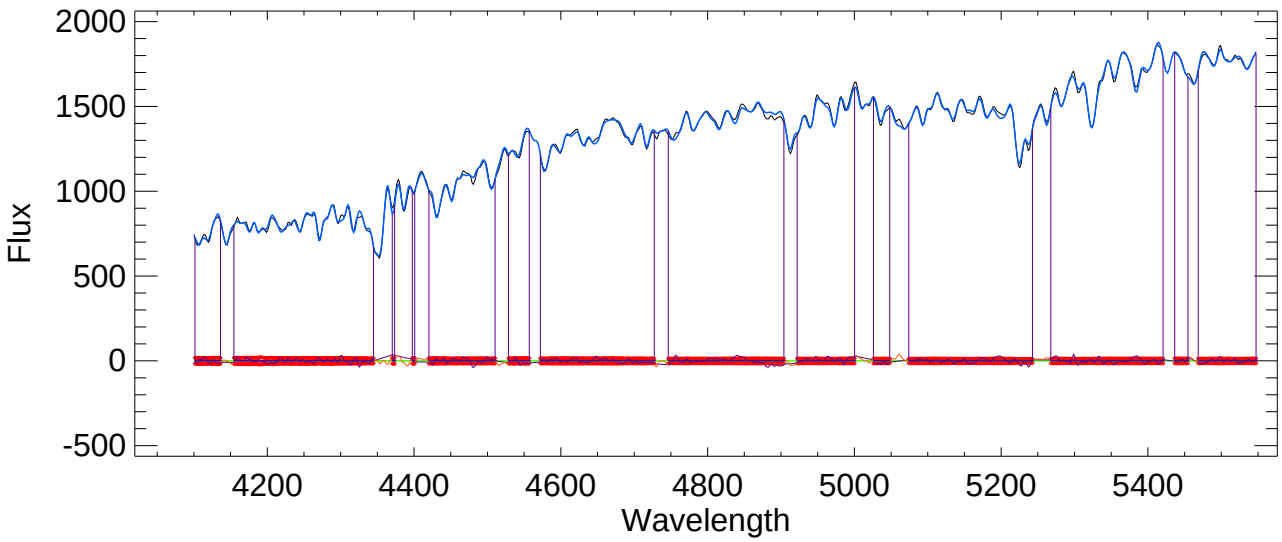

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

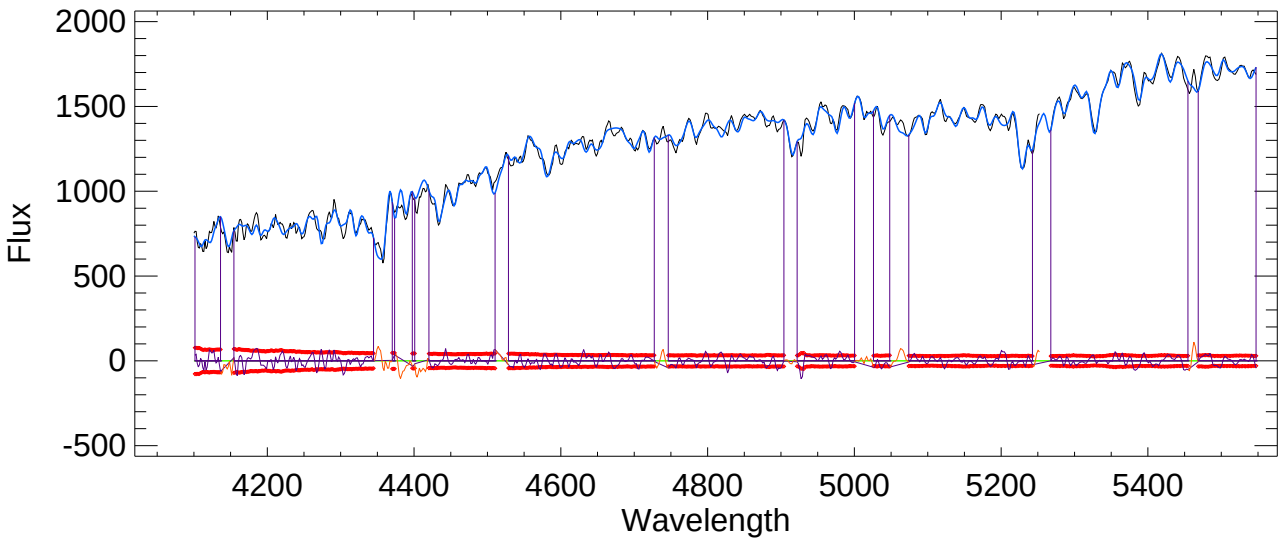

1200
1000
800
600
400
200
0
-200
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

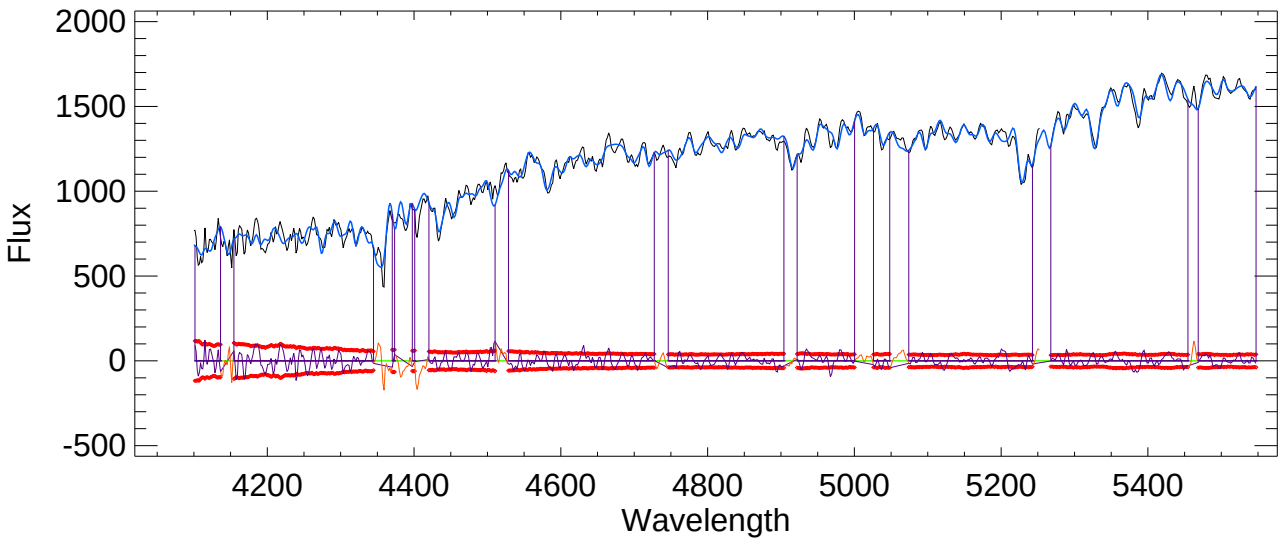

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

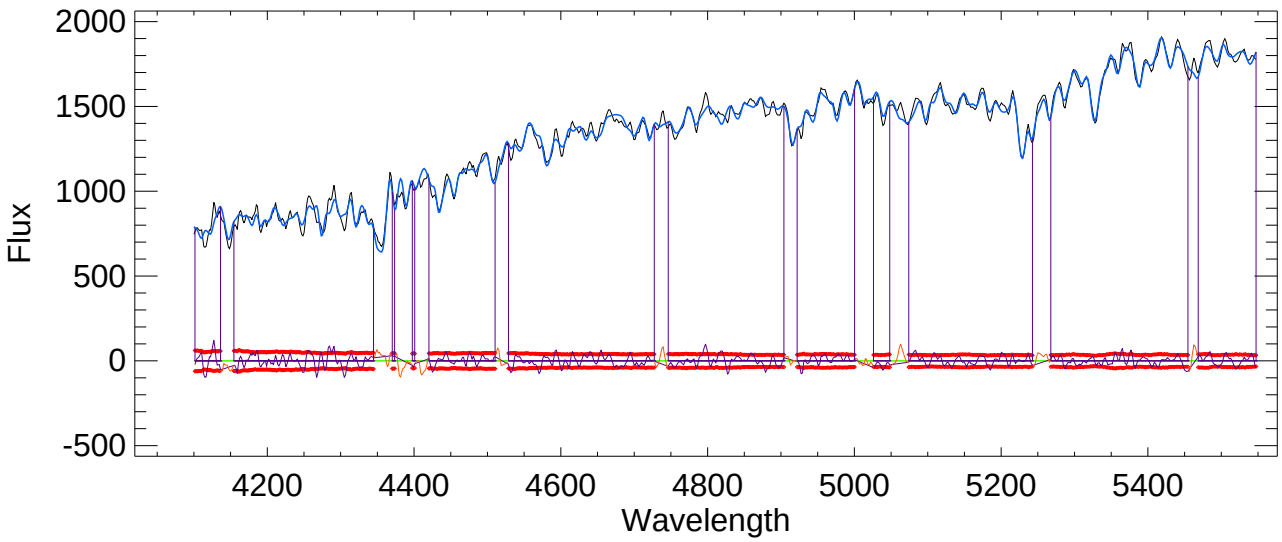

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

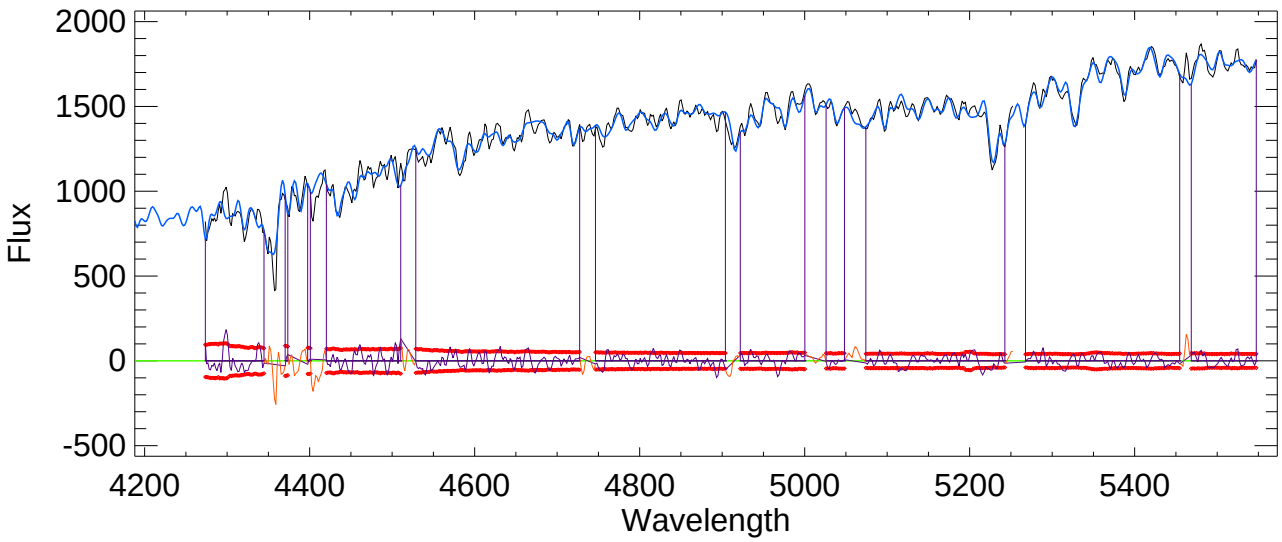

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

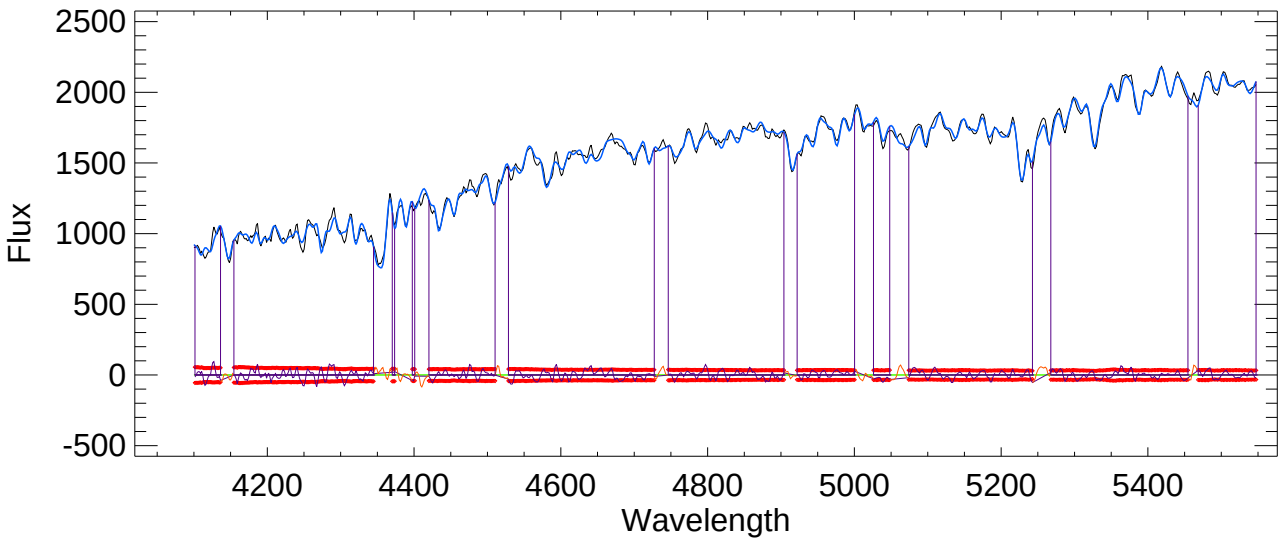

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

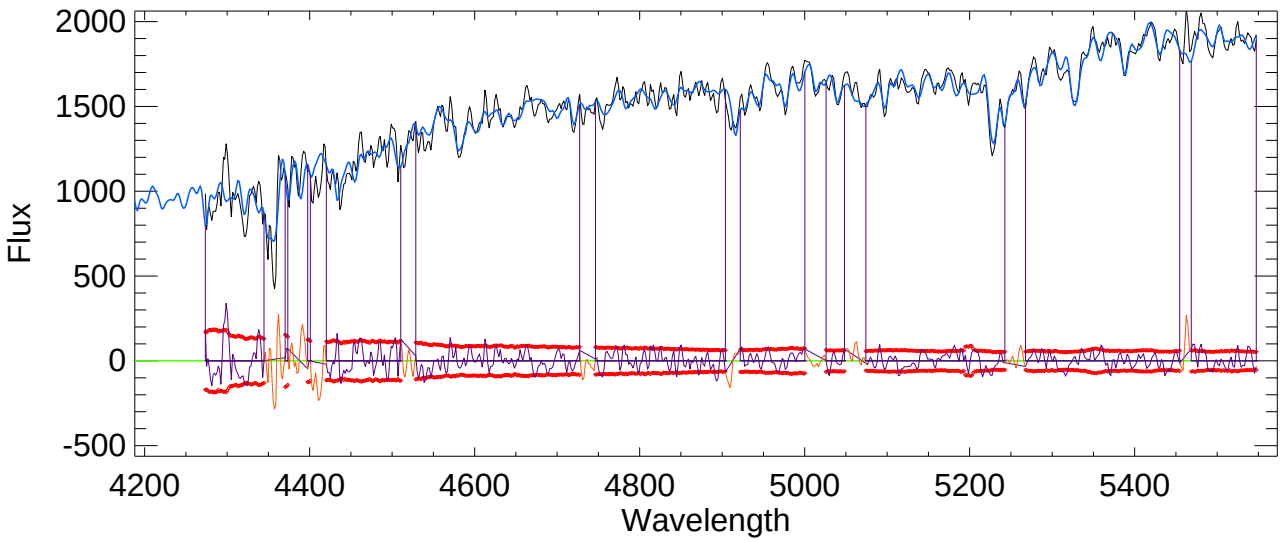

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

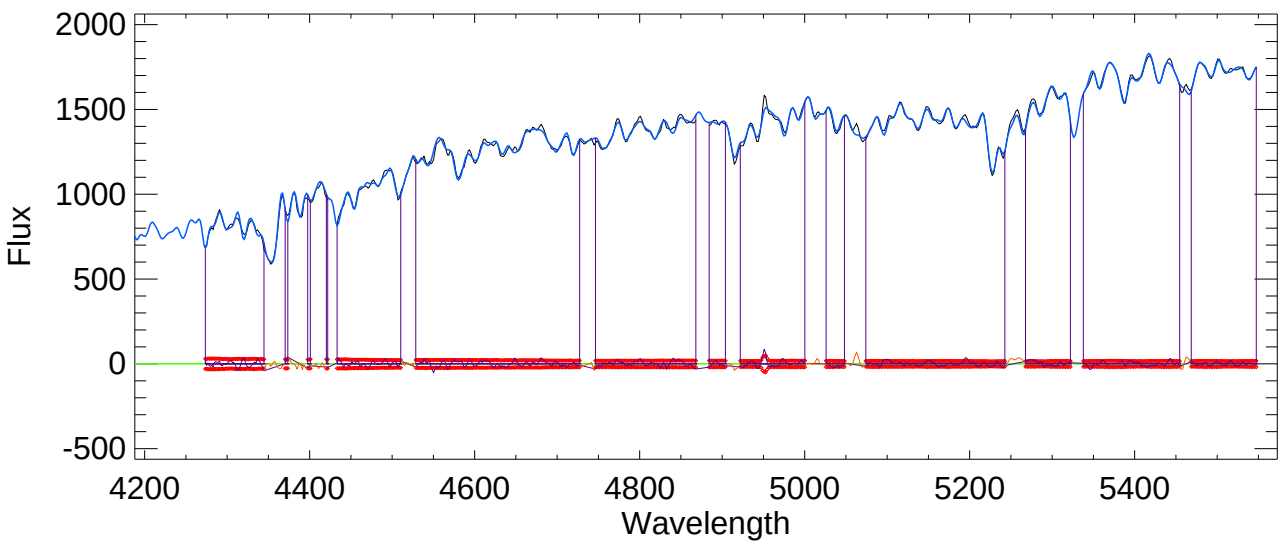

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

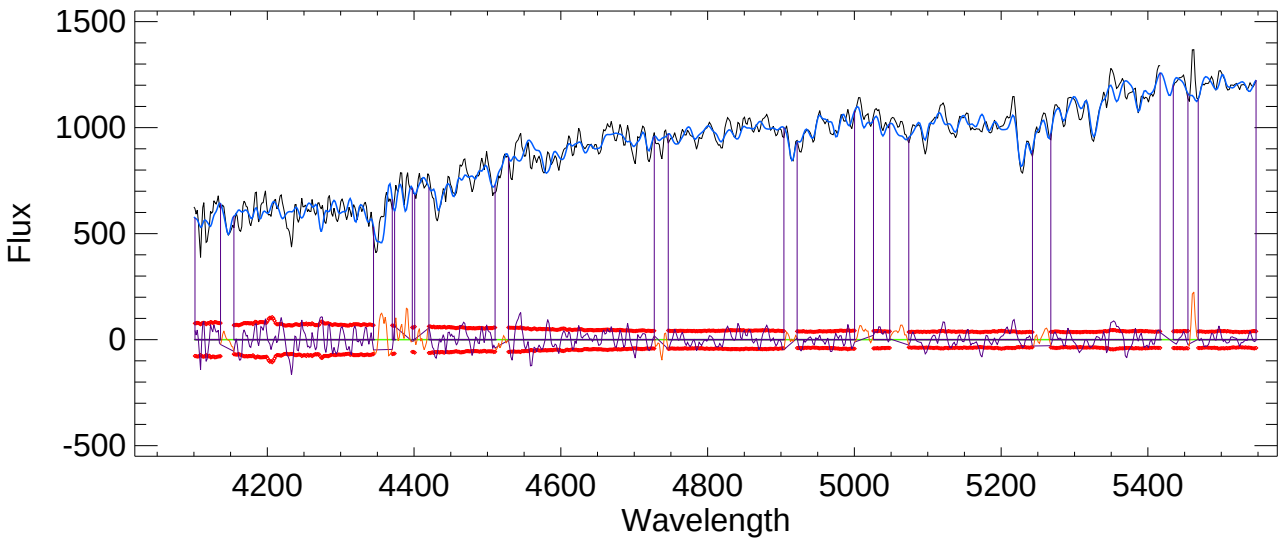

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

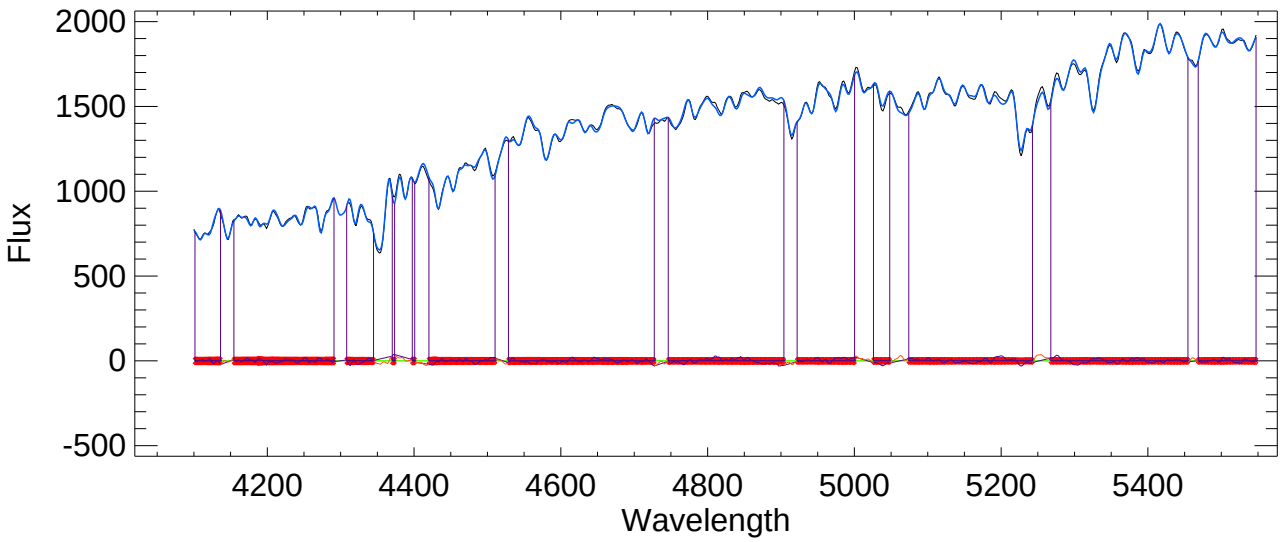

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

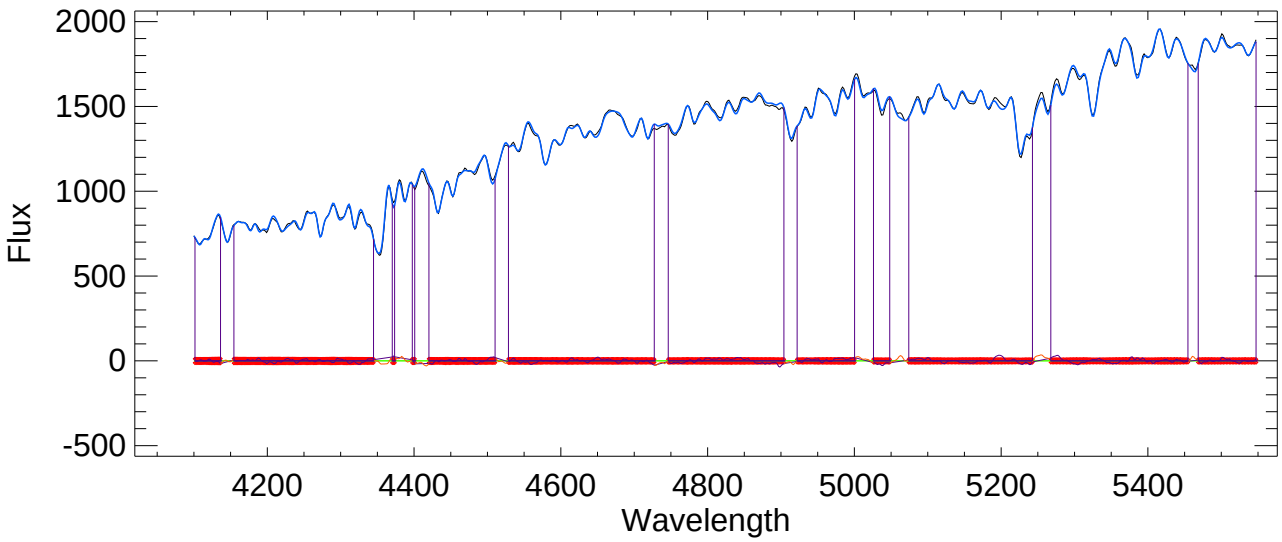

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

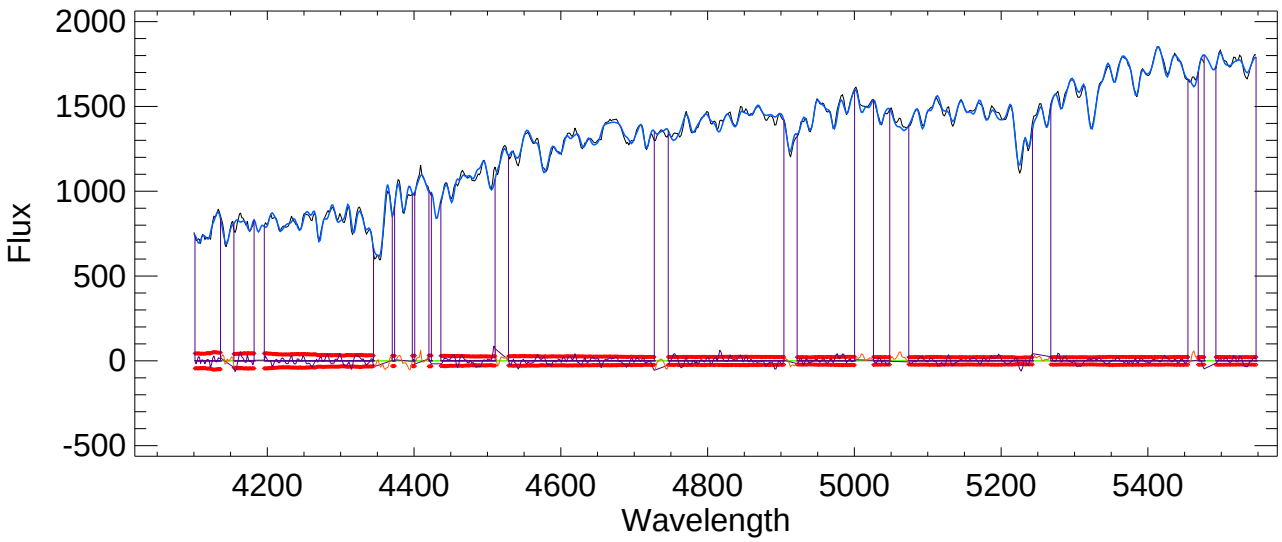

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

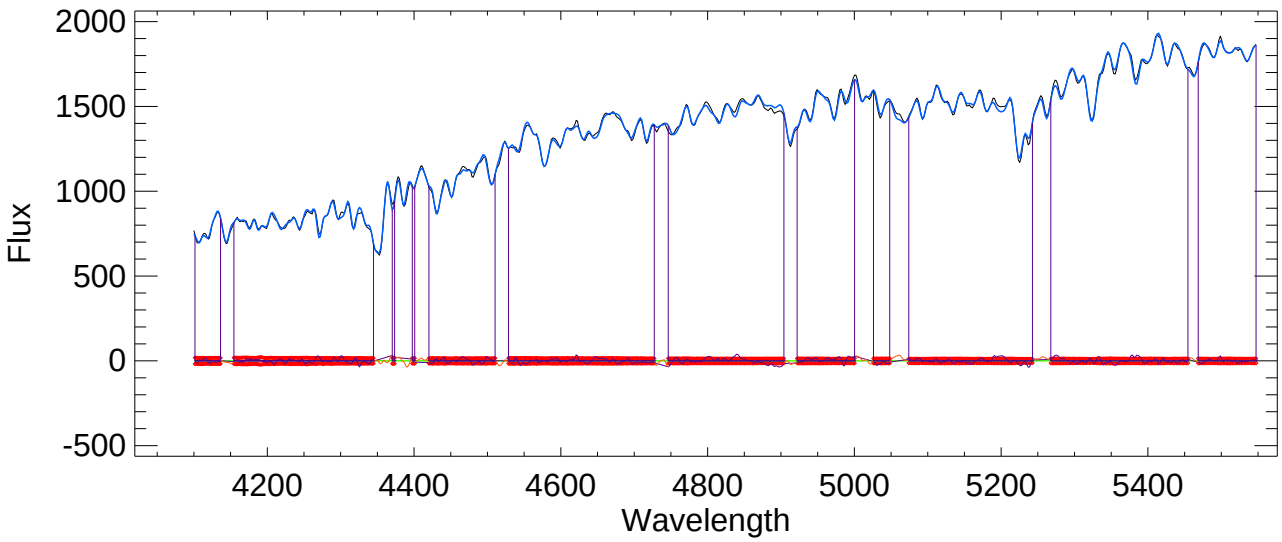

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

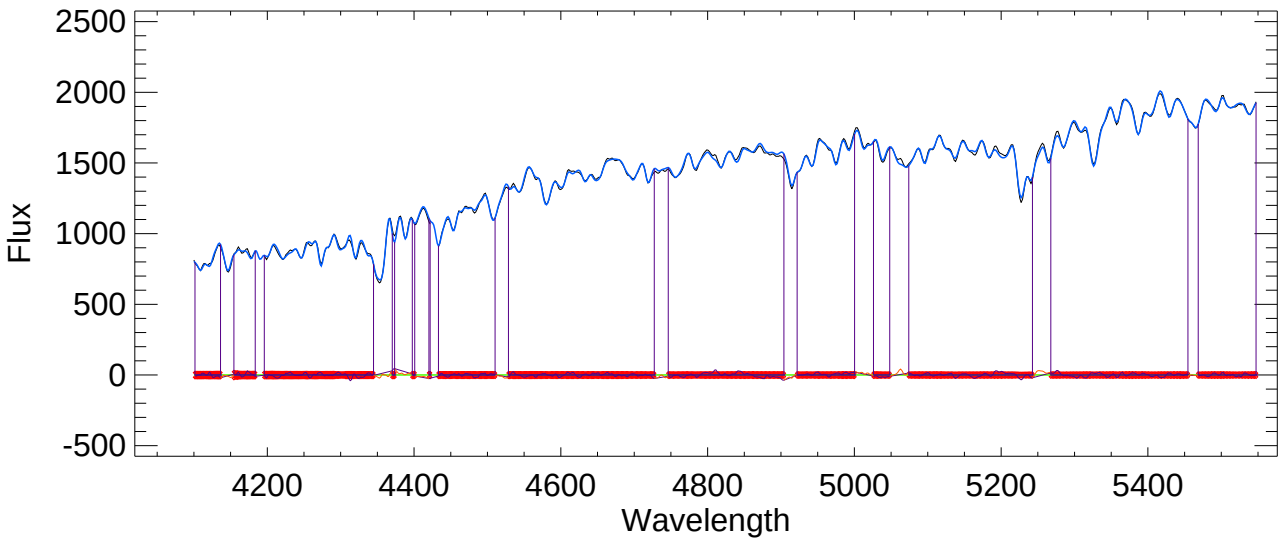

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

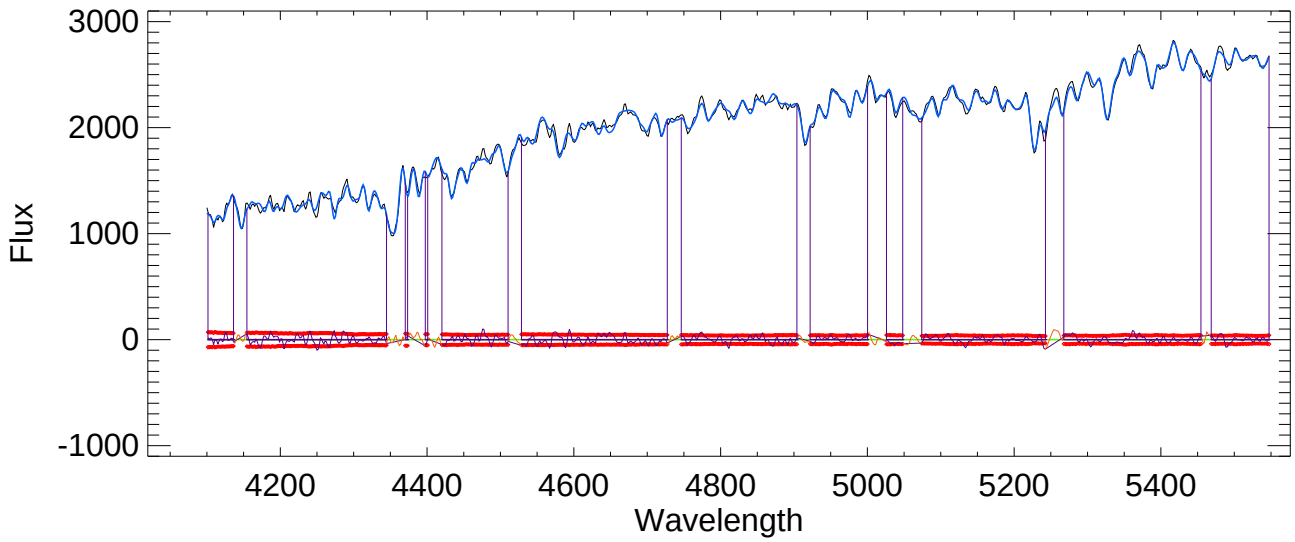

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

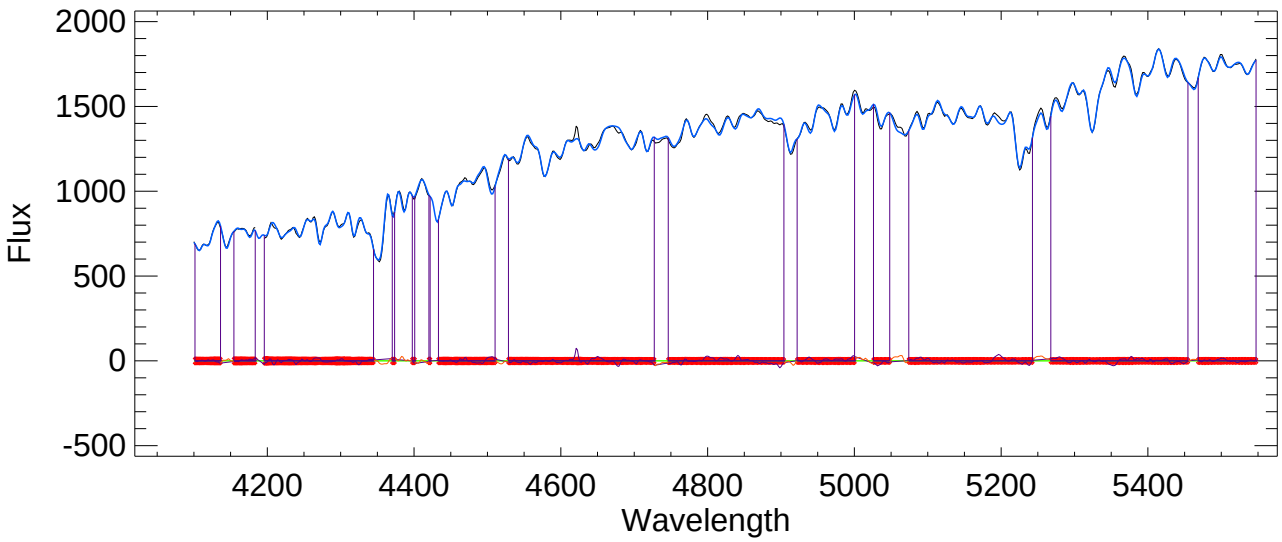

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

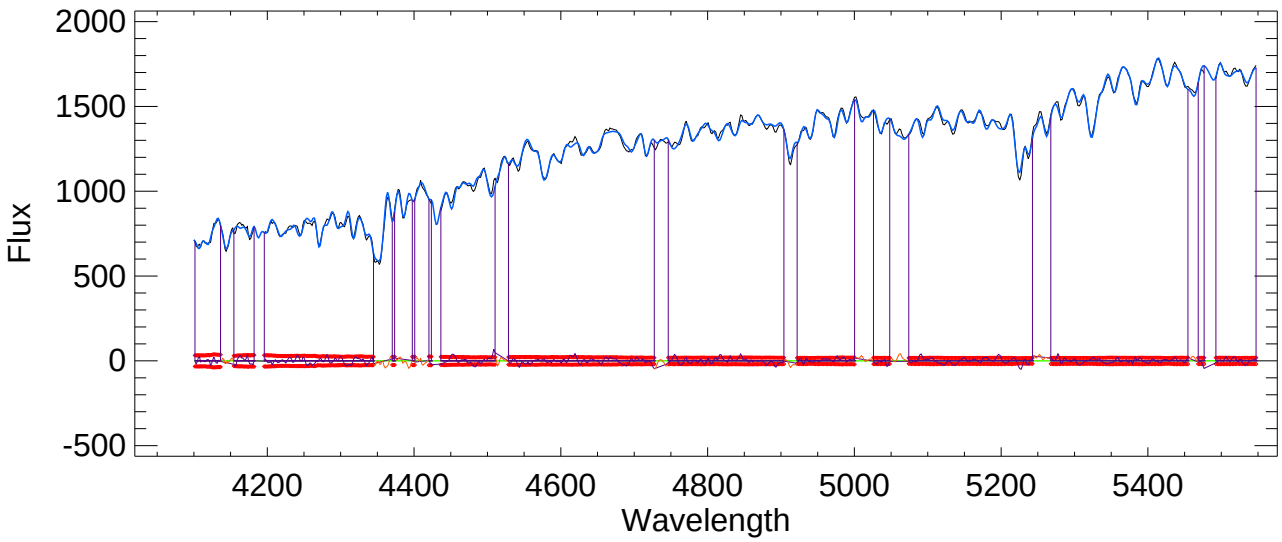

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

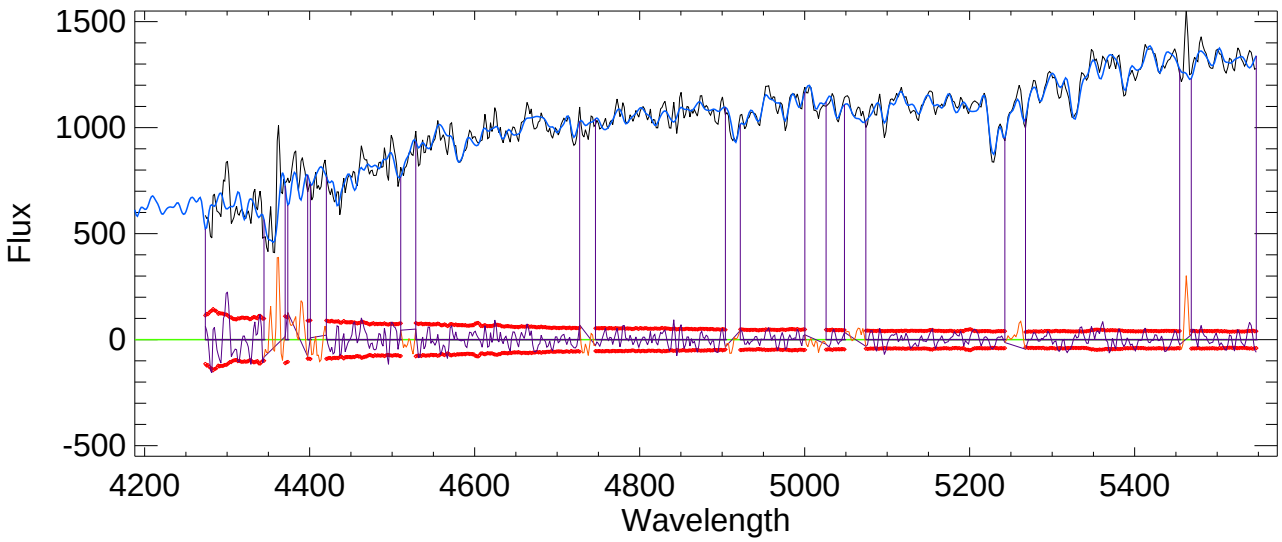

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

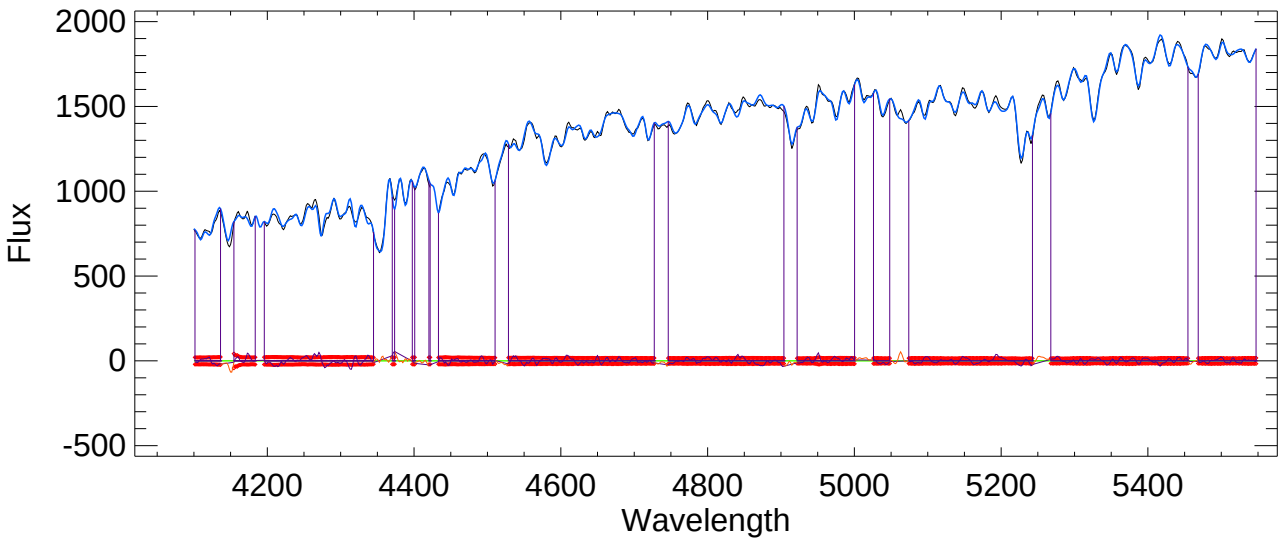

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

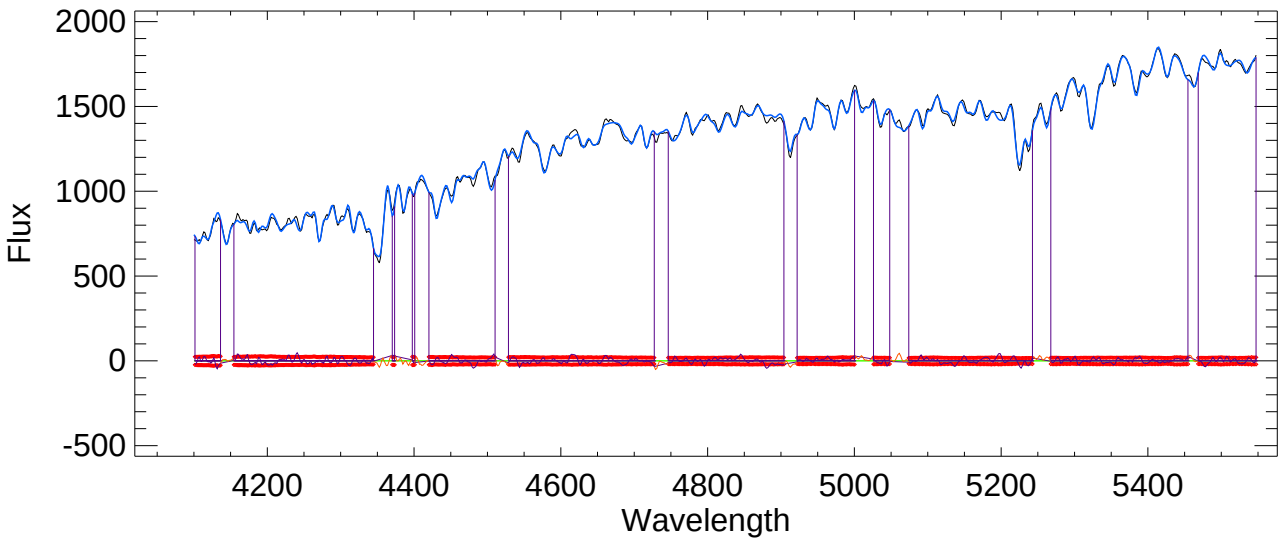

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

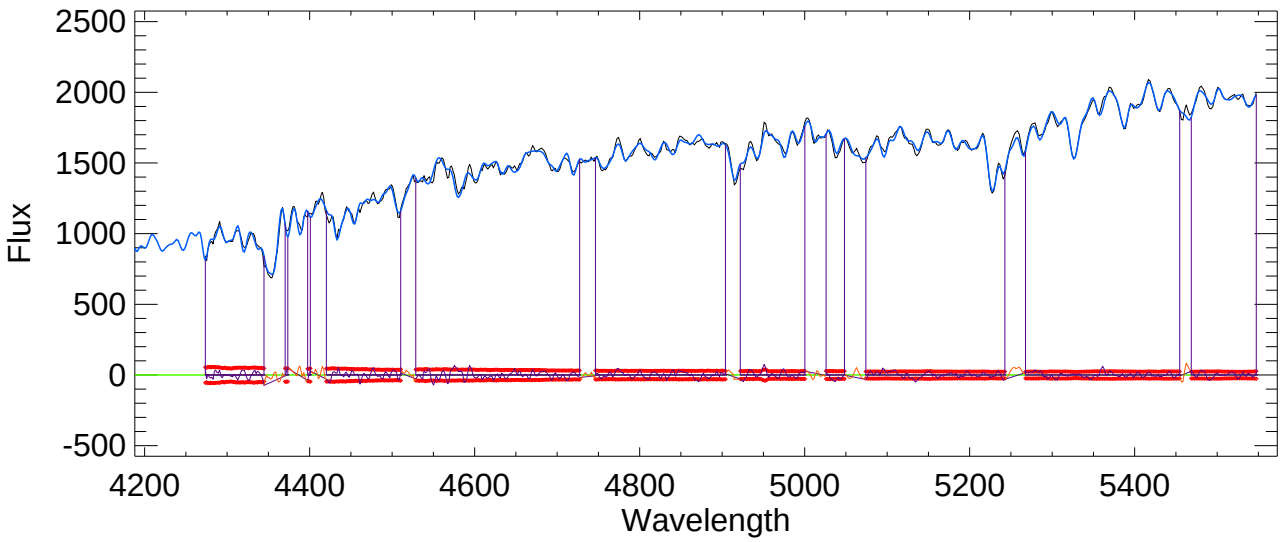

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

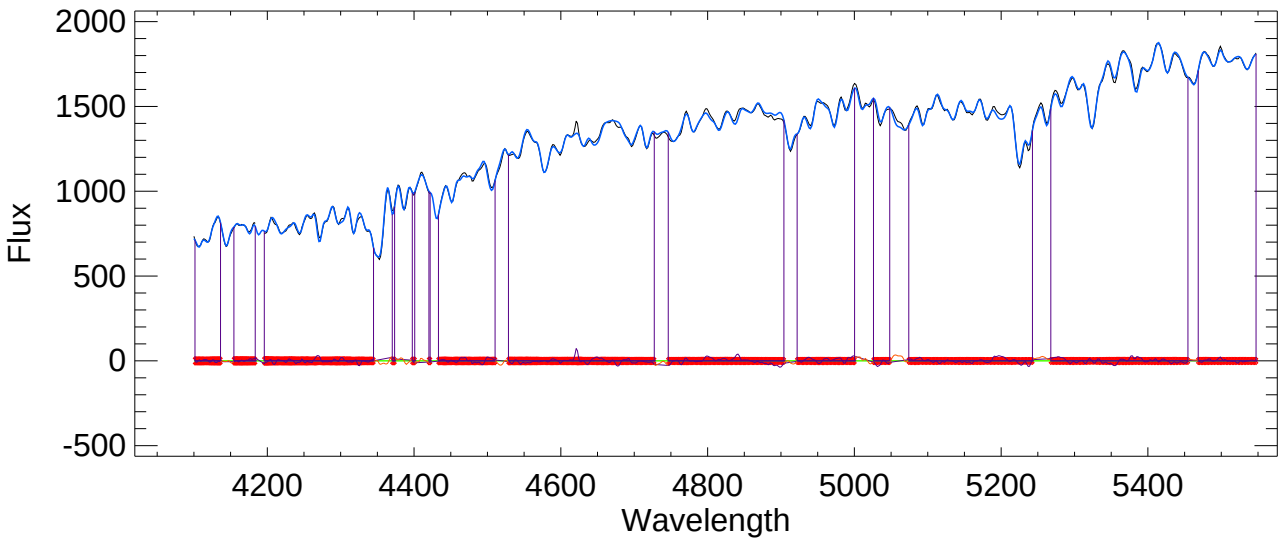

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

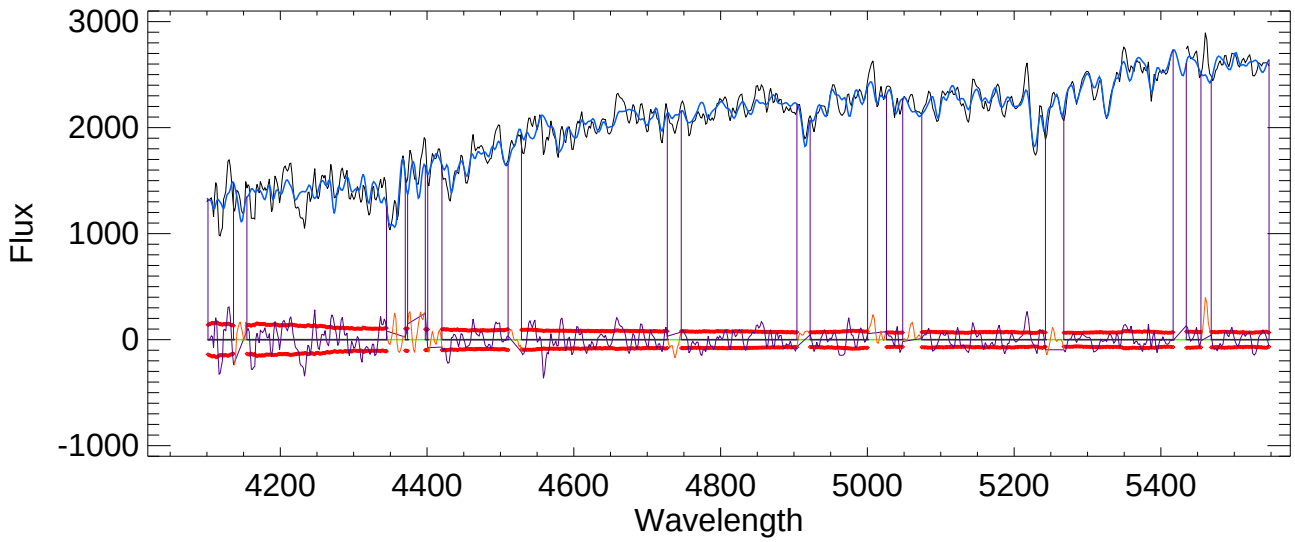

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

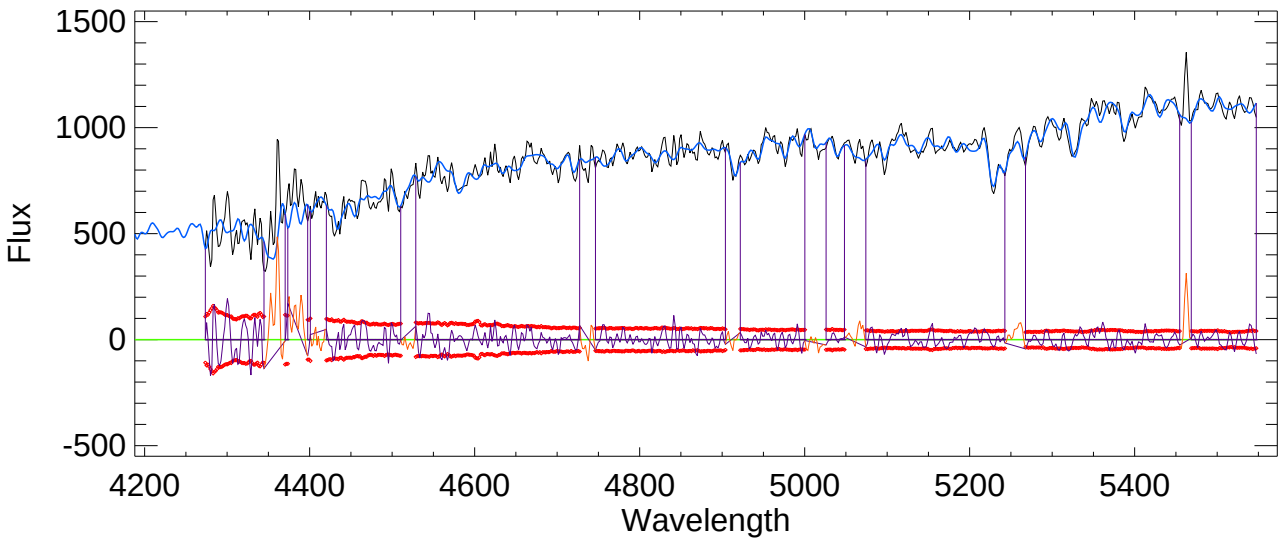

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

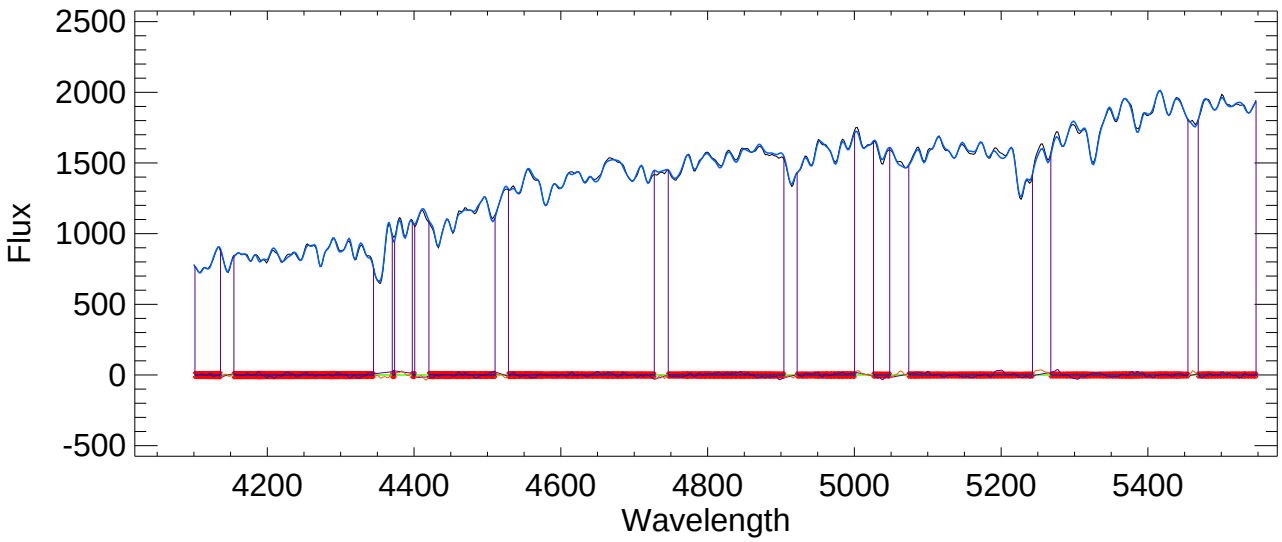

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

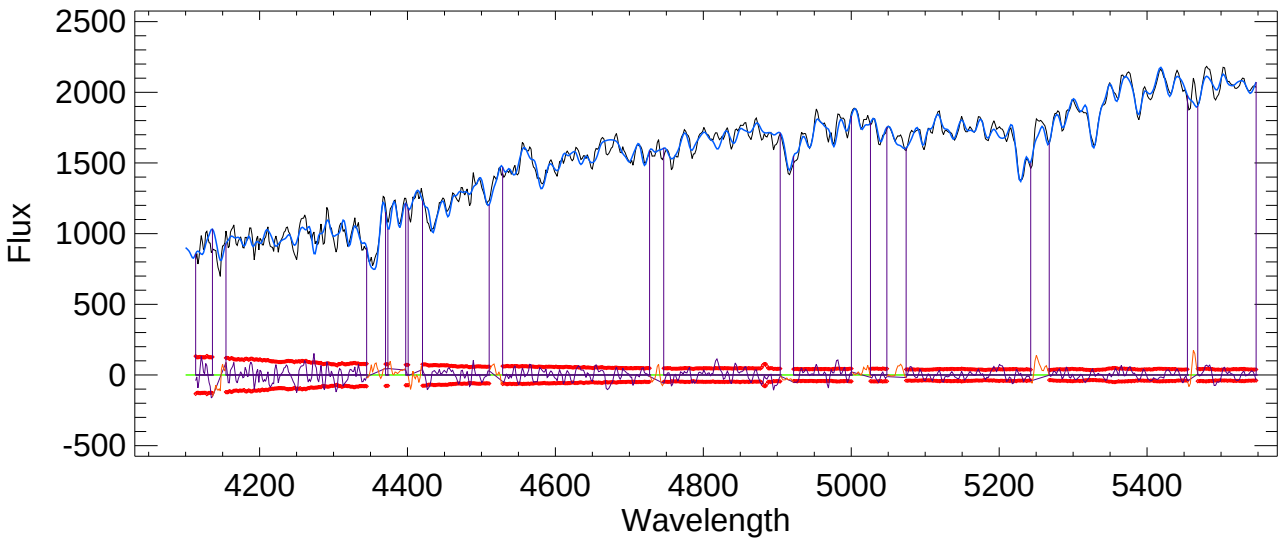

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

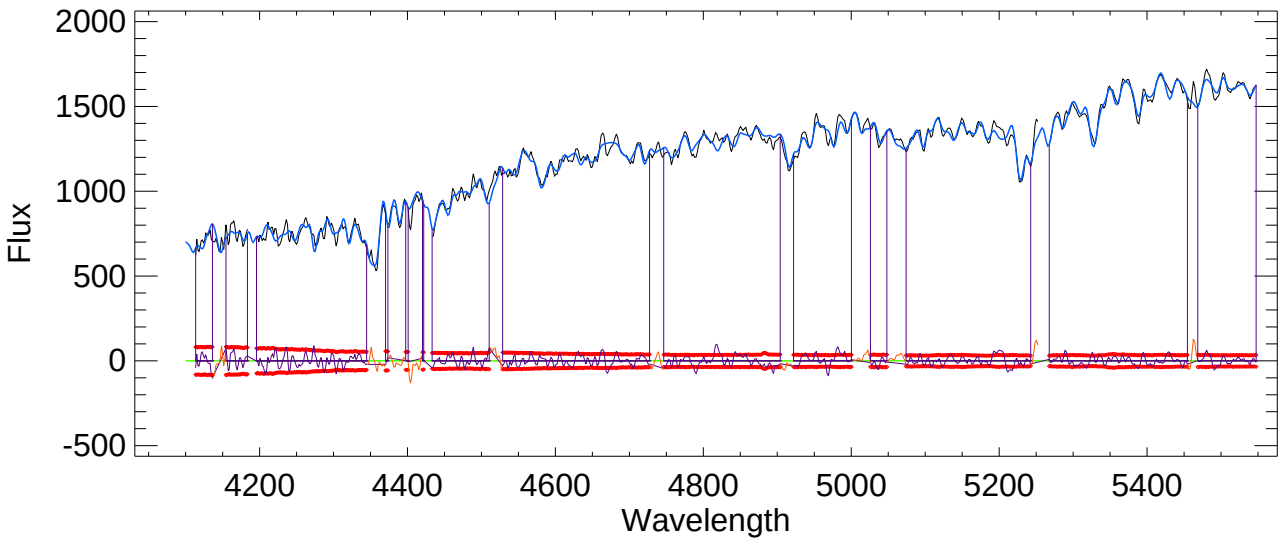

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

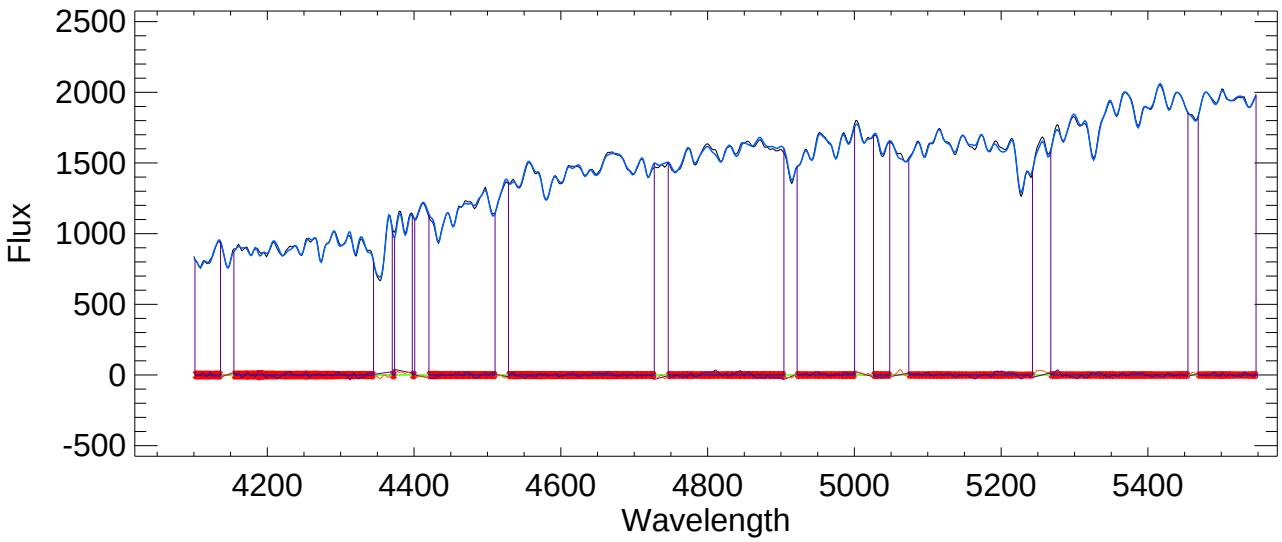

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

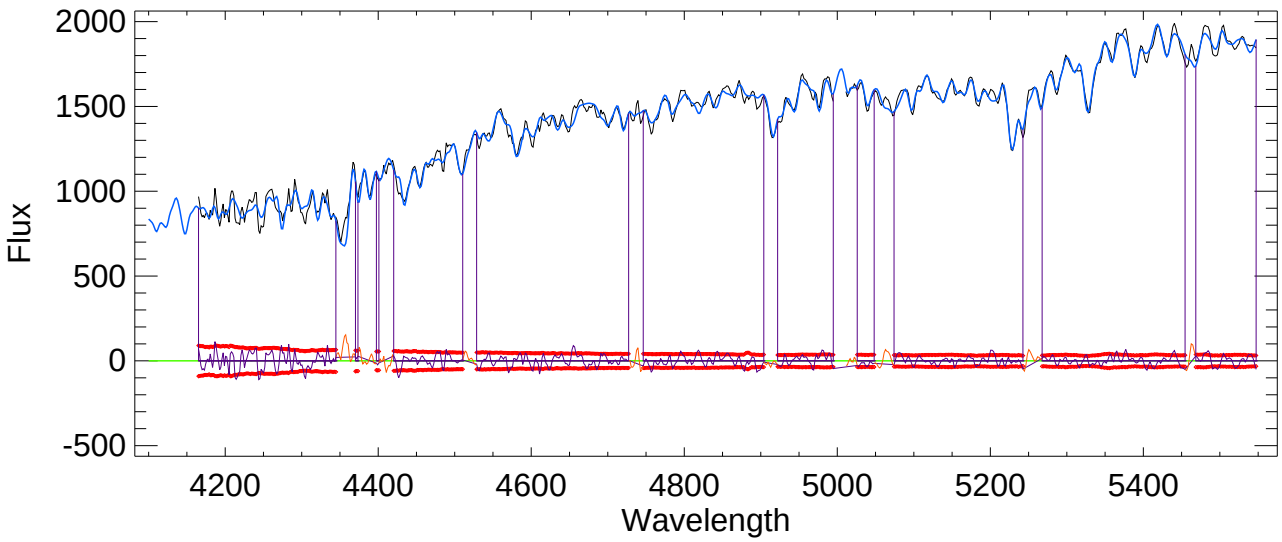

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

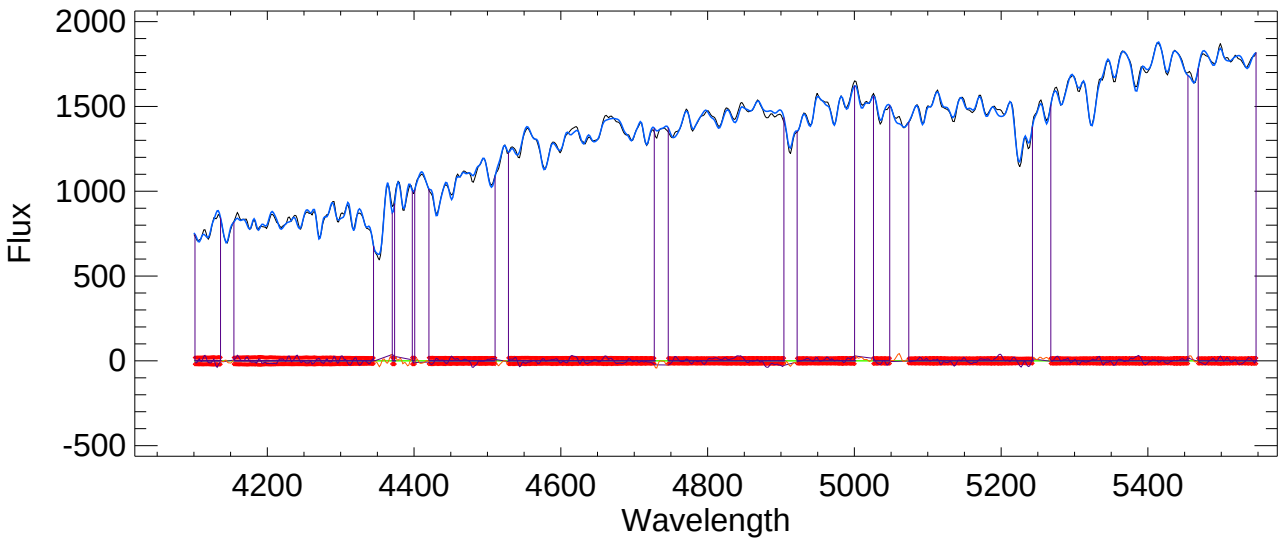

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

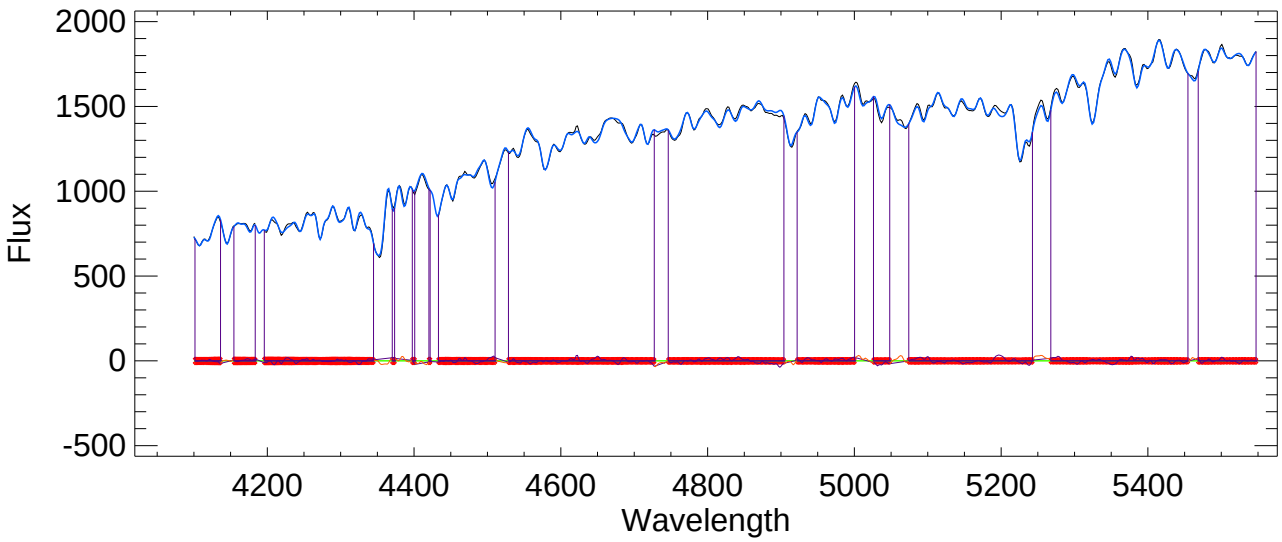

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

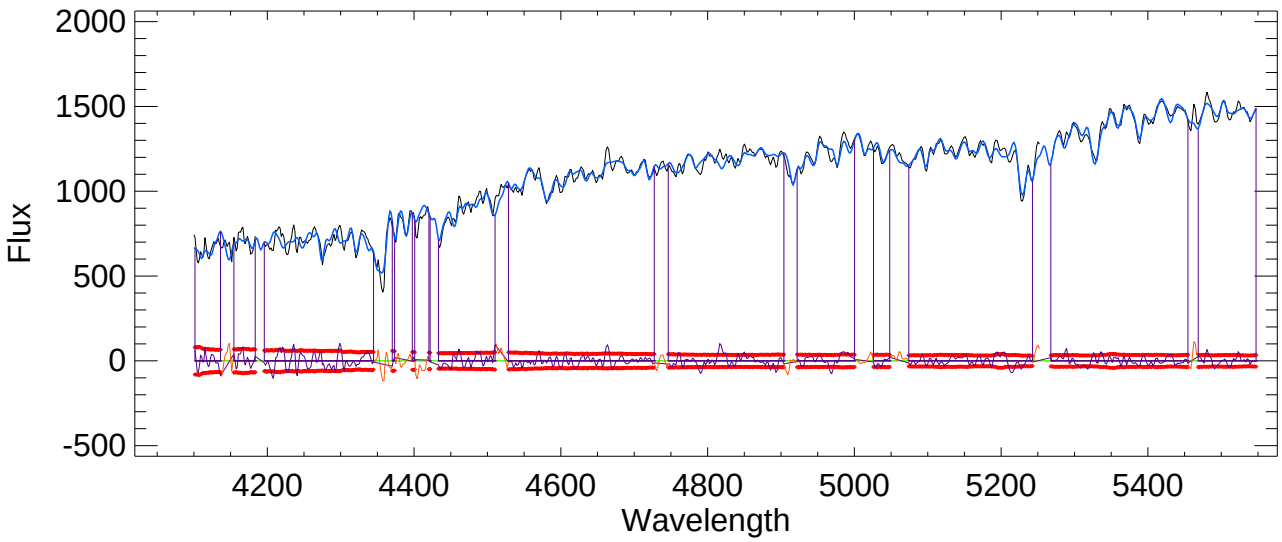

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

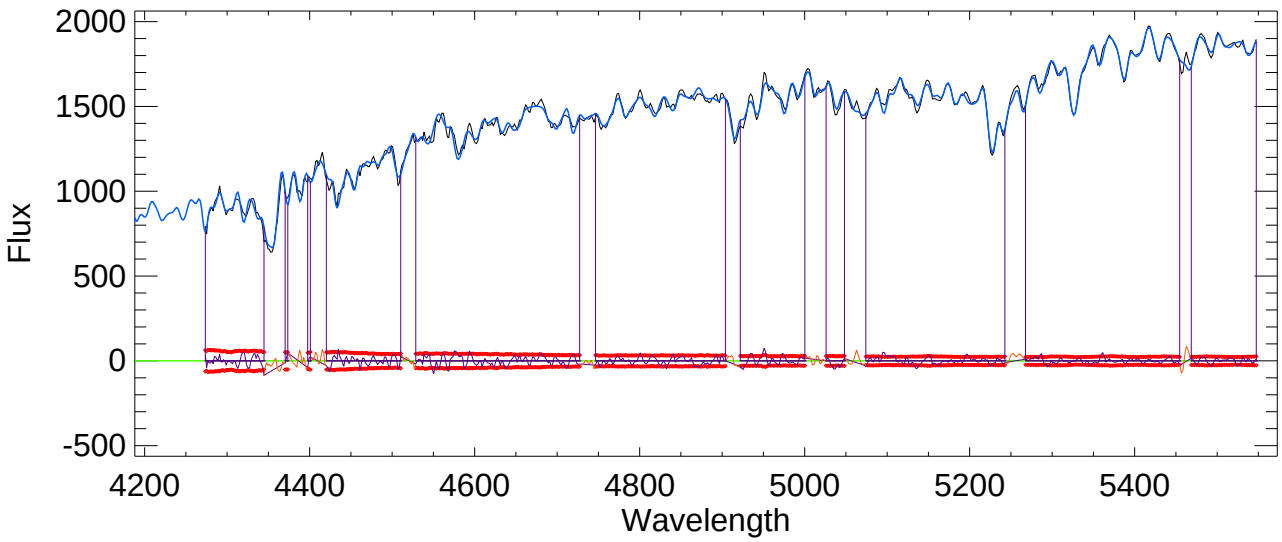

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

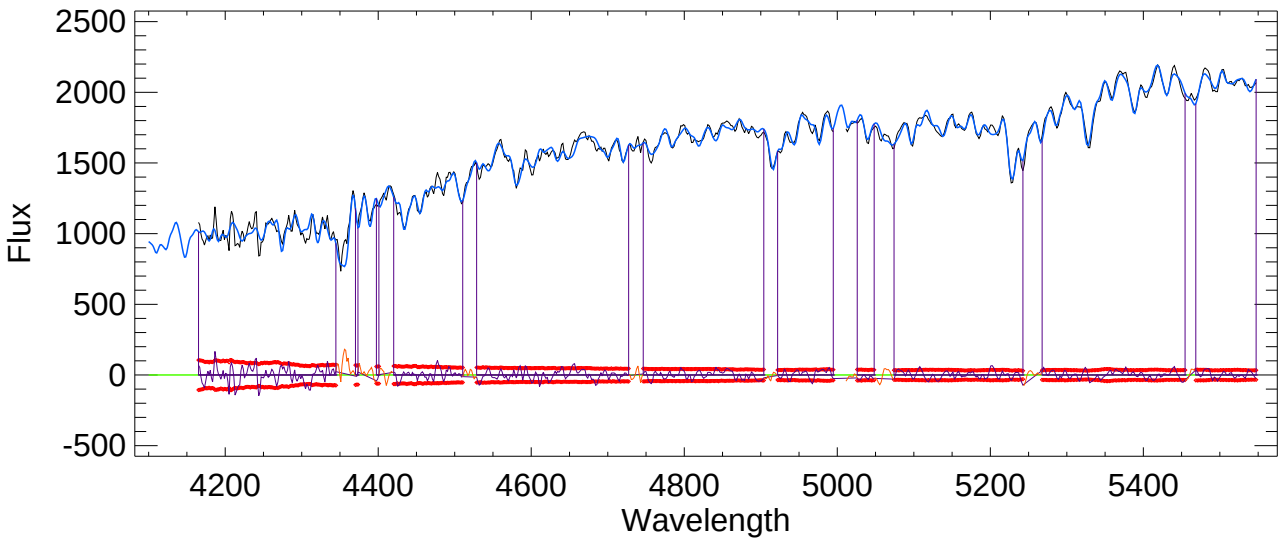

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

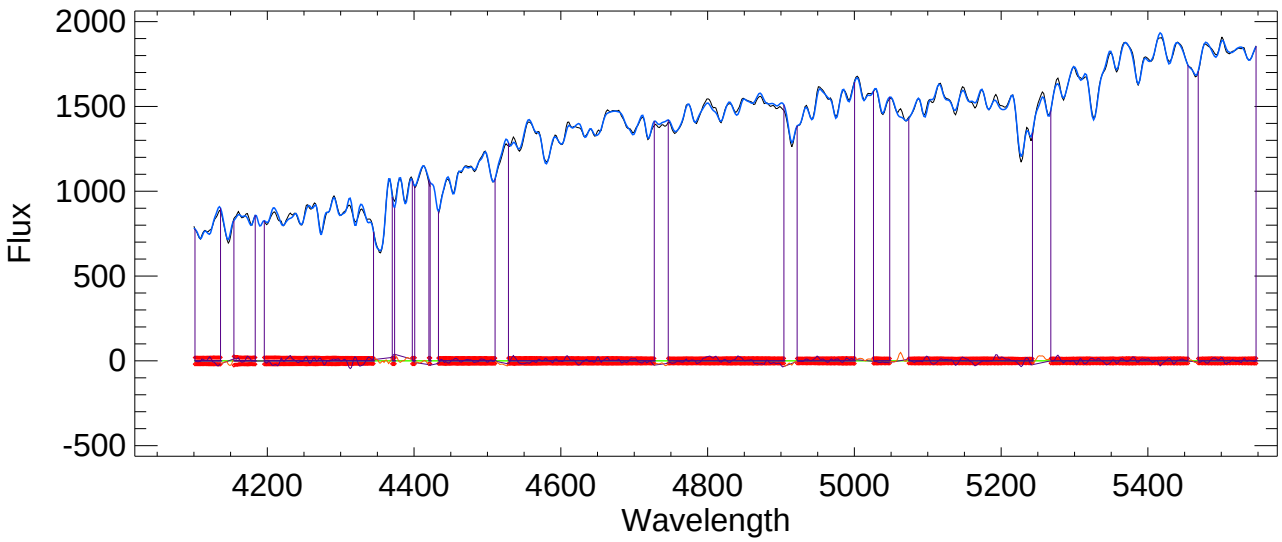

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

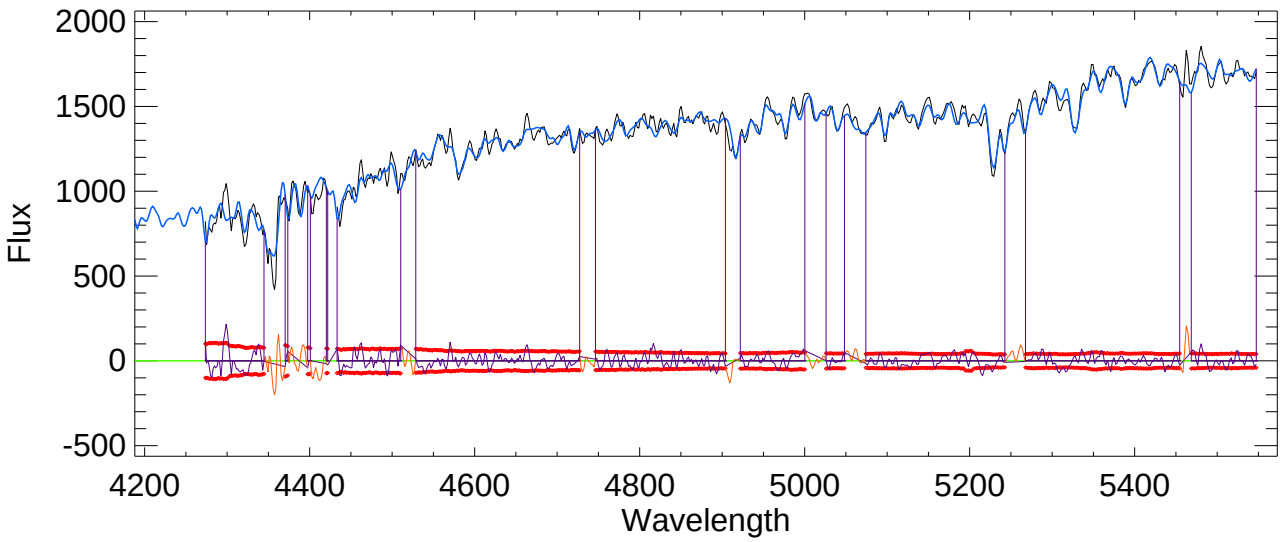

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

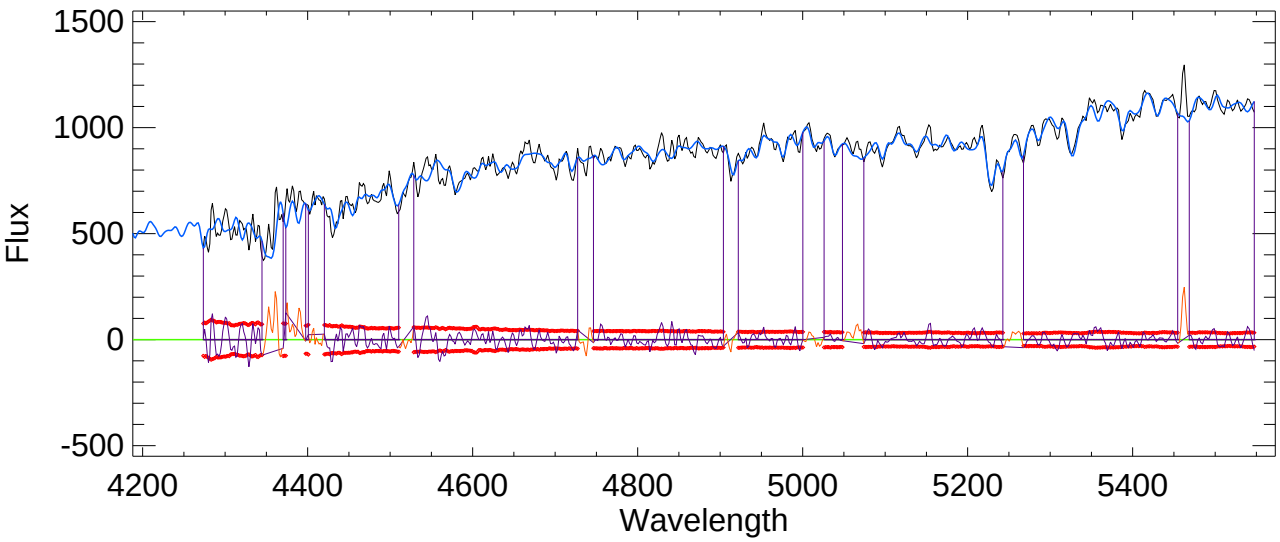

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

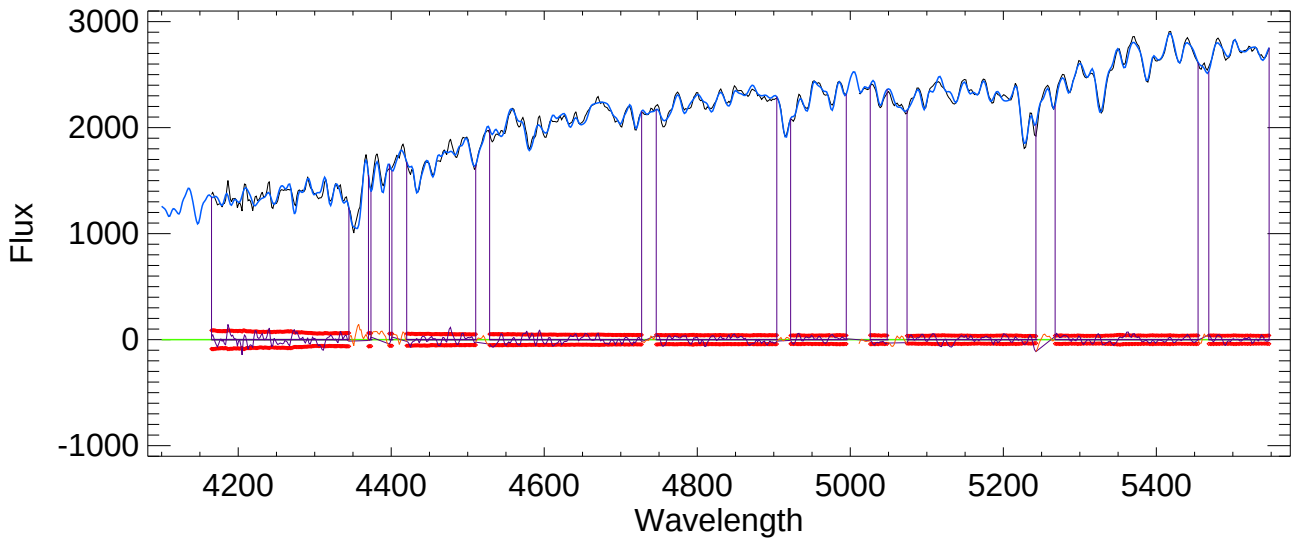

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

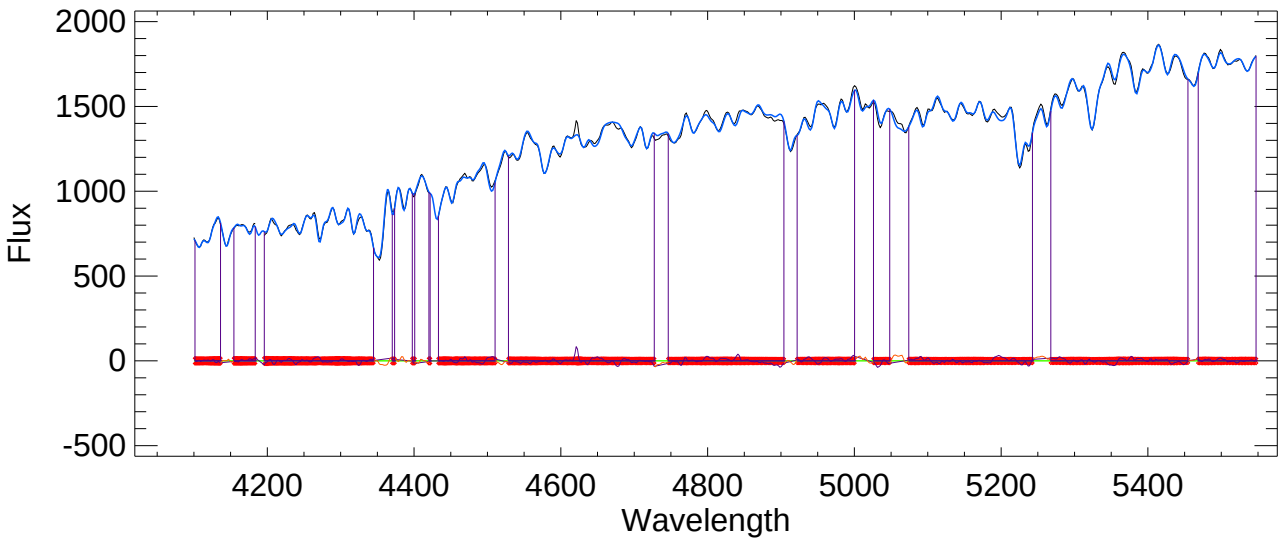

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

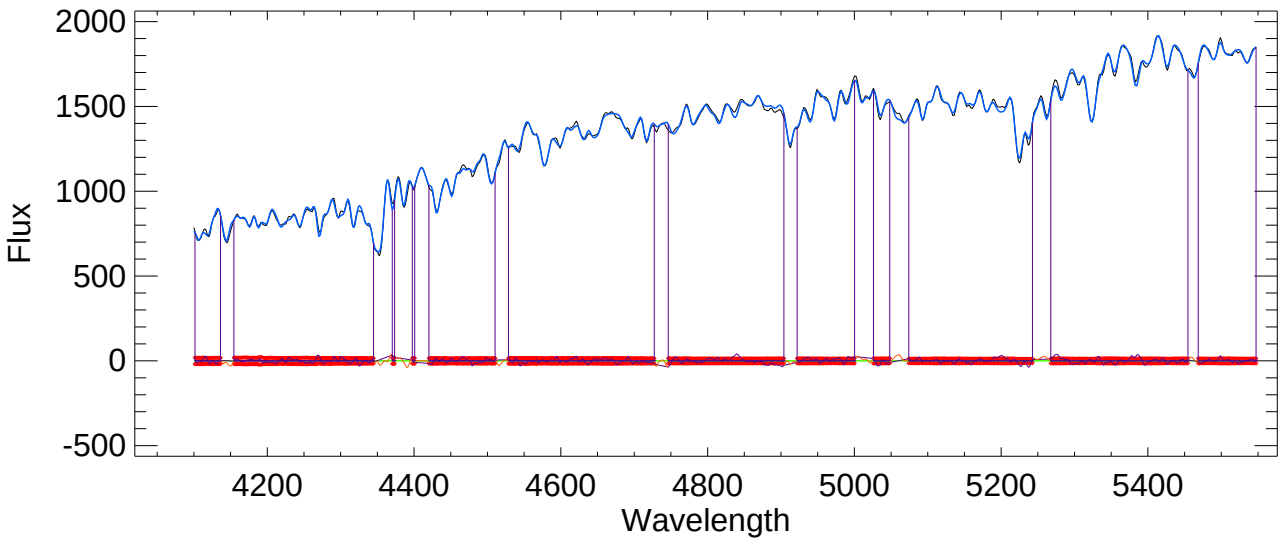

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

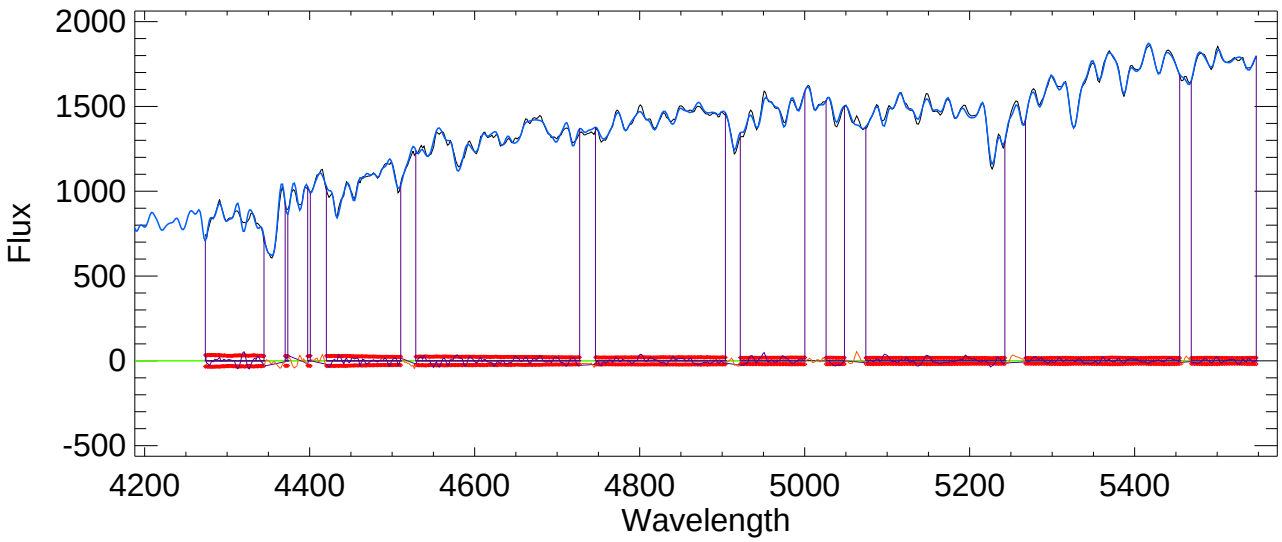

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

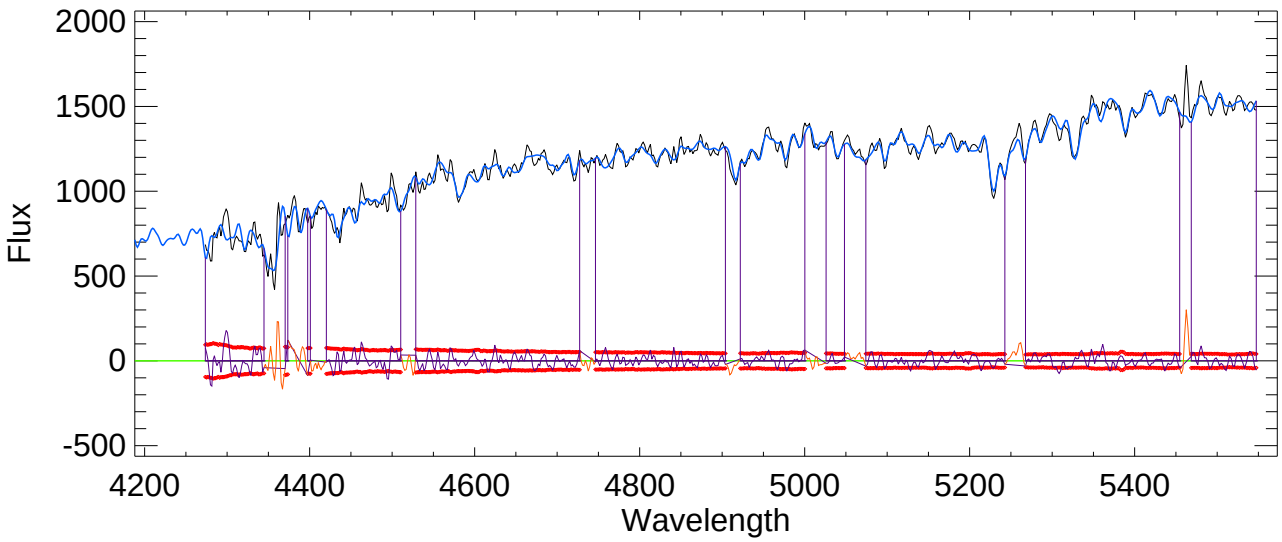

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

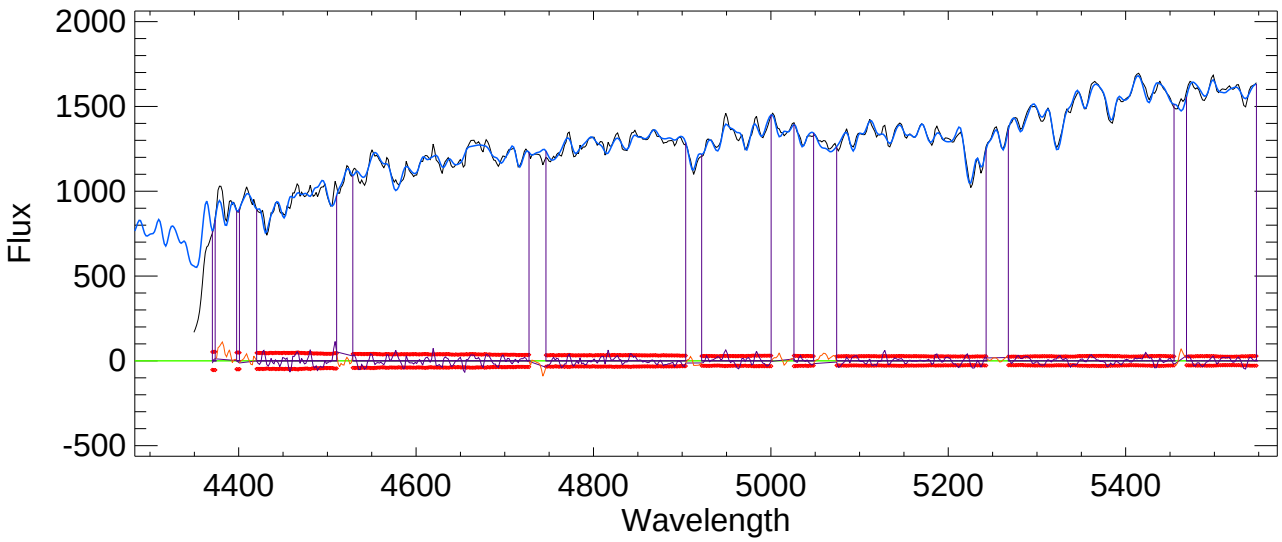

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

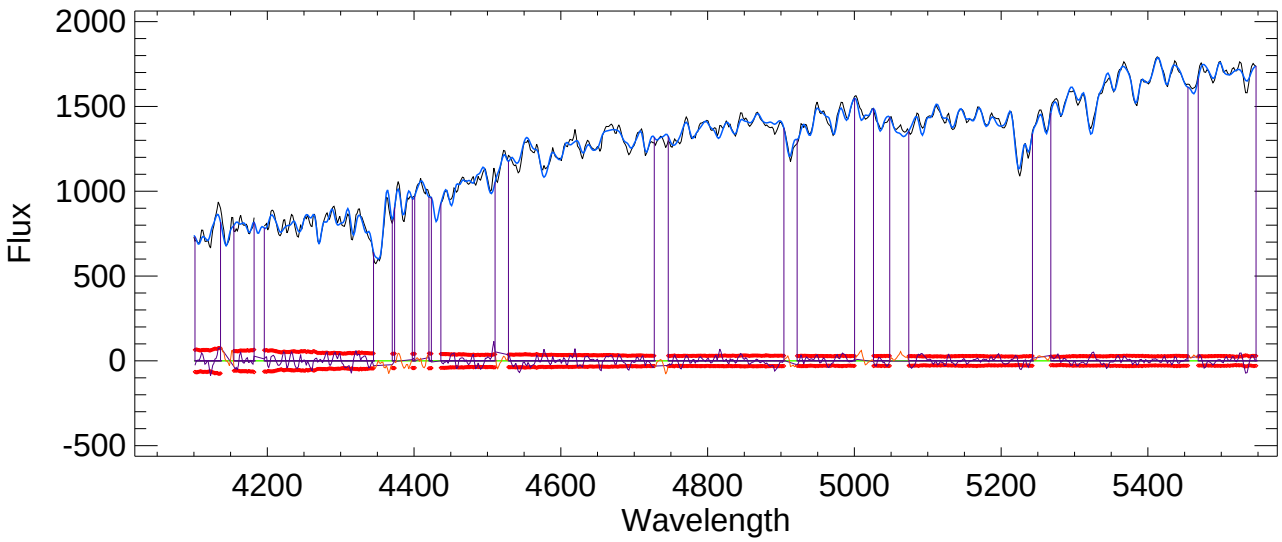

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

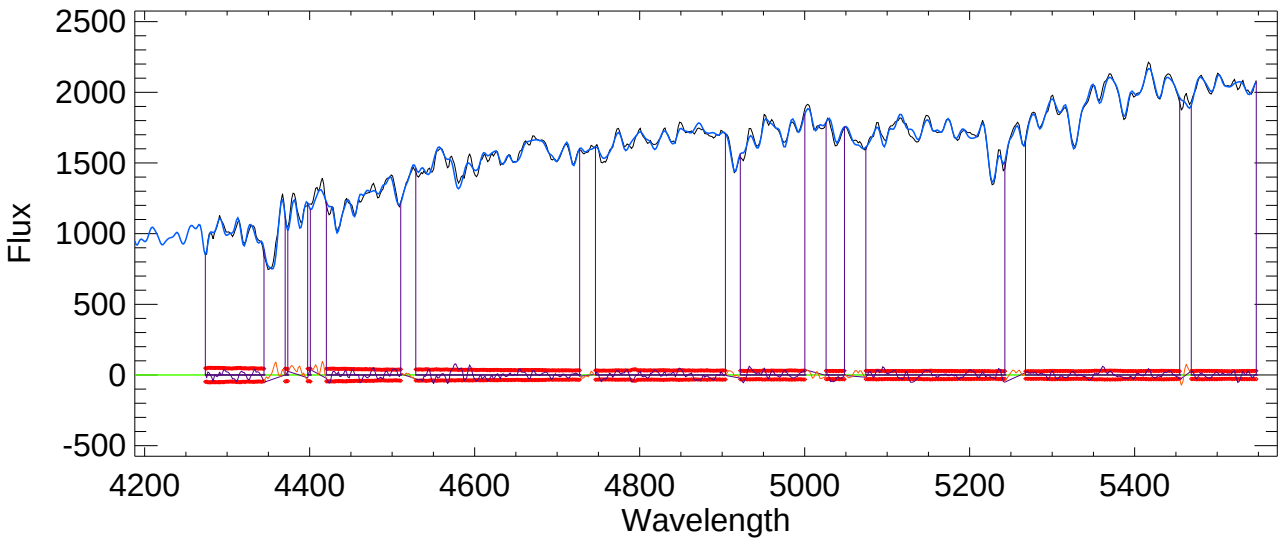

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

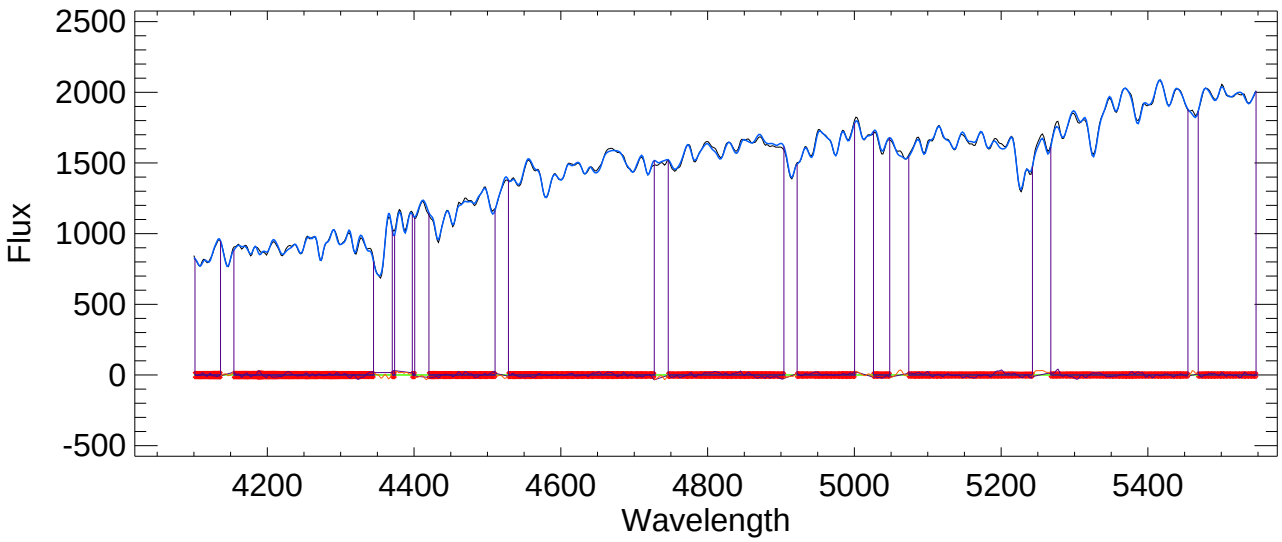

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

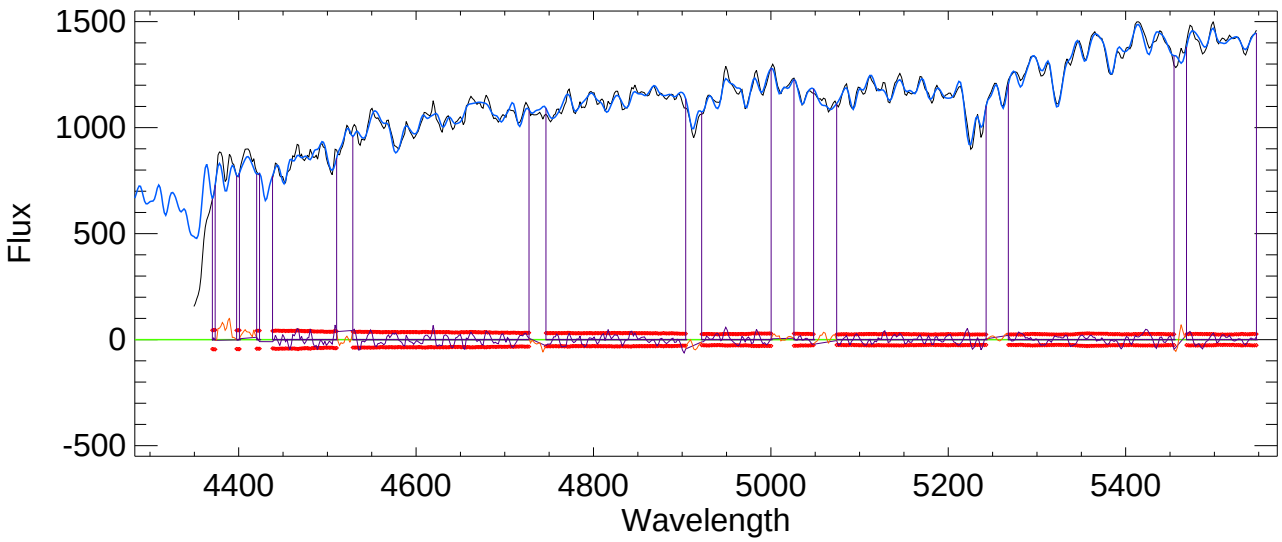

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

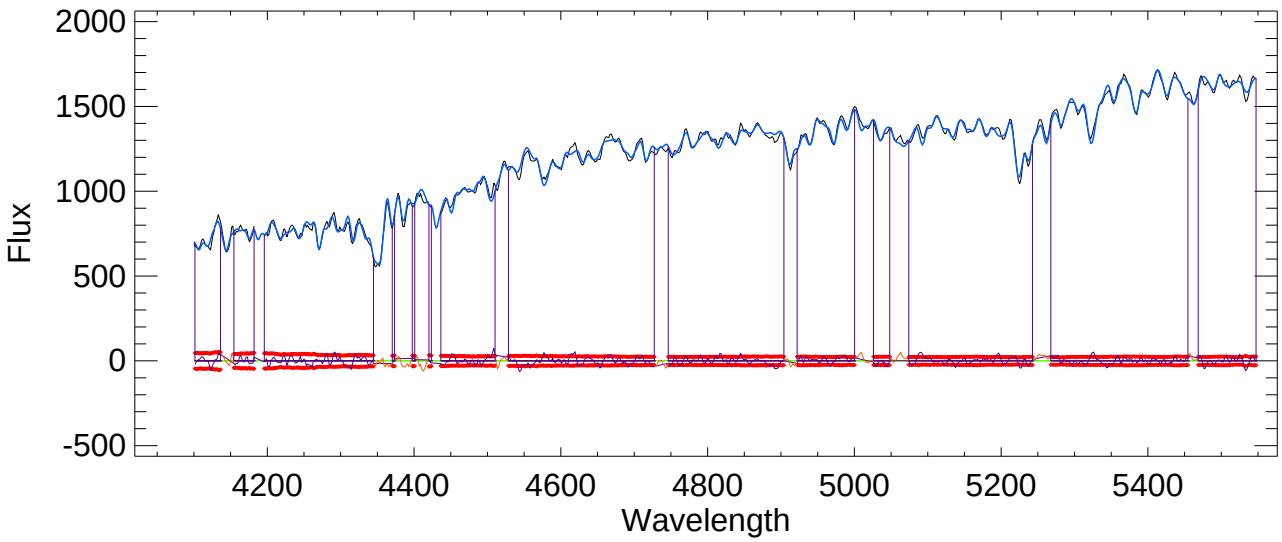

2000
1500
1000
500
0
-500
Flux
4400
4600
4800
5000
5200
5400
Wavelength

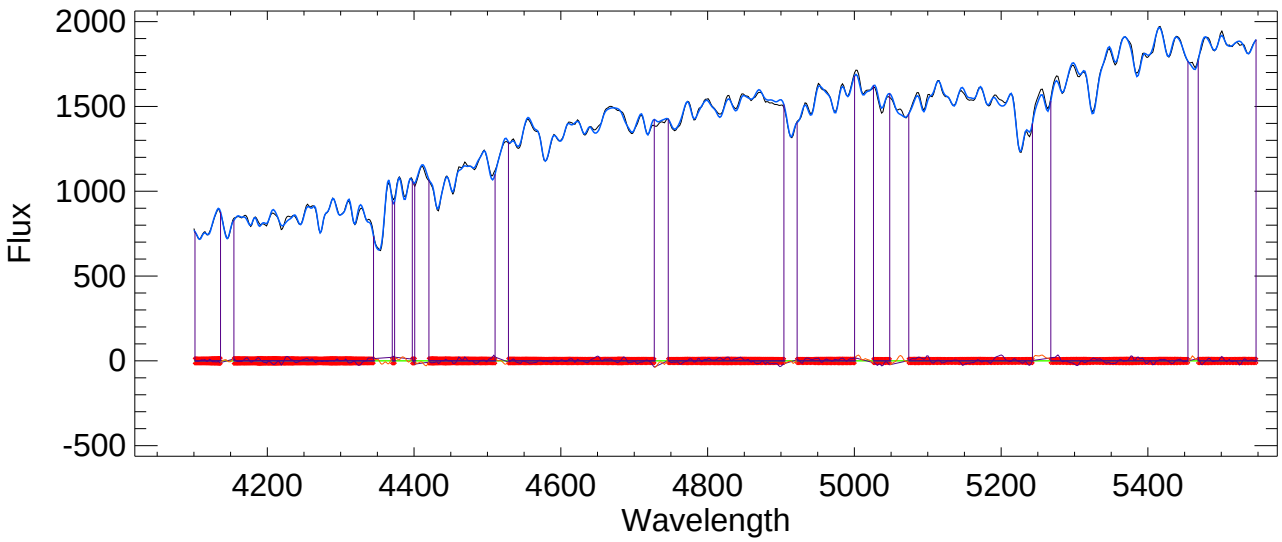

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

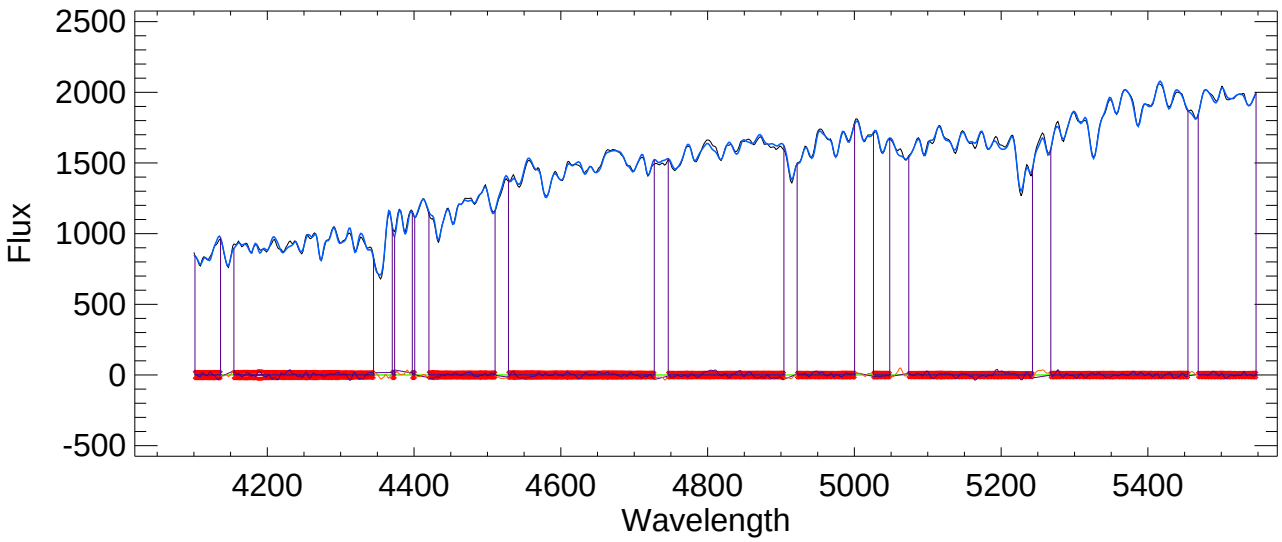

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

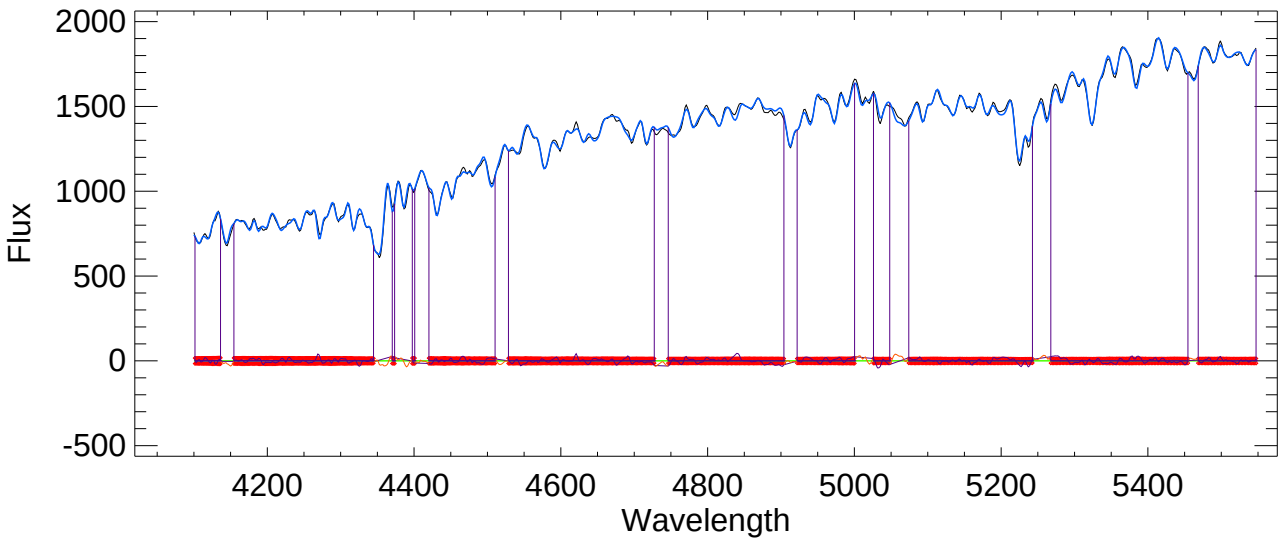

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

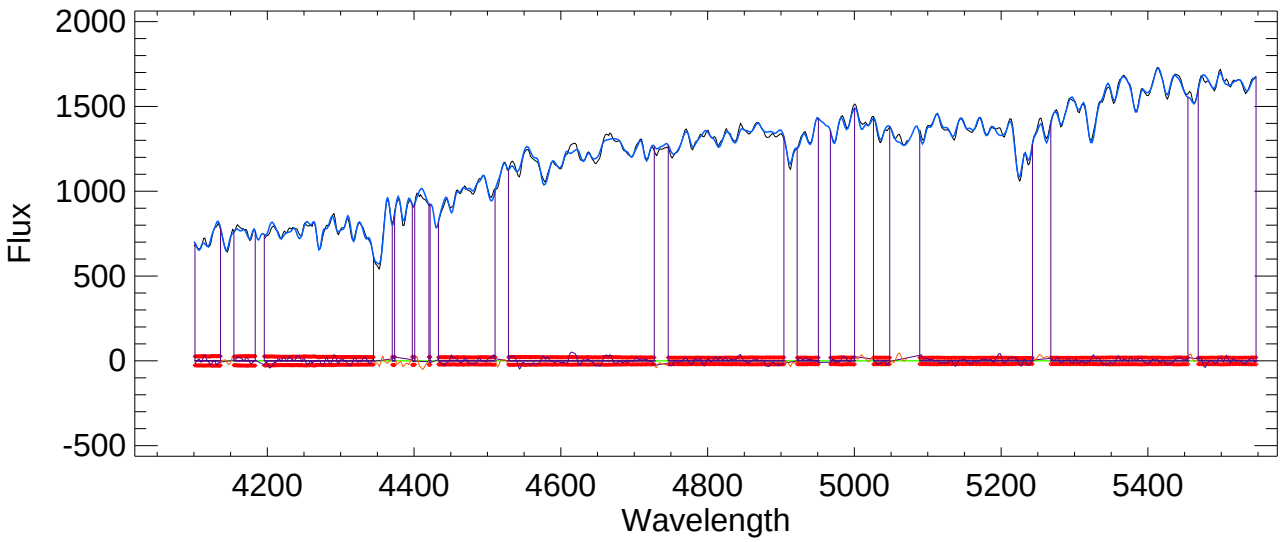

1500
1000
500
0
-500
Flux
4400
4600
4800
5000
5200
5400
Wavelength

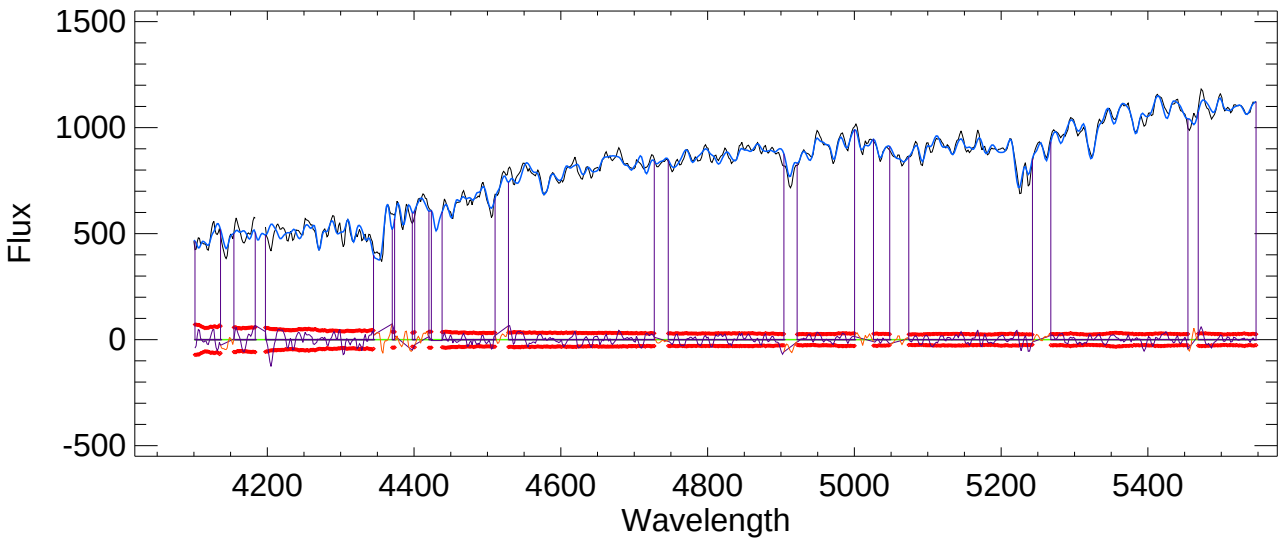

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

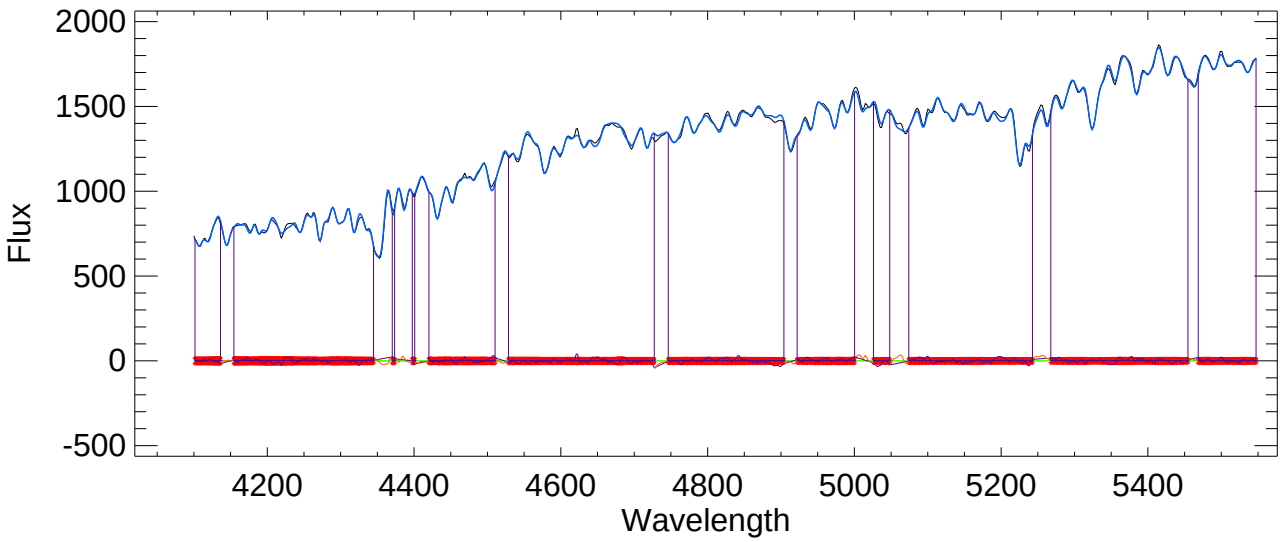

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

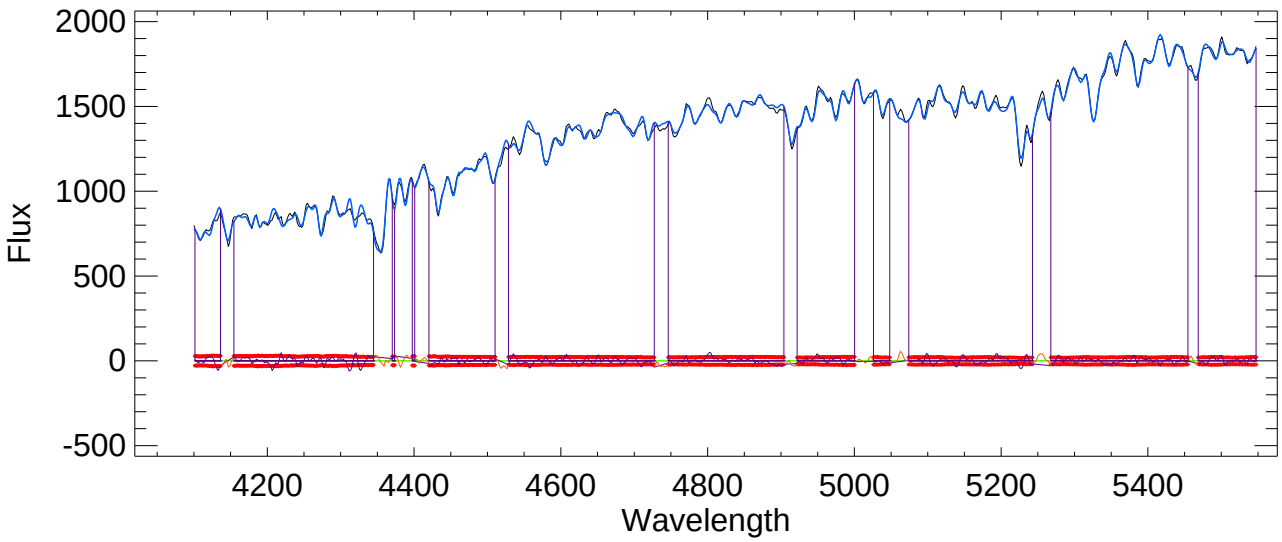

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

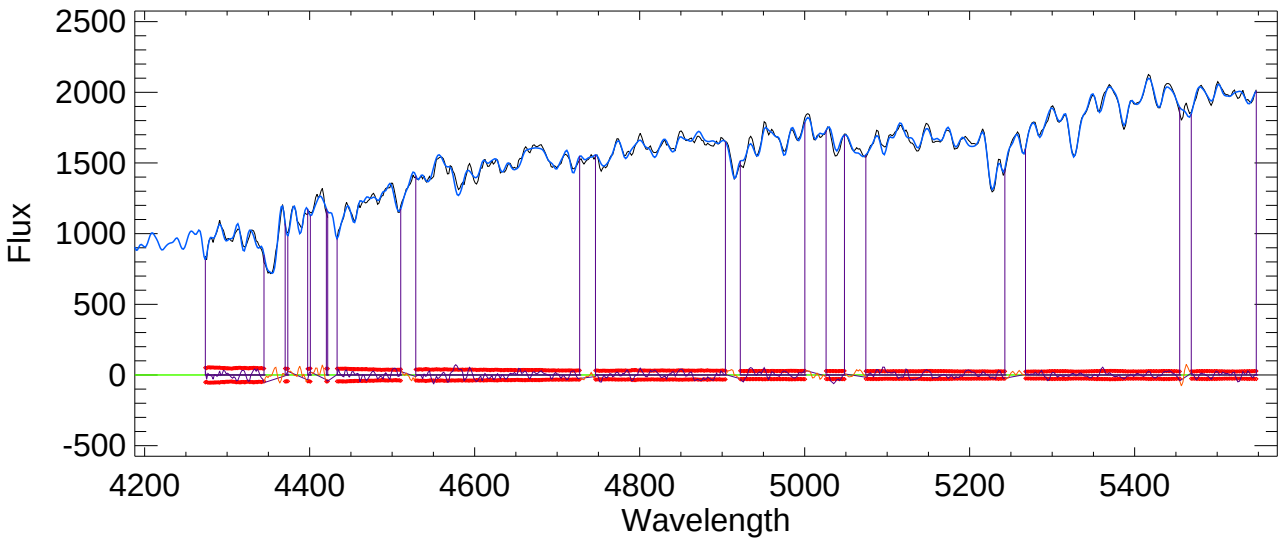

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

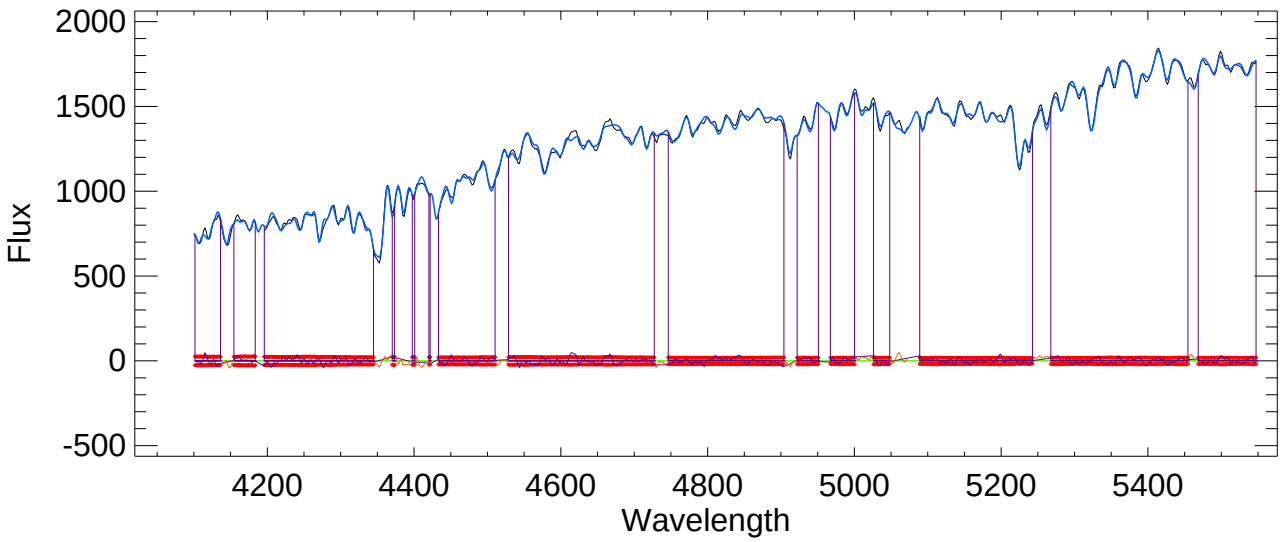

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

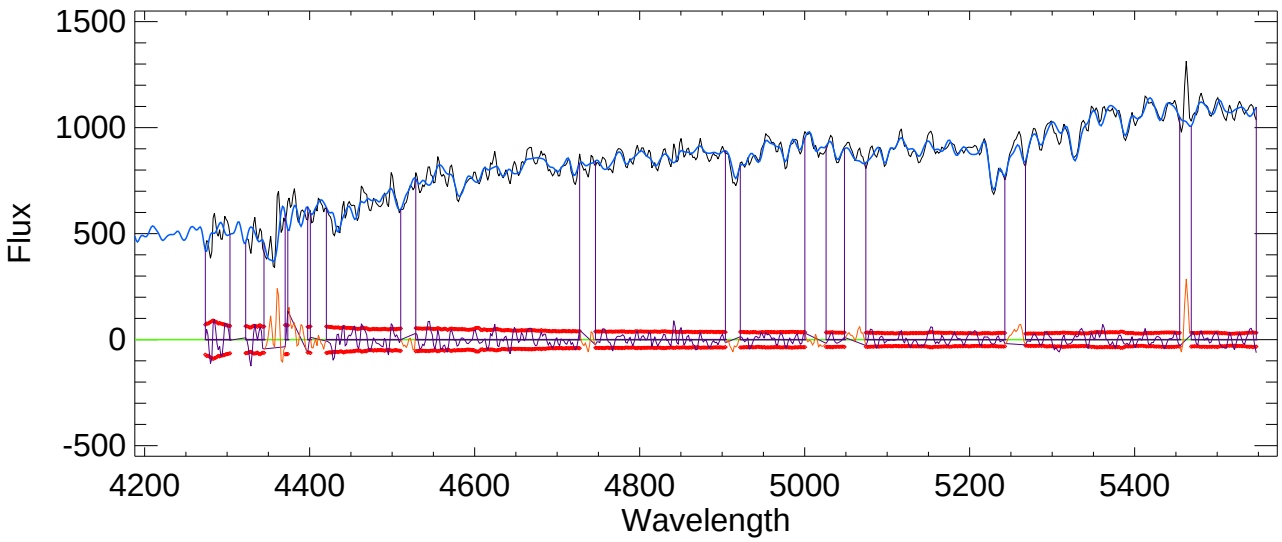

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

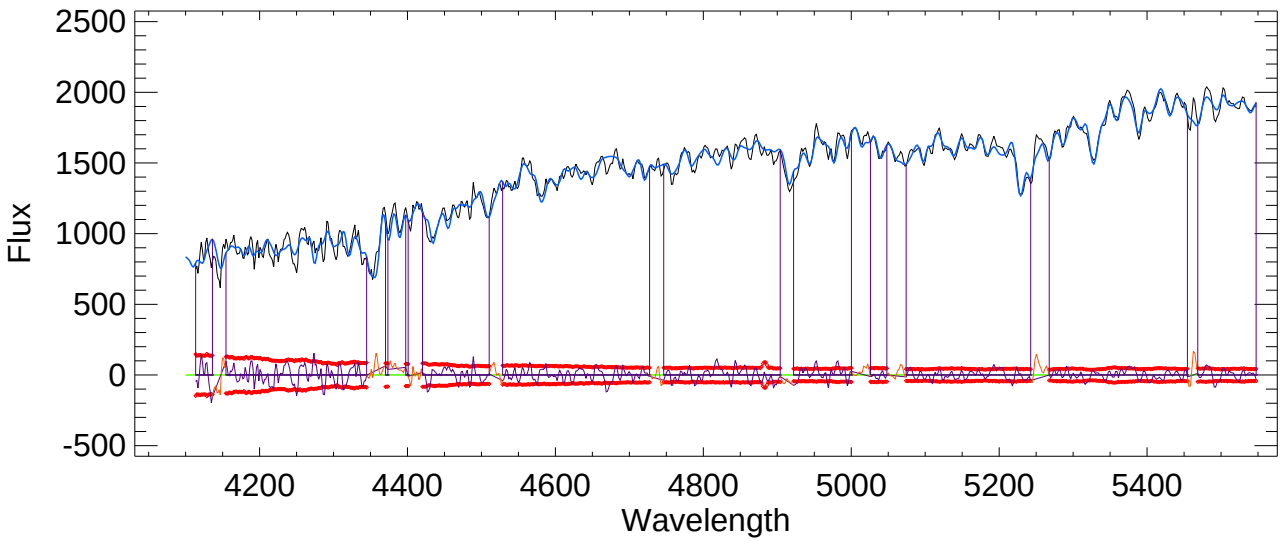

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

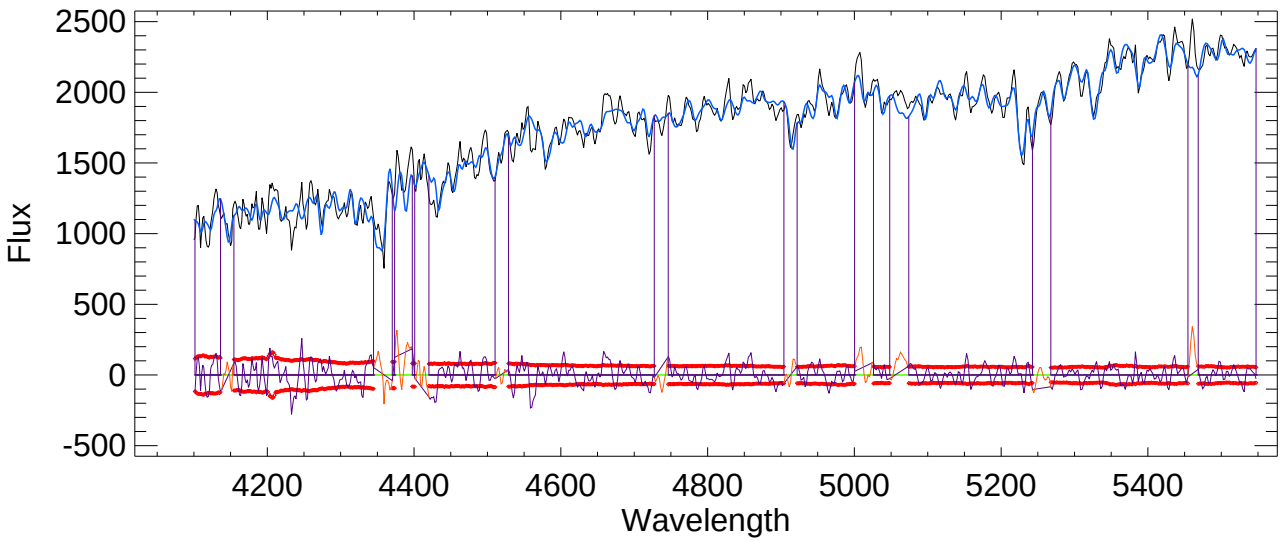

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

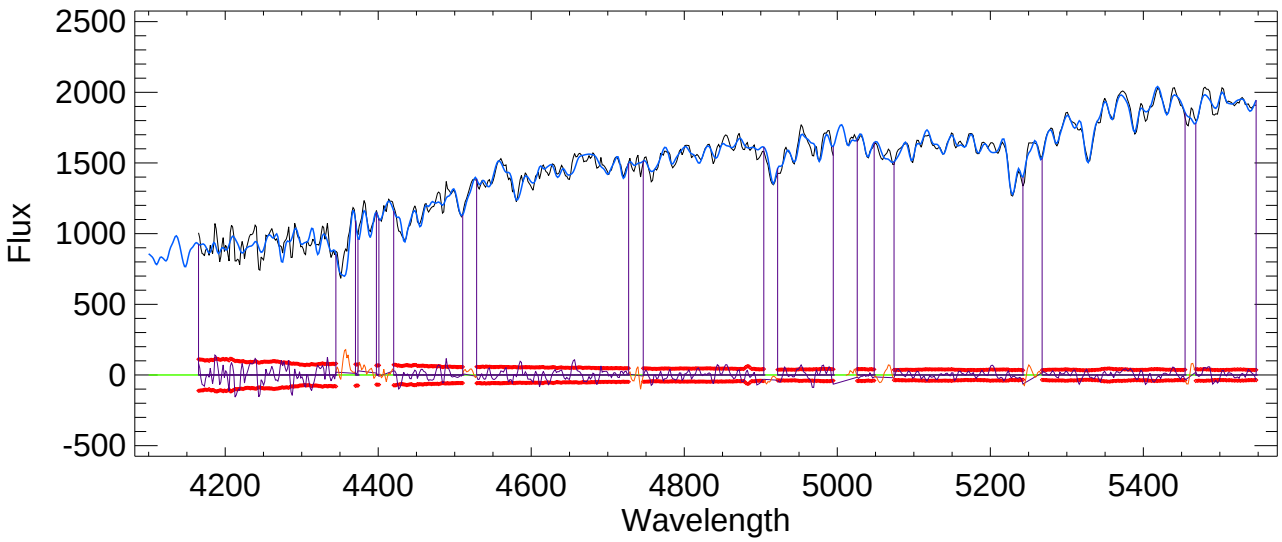

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

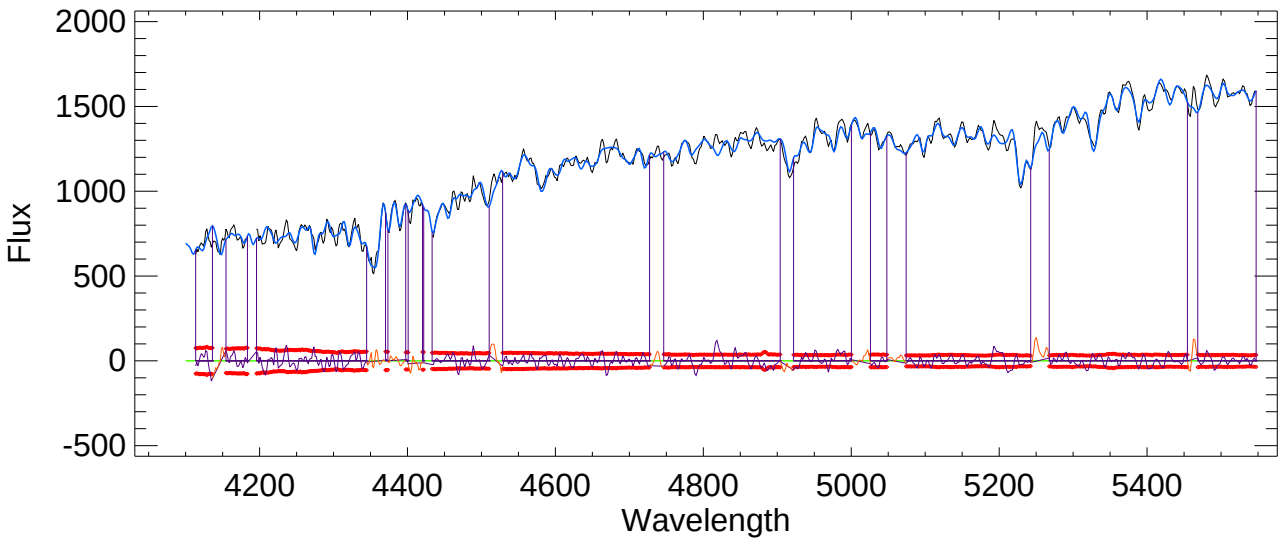

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

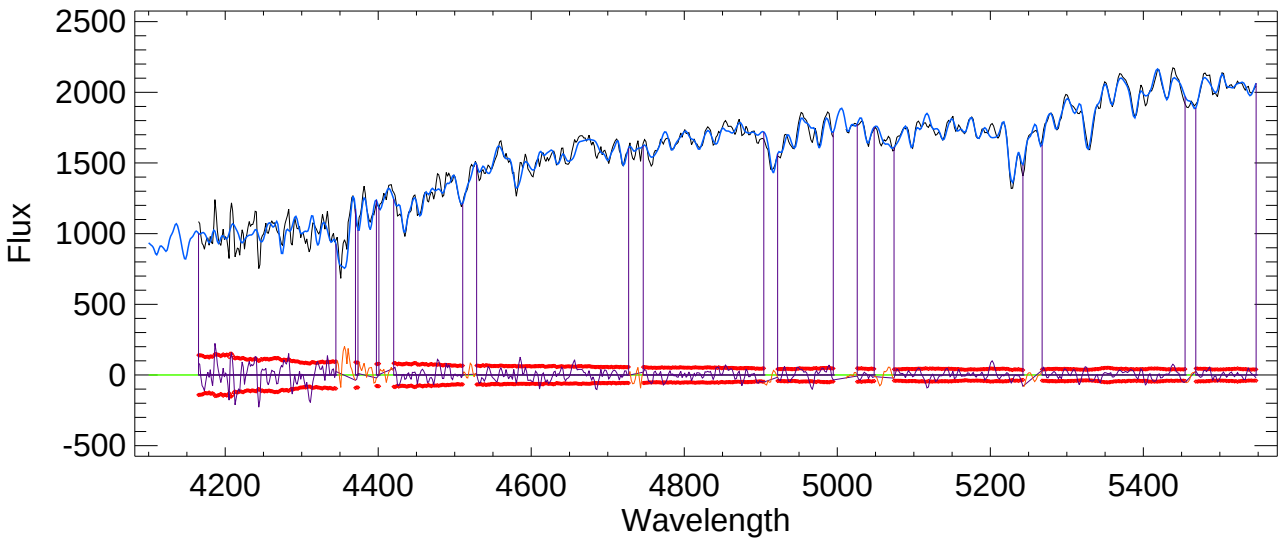

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

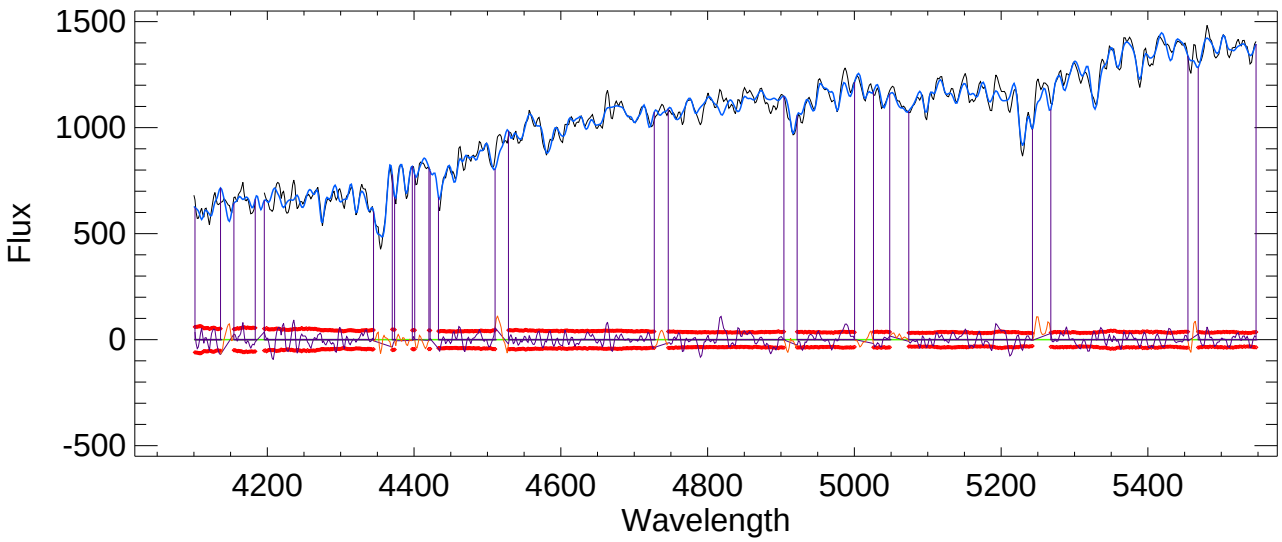

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

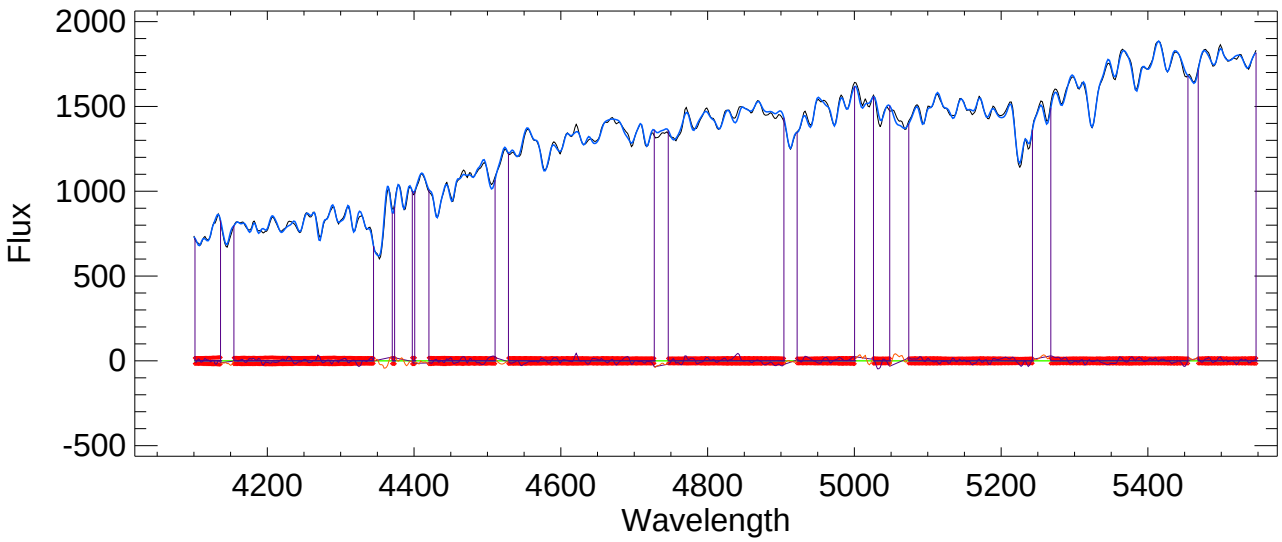

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

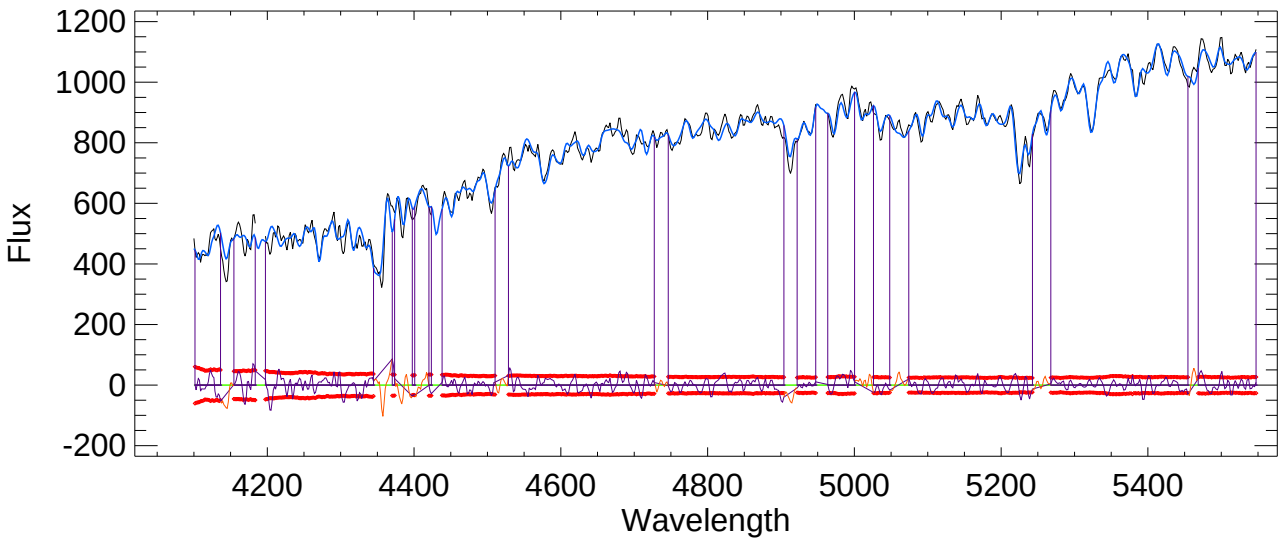

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

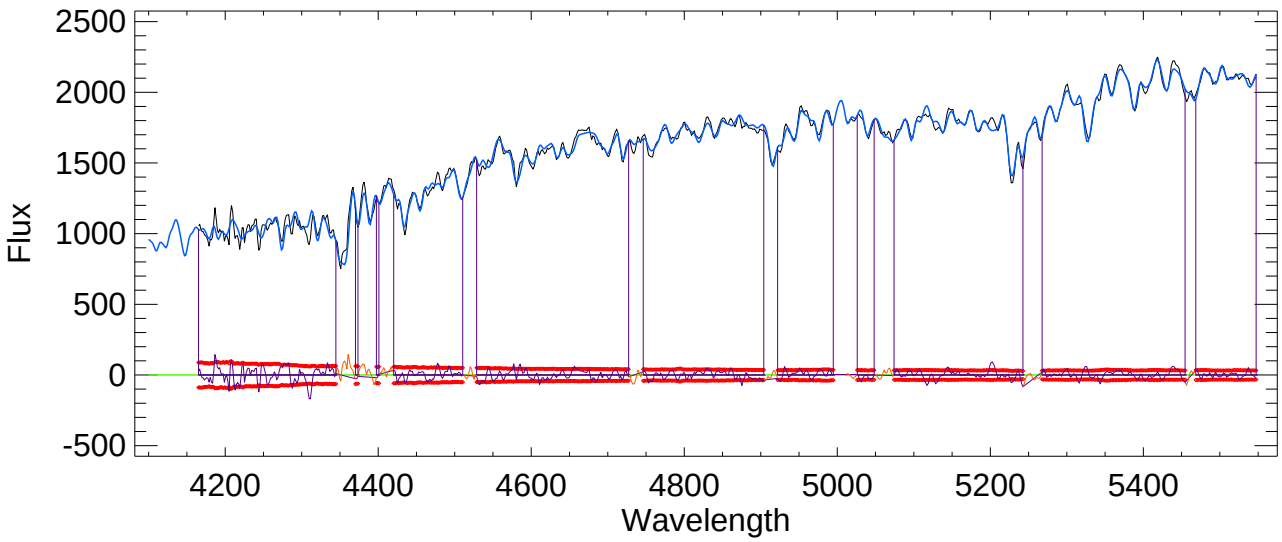

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

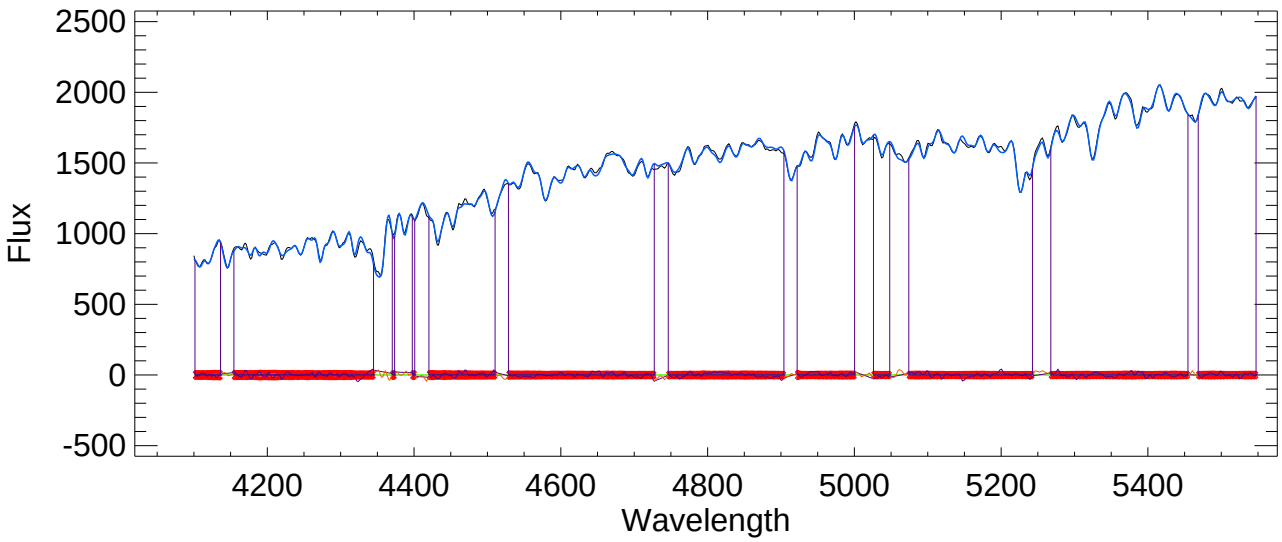

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

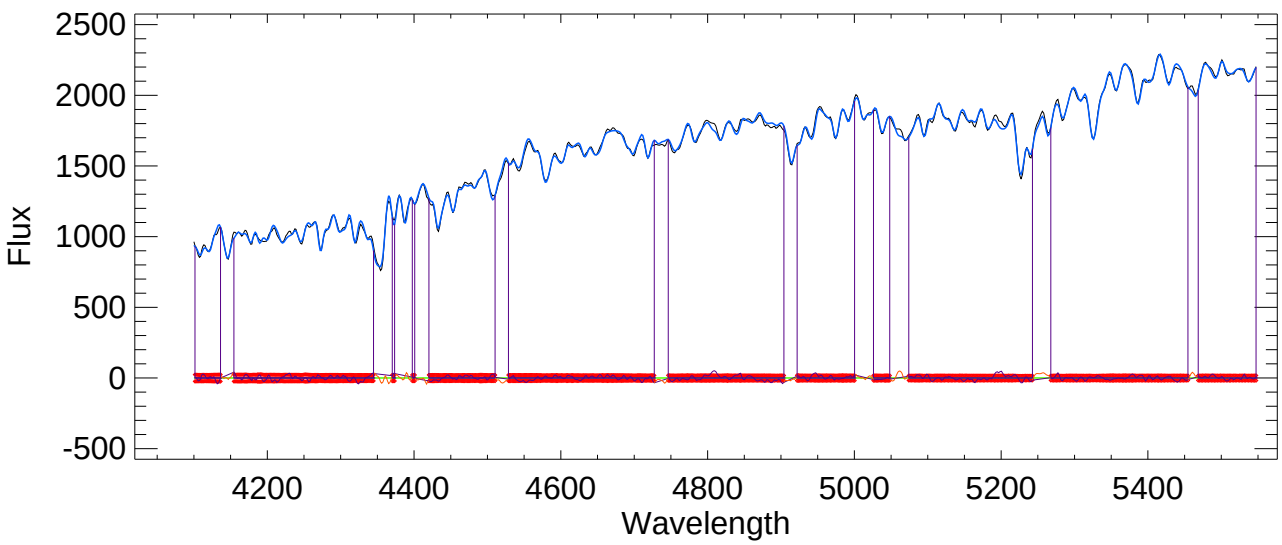

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

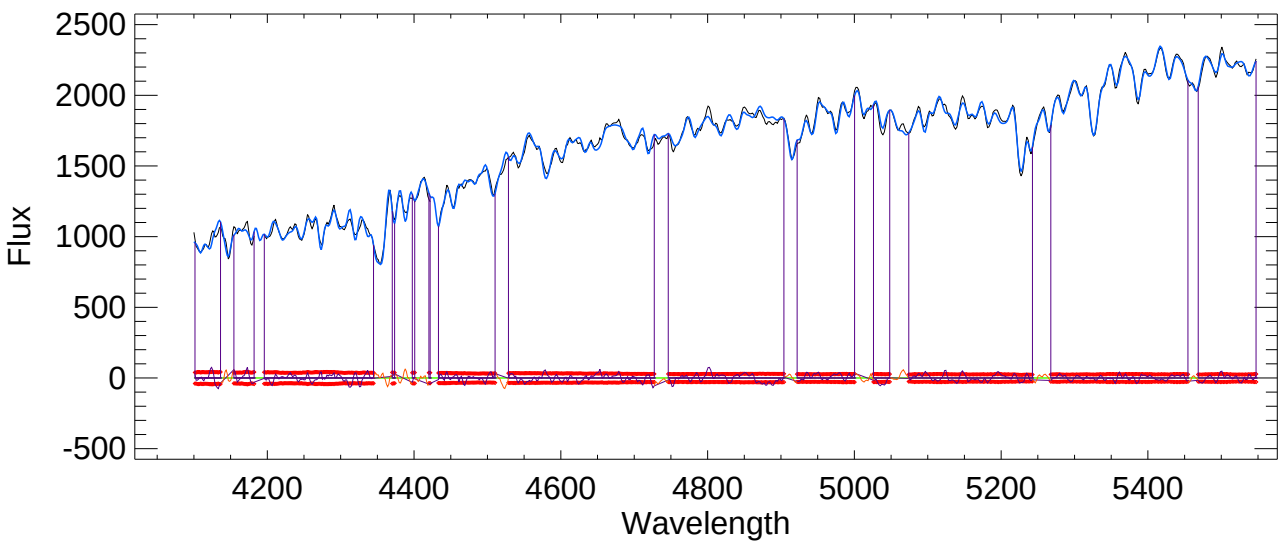

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

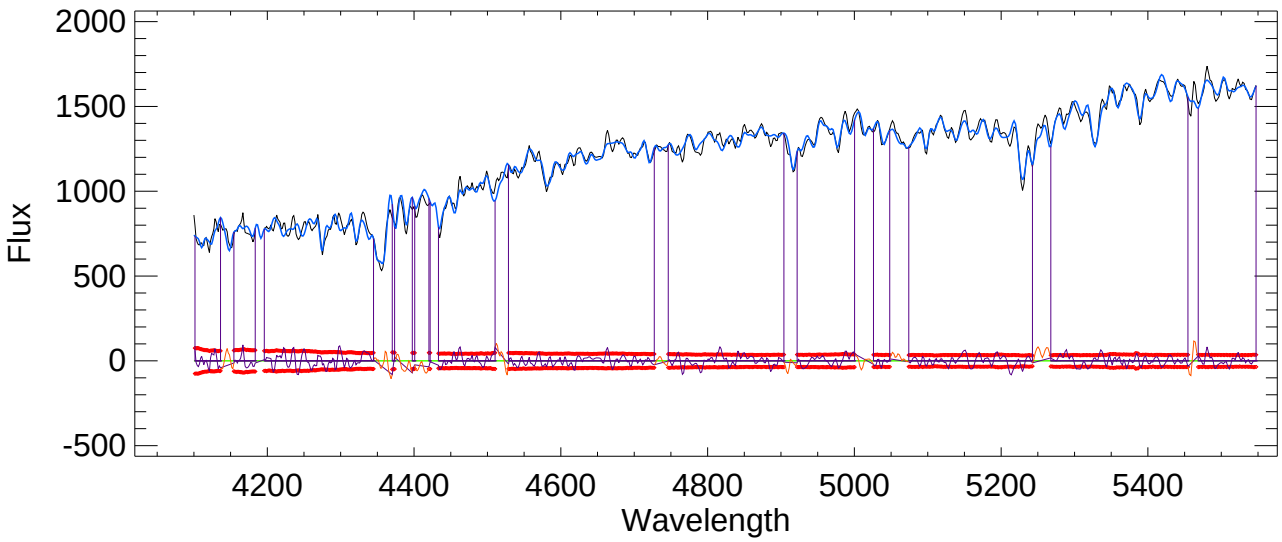

1200
1000
800
600
400
200
0
-200
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

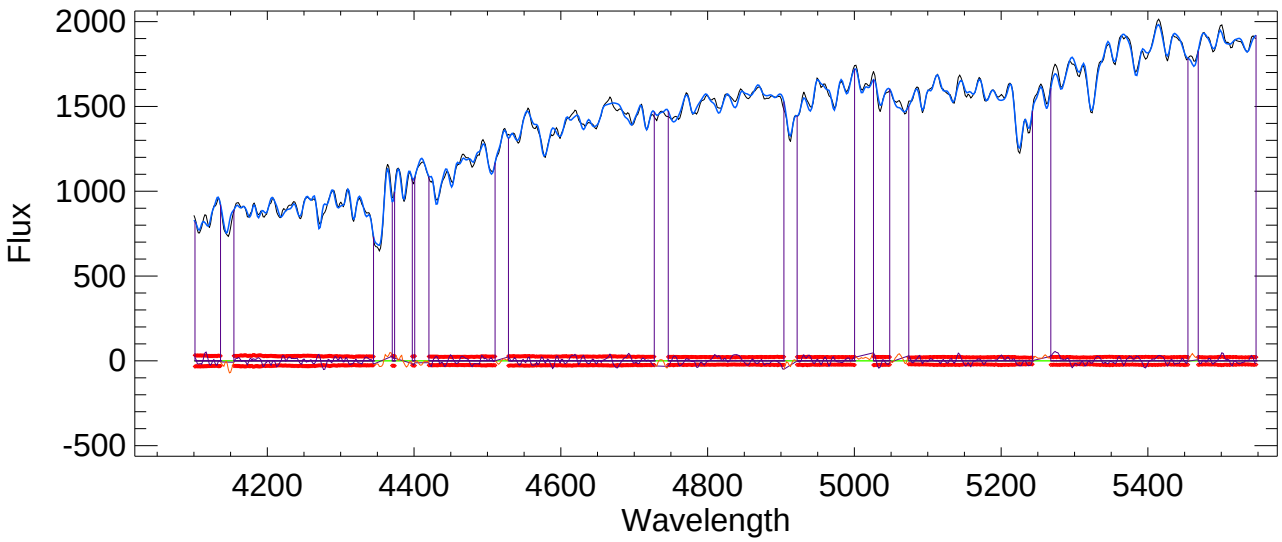

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

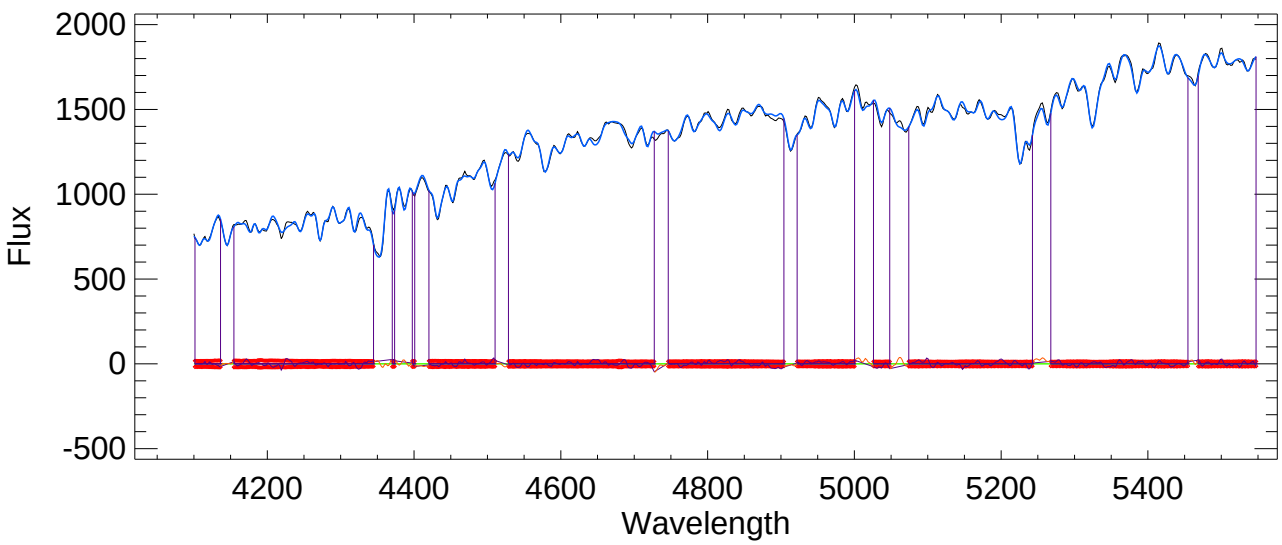

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

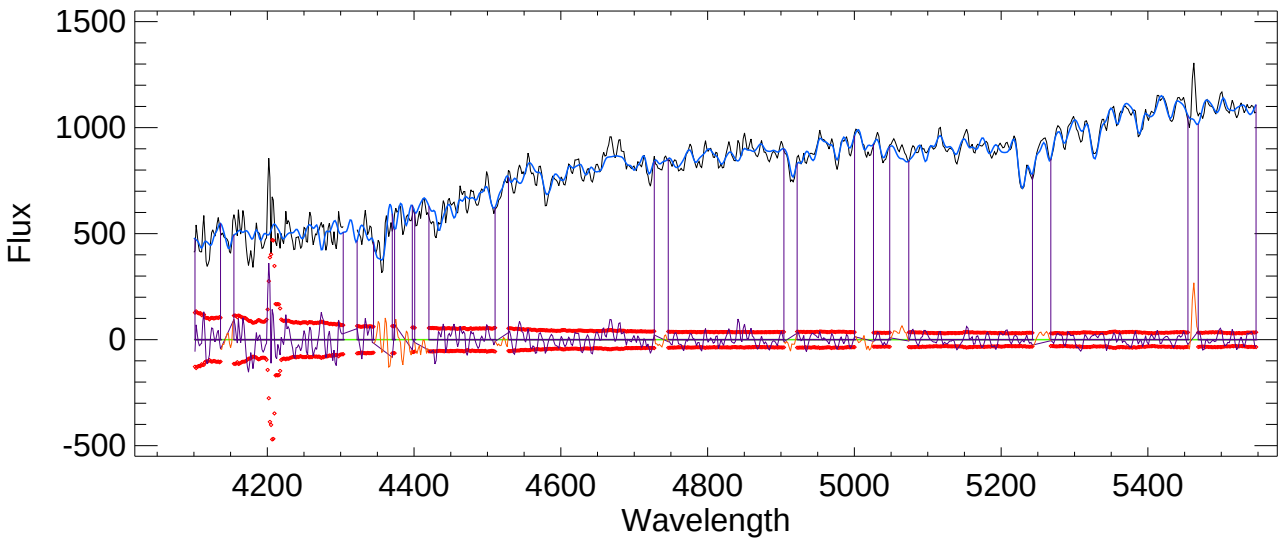

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

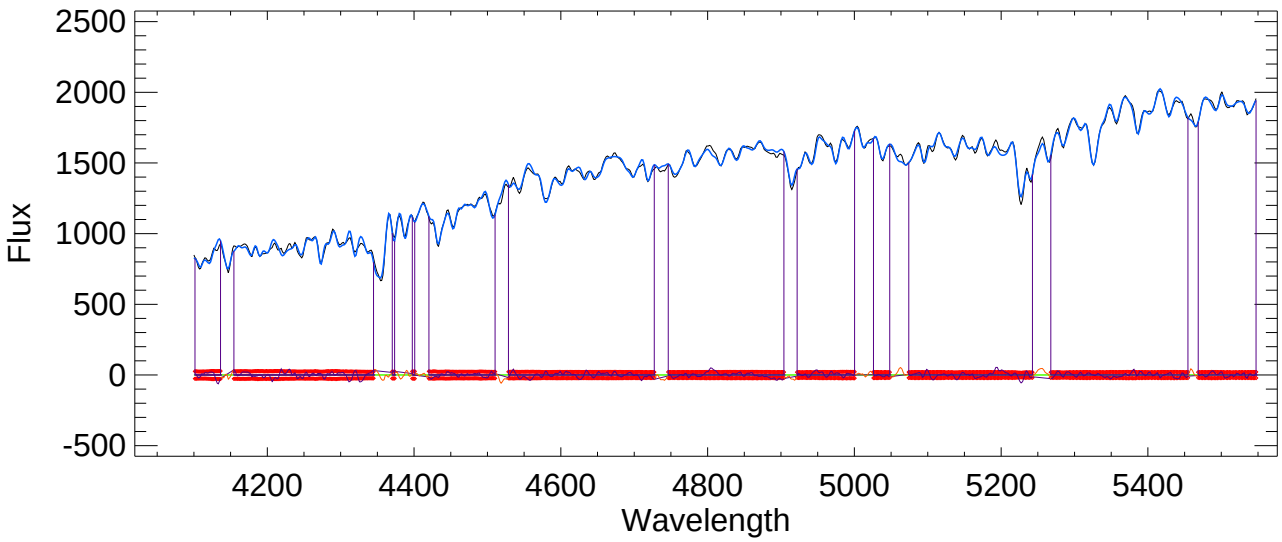

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

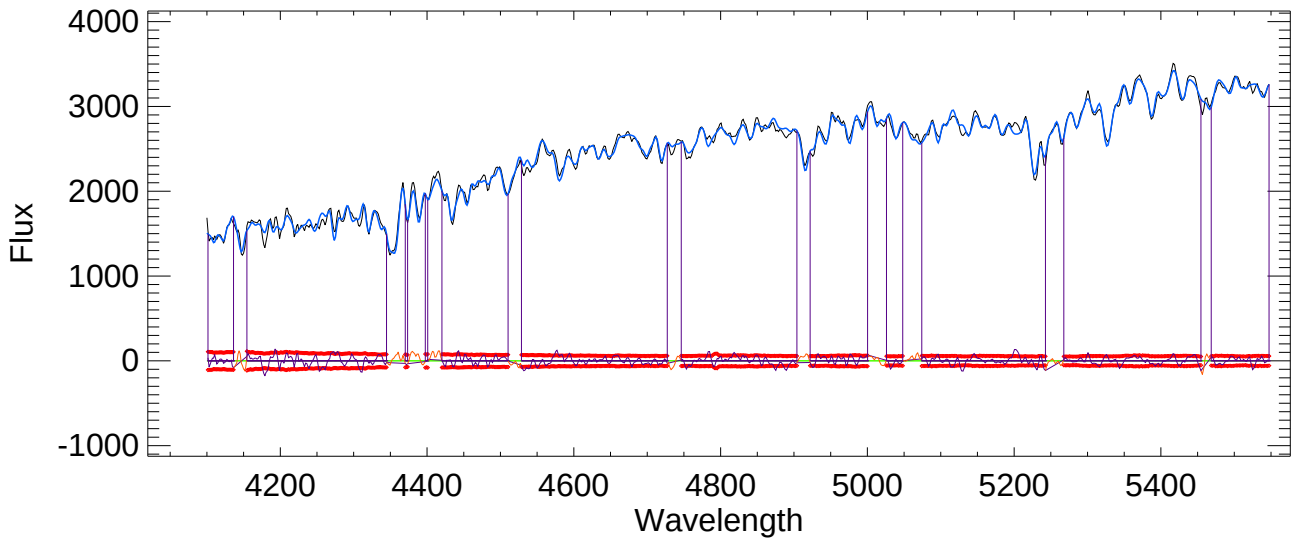

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

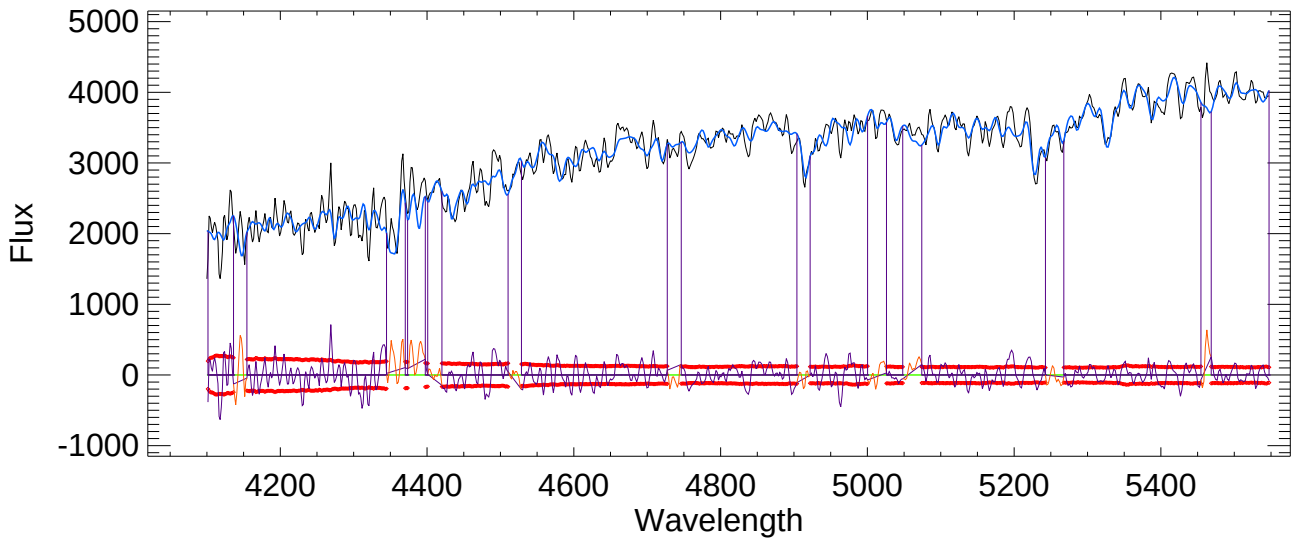

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

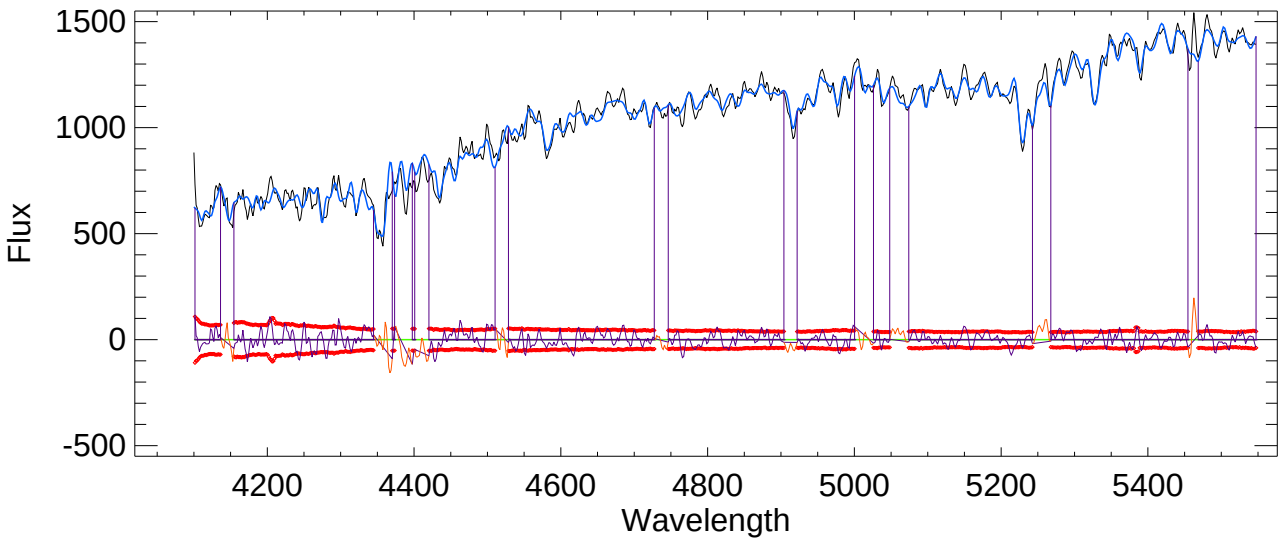

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

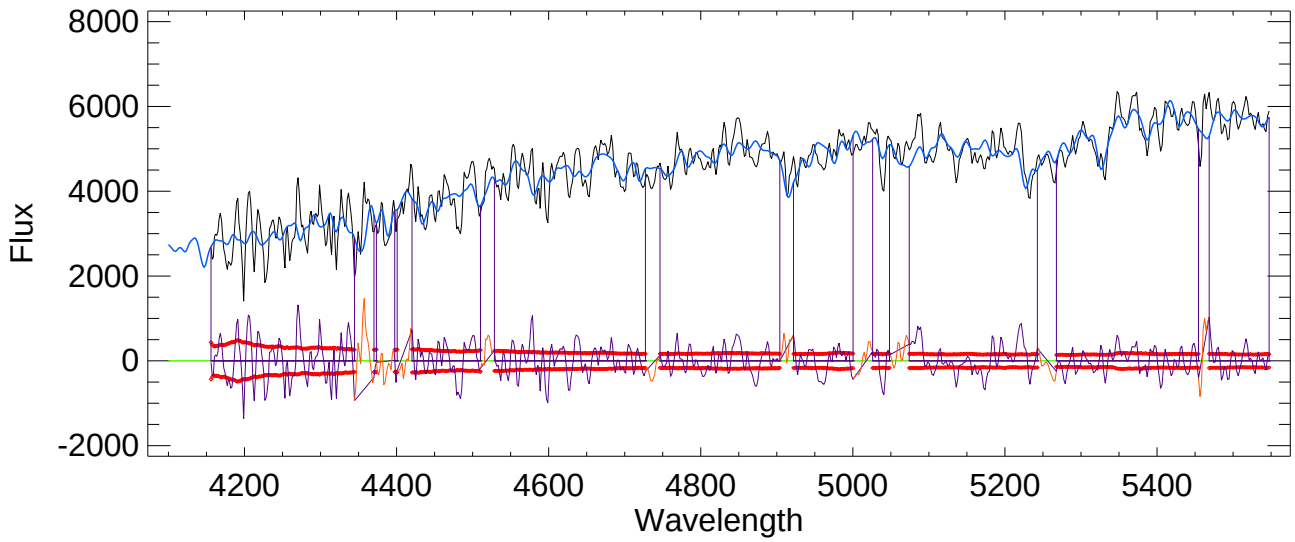

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

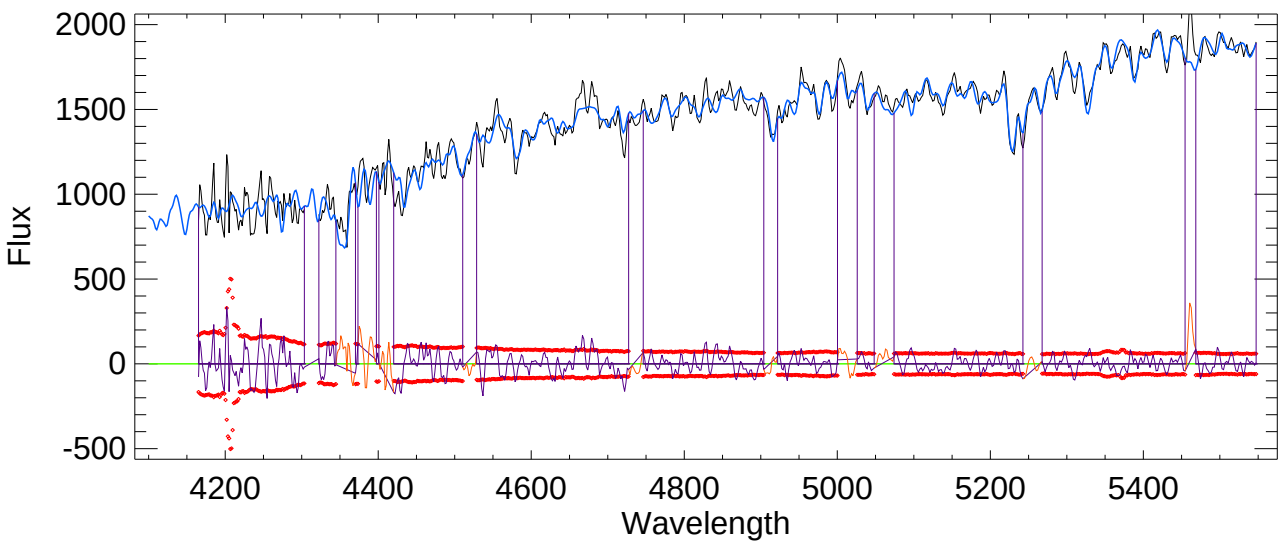

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

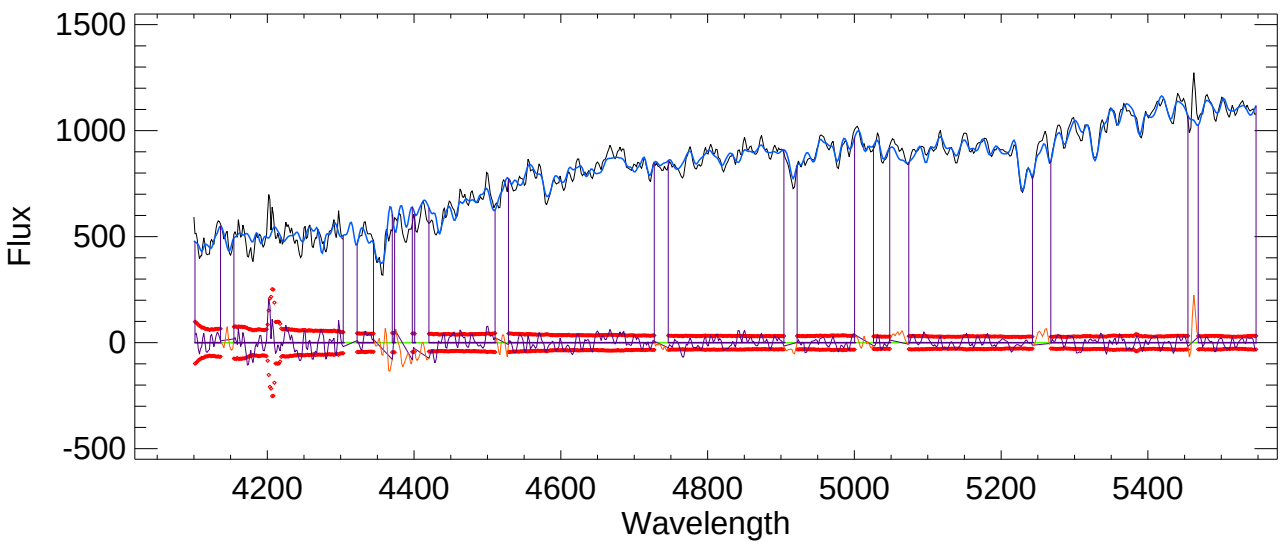

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

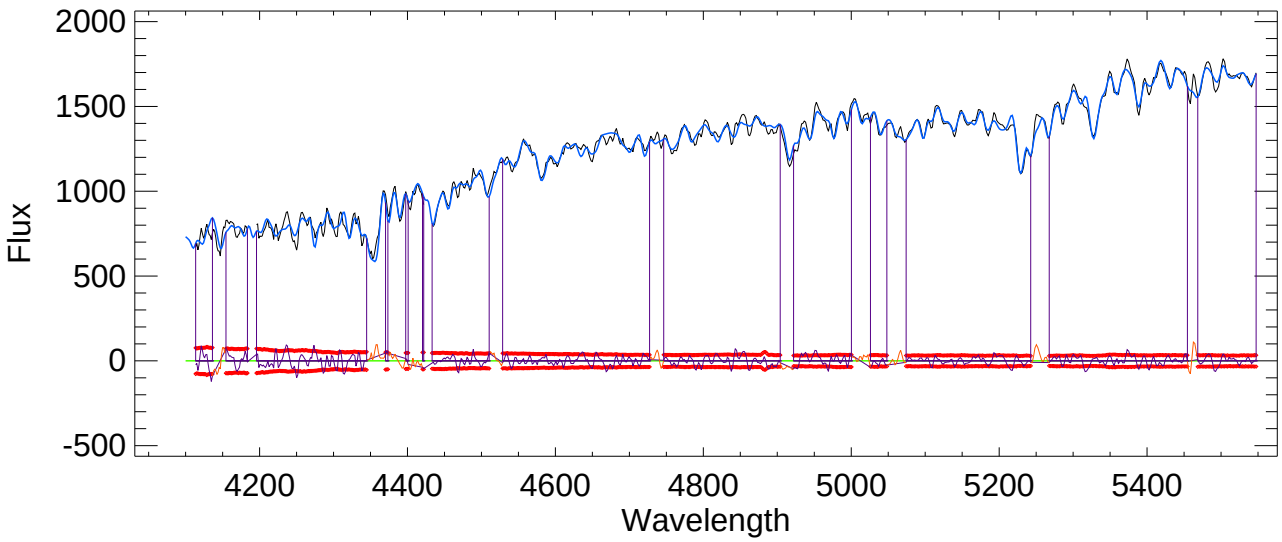

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

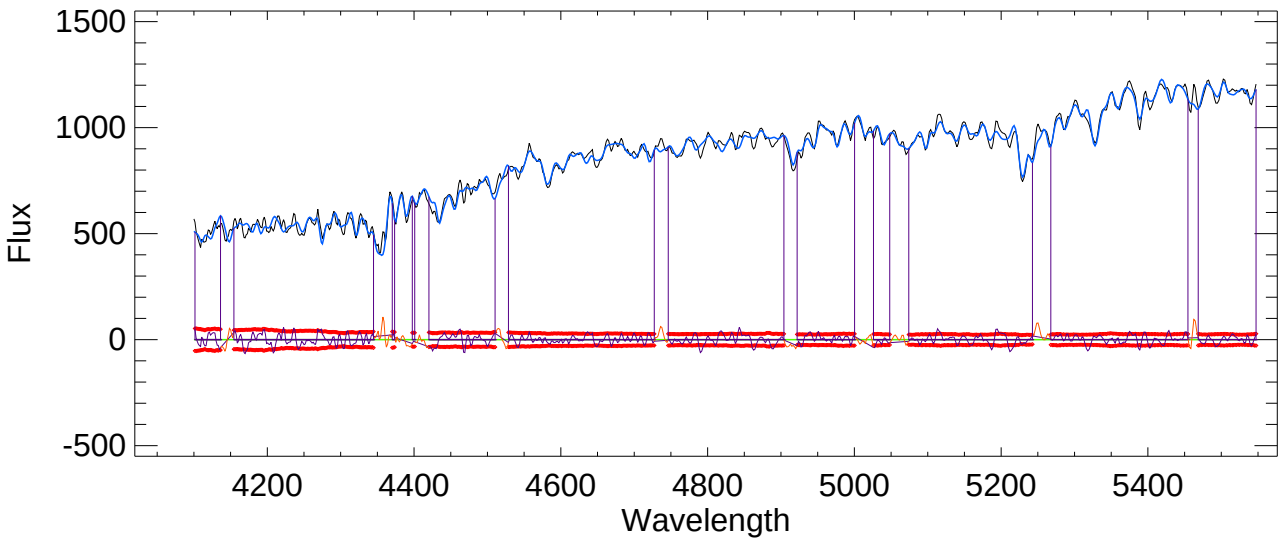

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

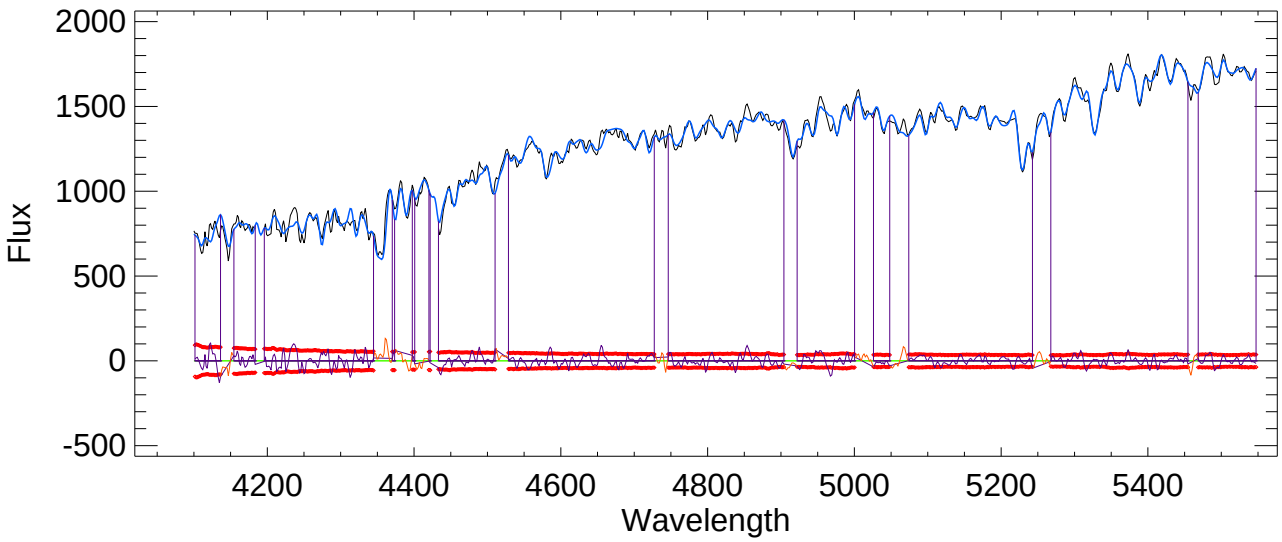

8000
6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

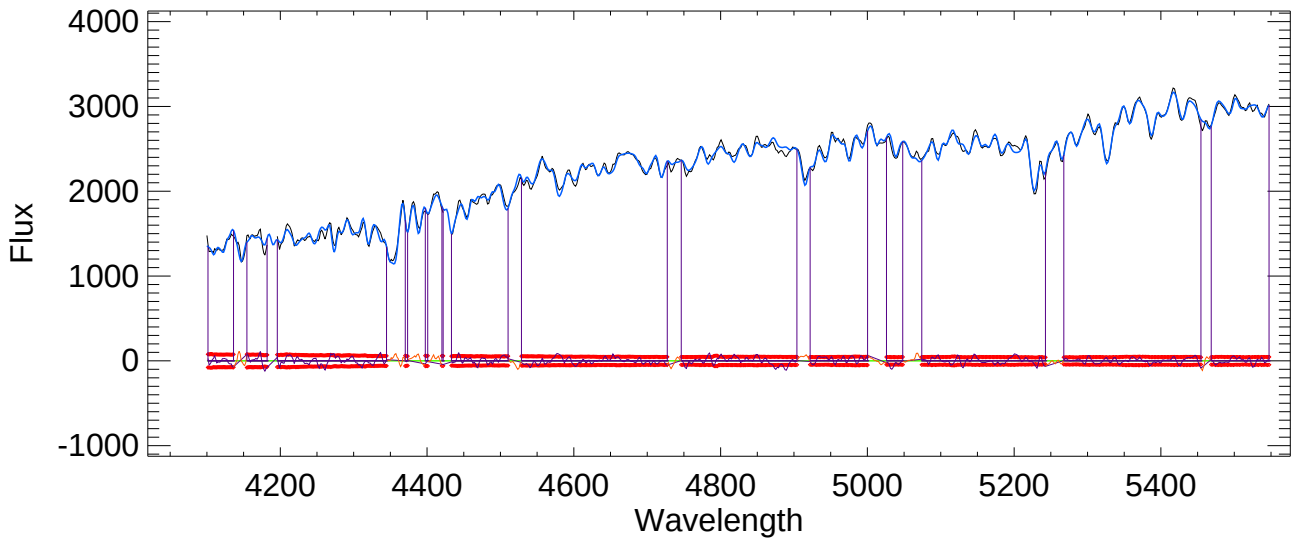

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

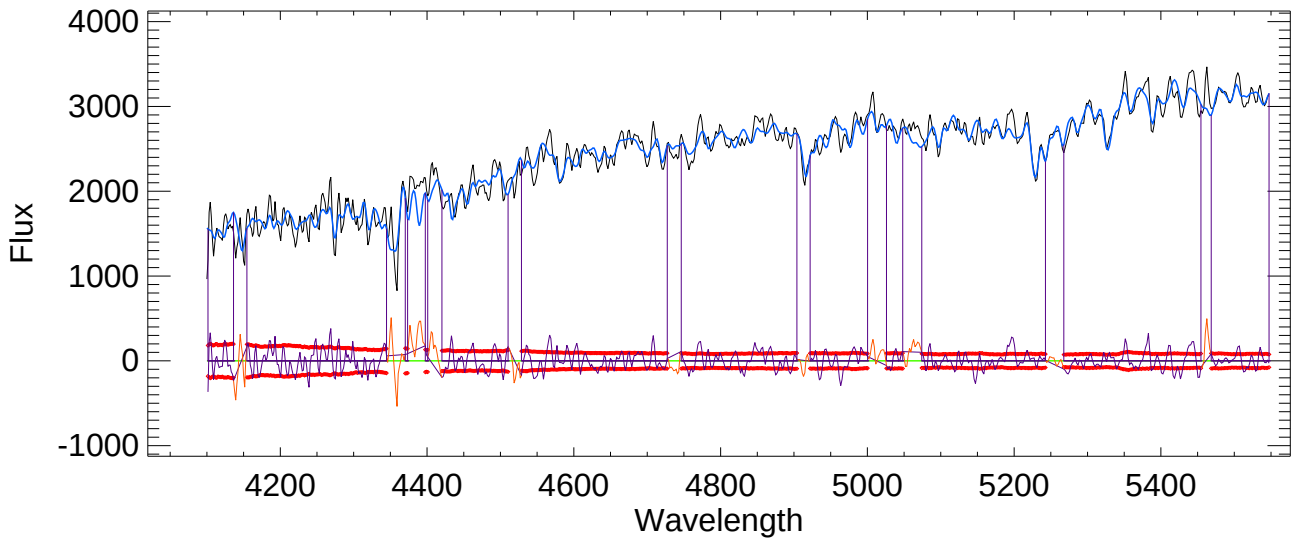

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

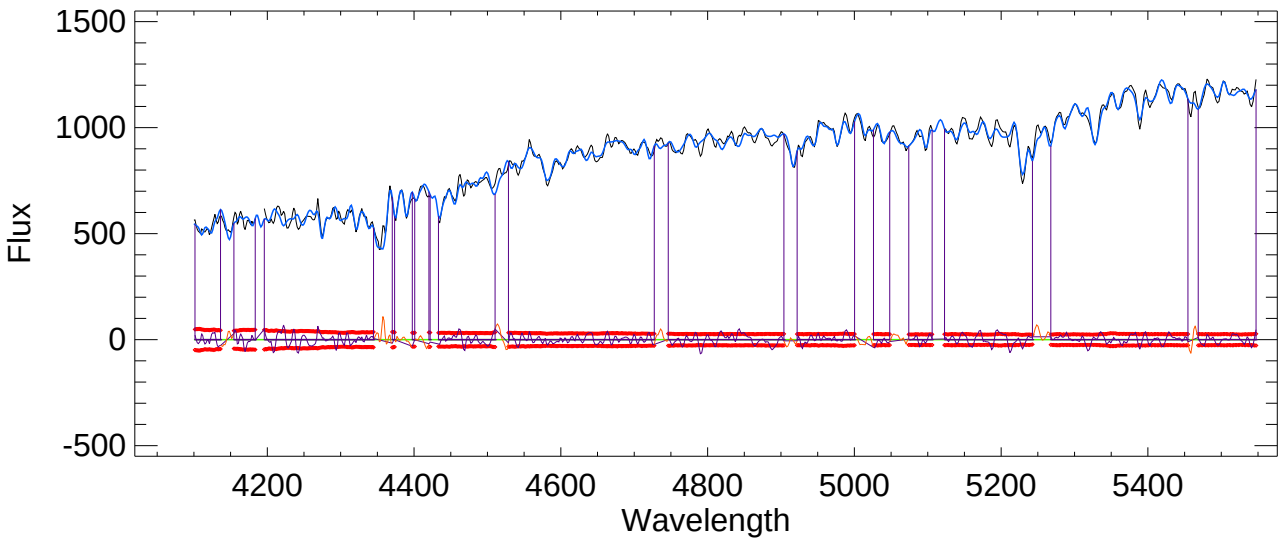

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

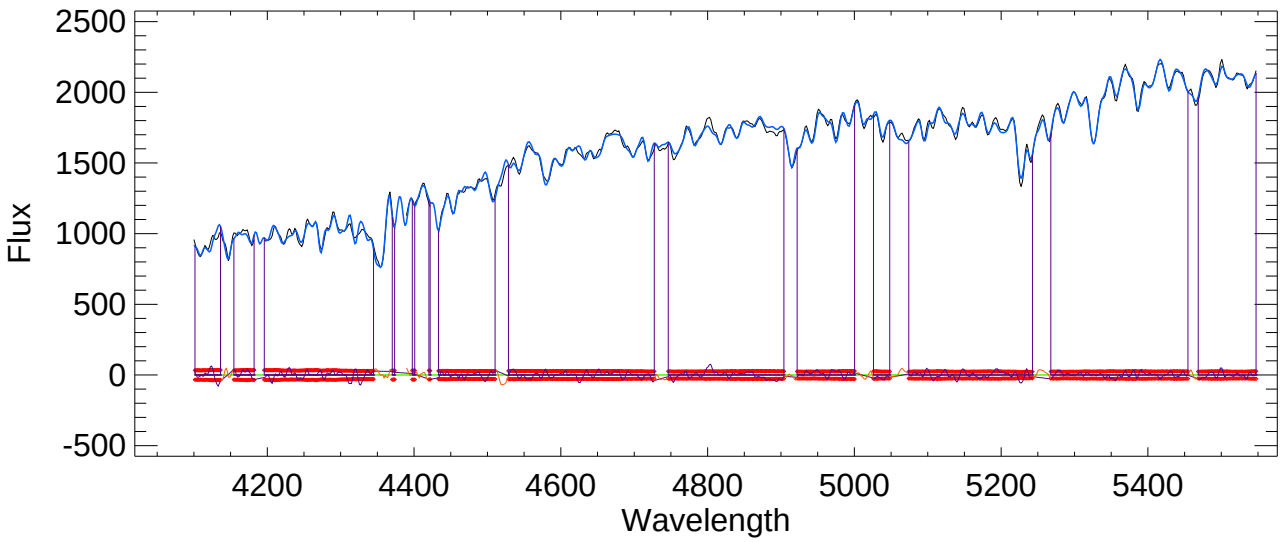

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

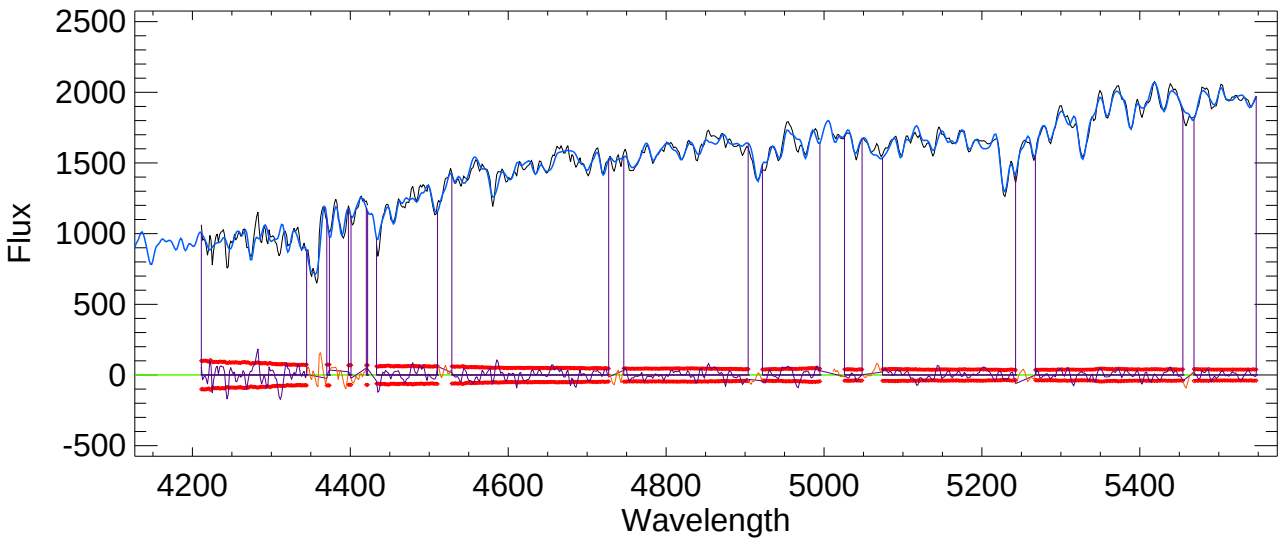

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

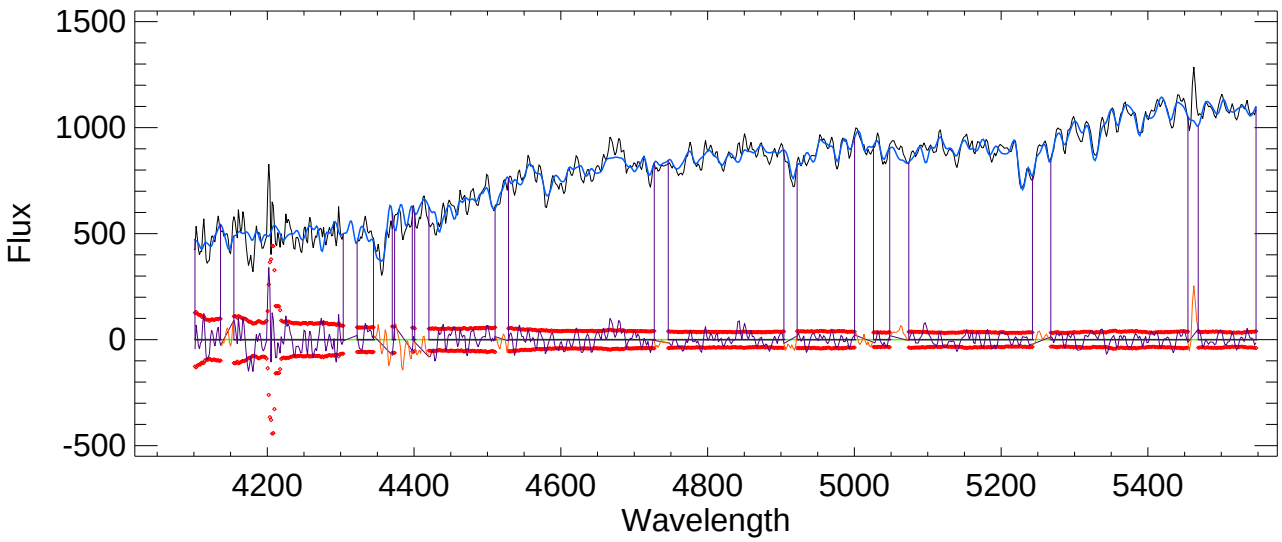

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

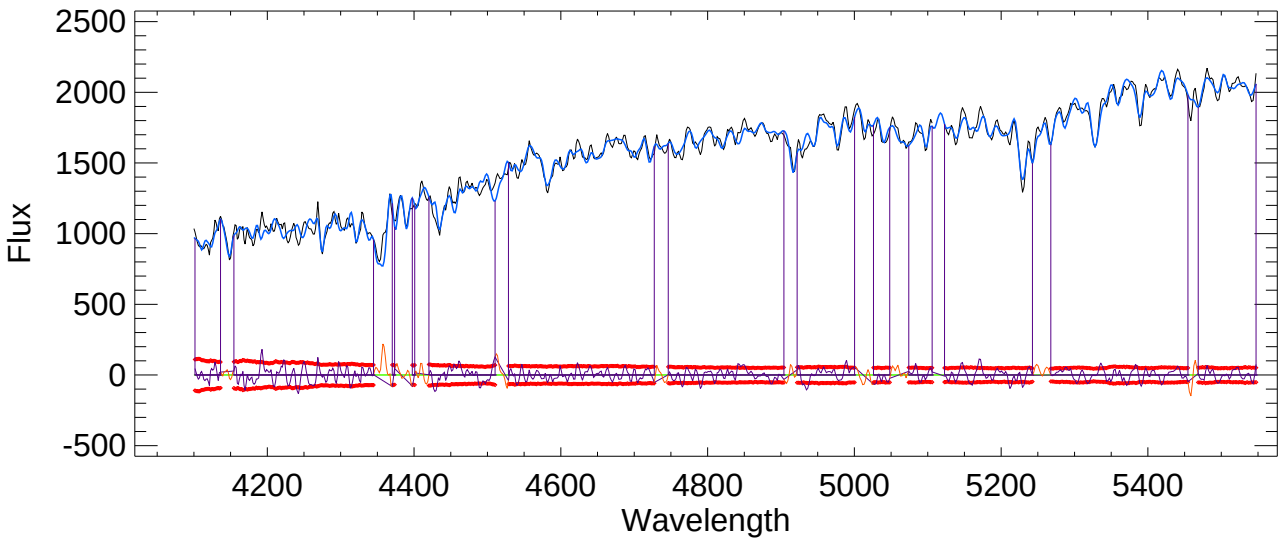

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

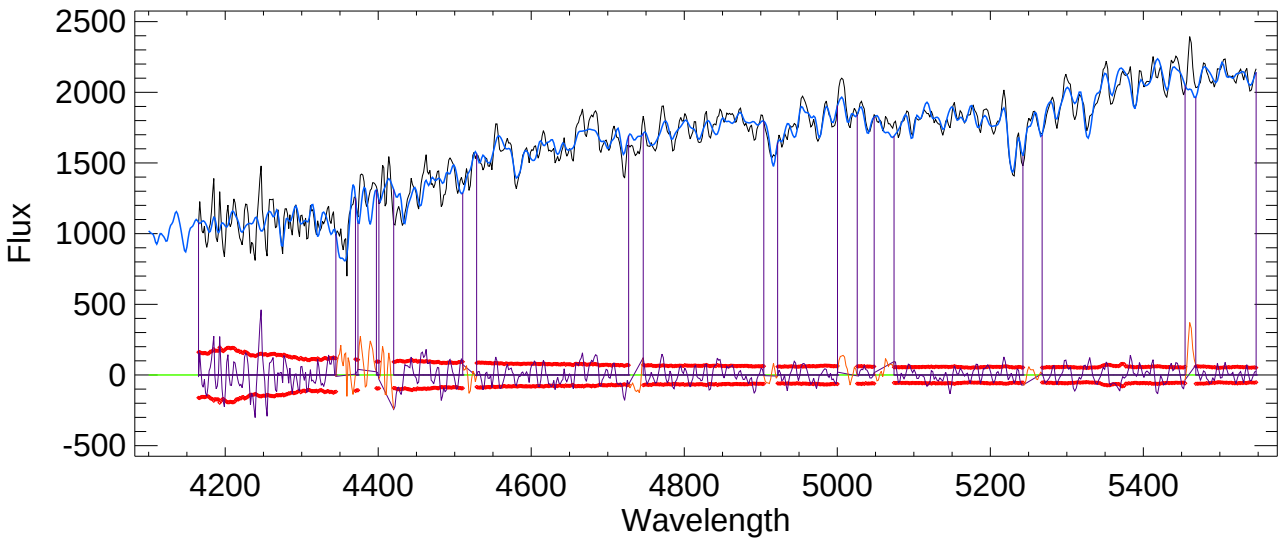

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

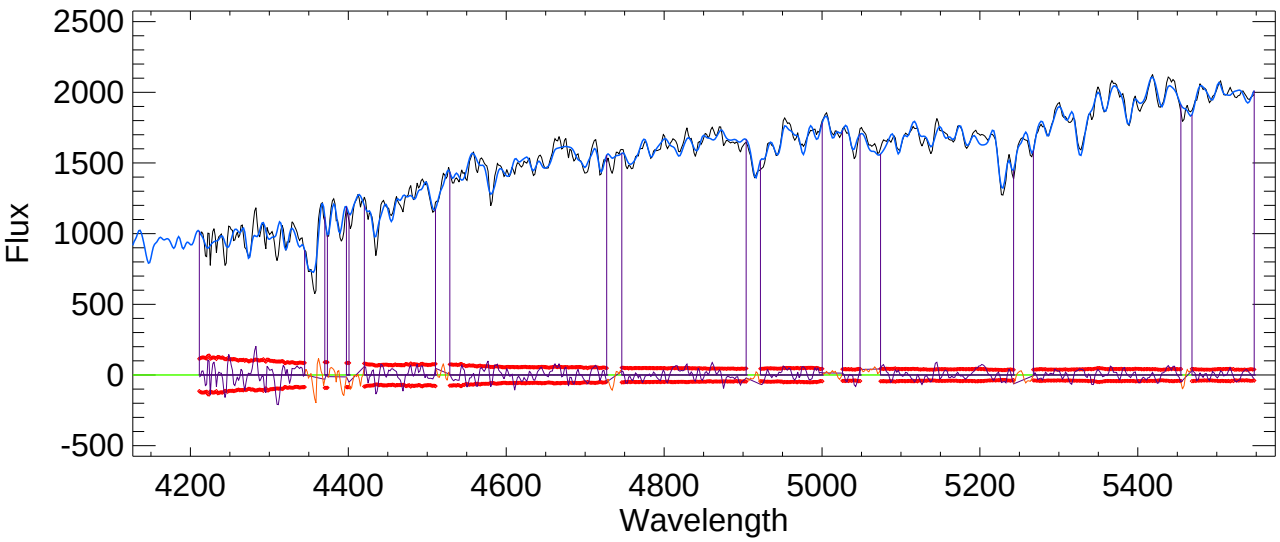

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

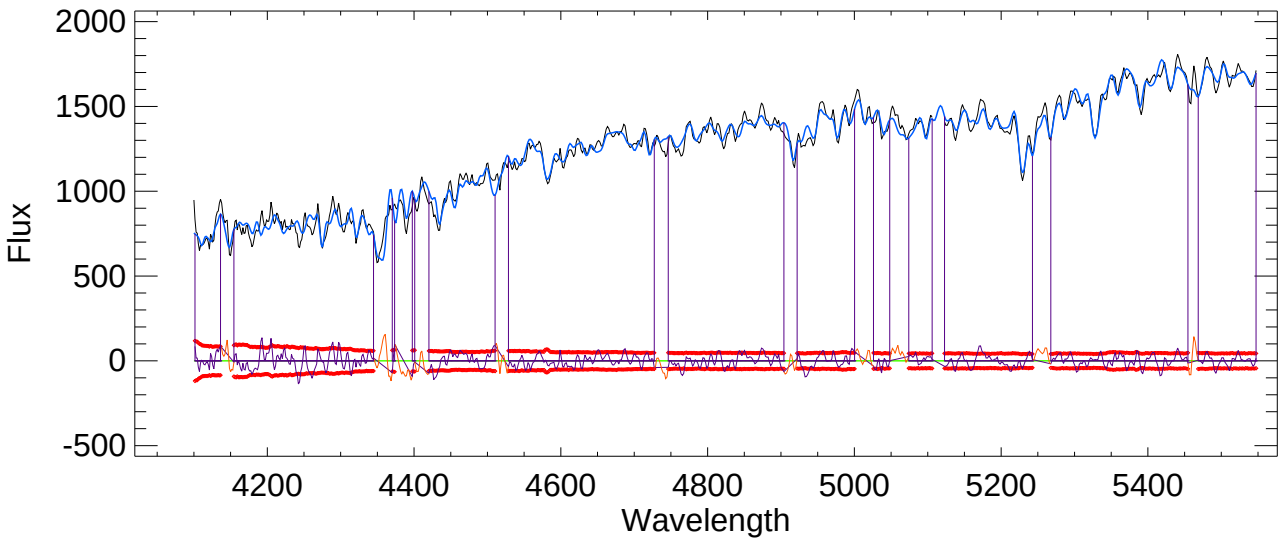

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

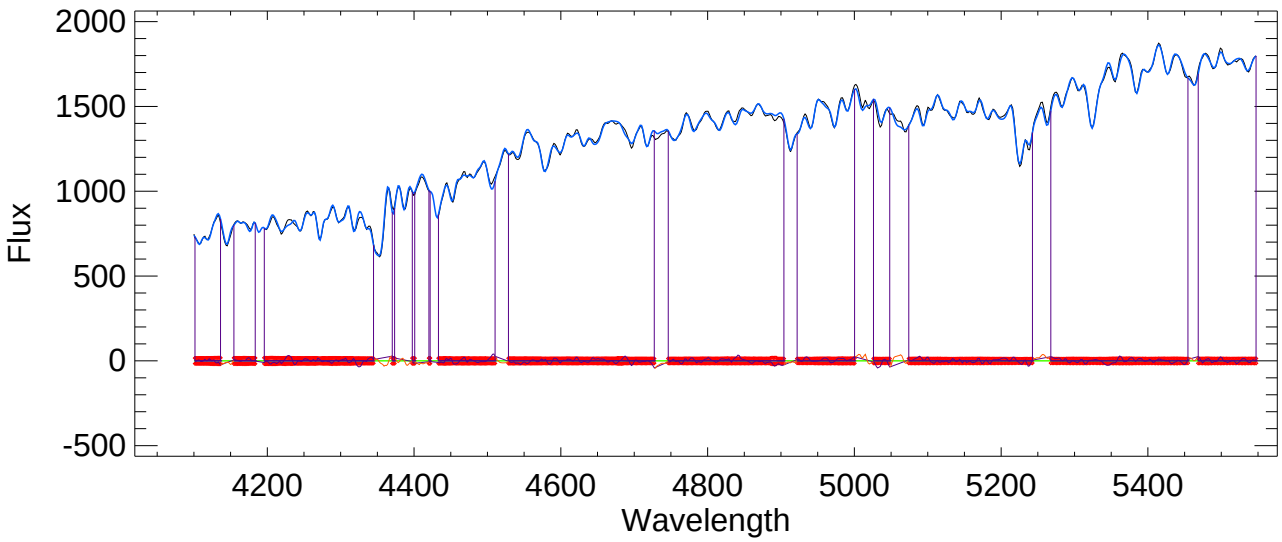

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

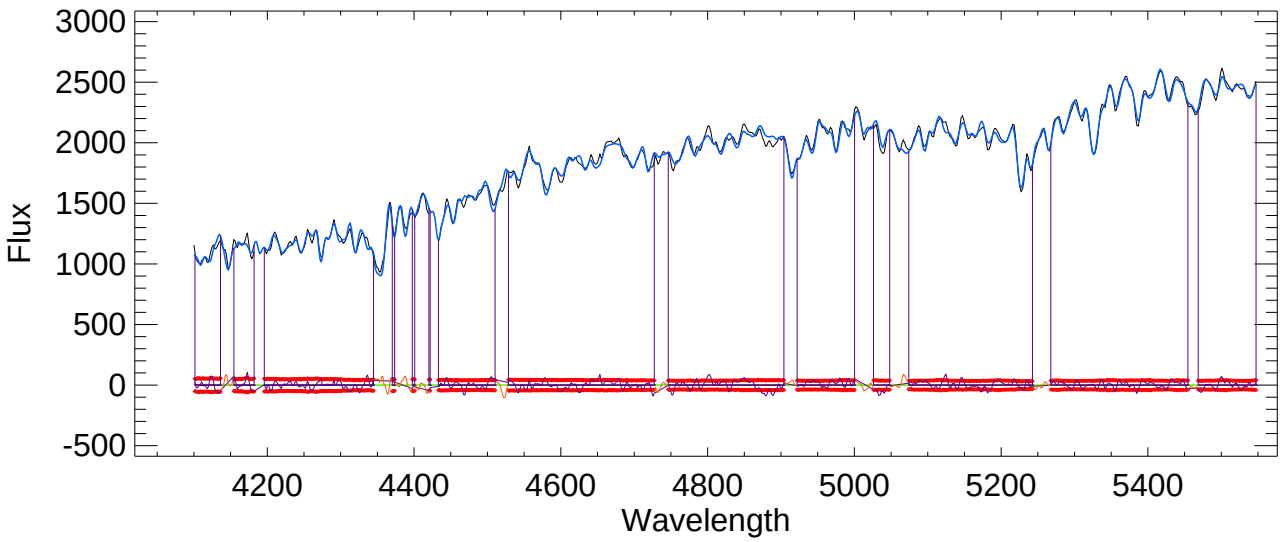

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

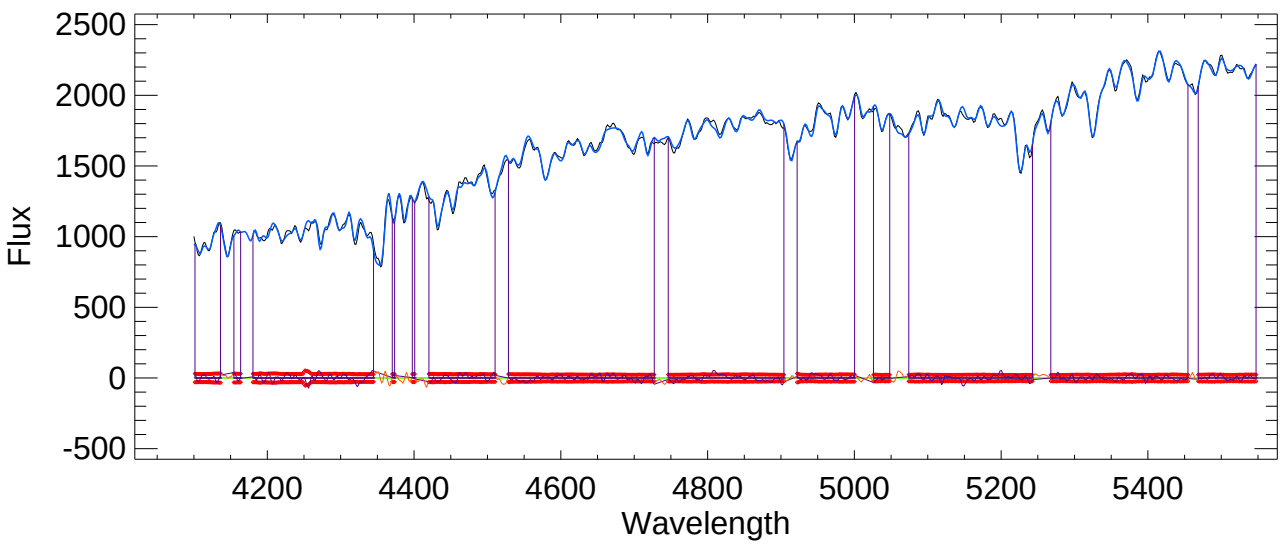

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

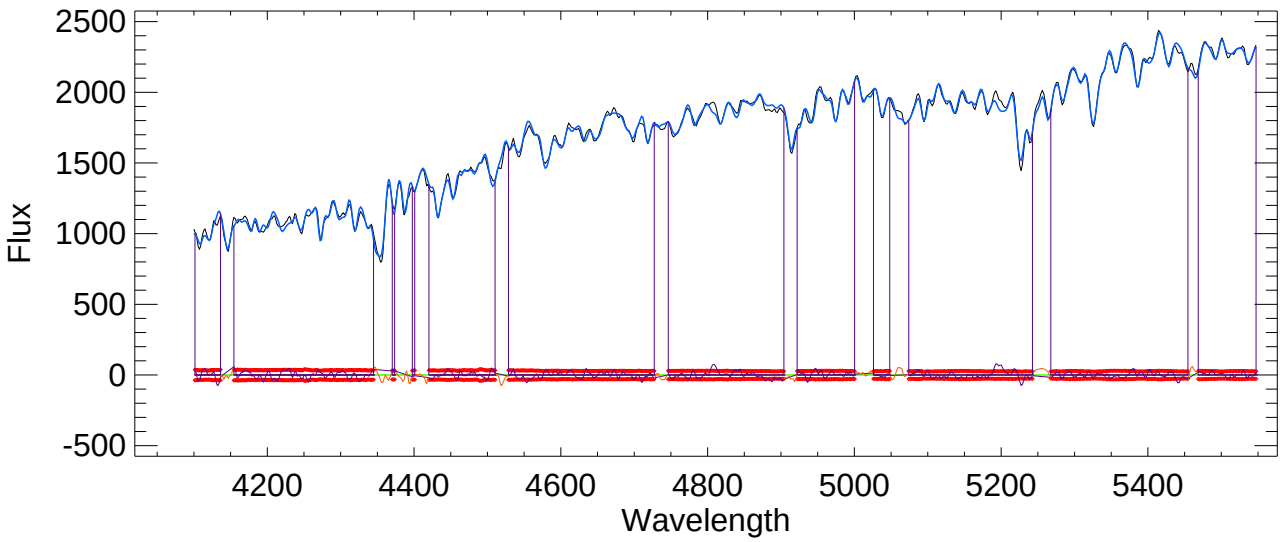

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

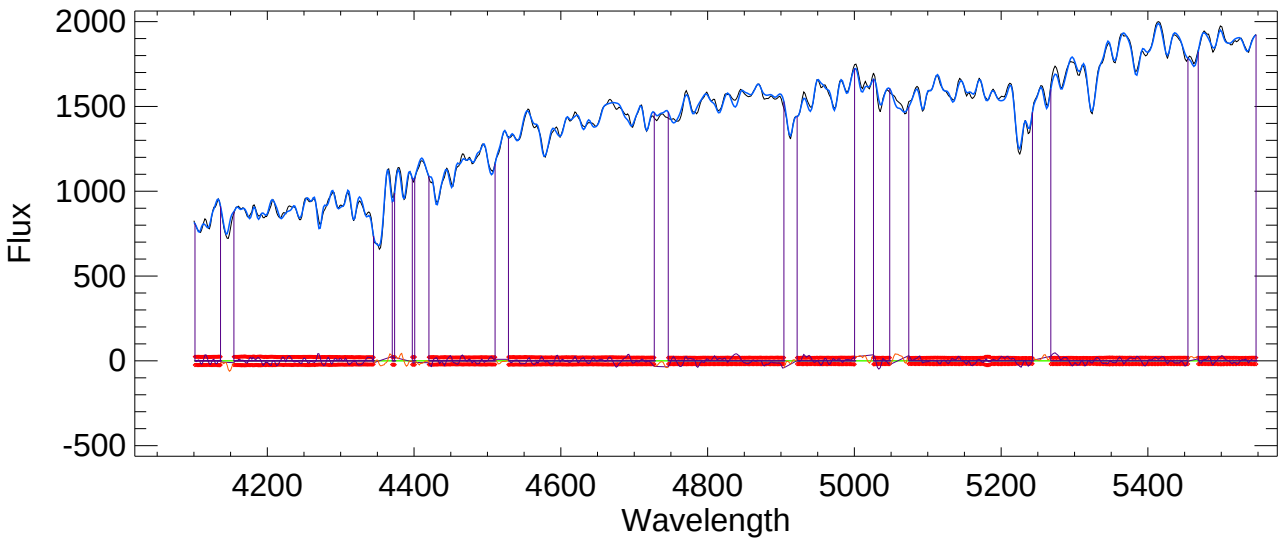

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

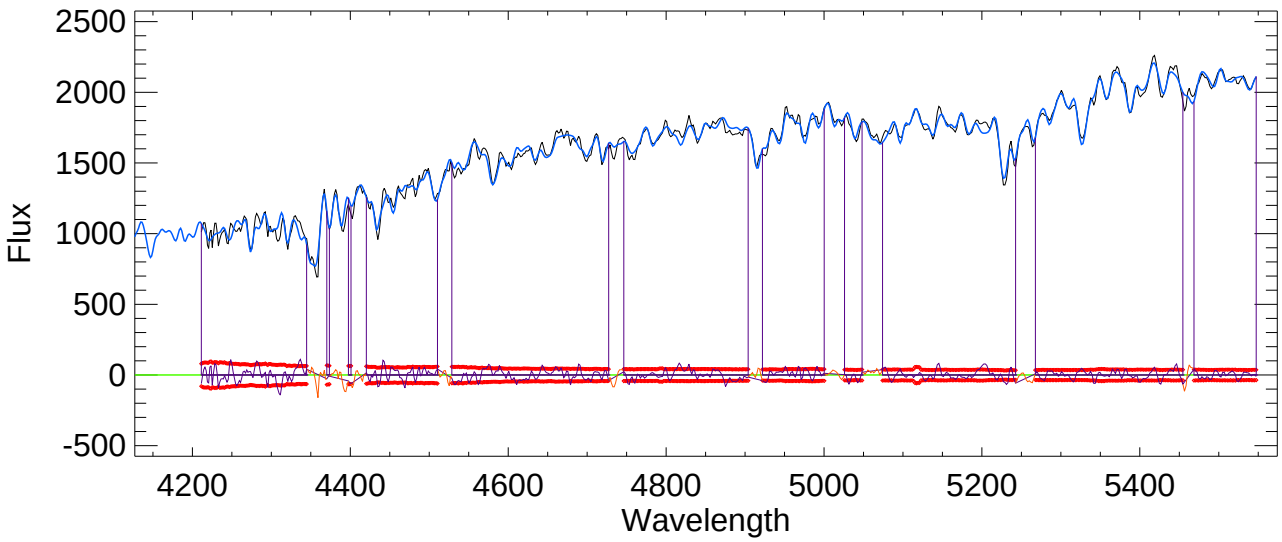

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

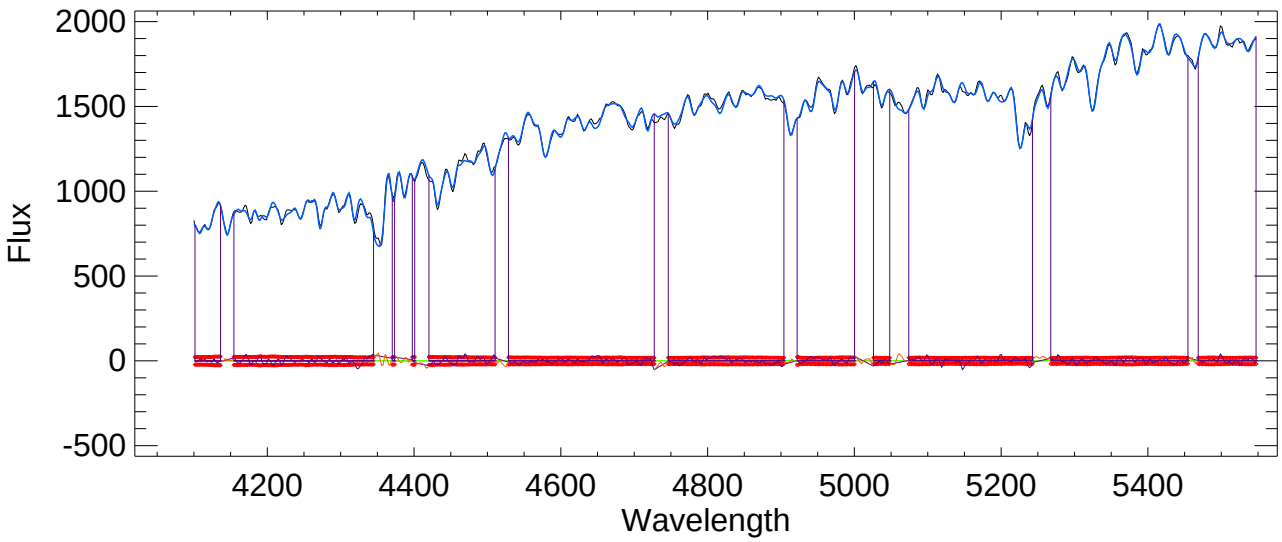

3000
2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

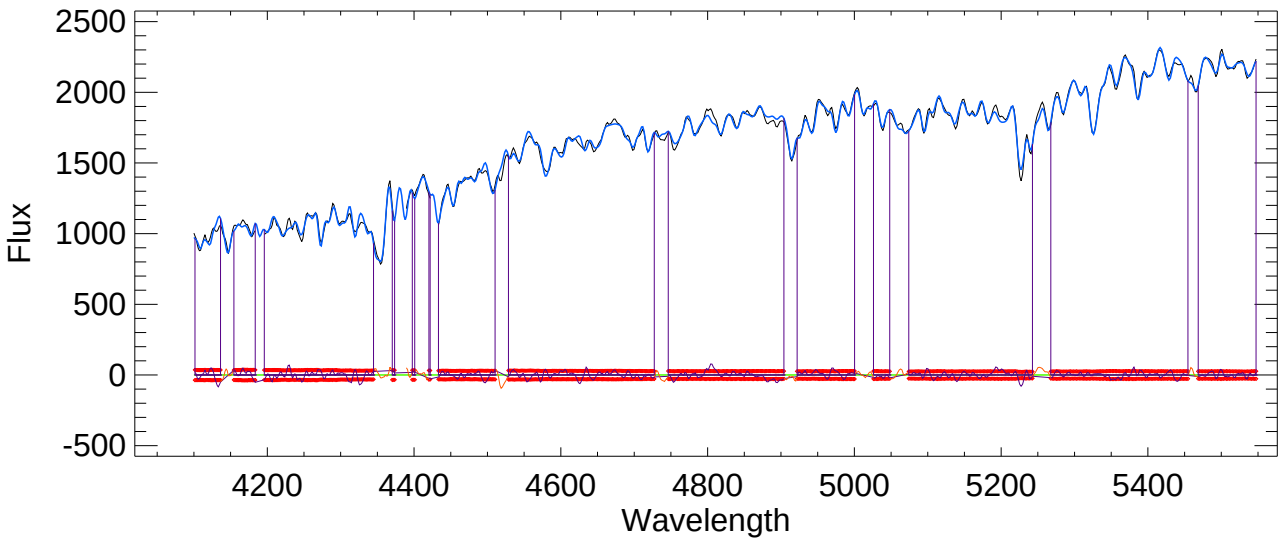

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

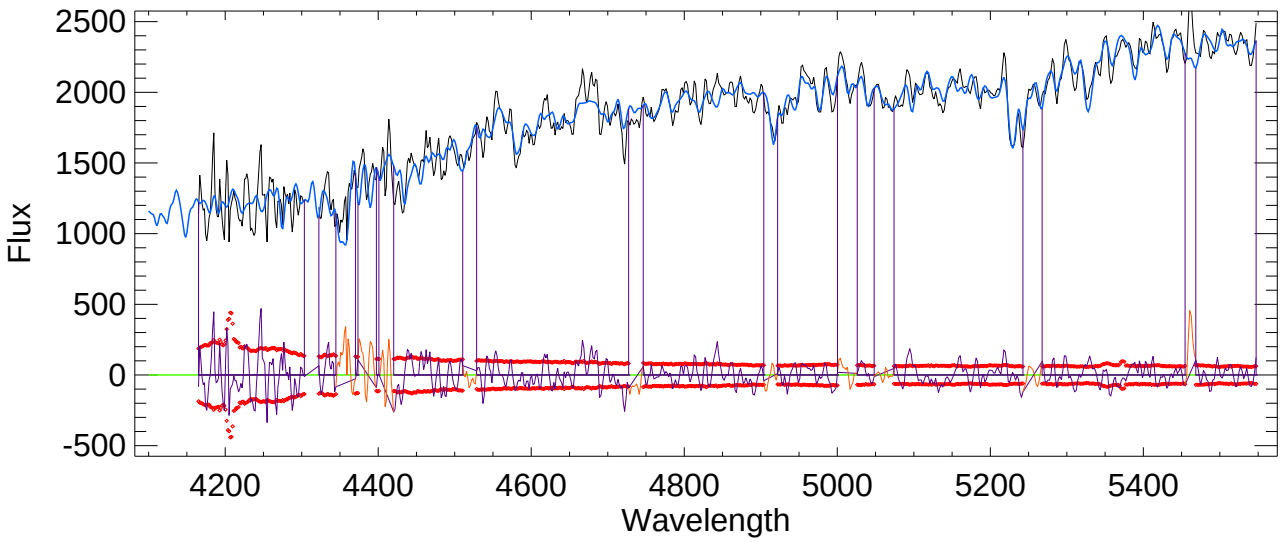

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

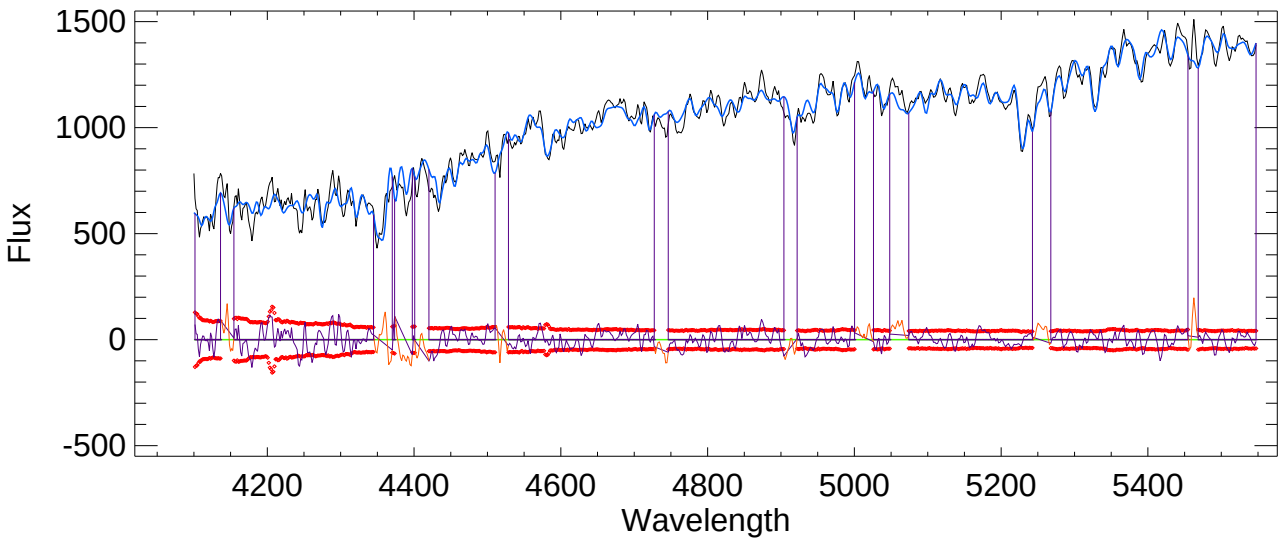

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

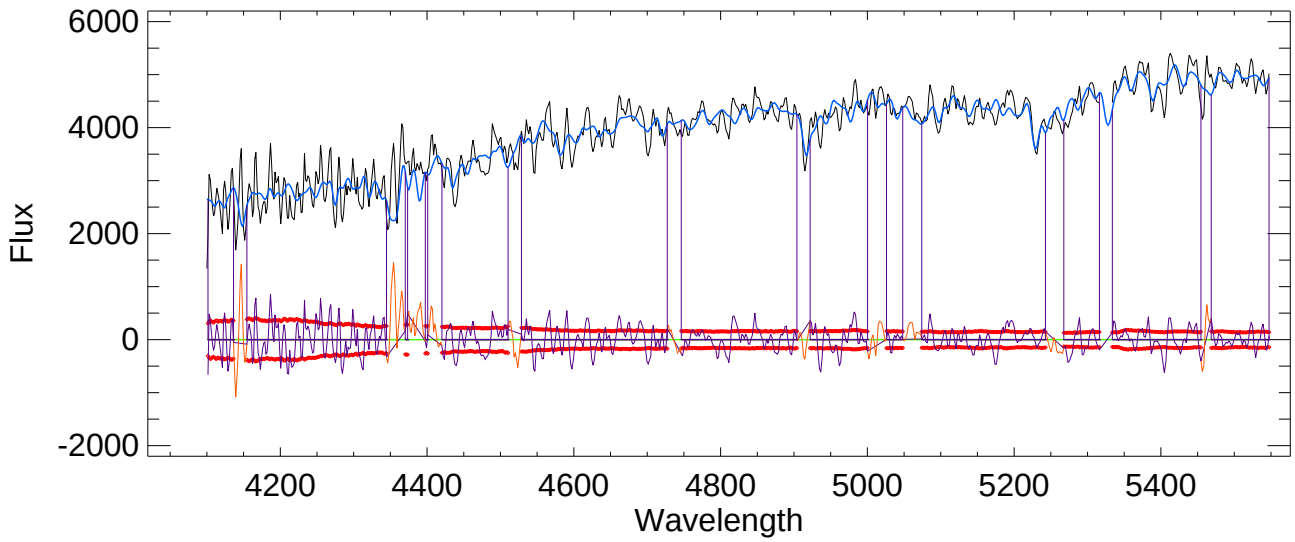

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

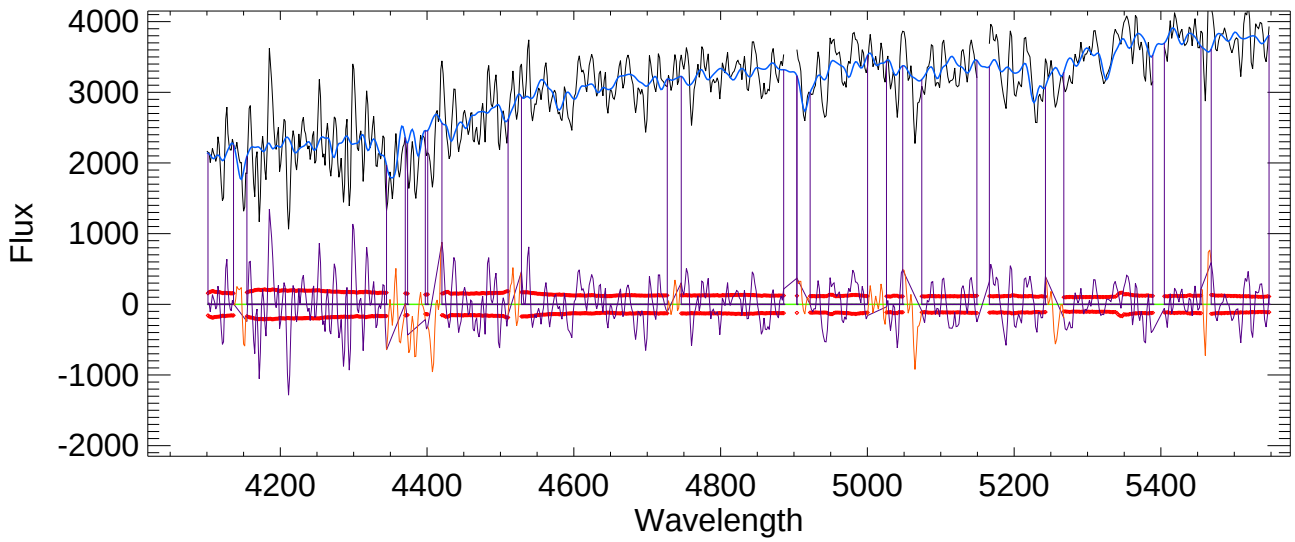

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

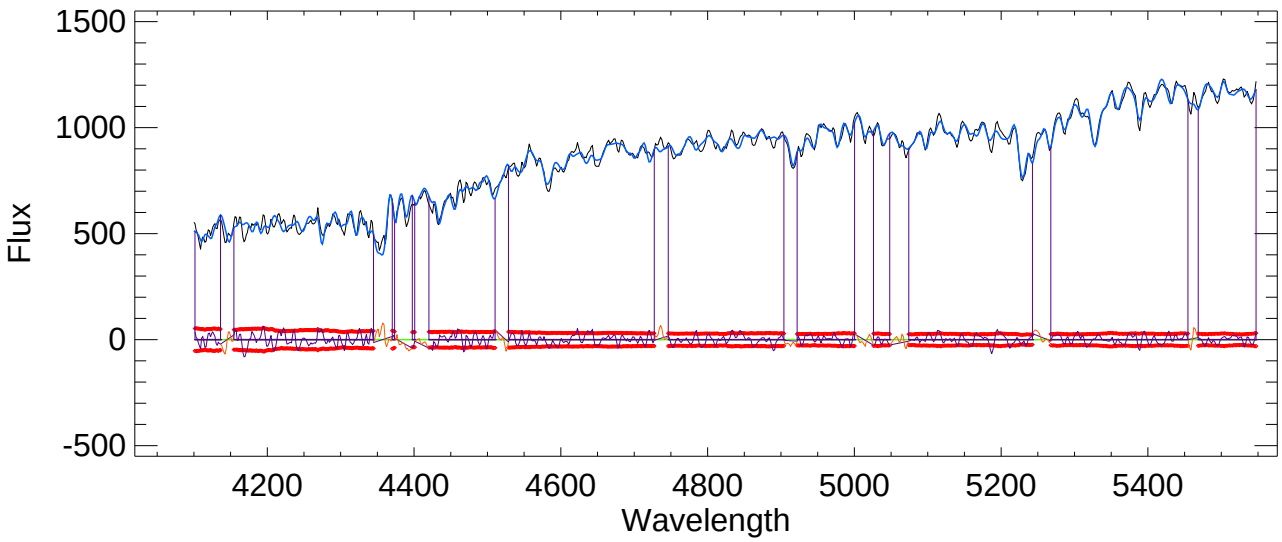

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

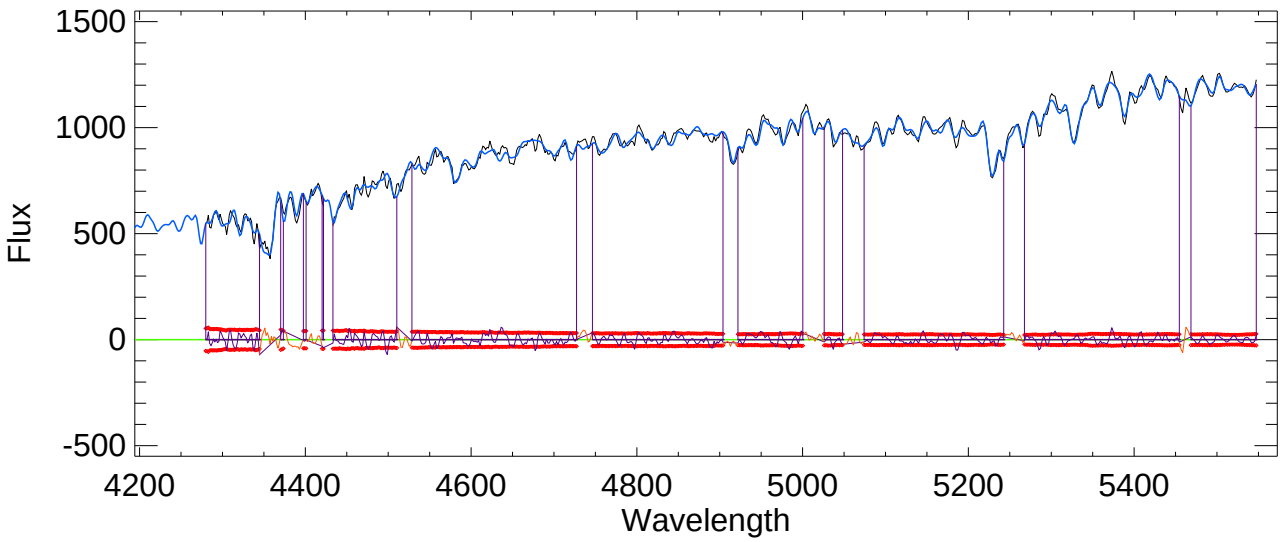

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

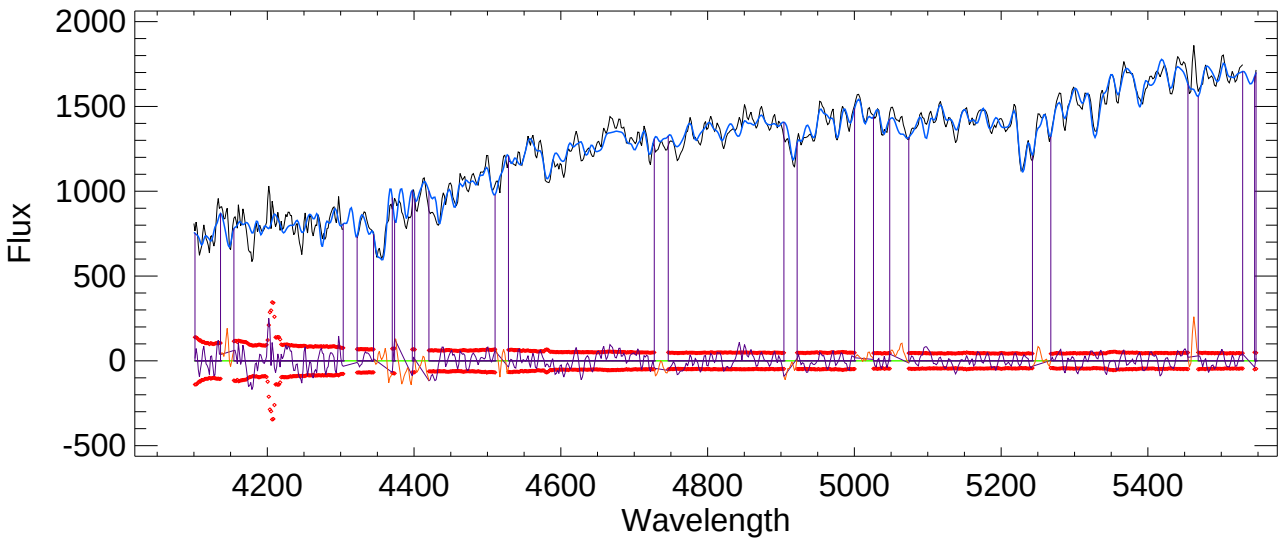

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

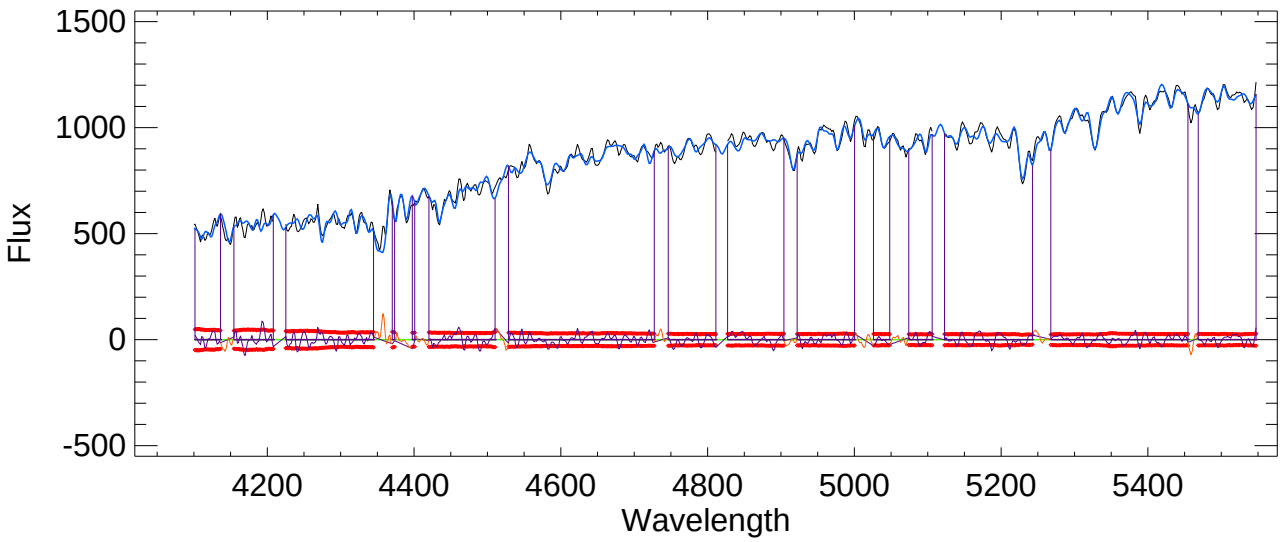

6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

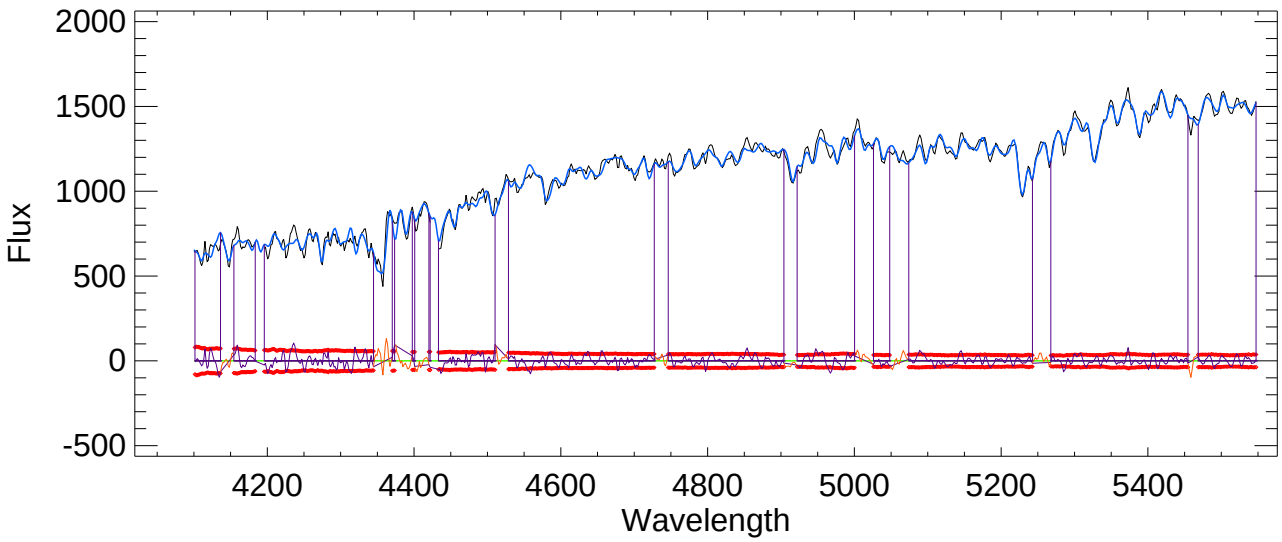

4000
3000
2000
1000
0
-1000
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

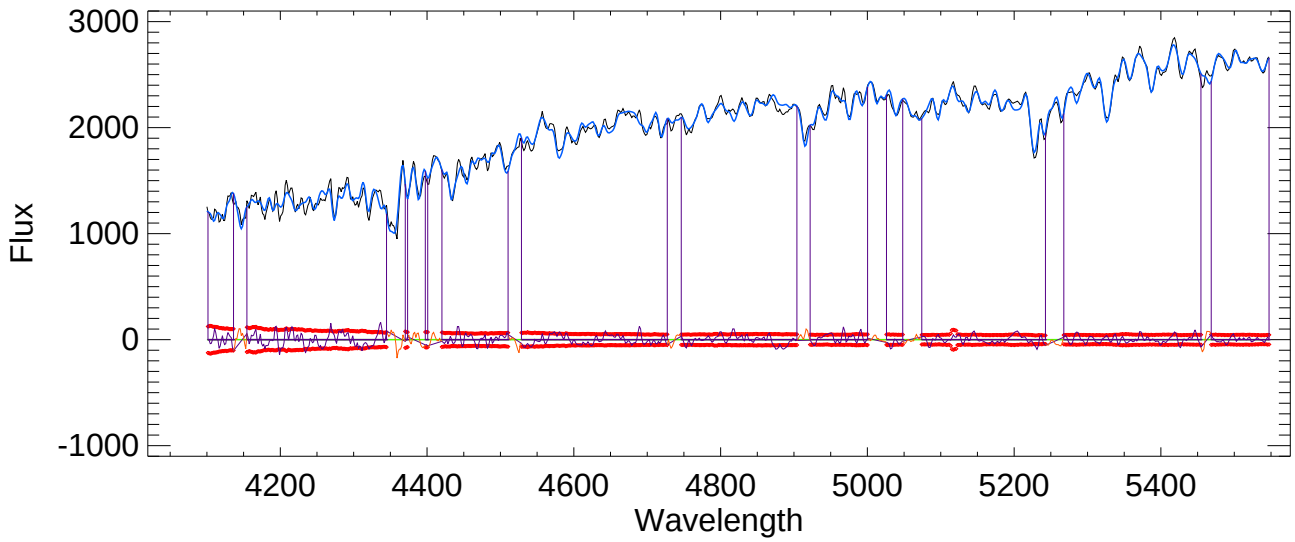

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

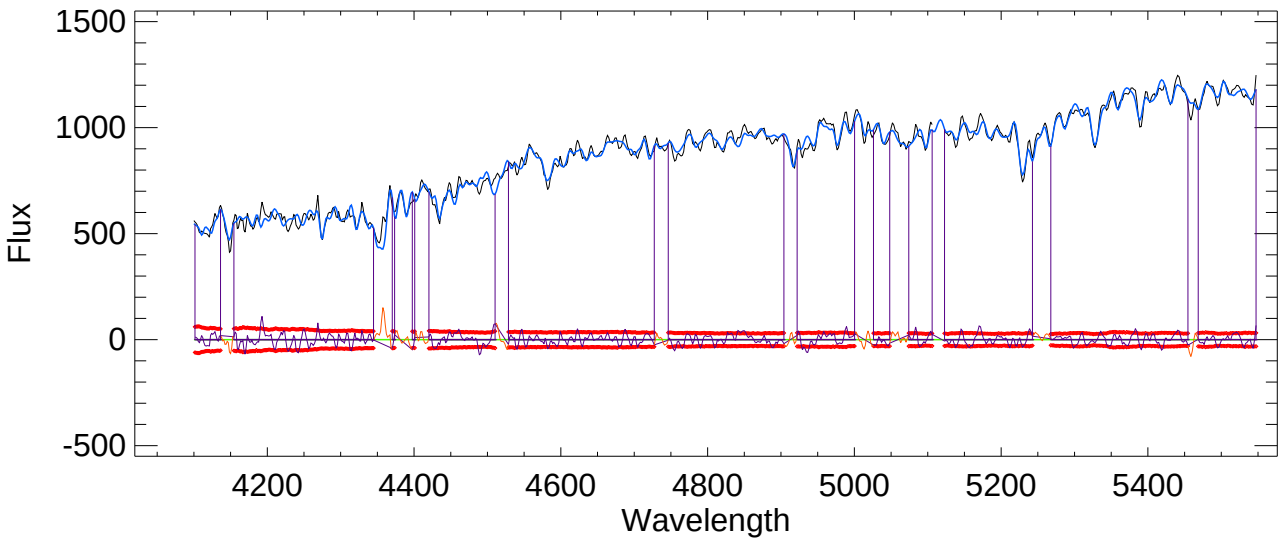

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

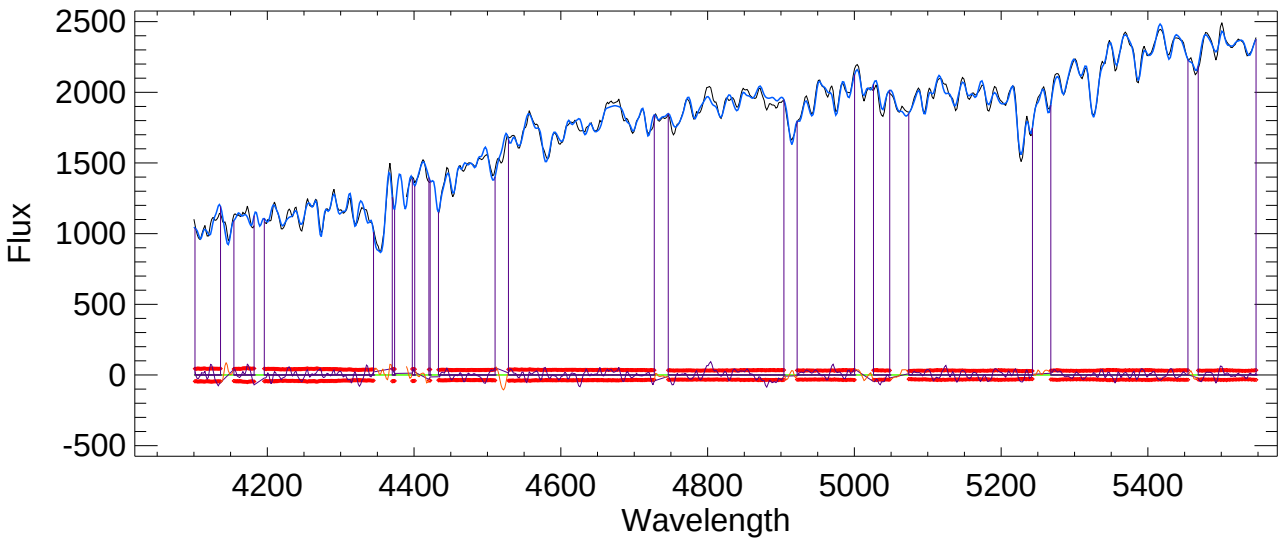

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

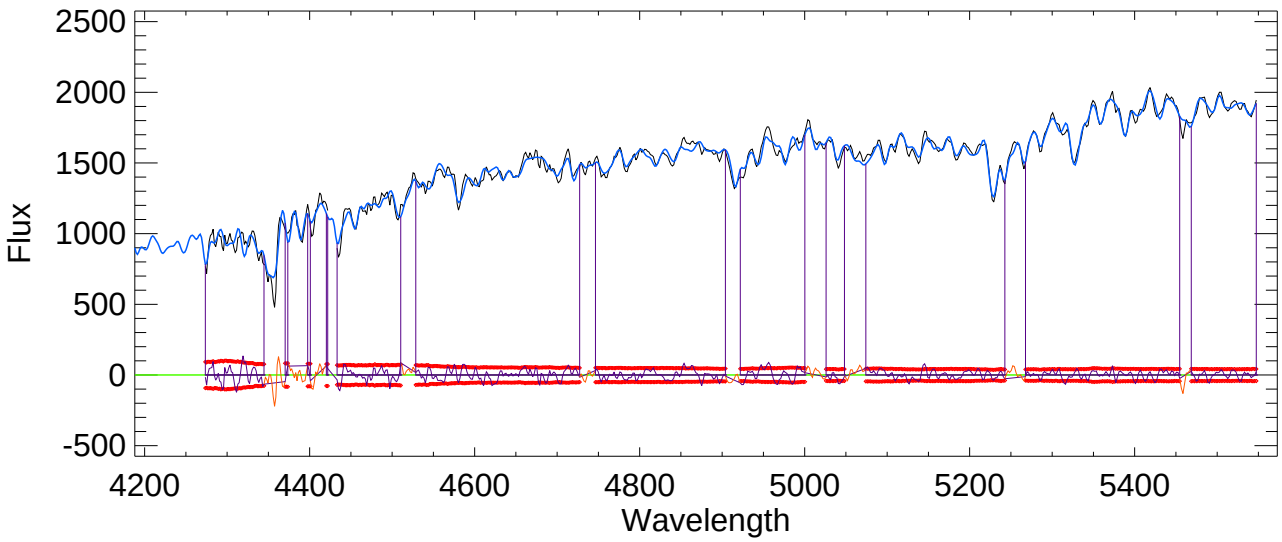

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

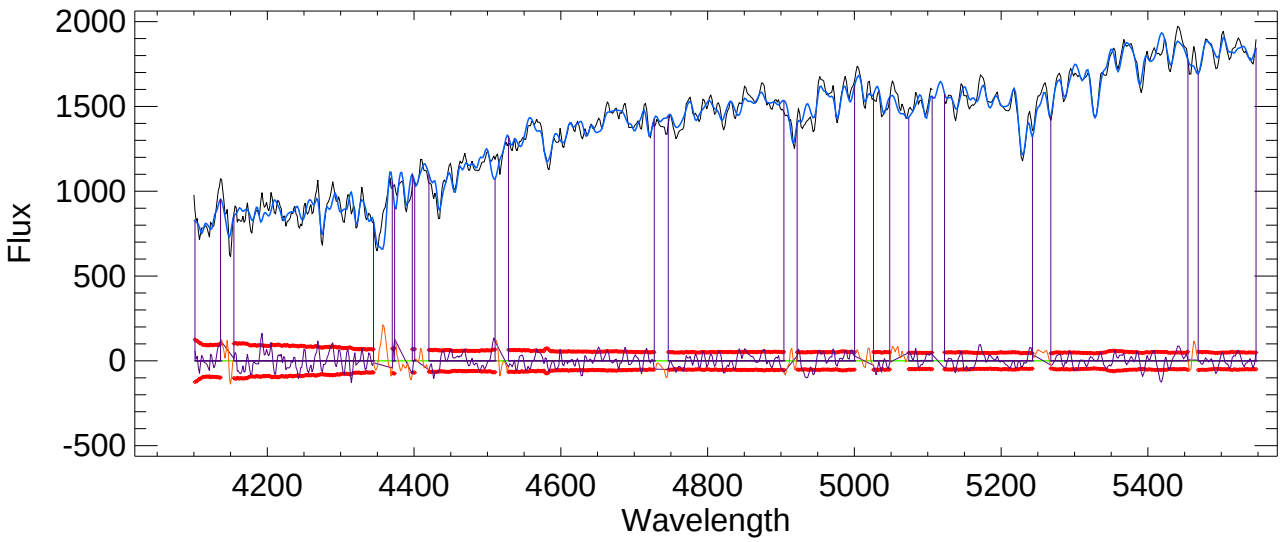

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

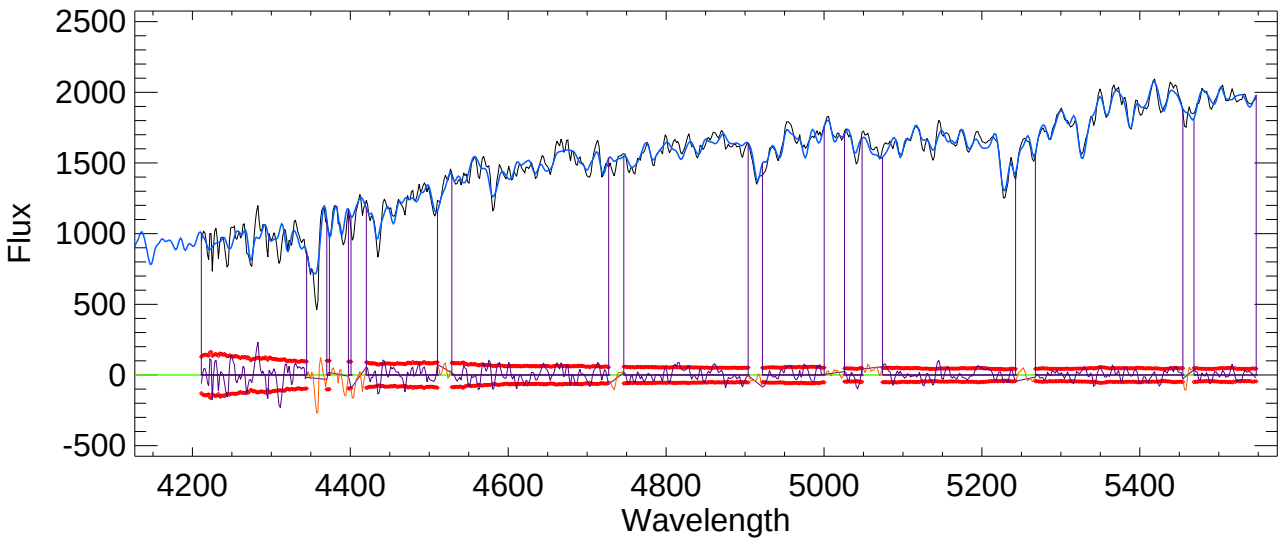

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

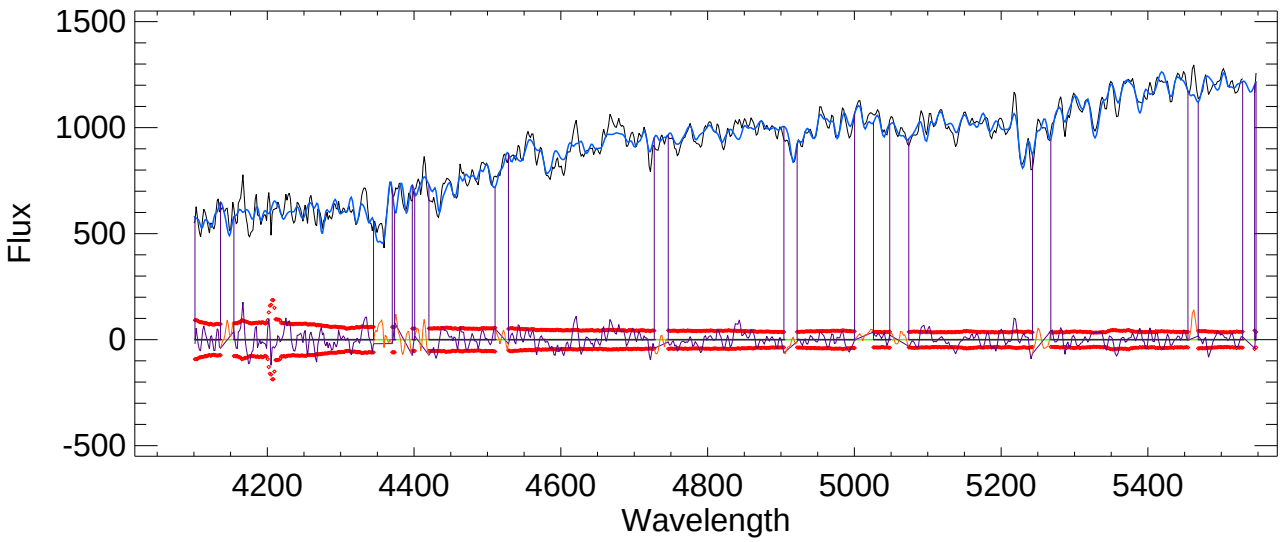

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

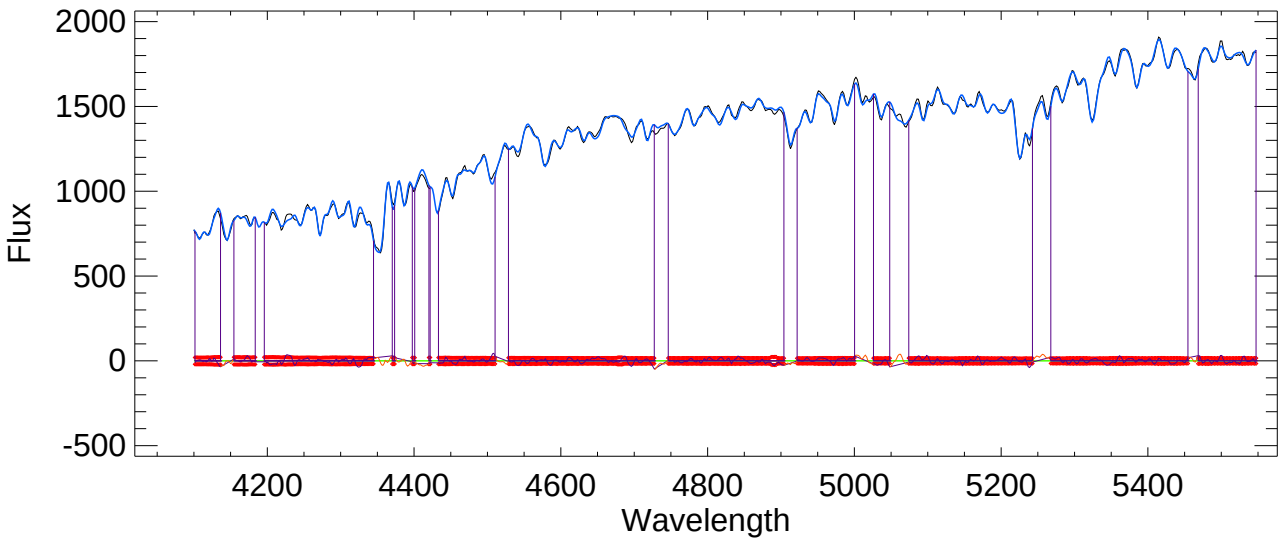

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

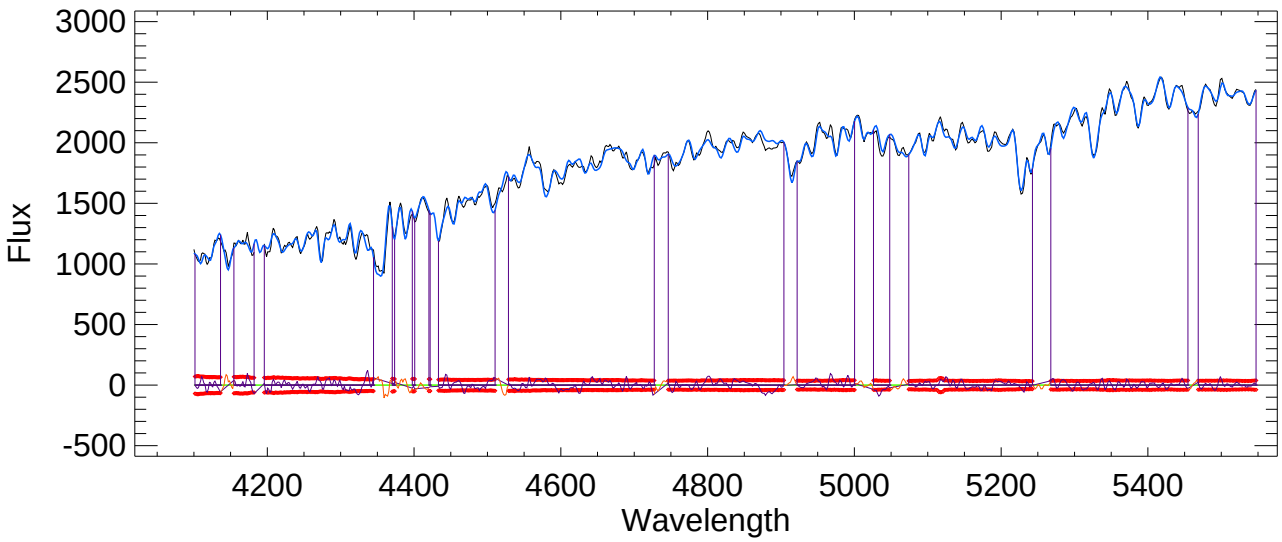

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

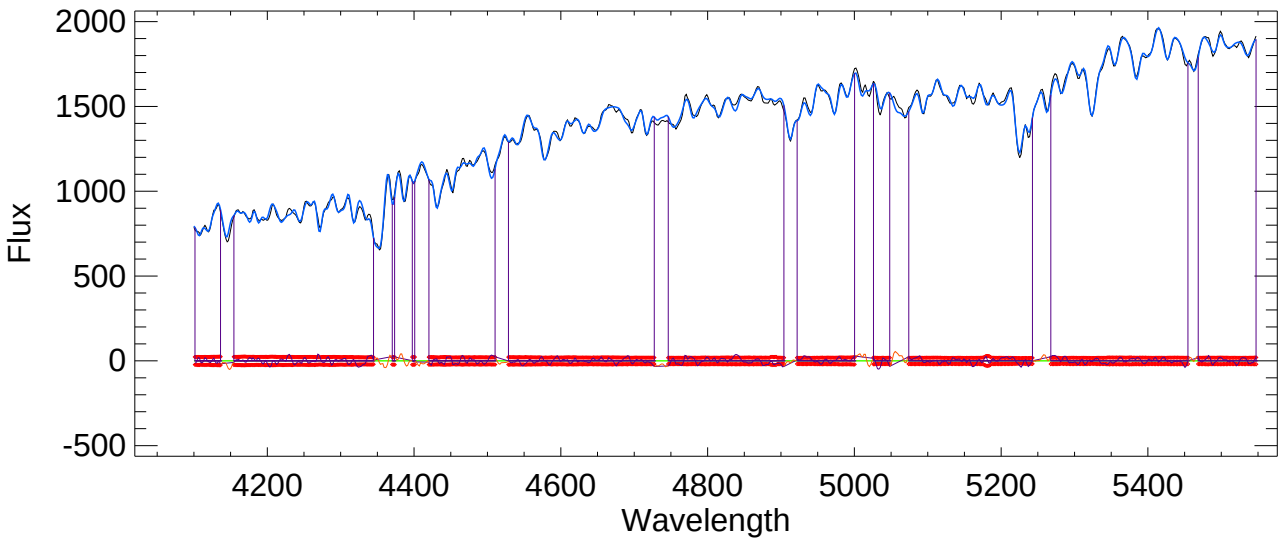

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

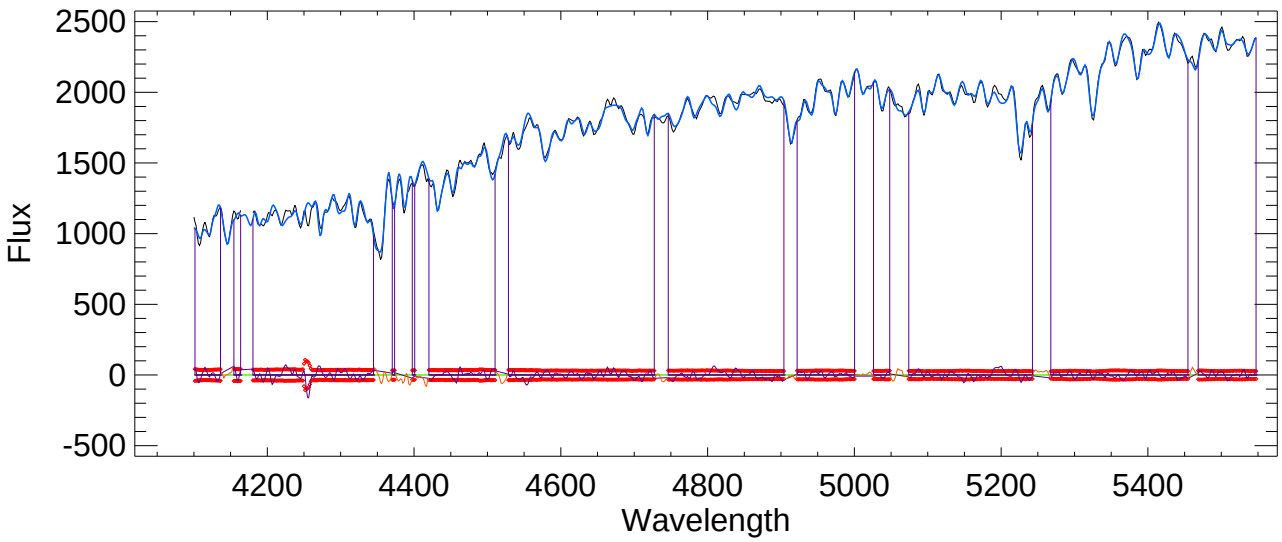

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

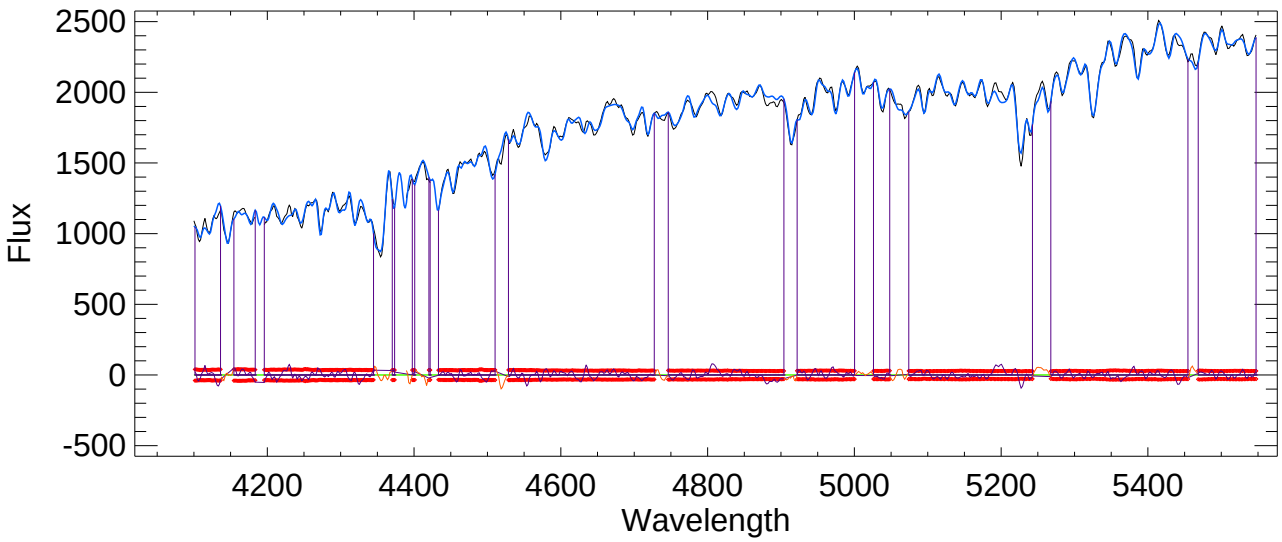

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

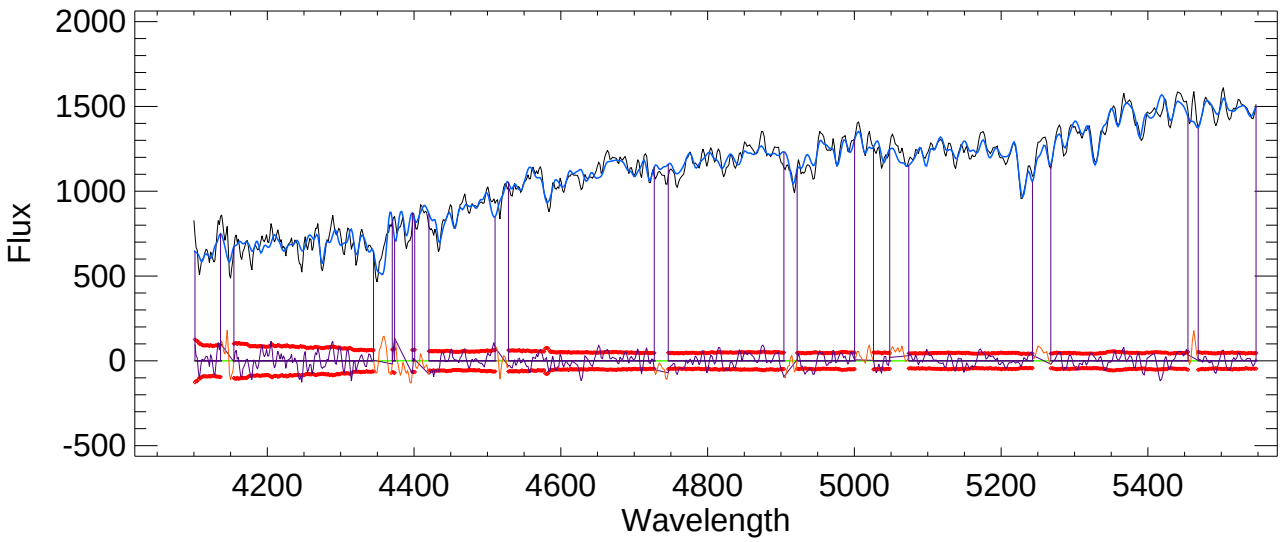

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

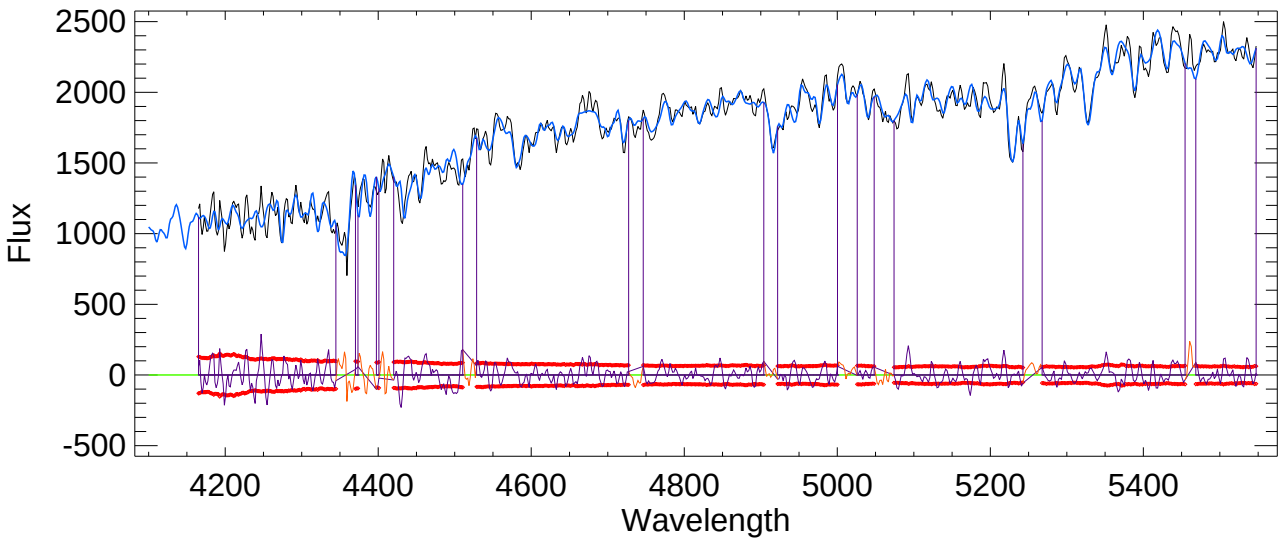

3000
2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

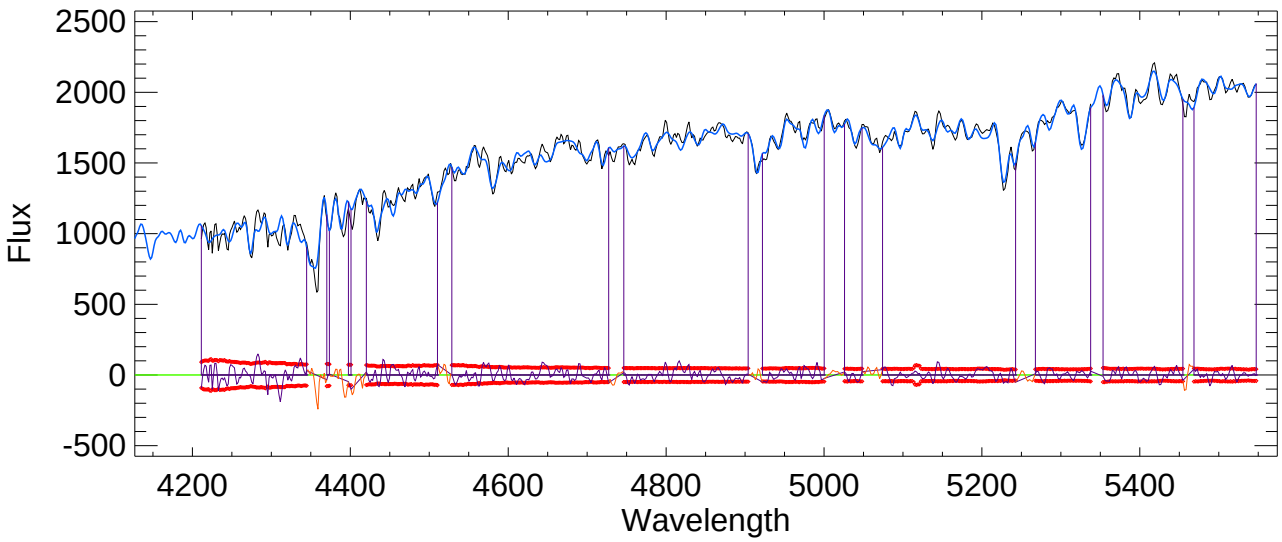

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

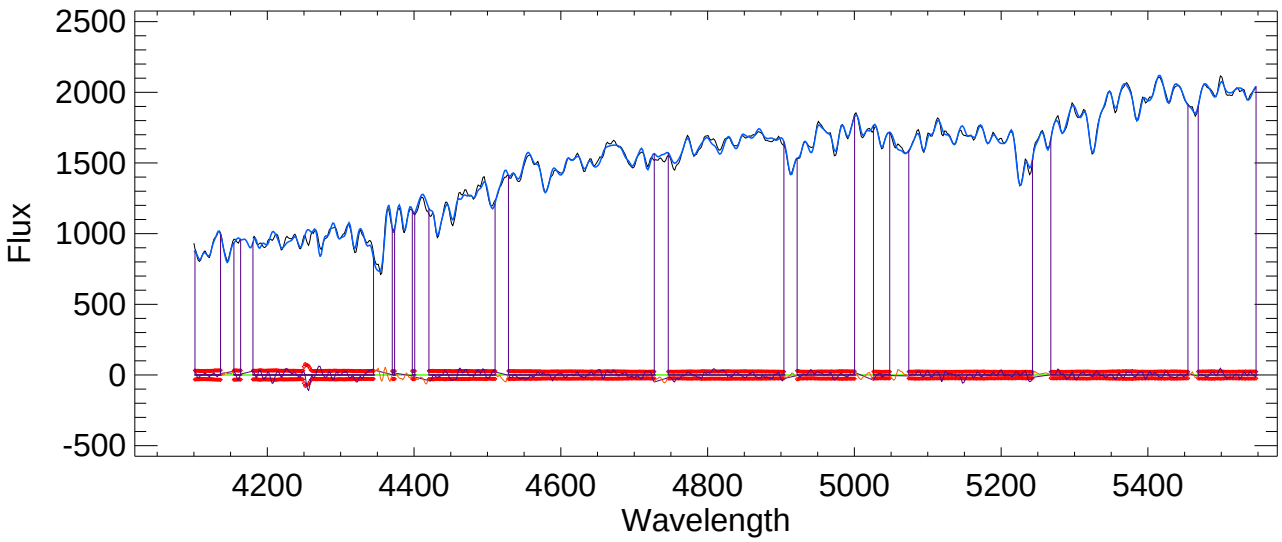

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

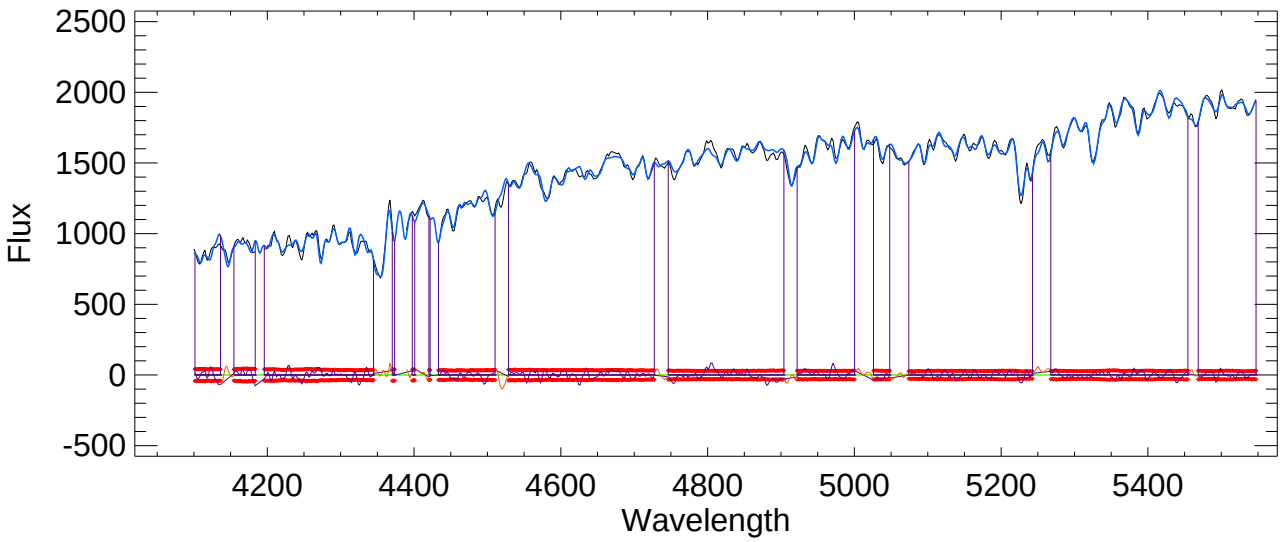

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

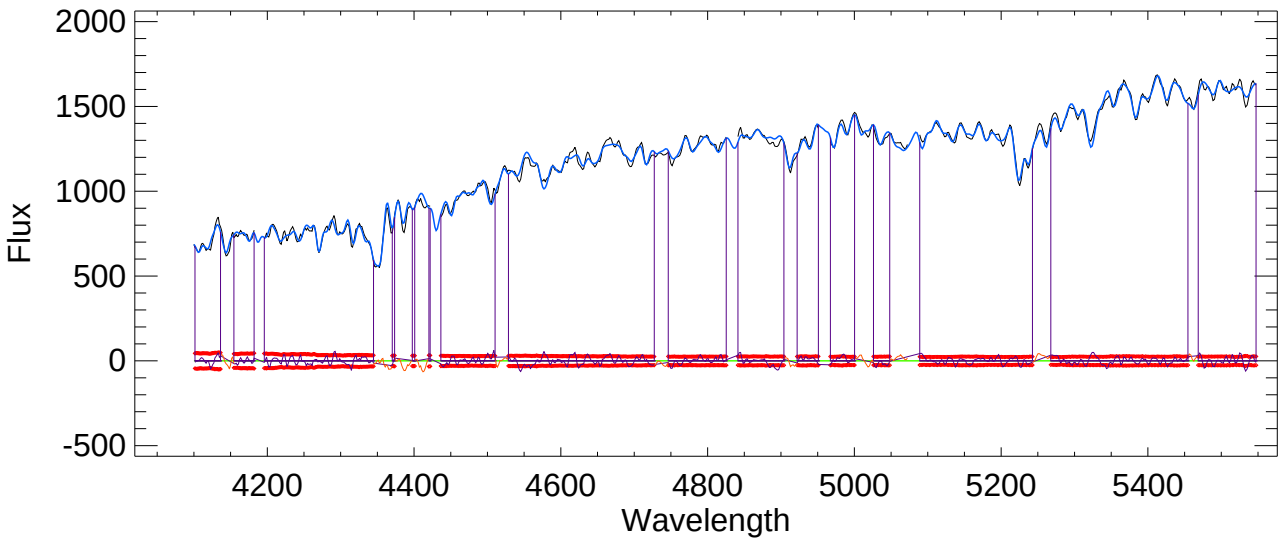

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

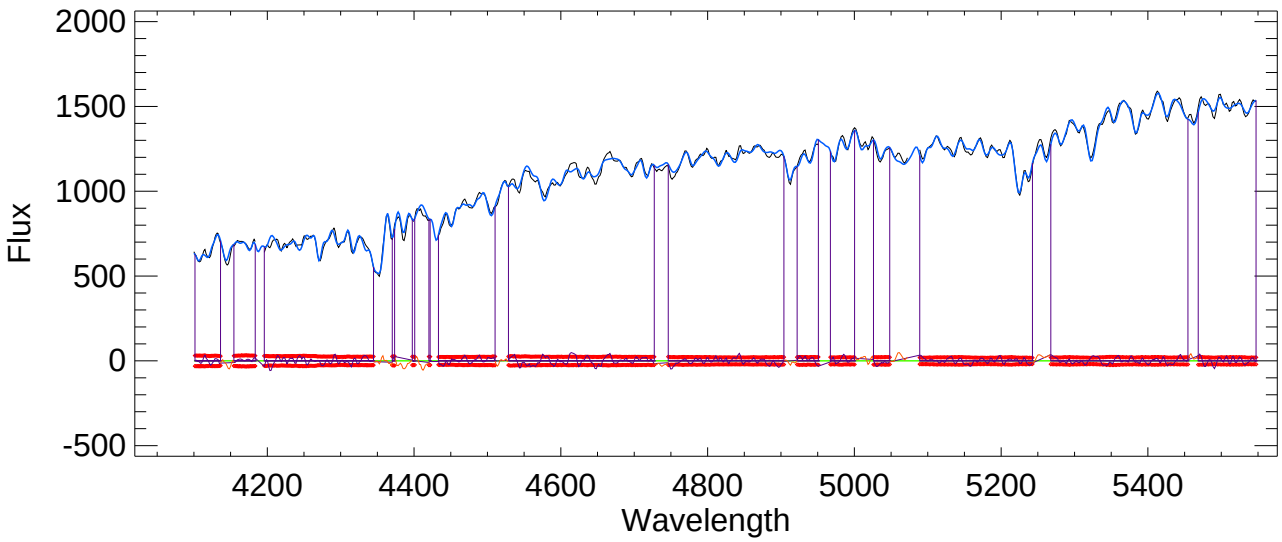

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

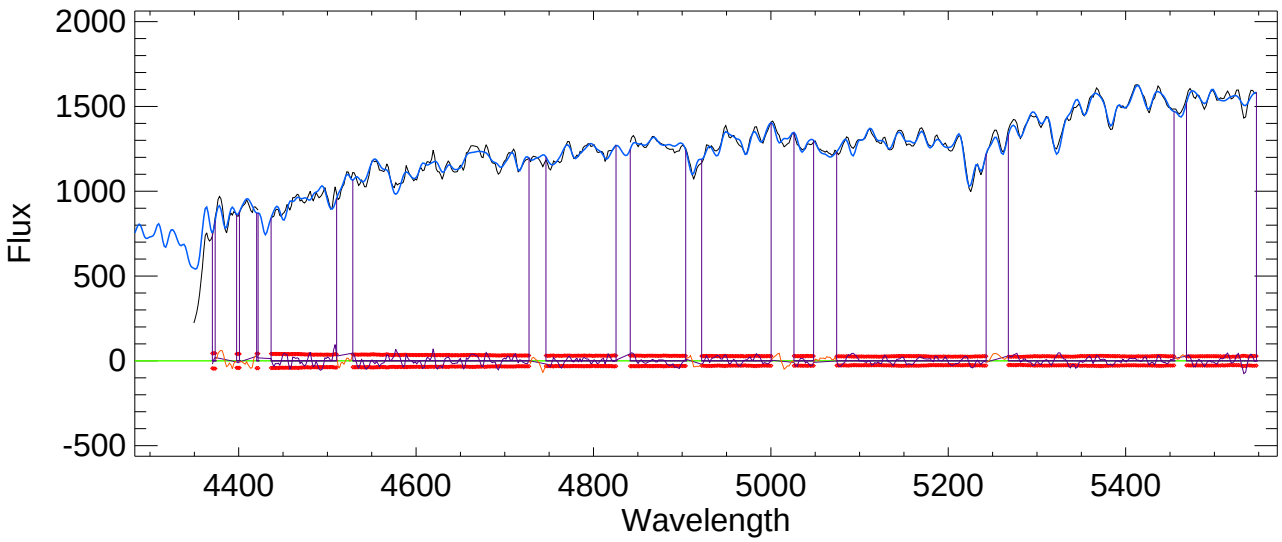

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

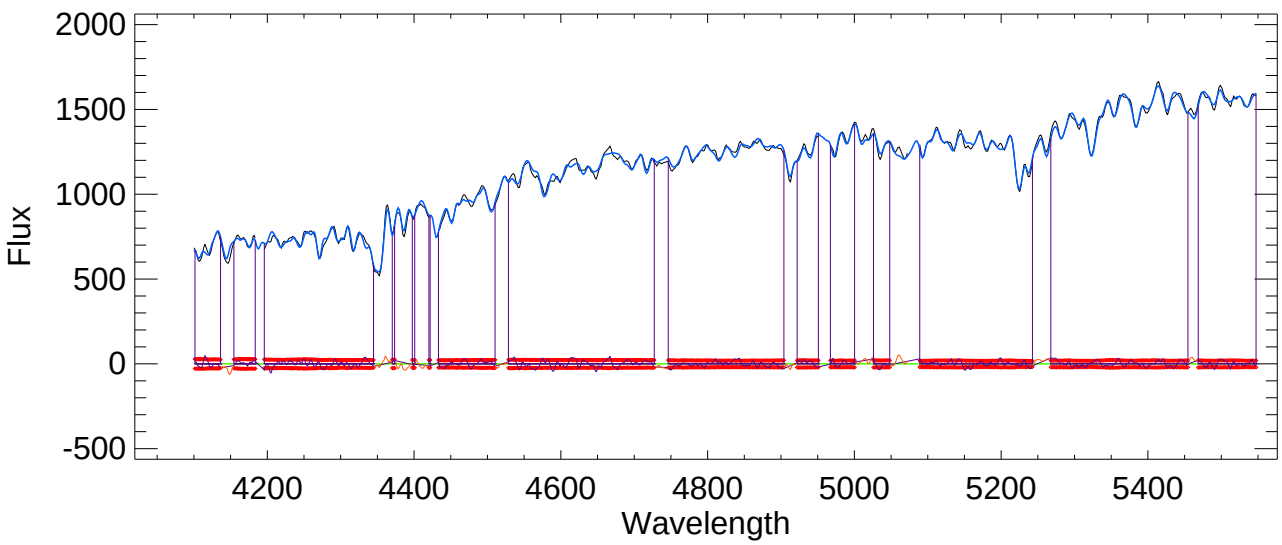

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

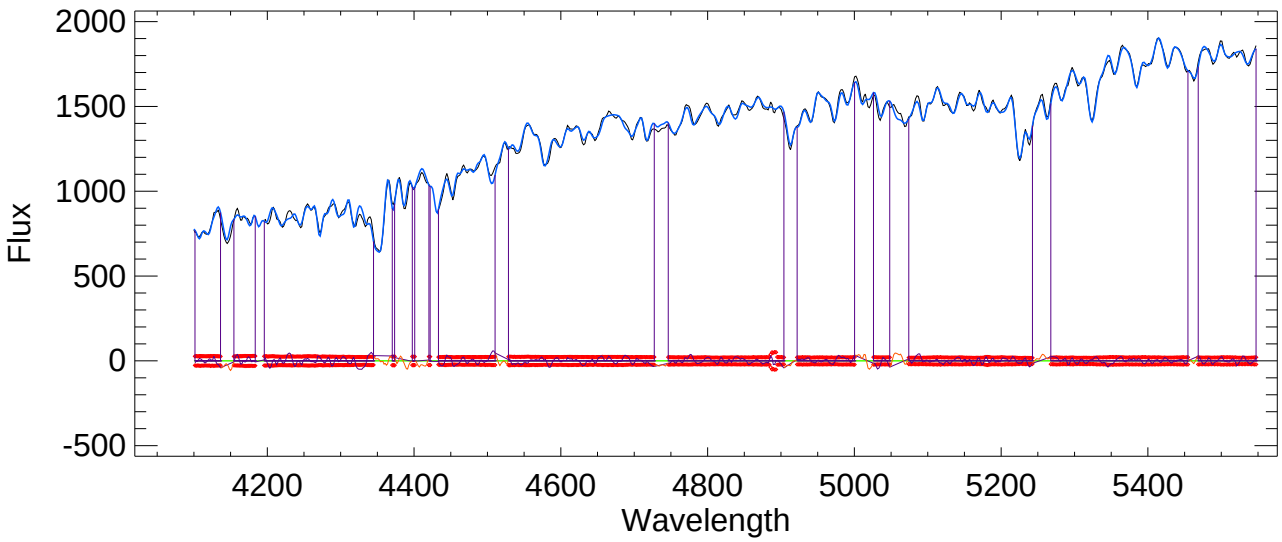

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

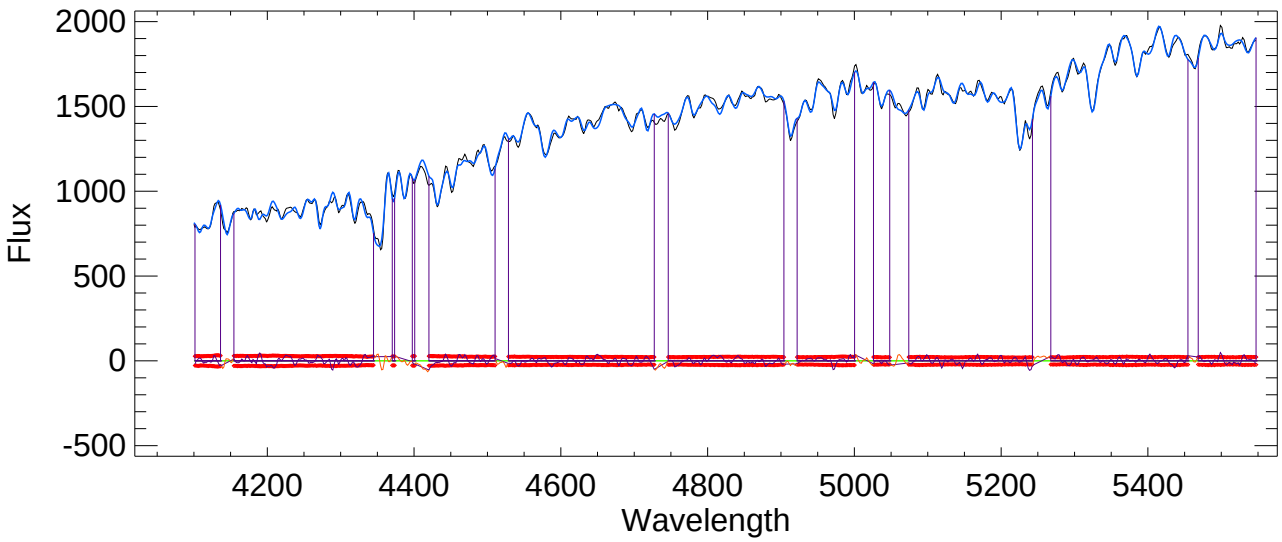

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

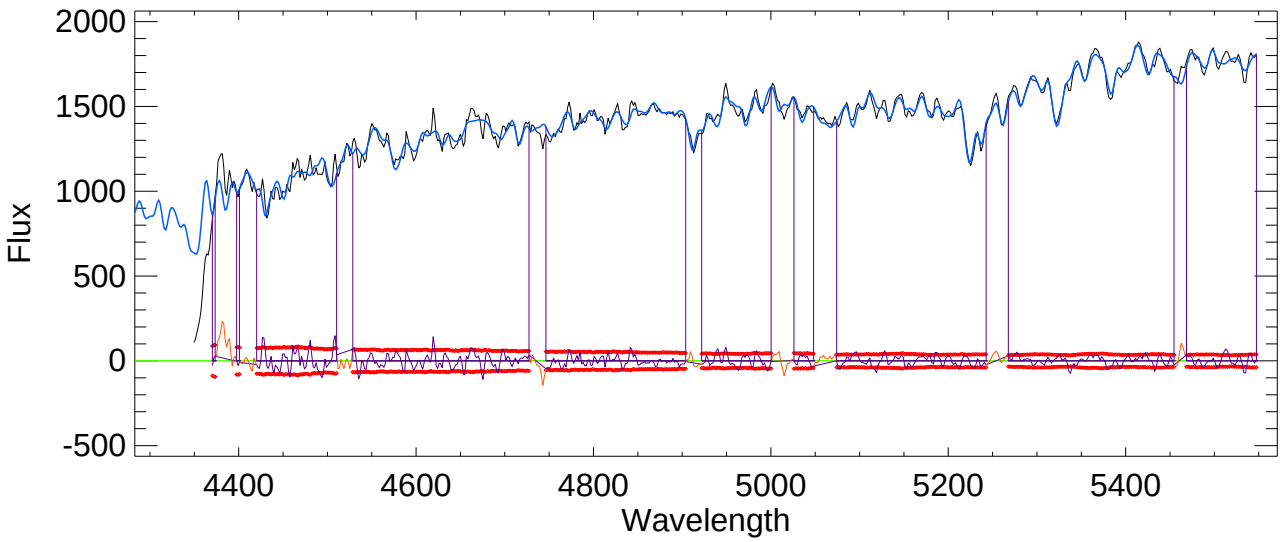

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

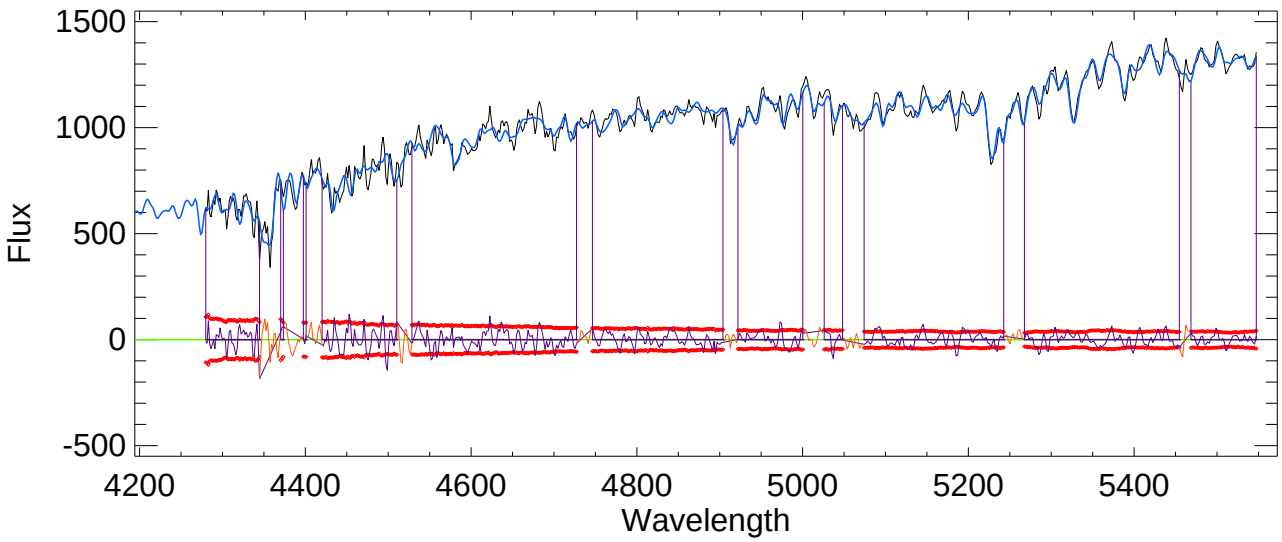

2000
1500
1000
500
0
-500
Flux
4400
4600
4800
5000
5200
5400
Wavelength

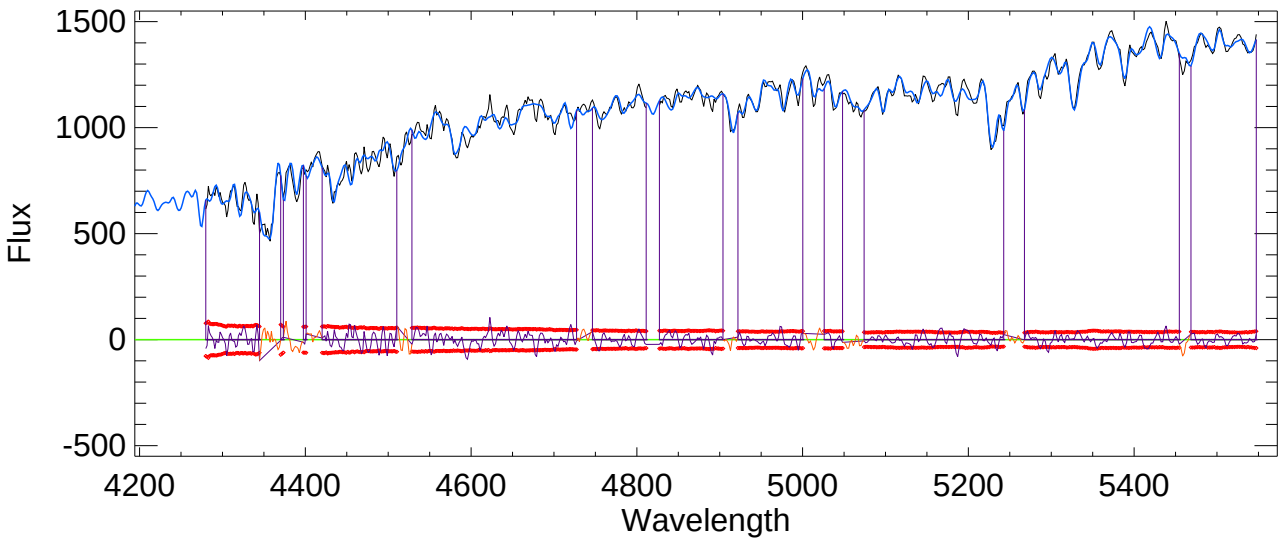

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

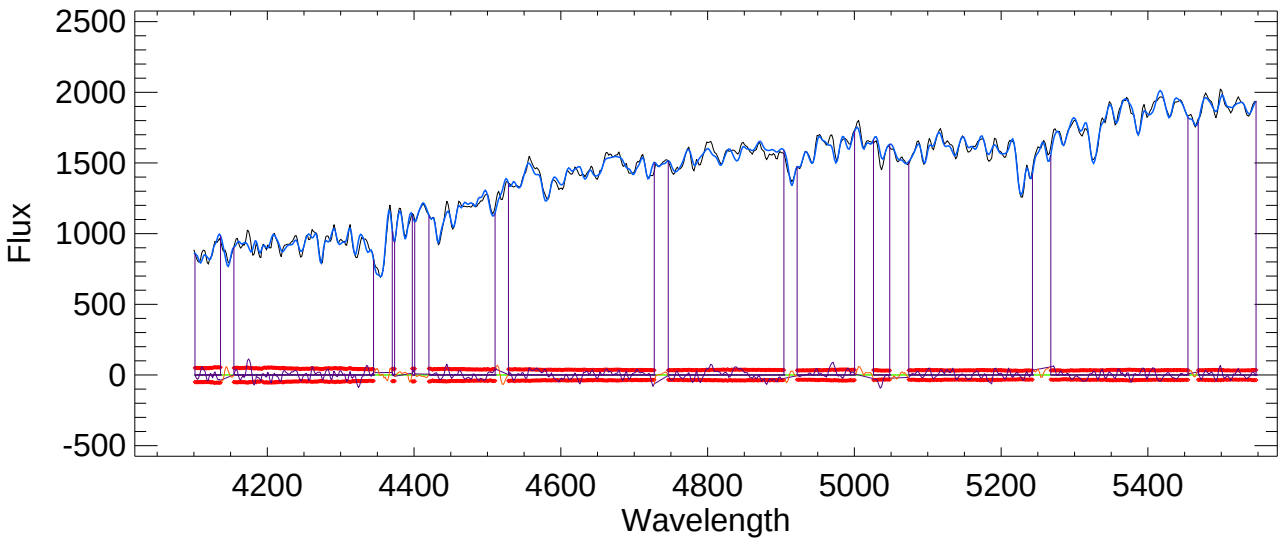

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

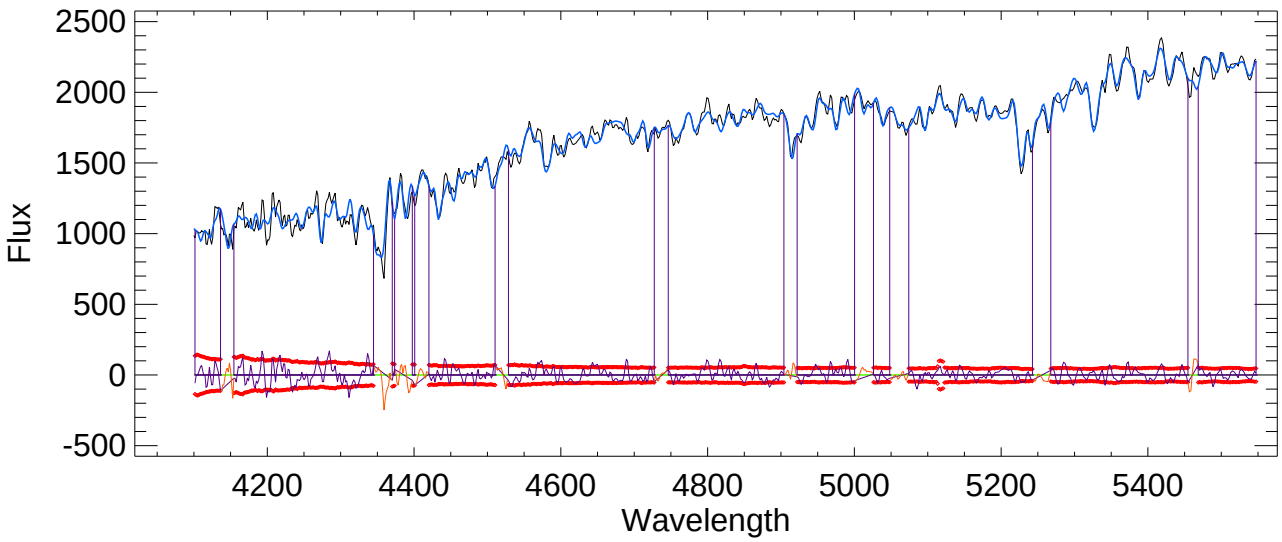

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

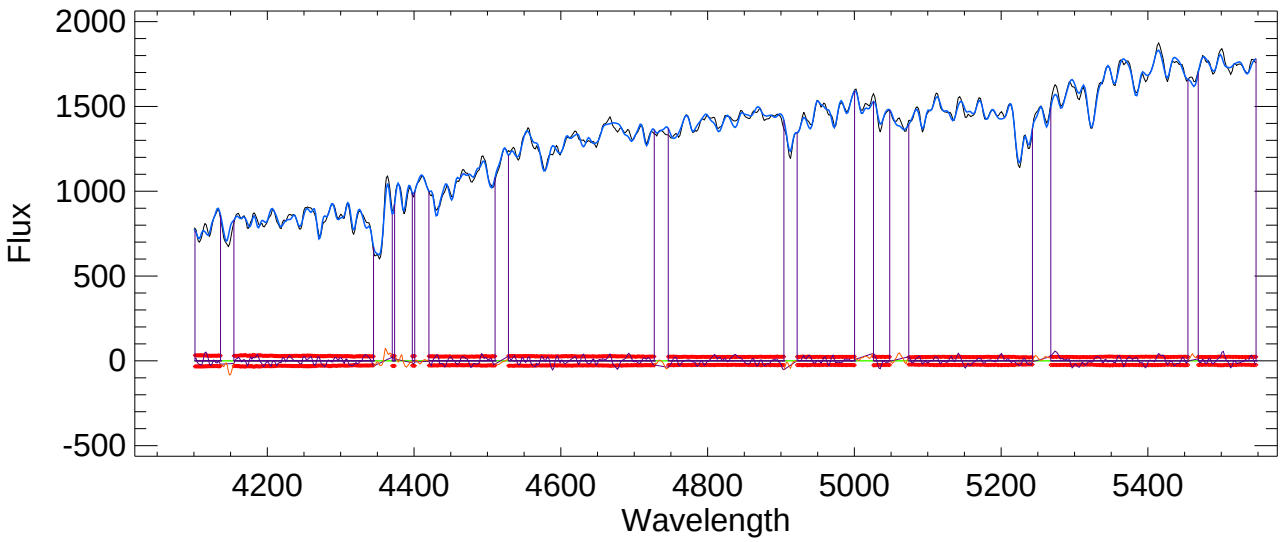

2000
1500
1000
500
0
-500
Flux
4400
4600
4800
5000
5200
5400
Wavelength

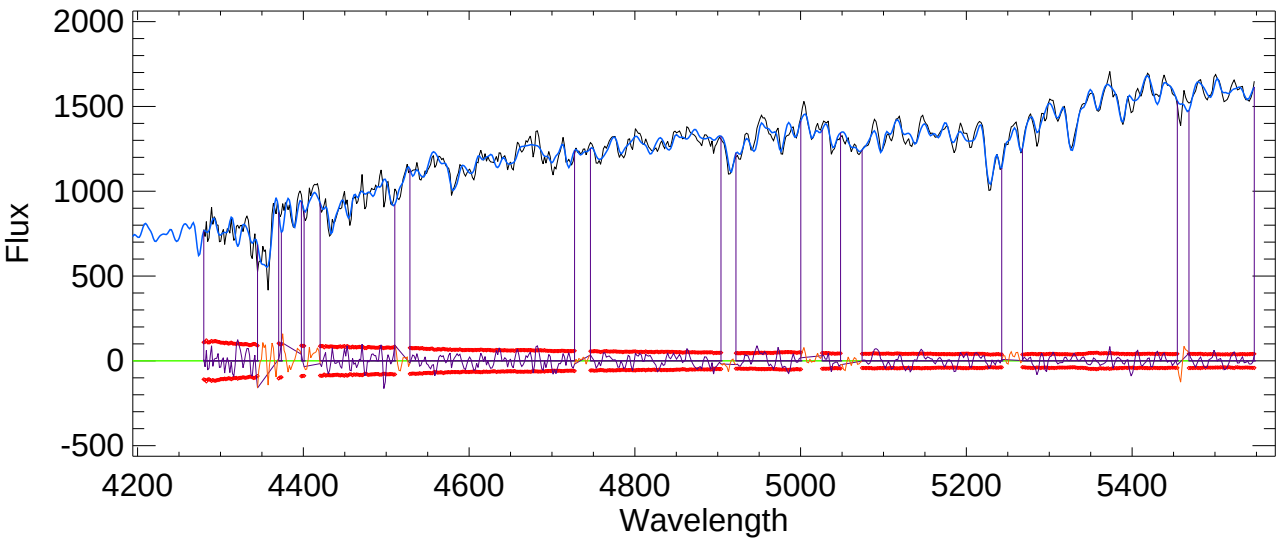

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

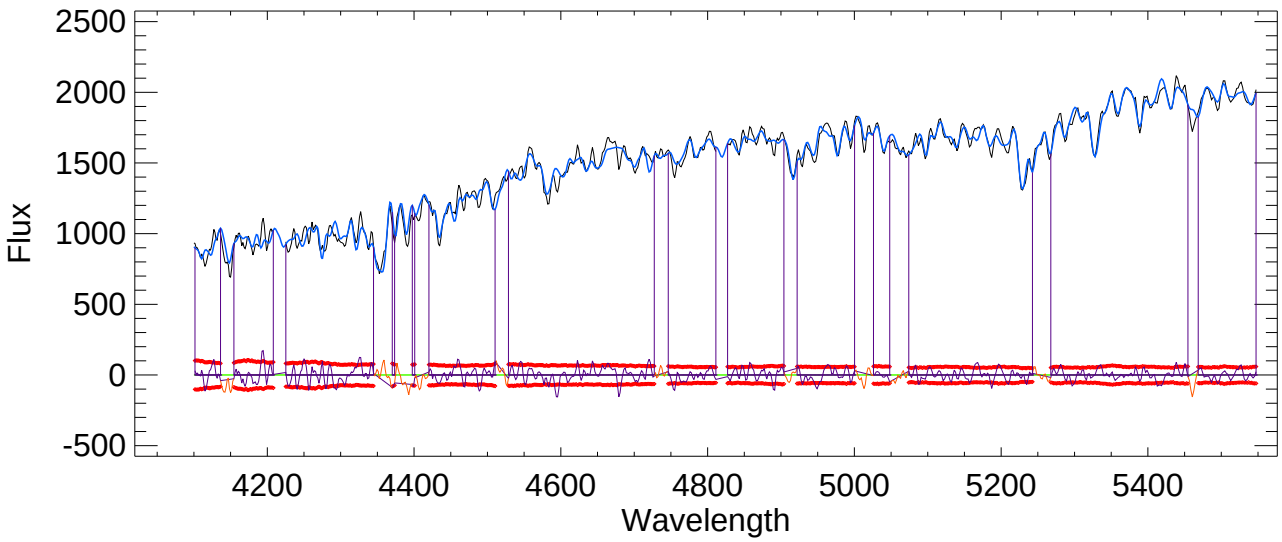

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

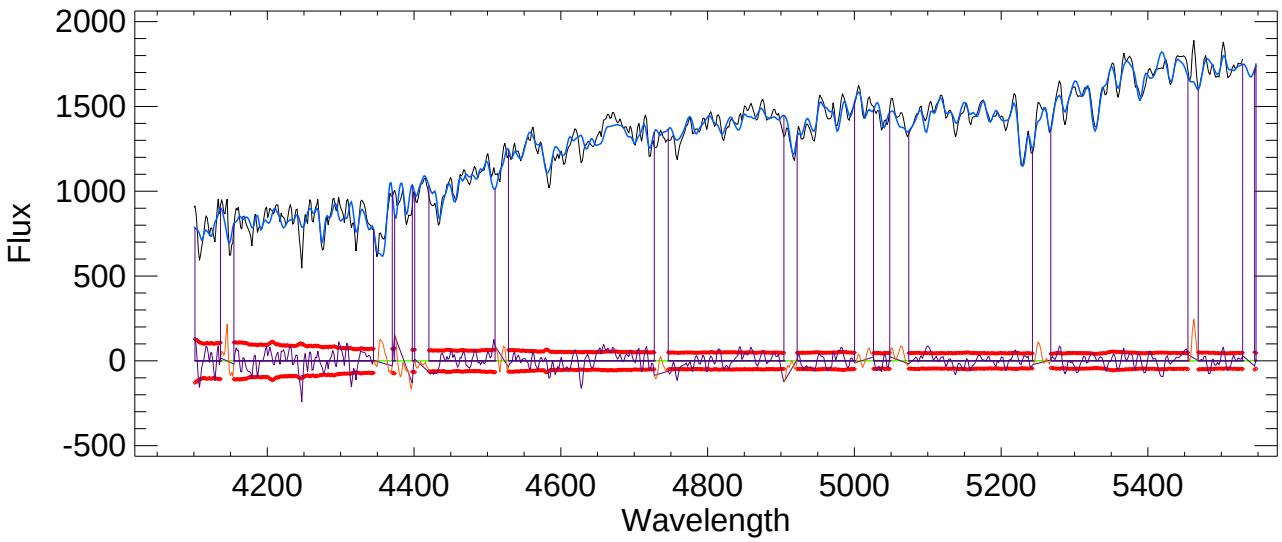

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

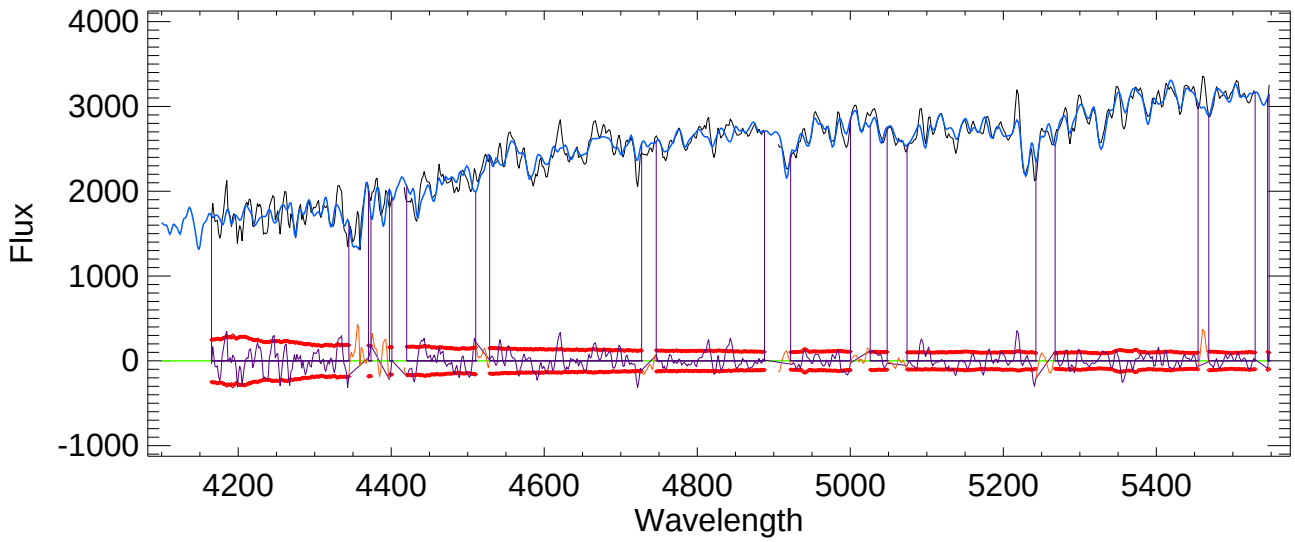

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

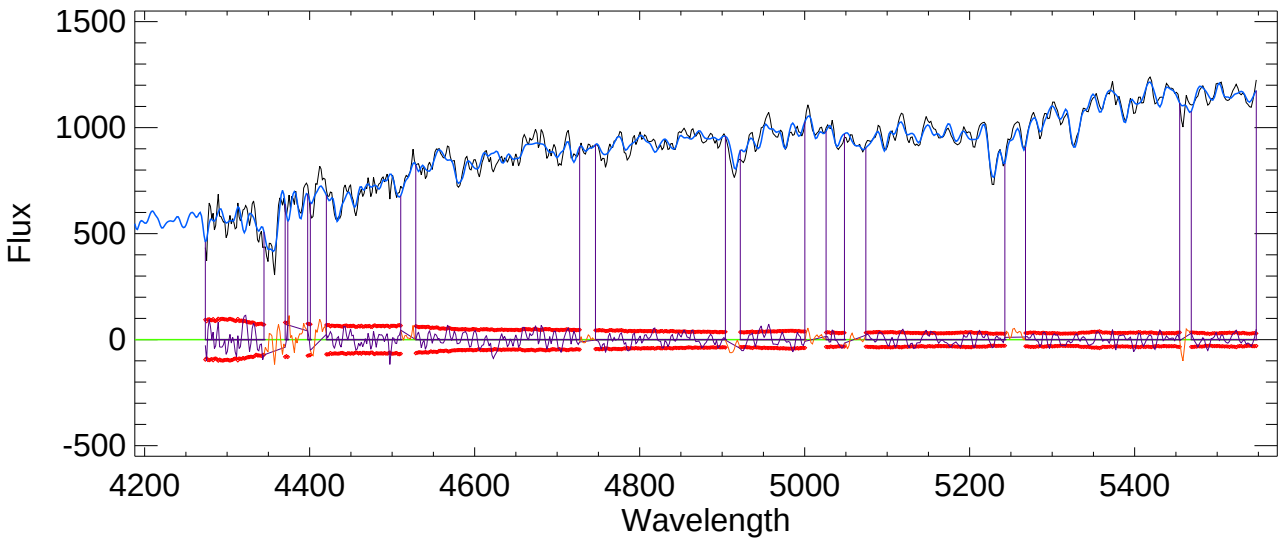

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

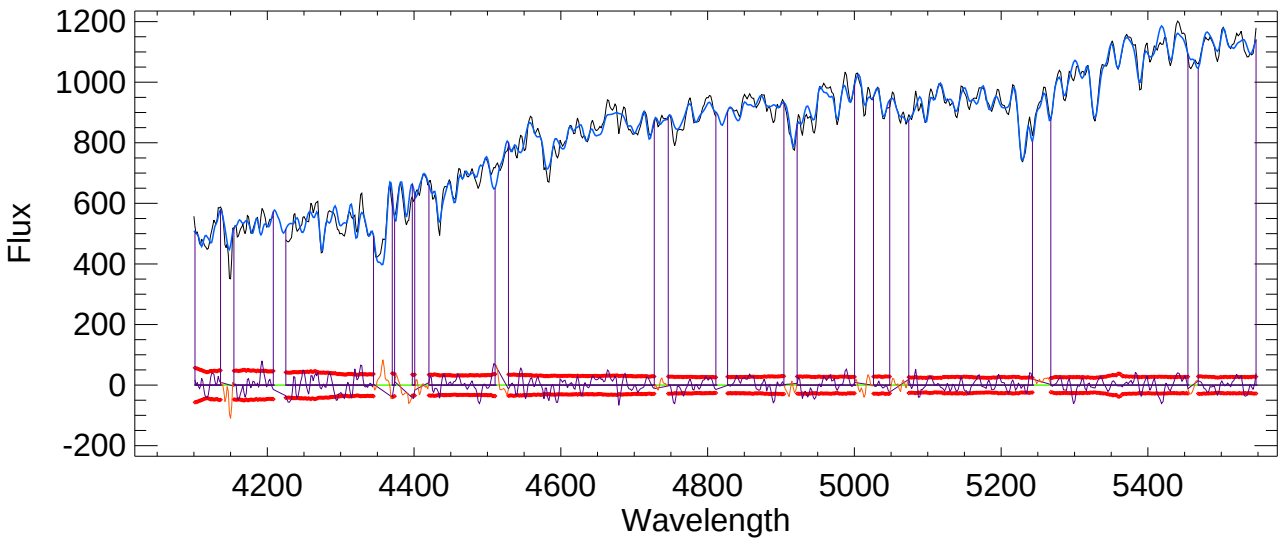

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

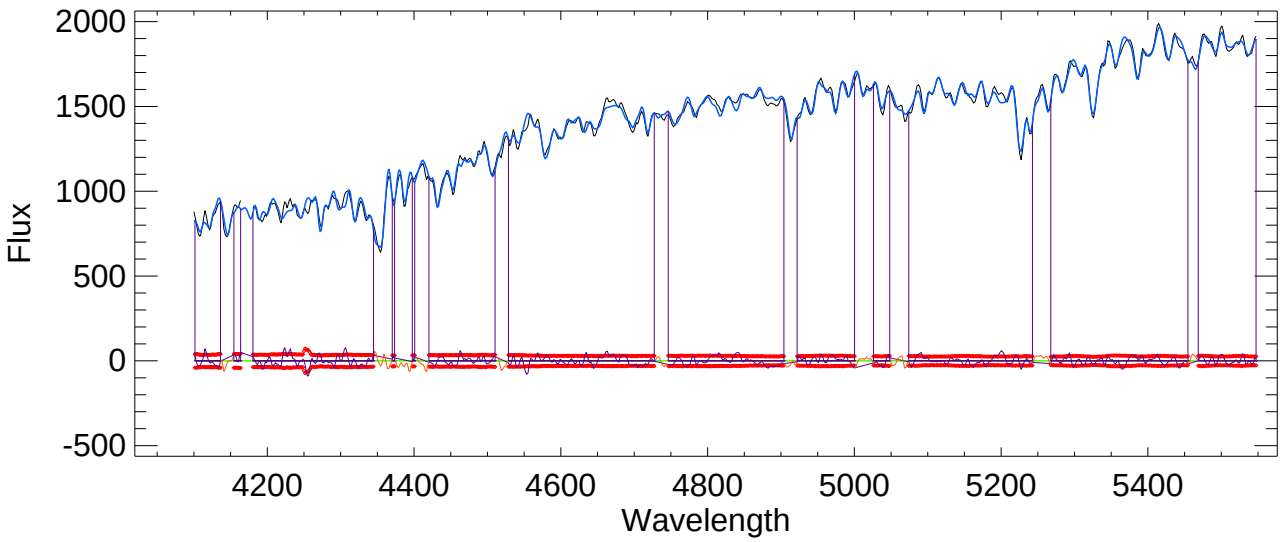

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

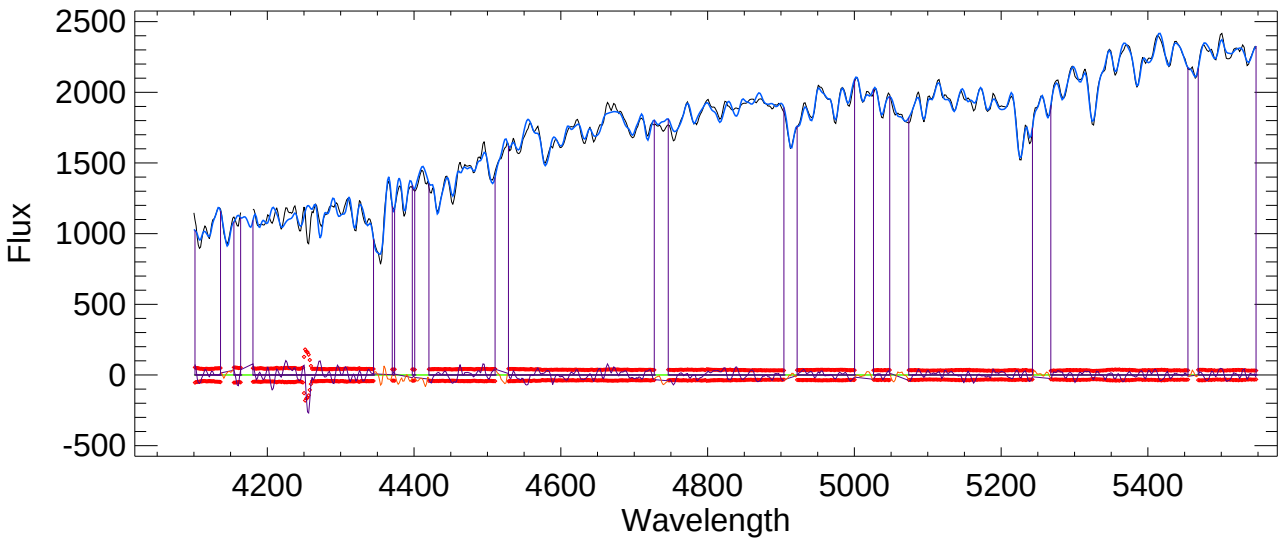

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

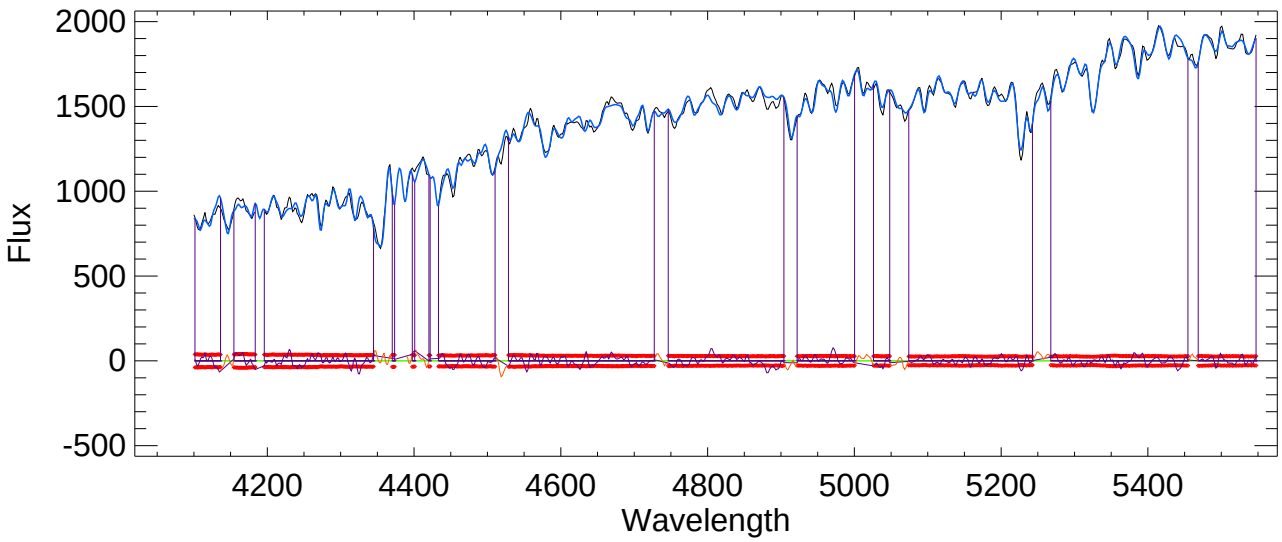

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

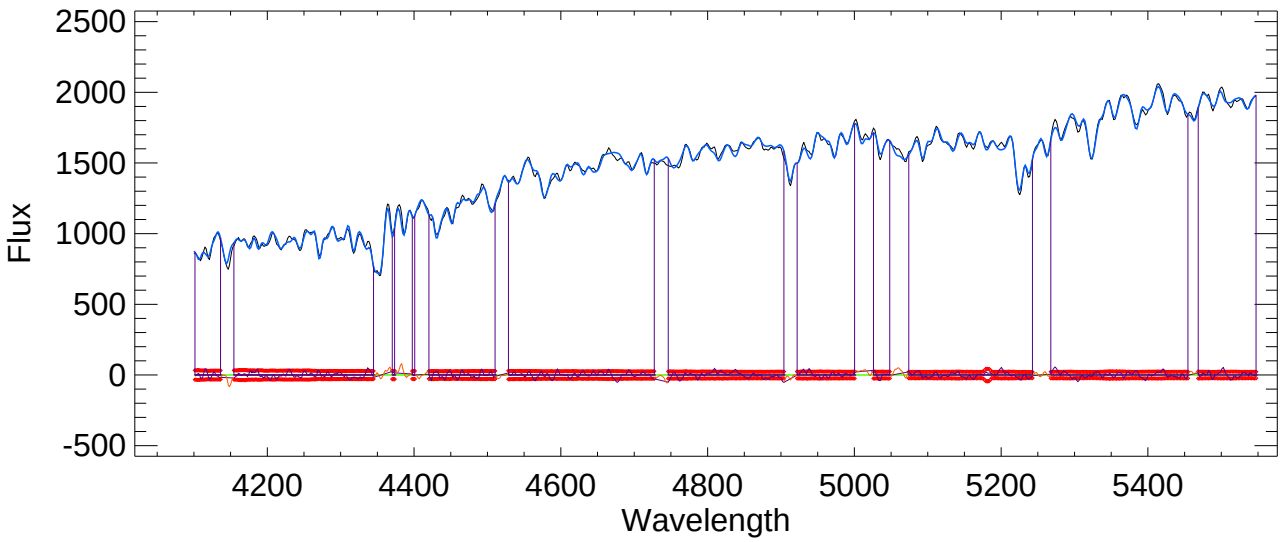

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

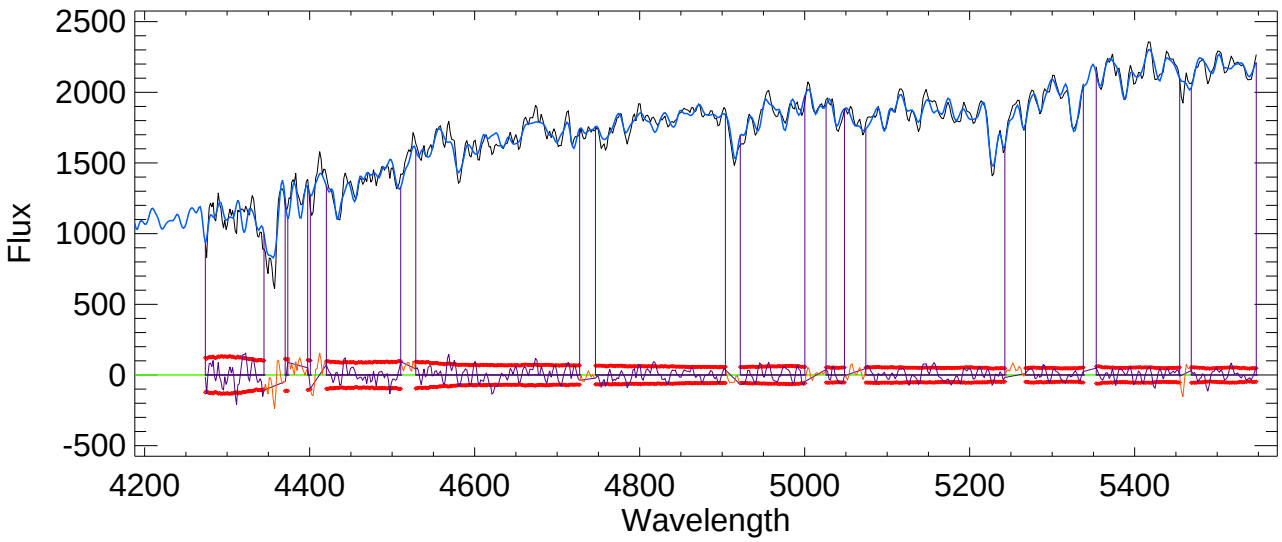

1200
1000
800
600
400
200
0
-200
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

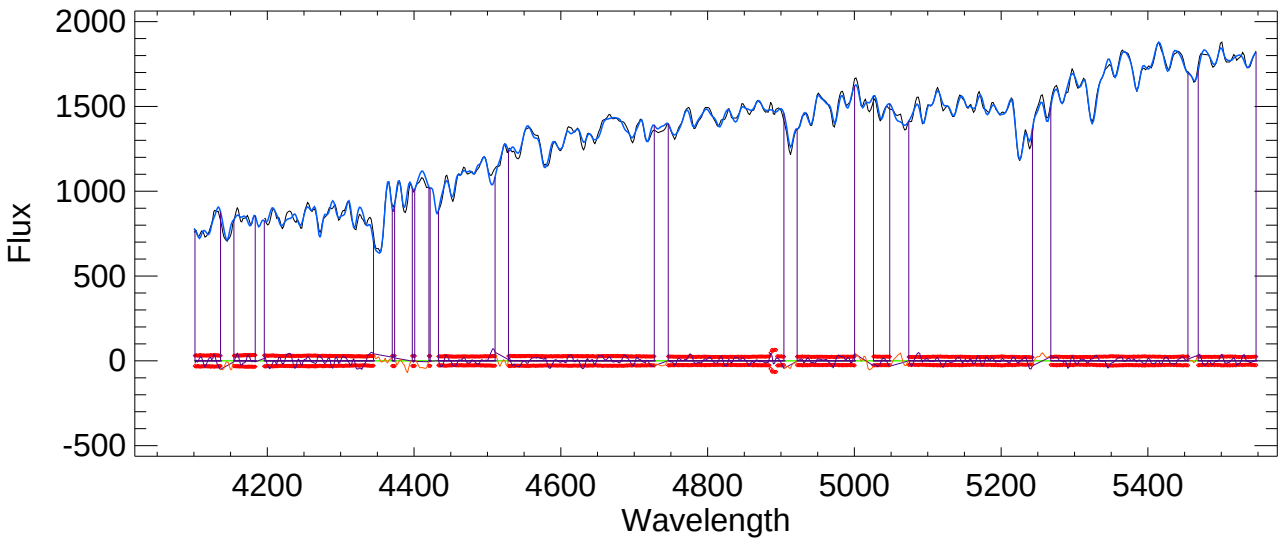

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

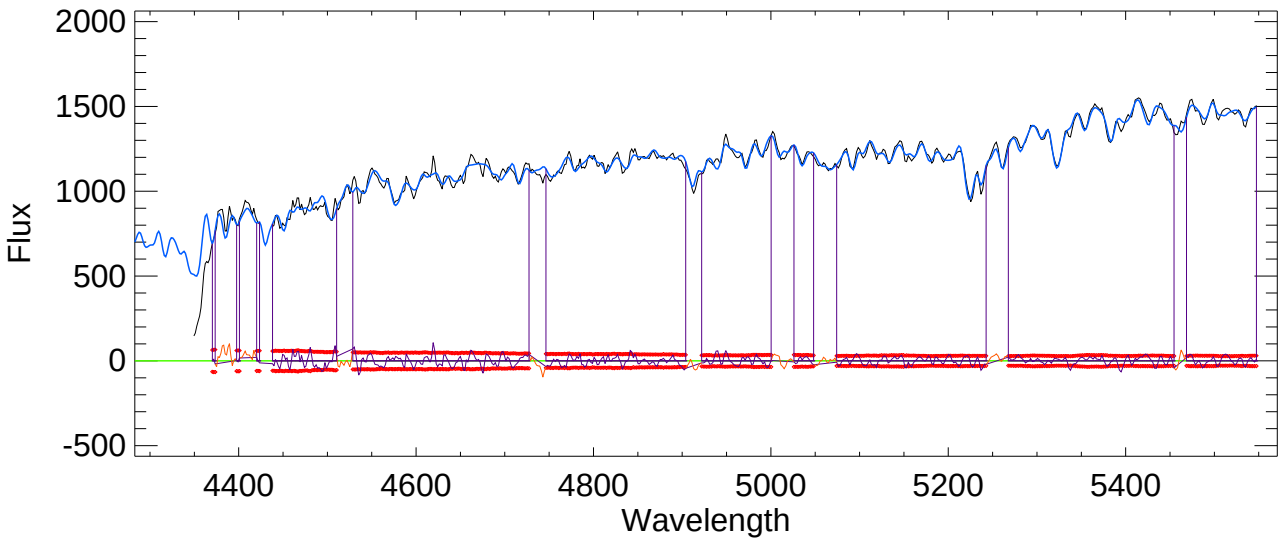

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

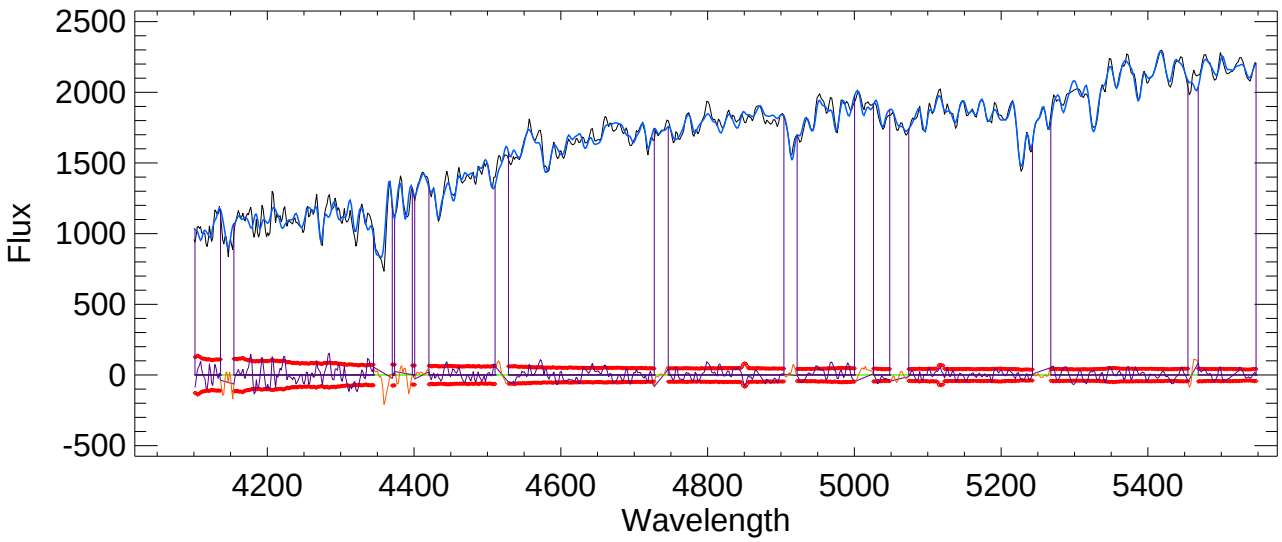

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

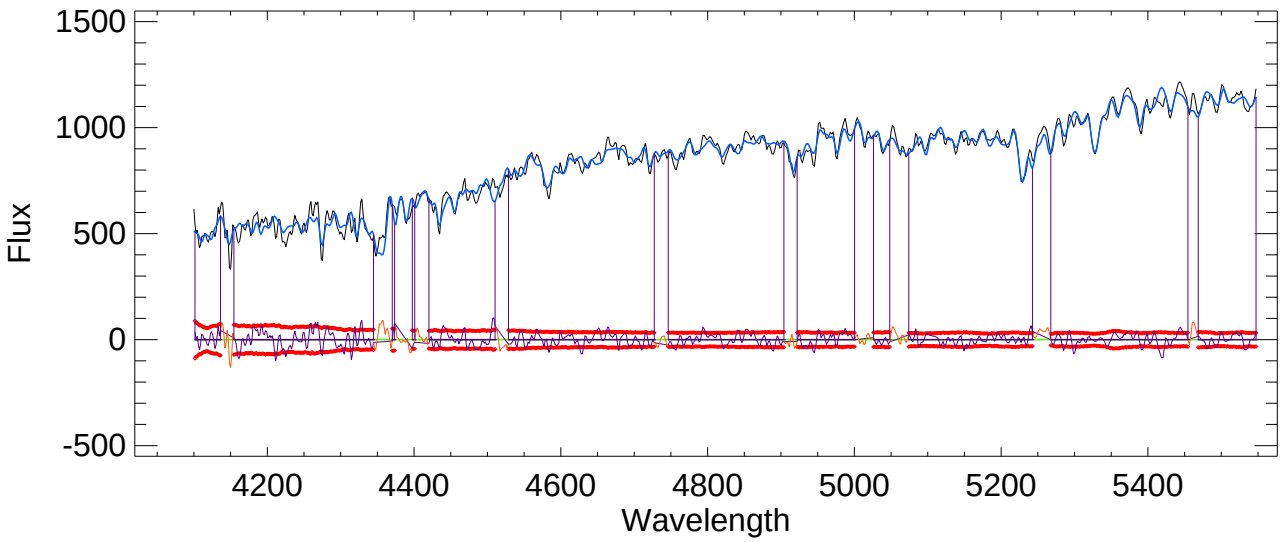

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

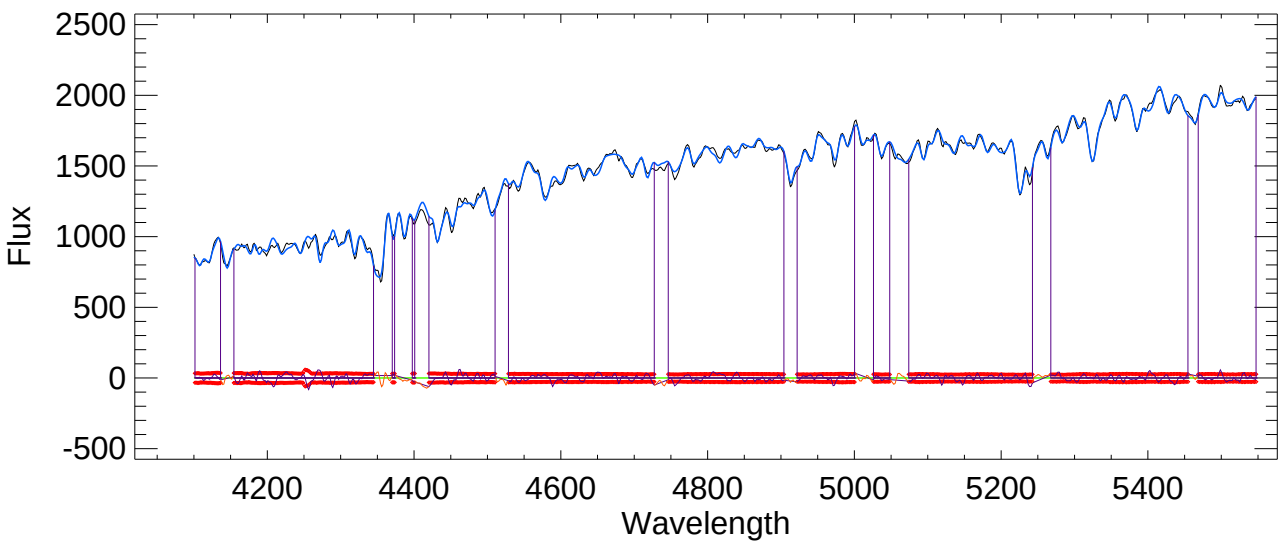

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

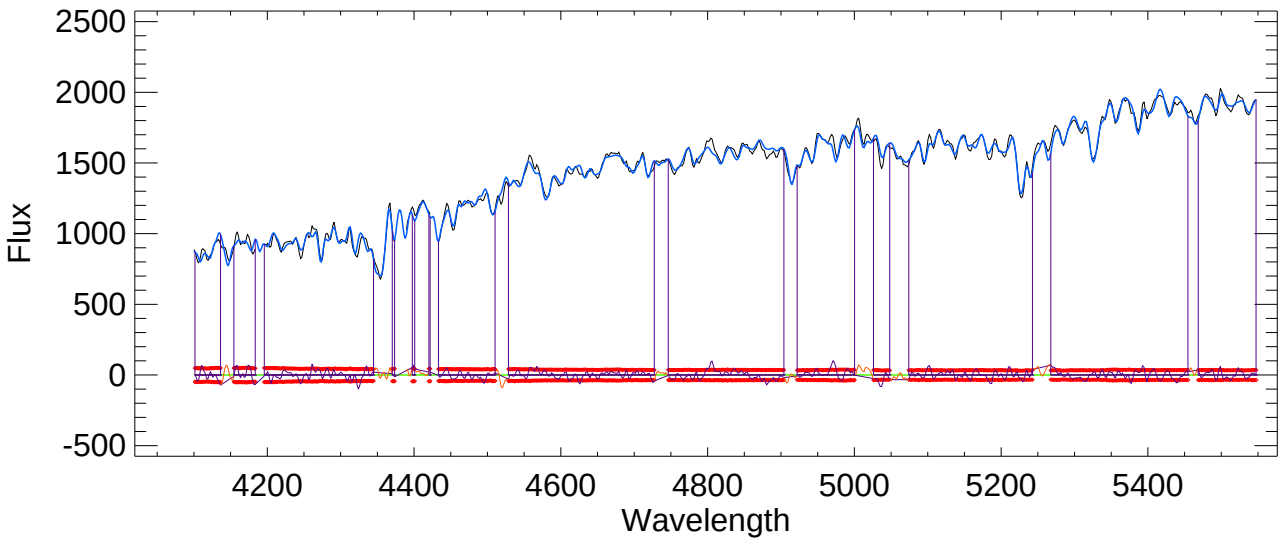

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

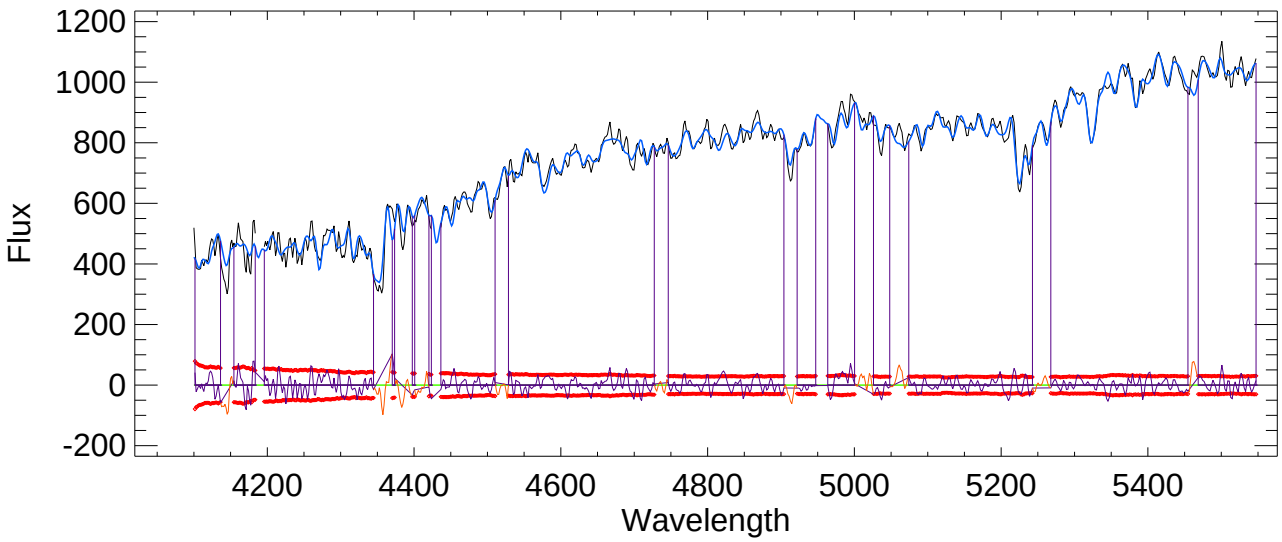

2000
1500
1000
500
0
-500
Flux
4400
4600
4800
5000
5200
5400
Wavelength

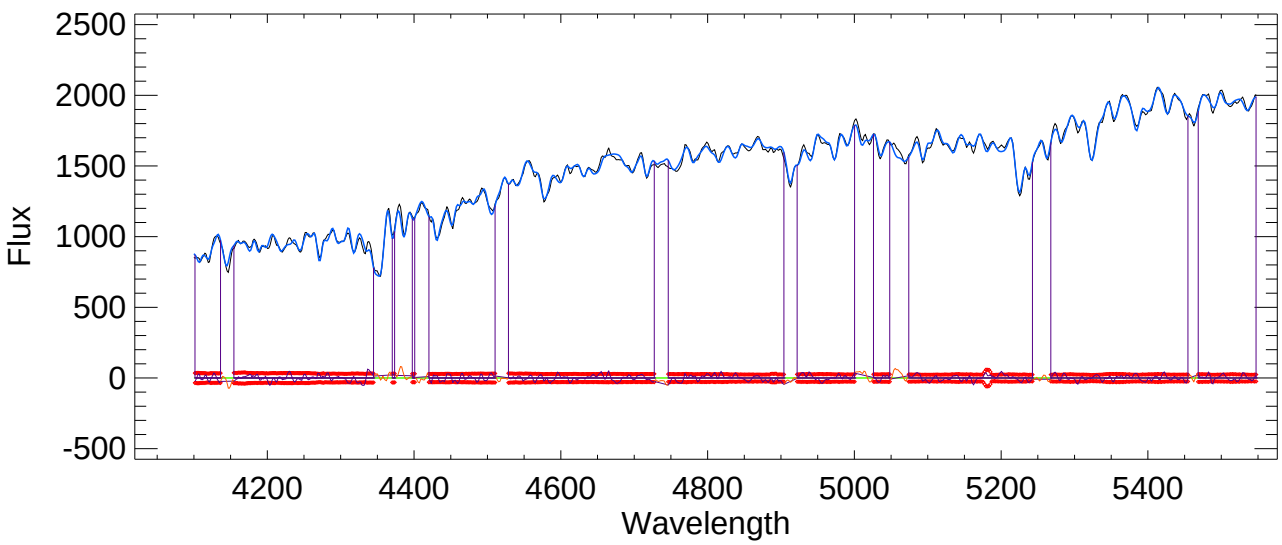

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

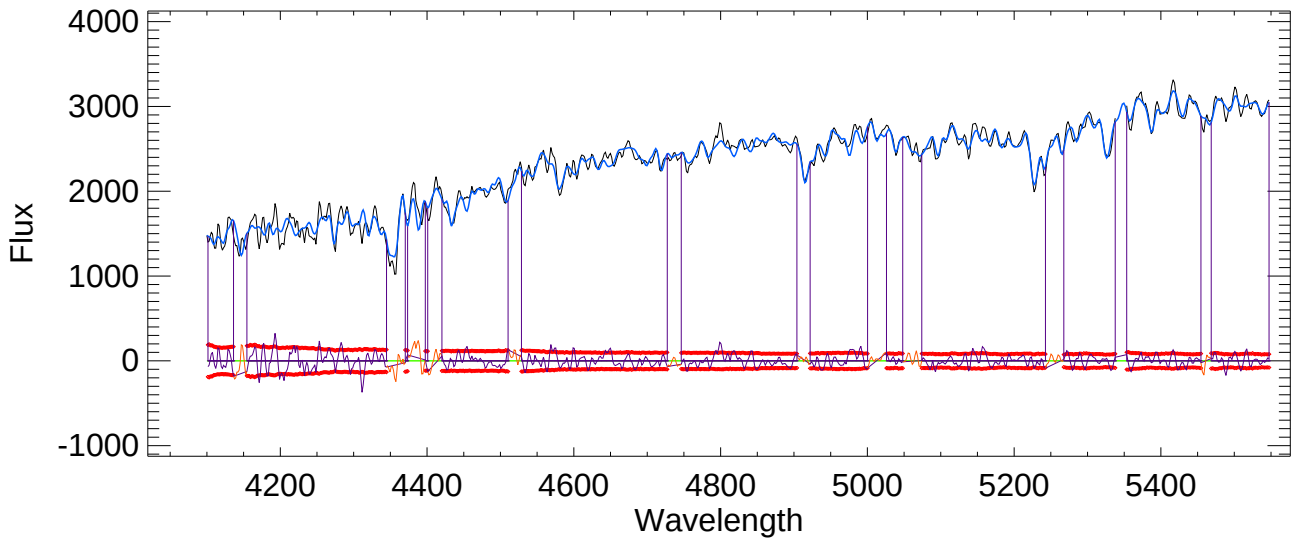

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

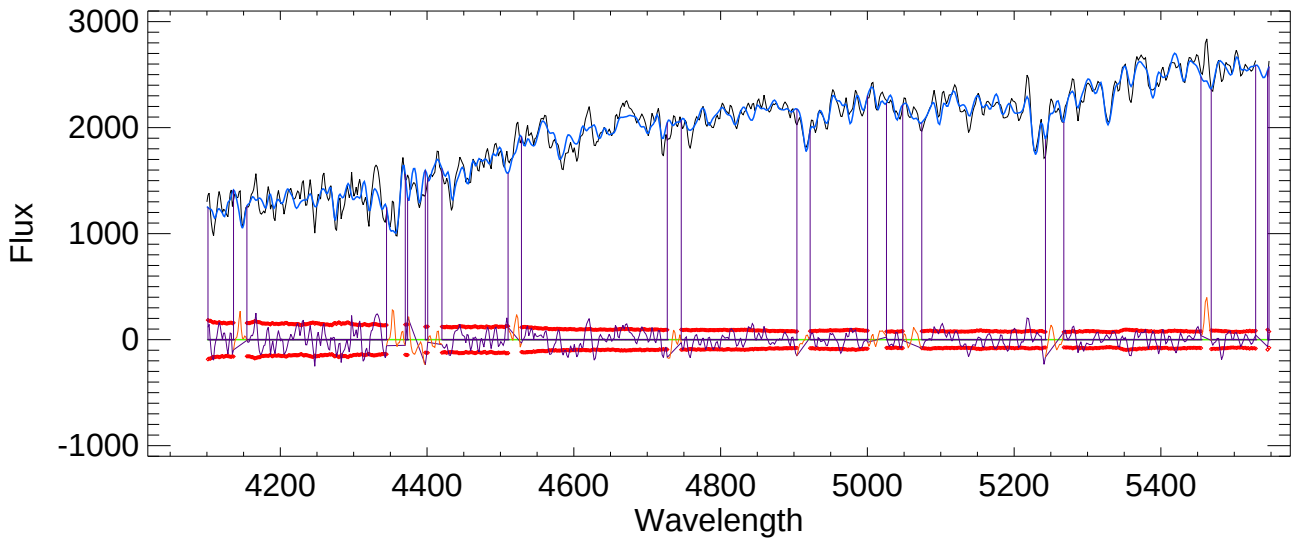

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

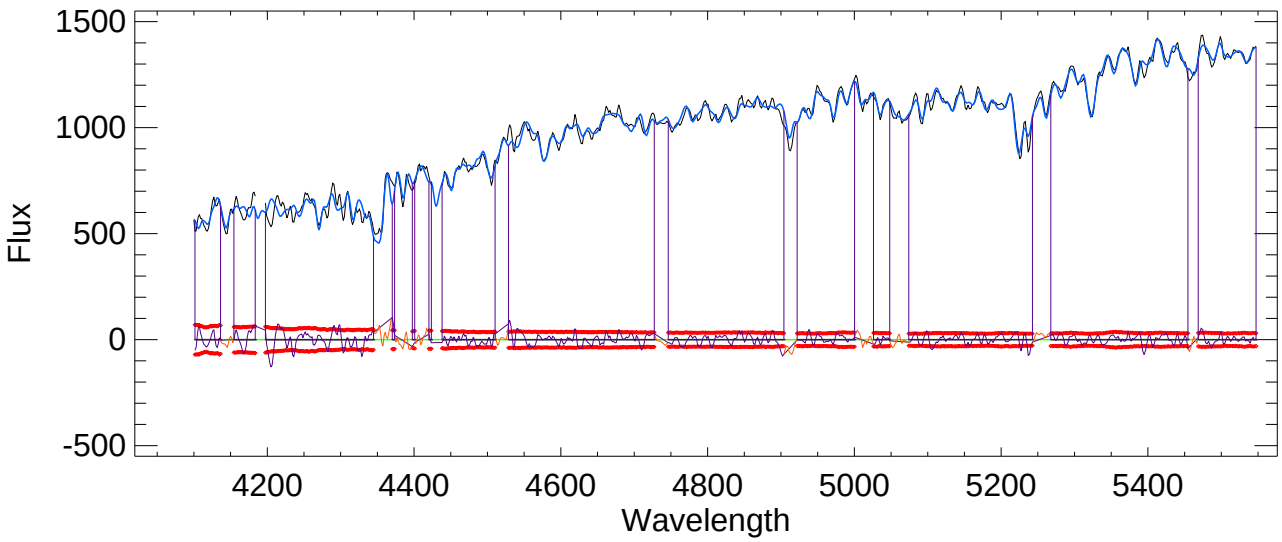

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

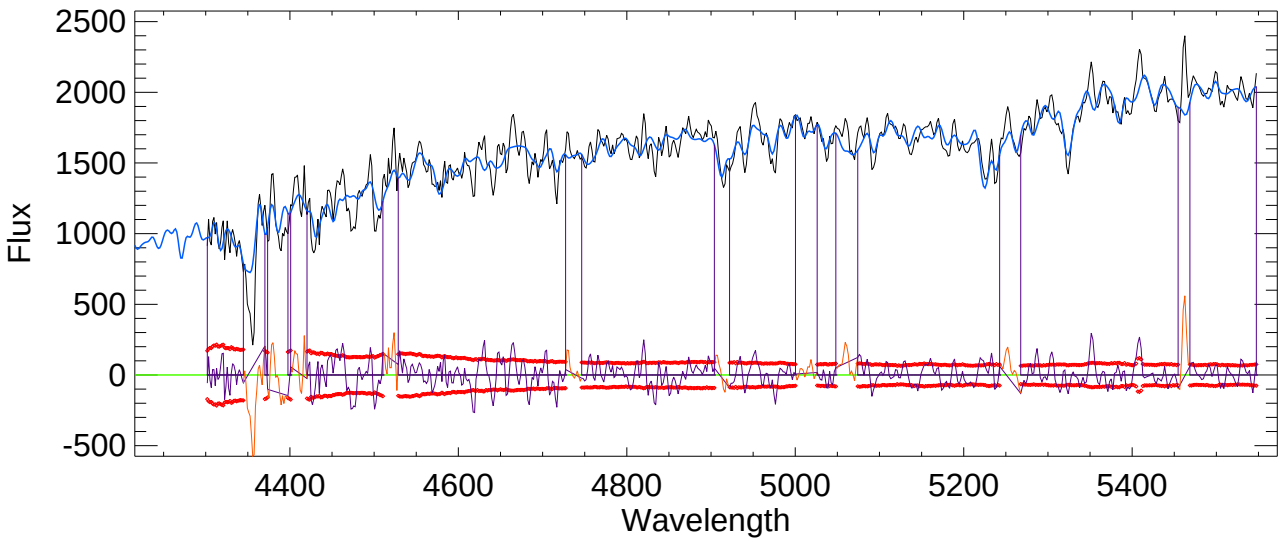

1200
1000
800
600
400
200
0
-200
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

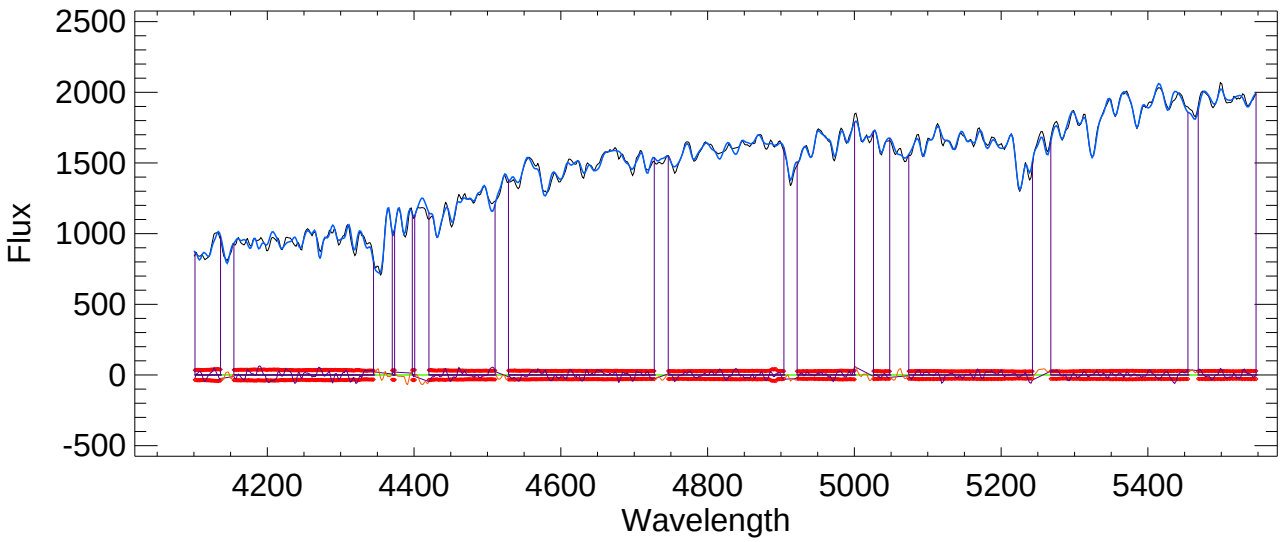

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

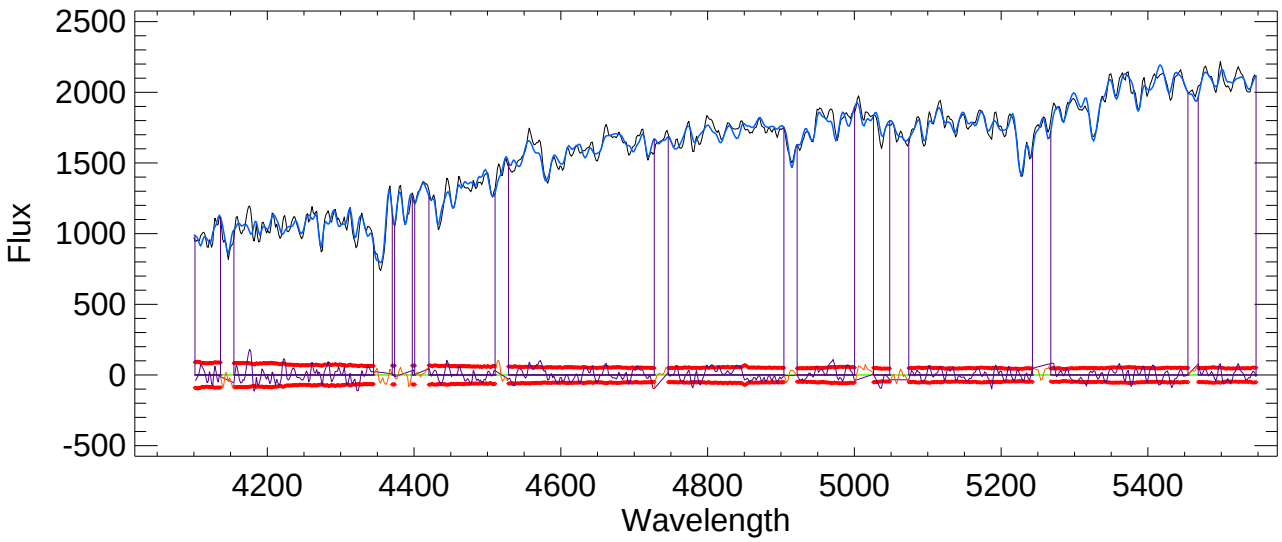

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

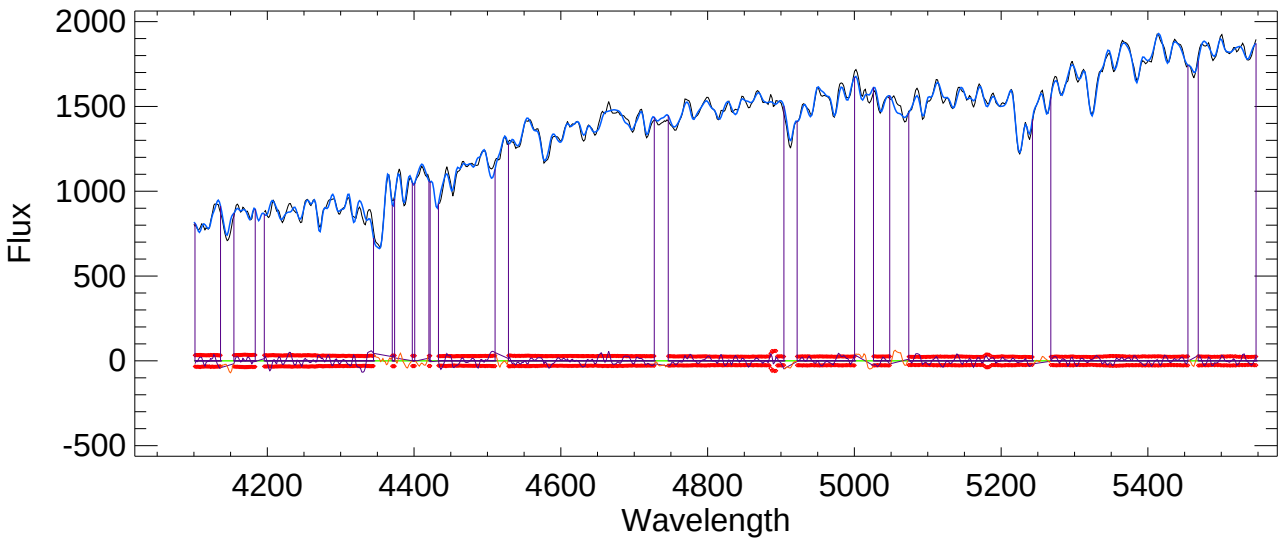

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

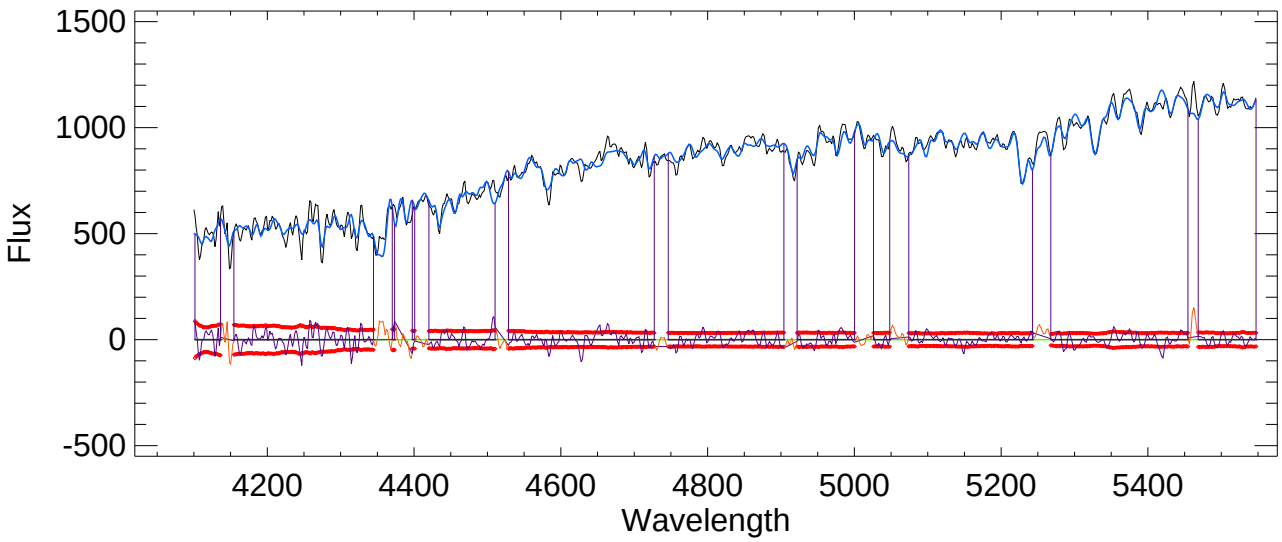

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

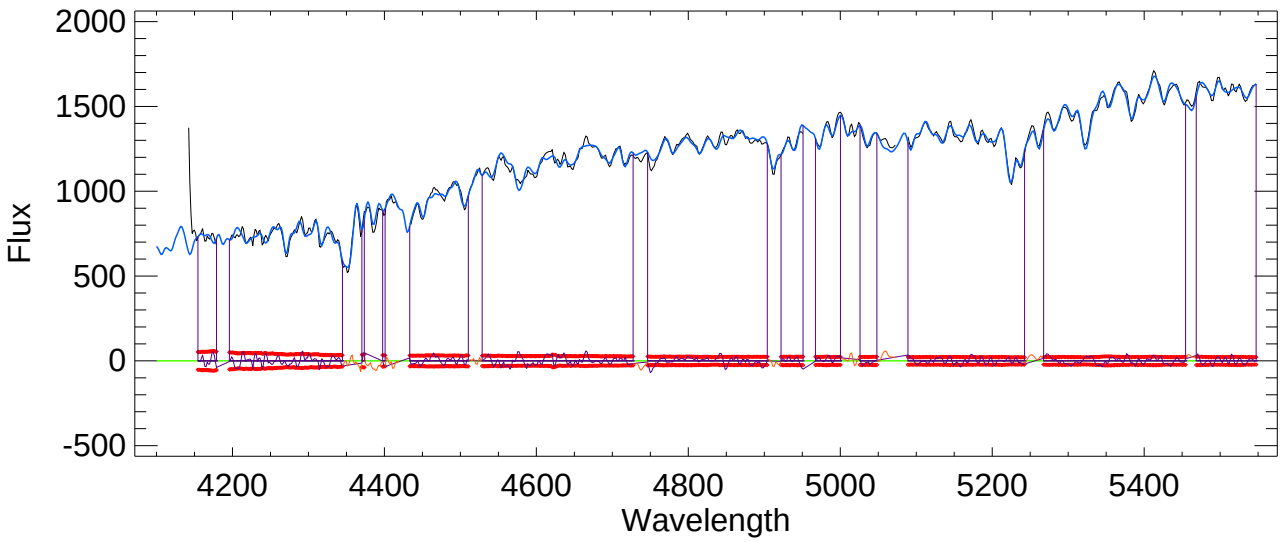

2500
2000
1500
1000
500
0
-500
Flux
4400
4600
4800
5000
5200
5400
Wavelength

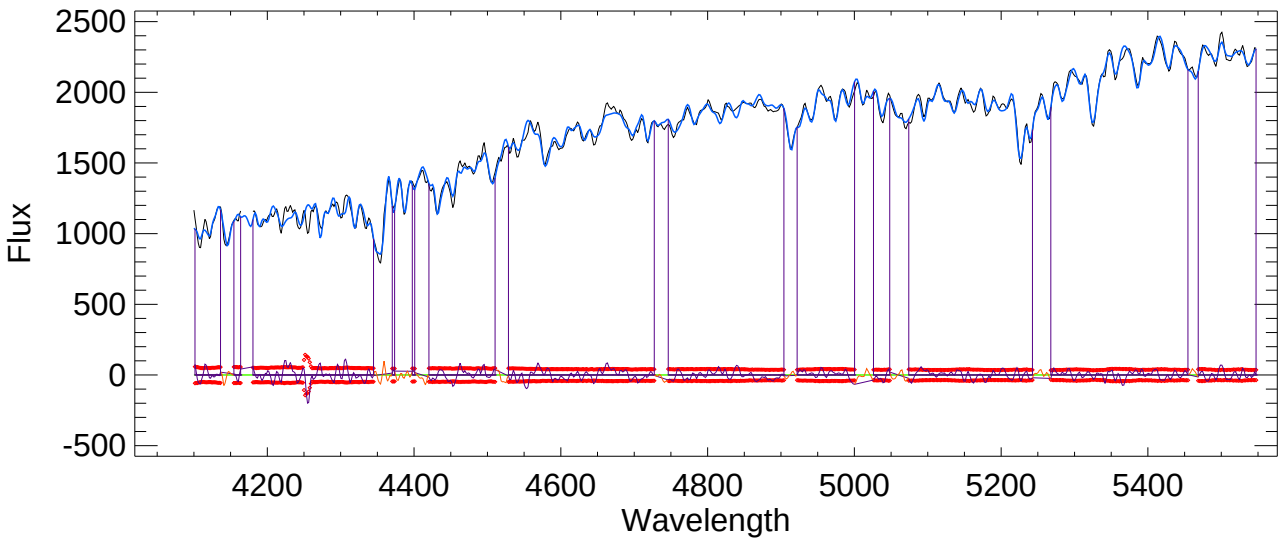

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

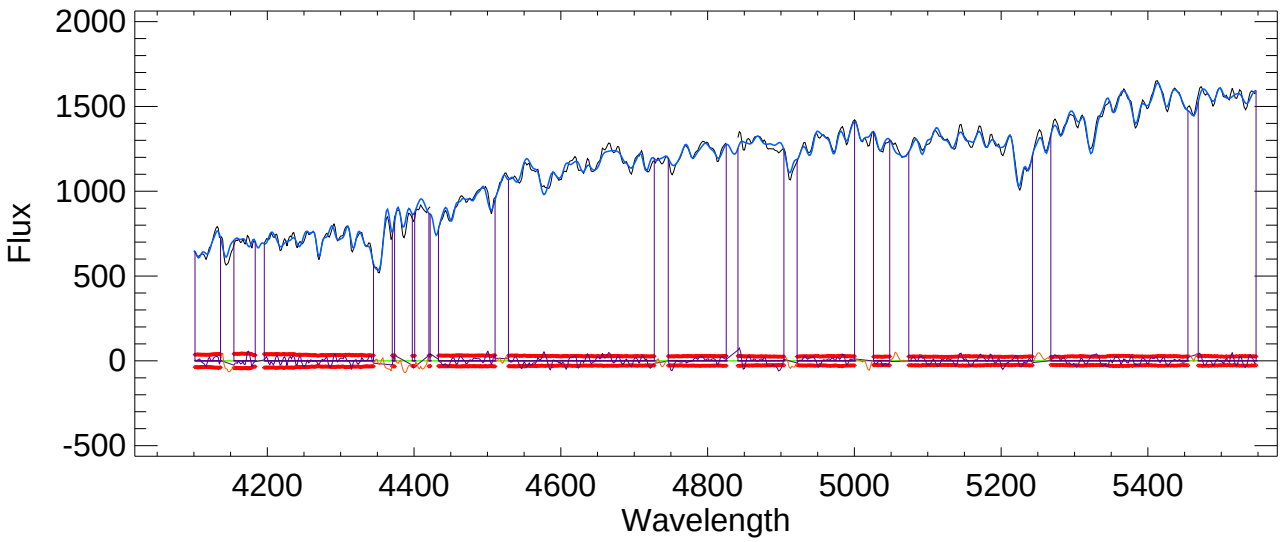

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

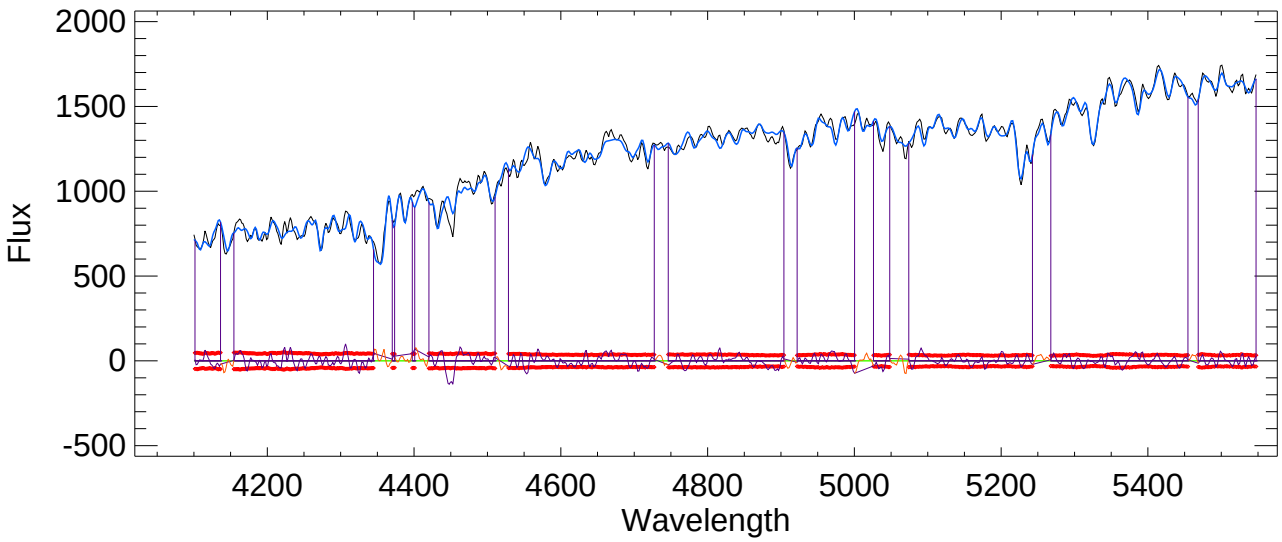

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

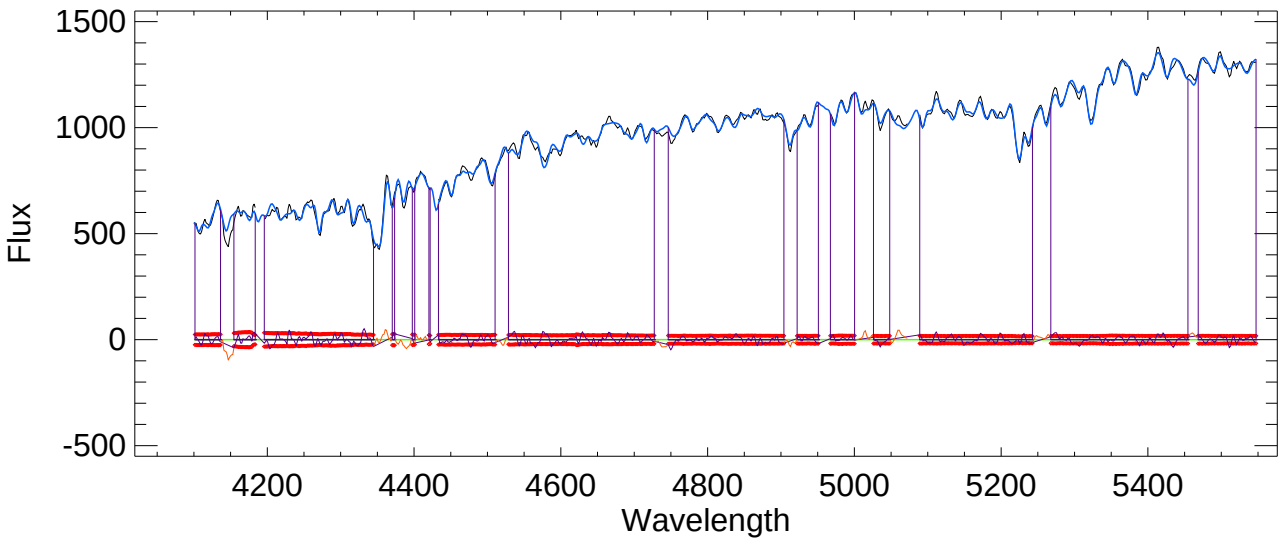

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

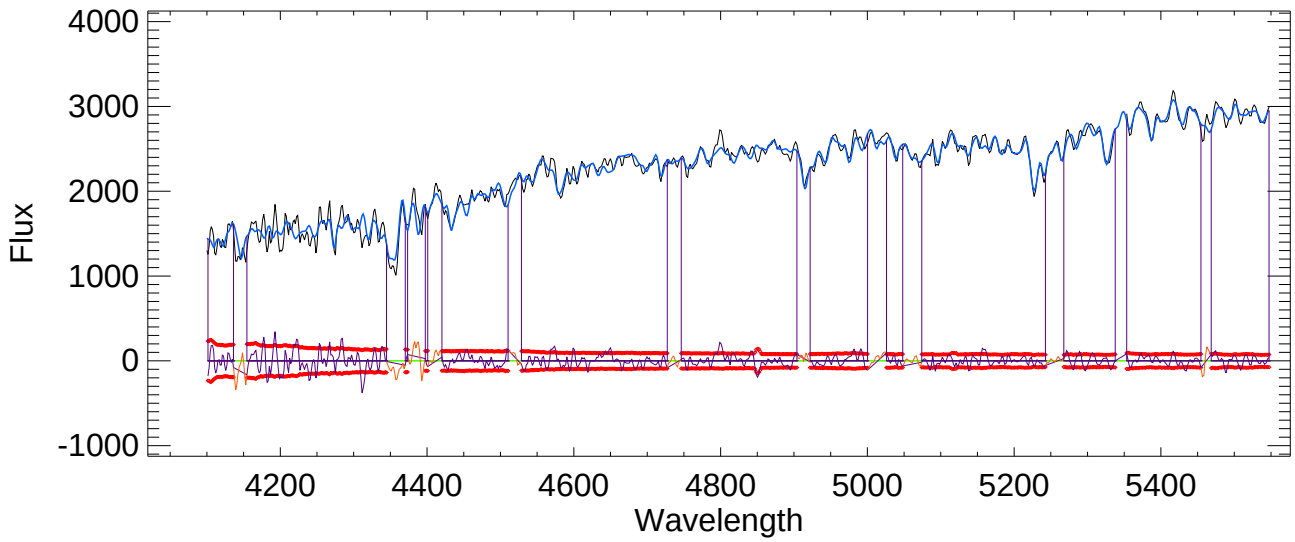

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

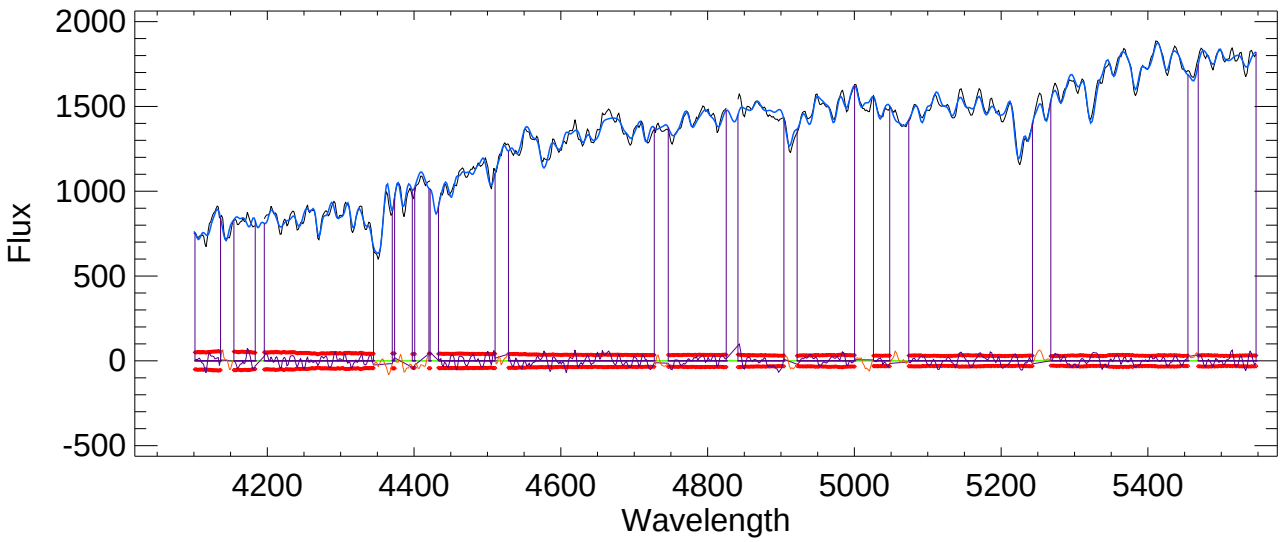

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

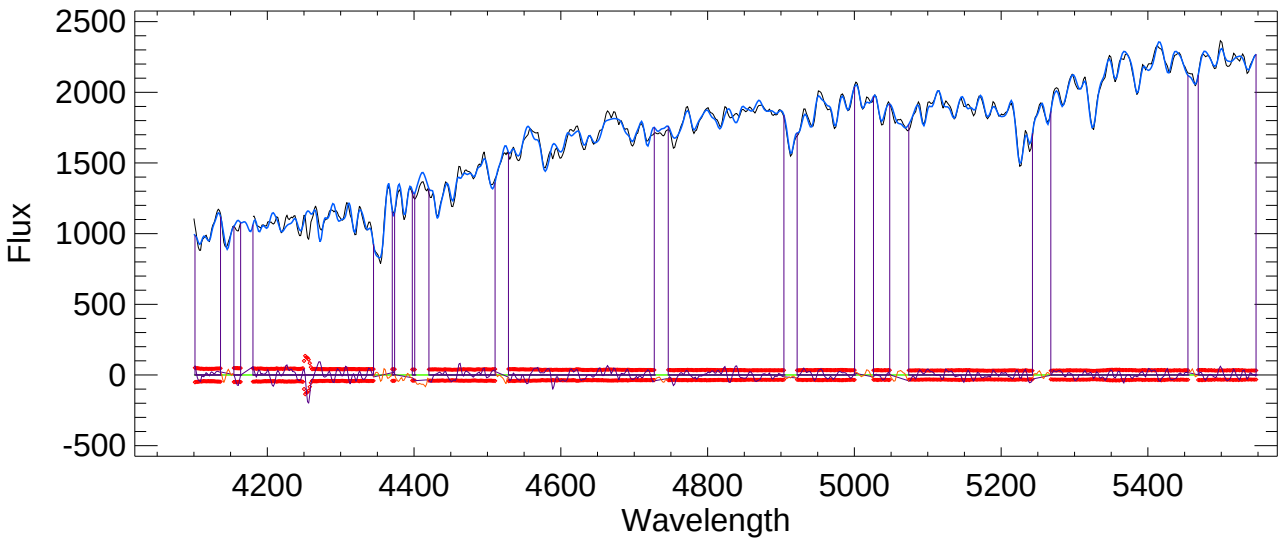

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

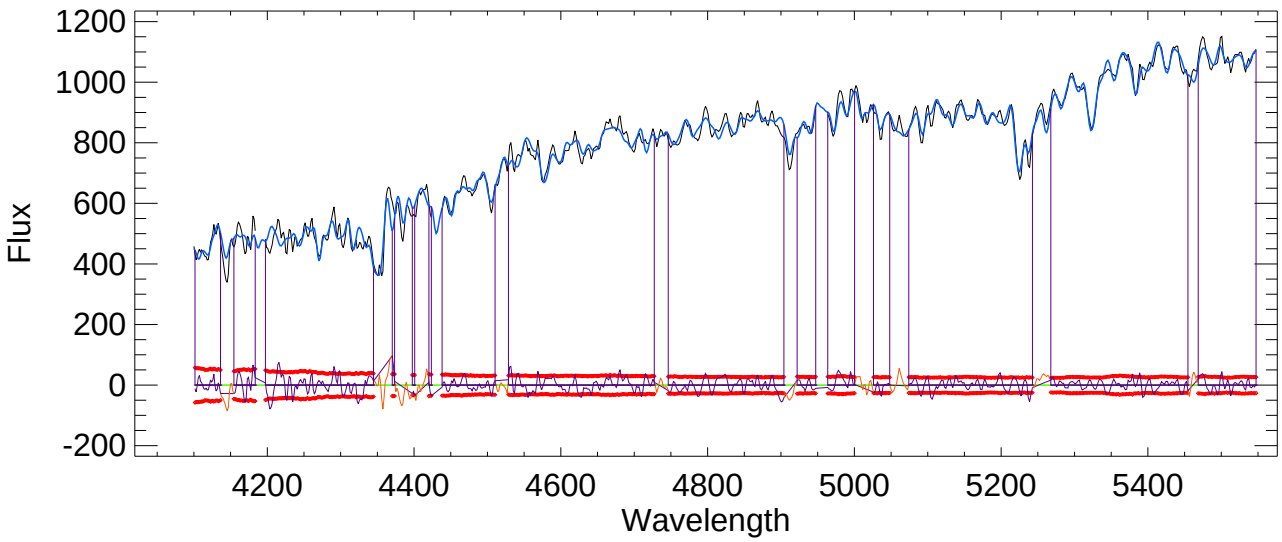

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

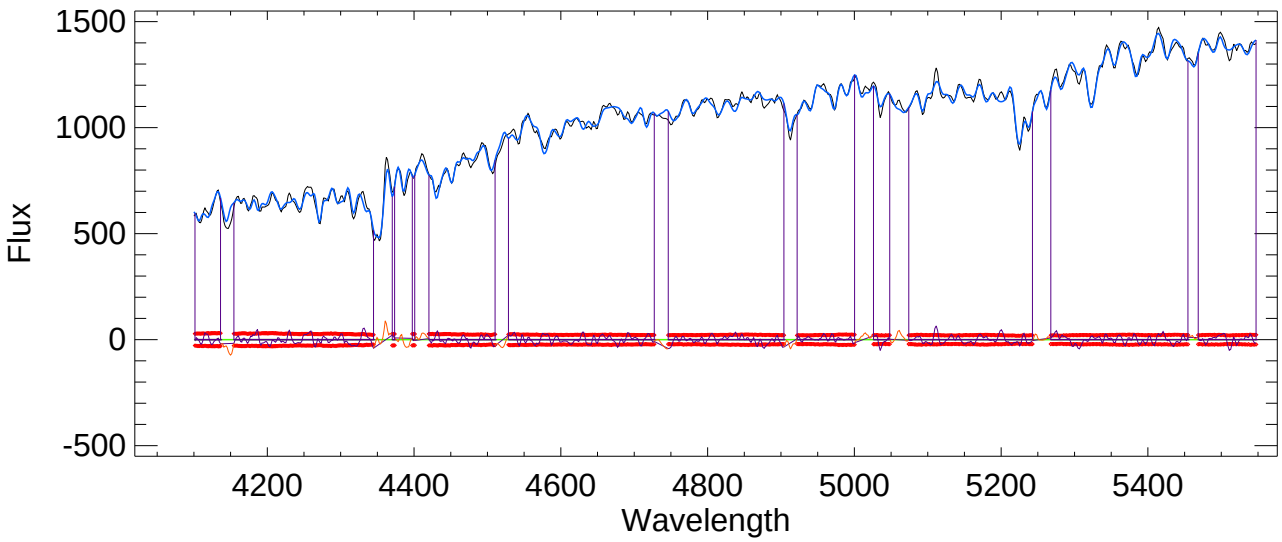

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

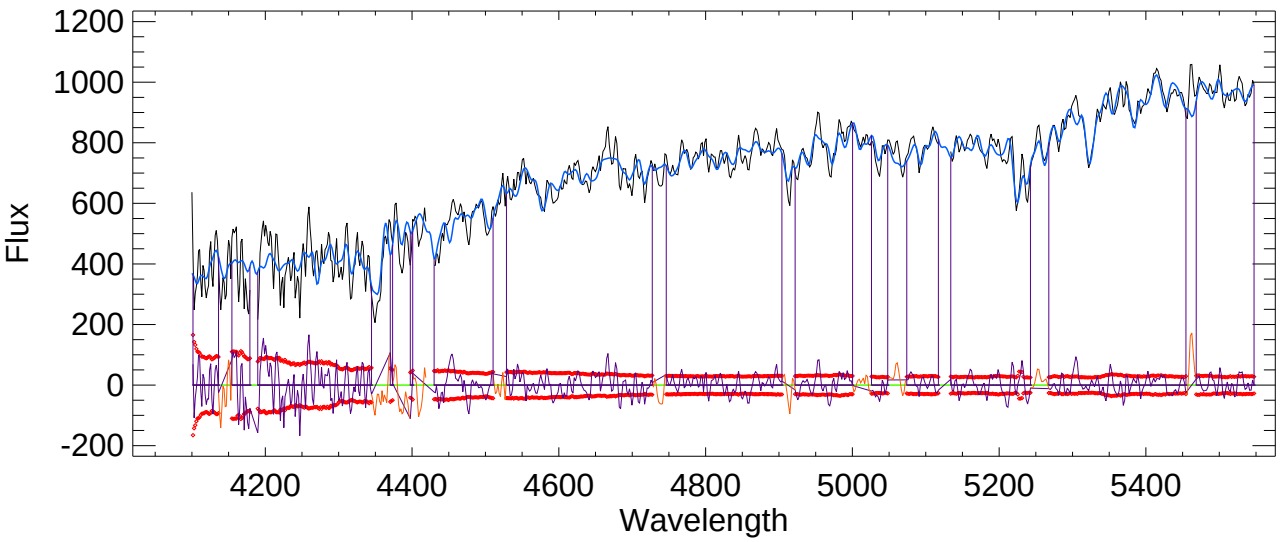

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

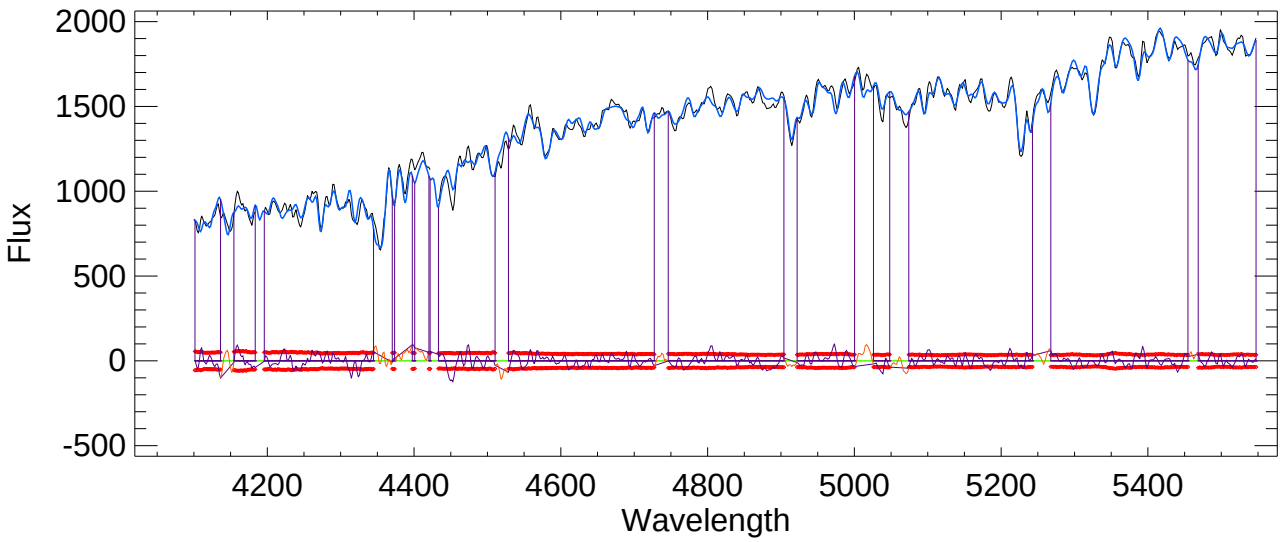

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

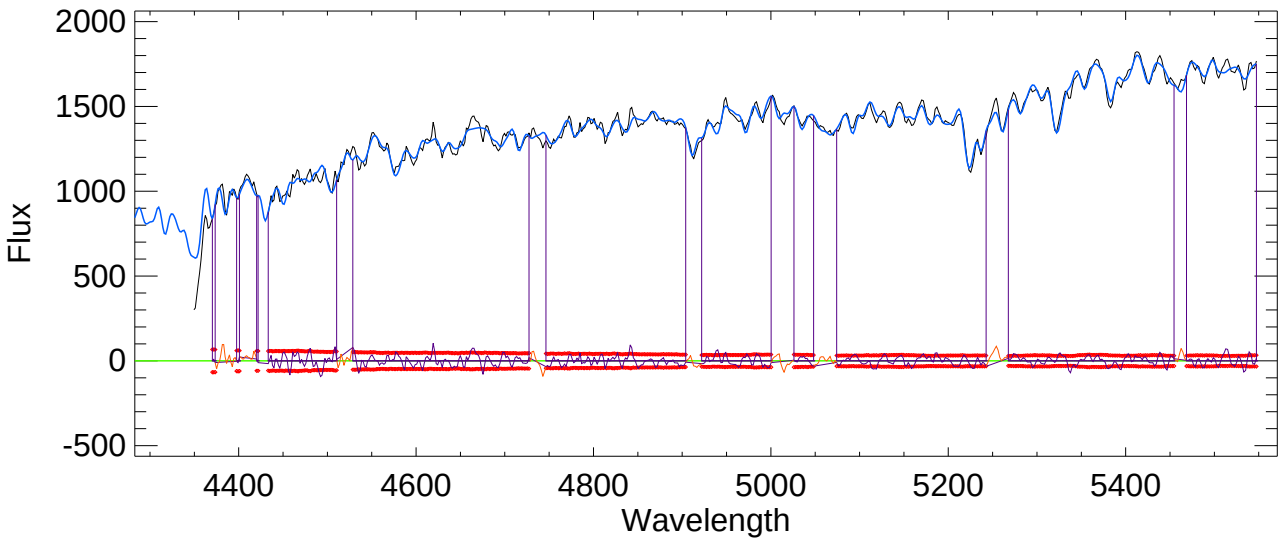

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

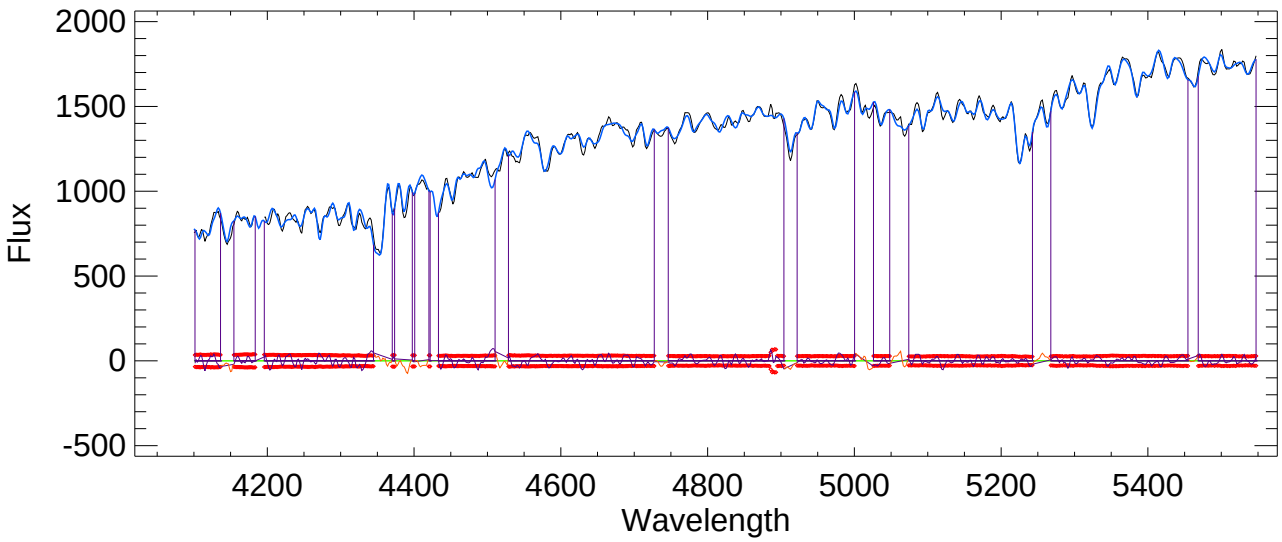

1200
1000
800
600
400
200
0
-200
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

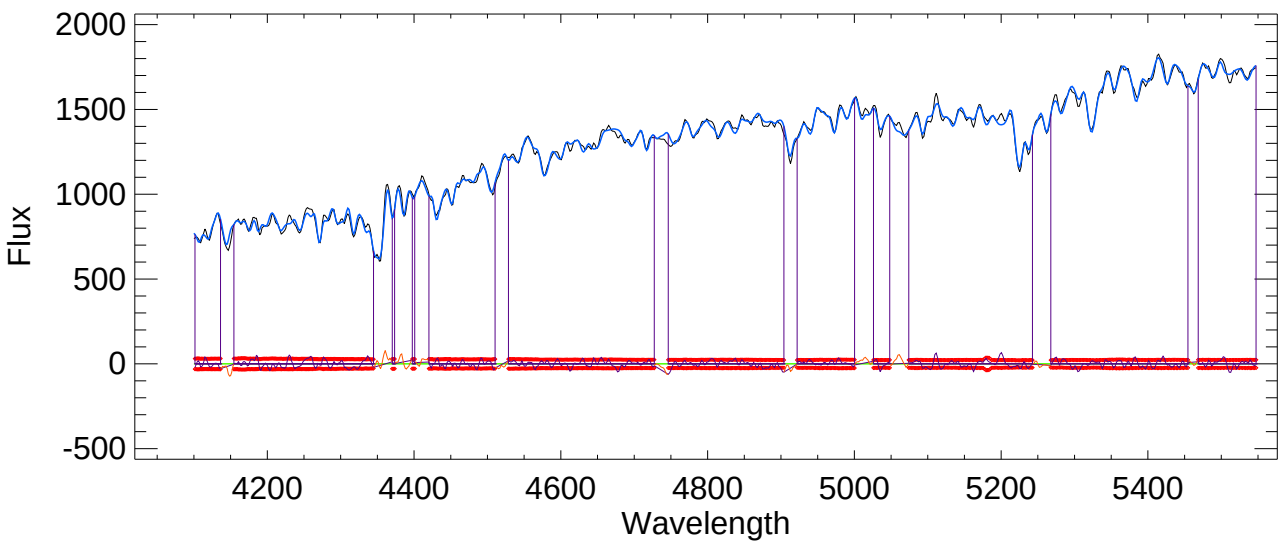

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

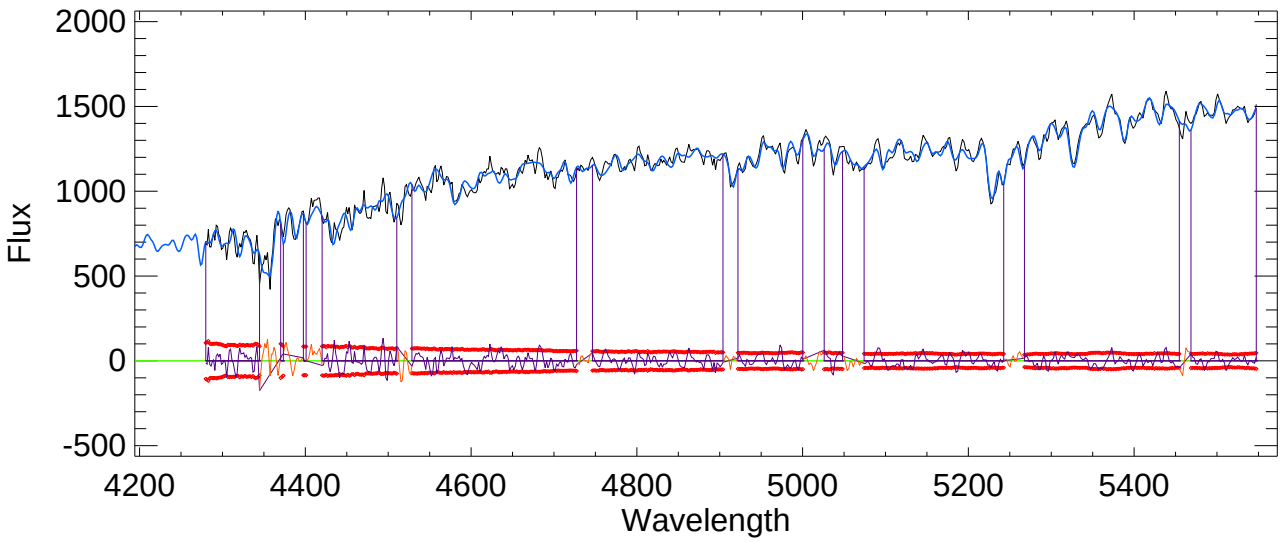

1200
1000
800
600
400
200
0
-200
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

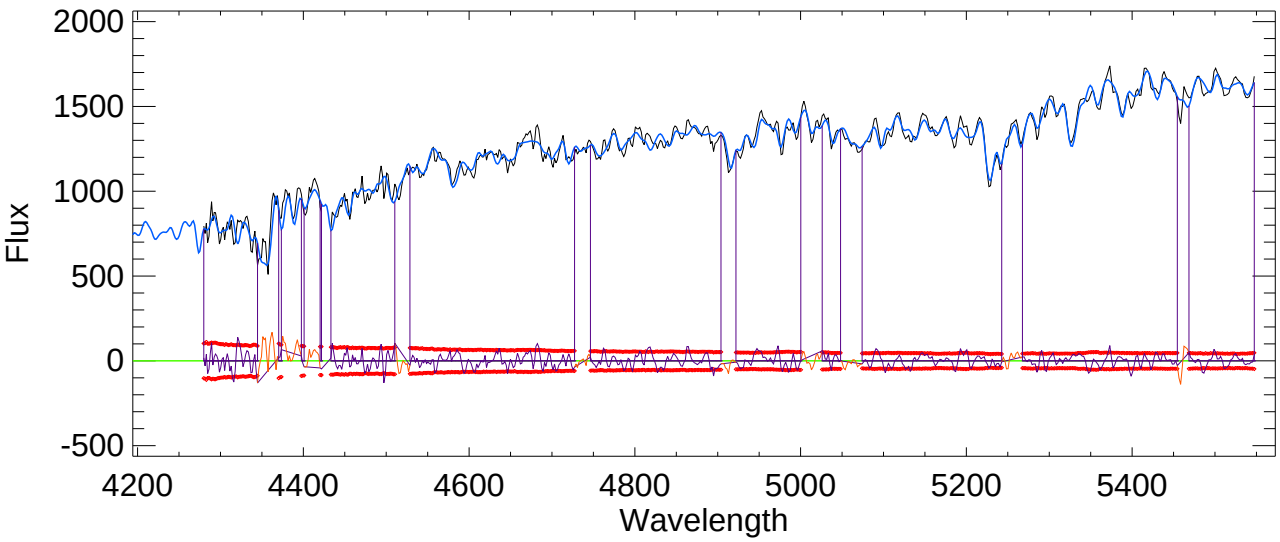

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

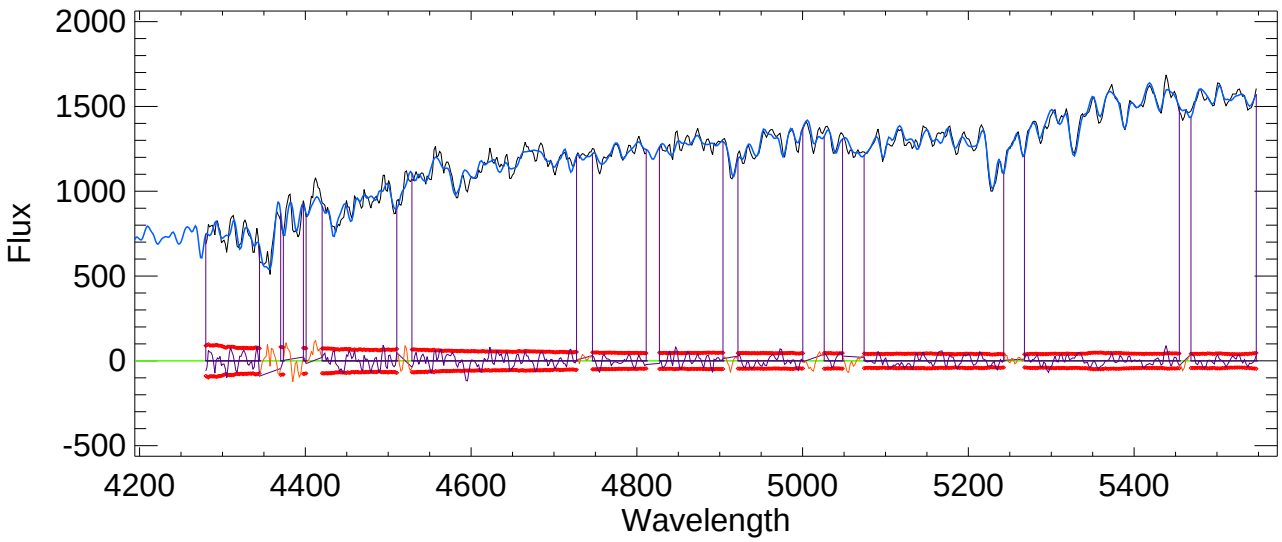

2000
1500
1000
500
0
-500
Flux
4400
4600
4800
5000
5200
5400
Wavelength

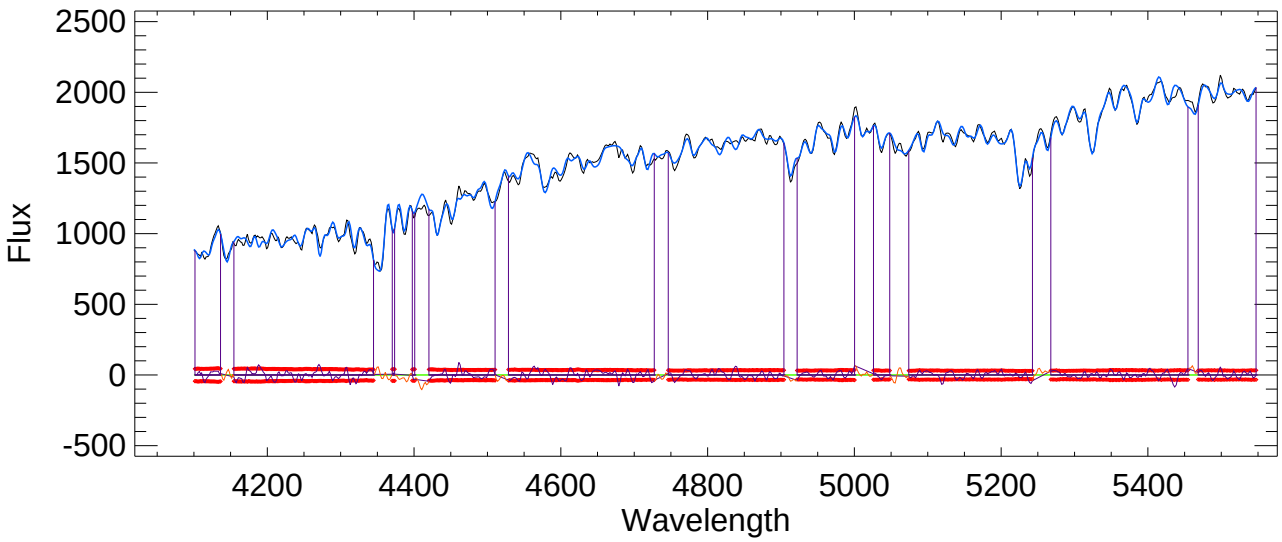

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

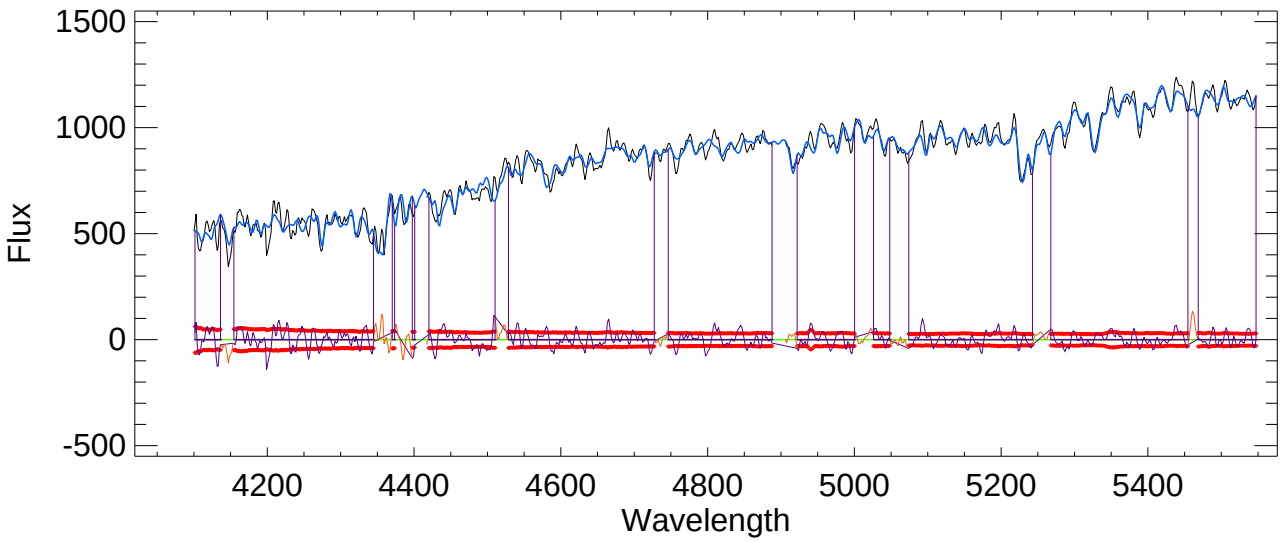

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

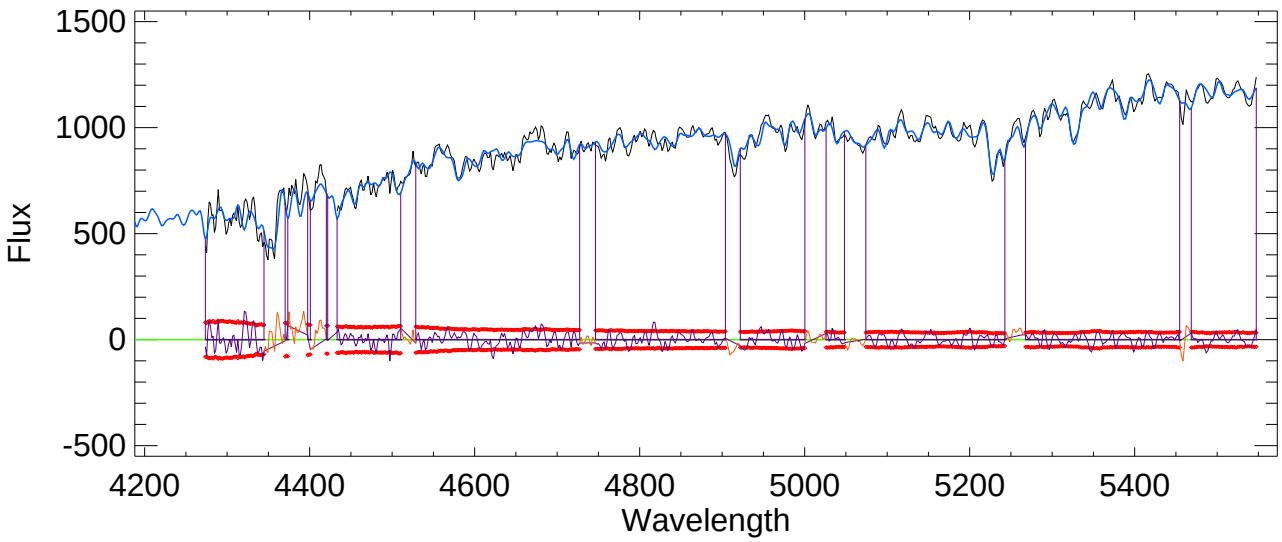

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

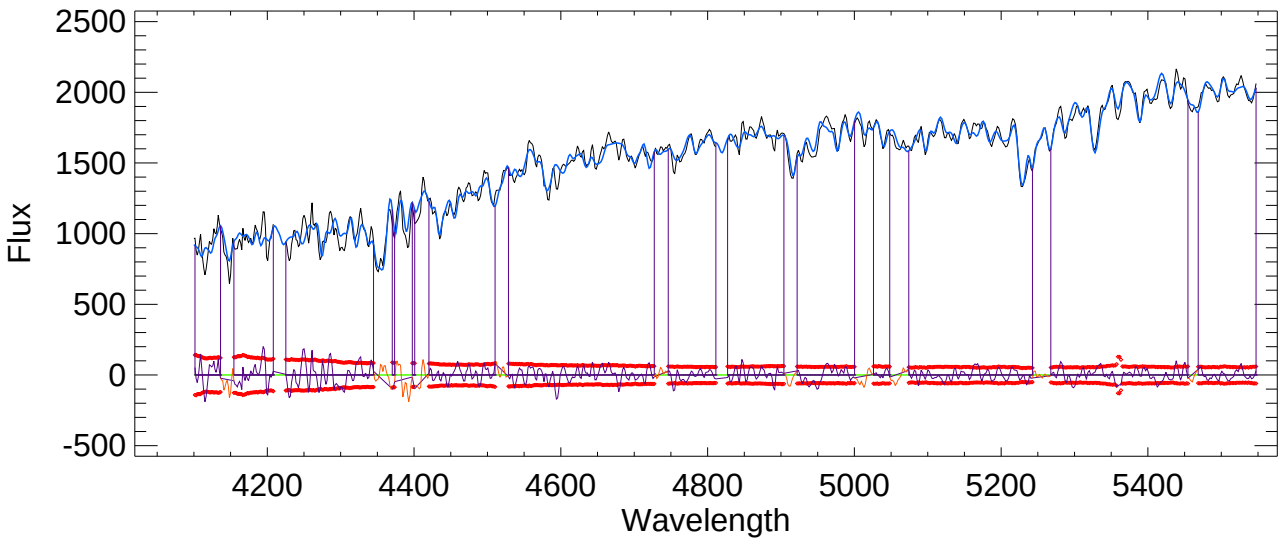

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

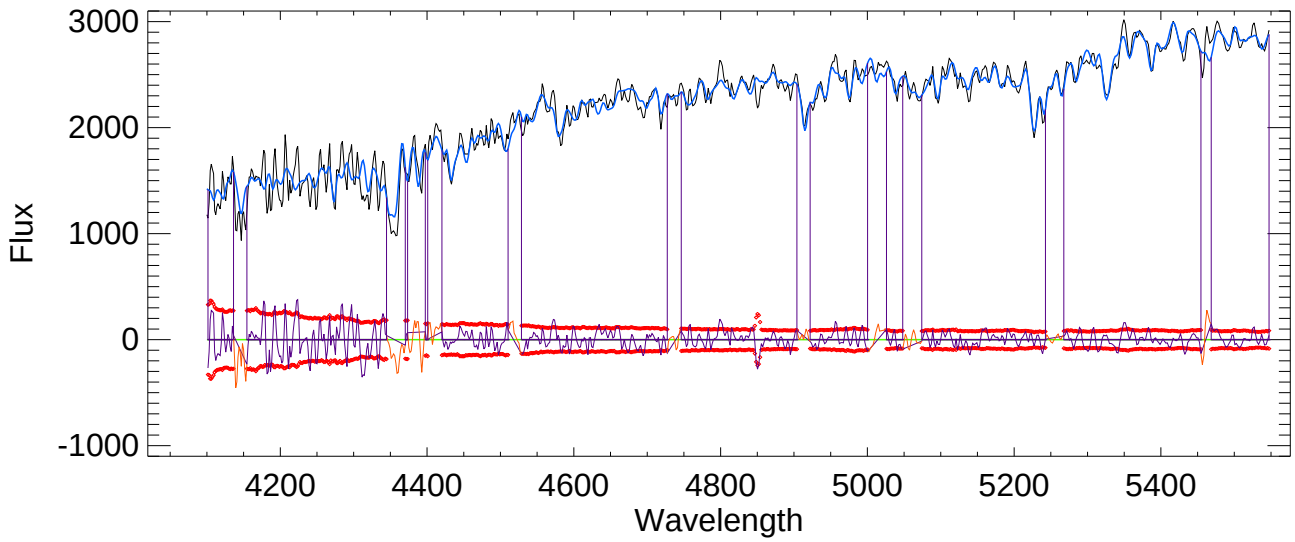

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

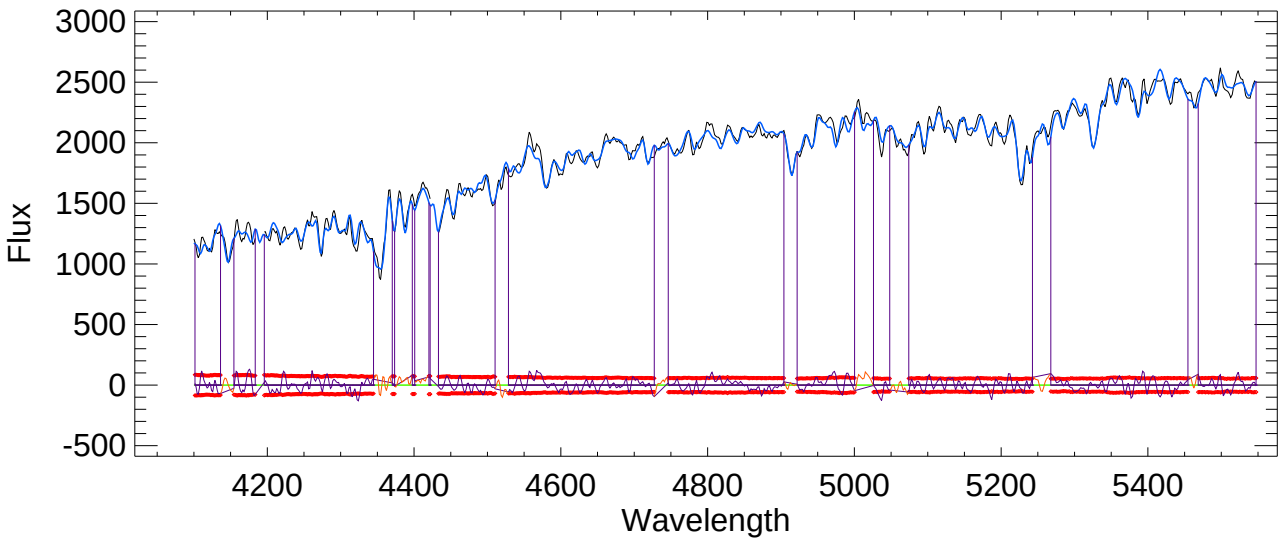

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

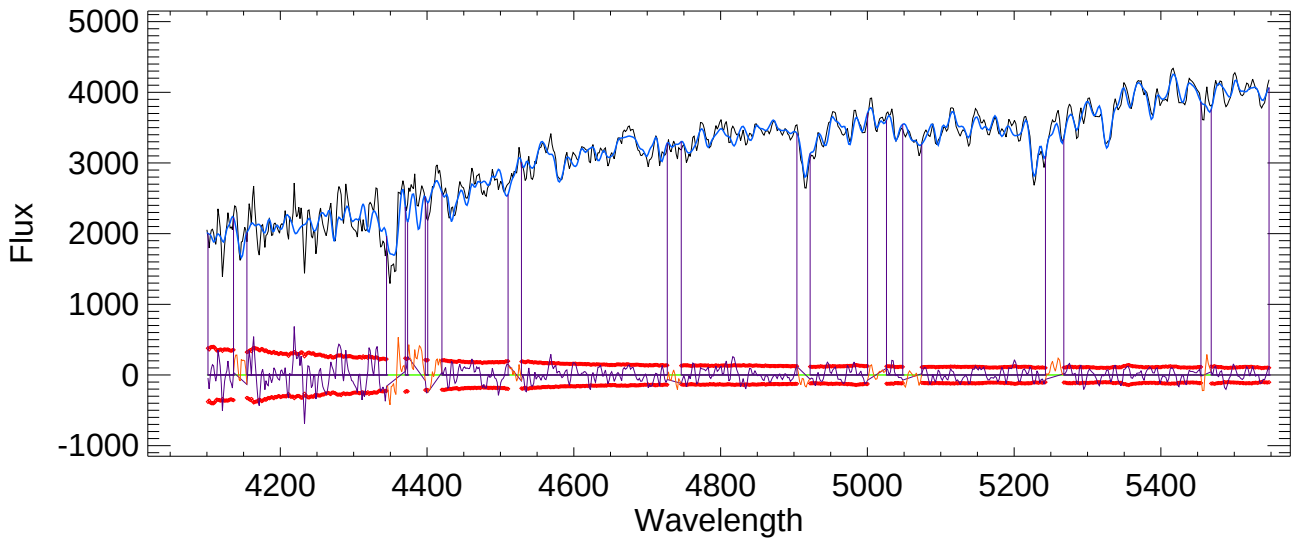

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

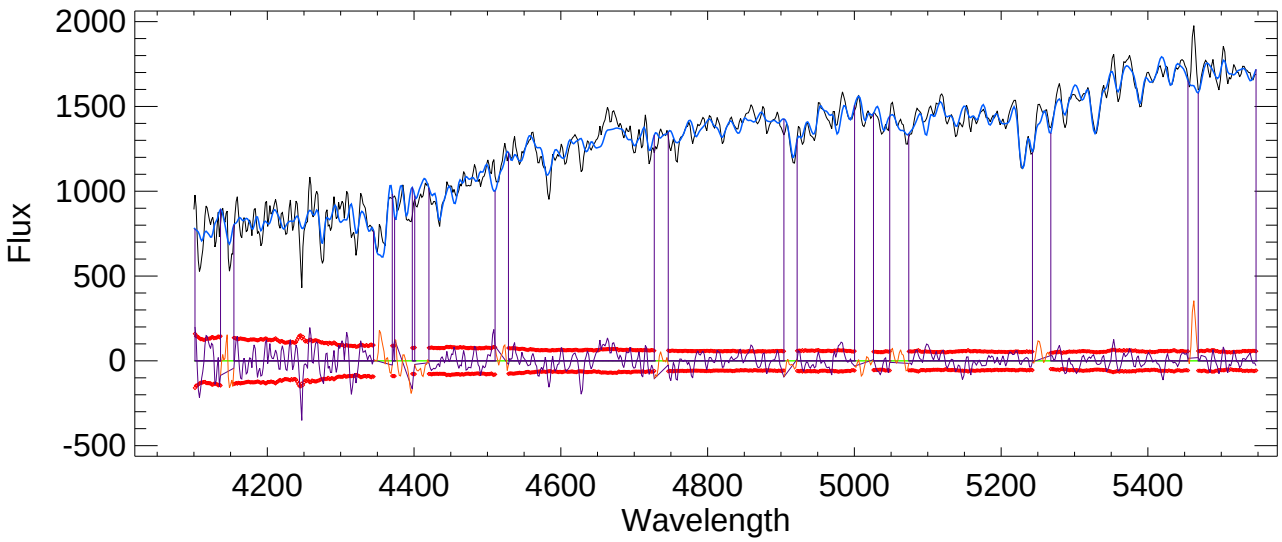

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

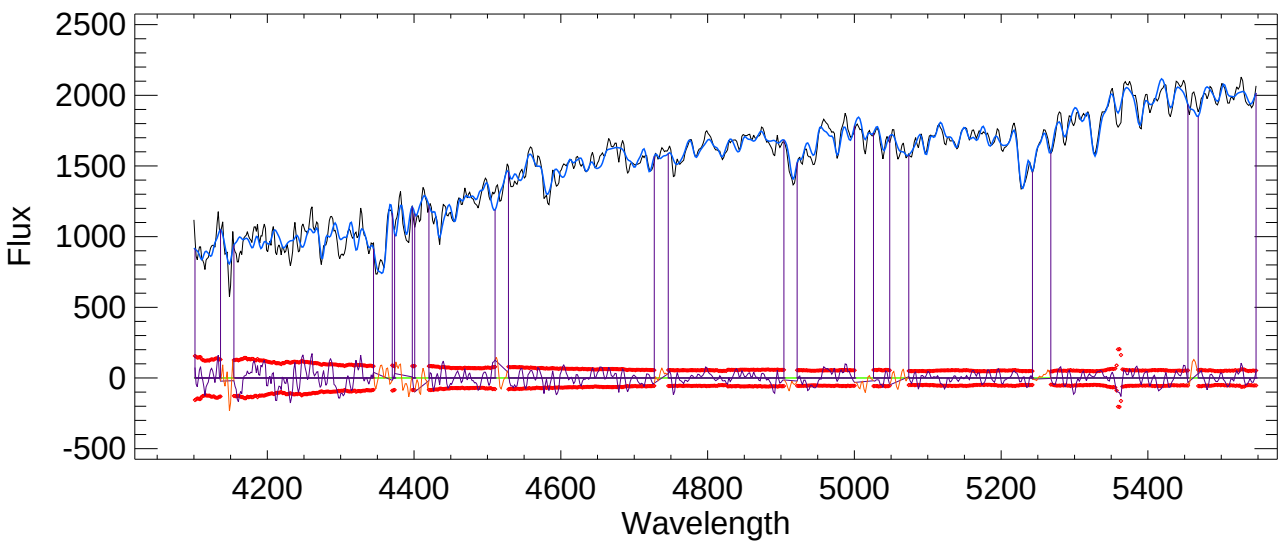

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

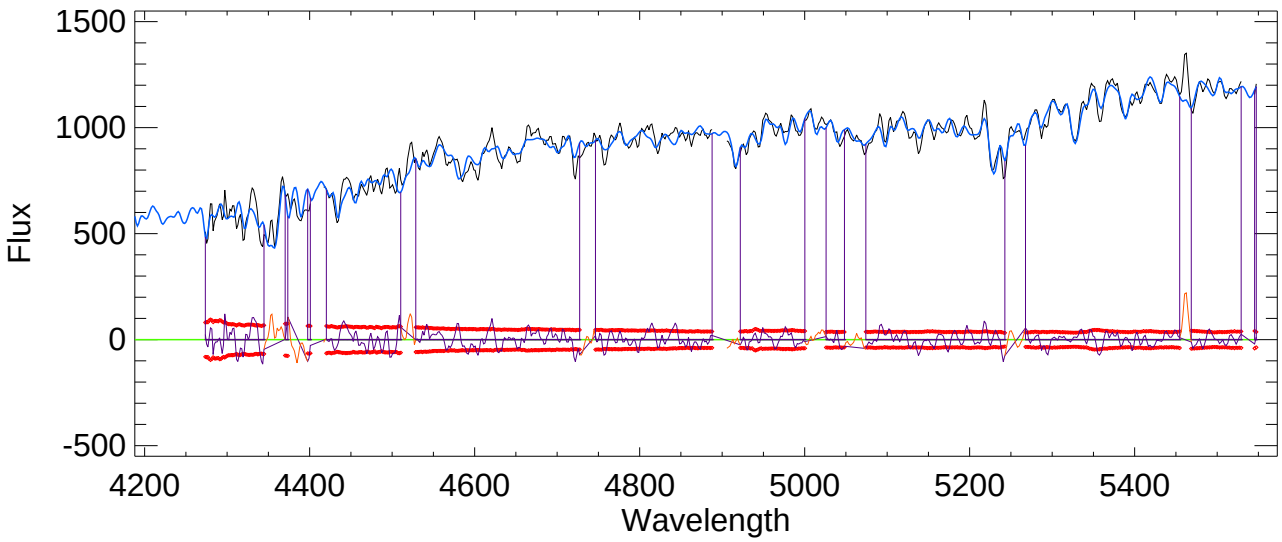

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

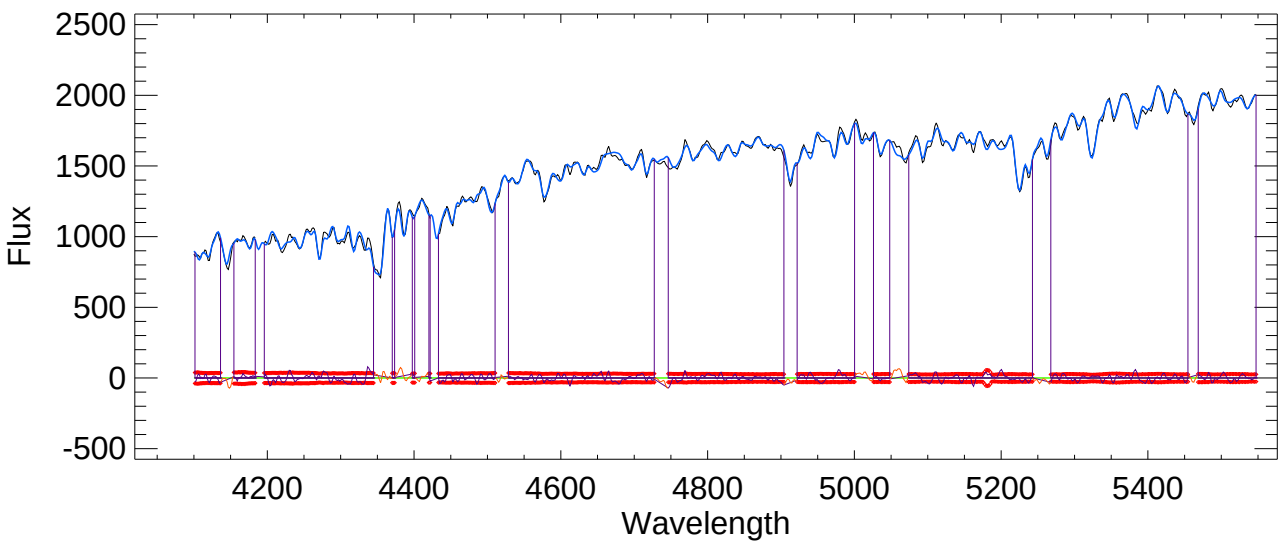

3000
2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

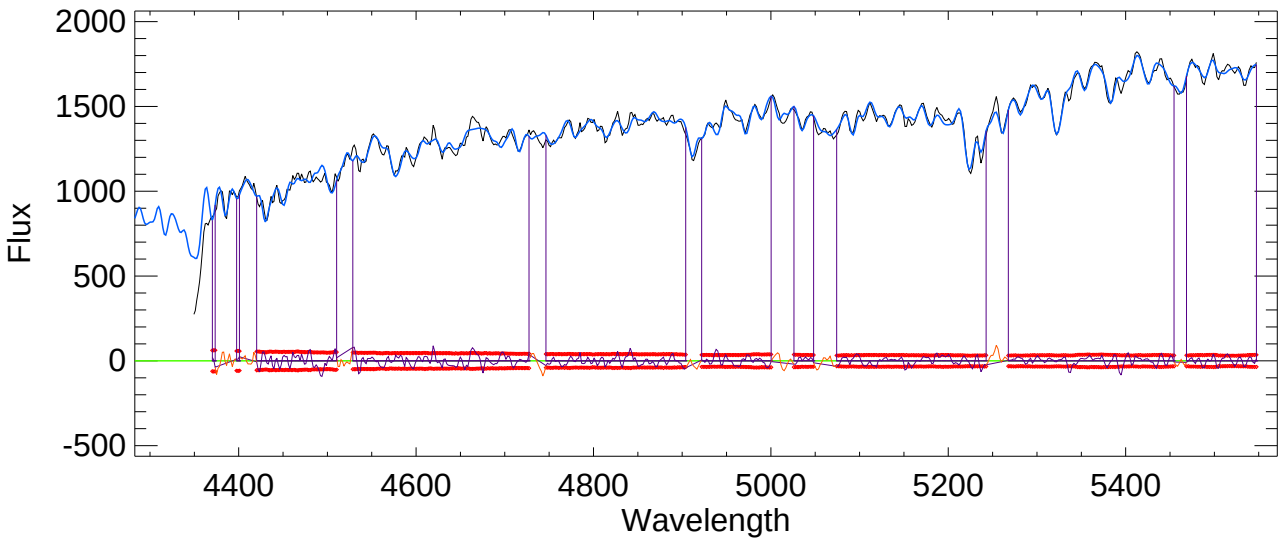

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

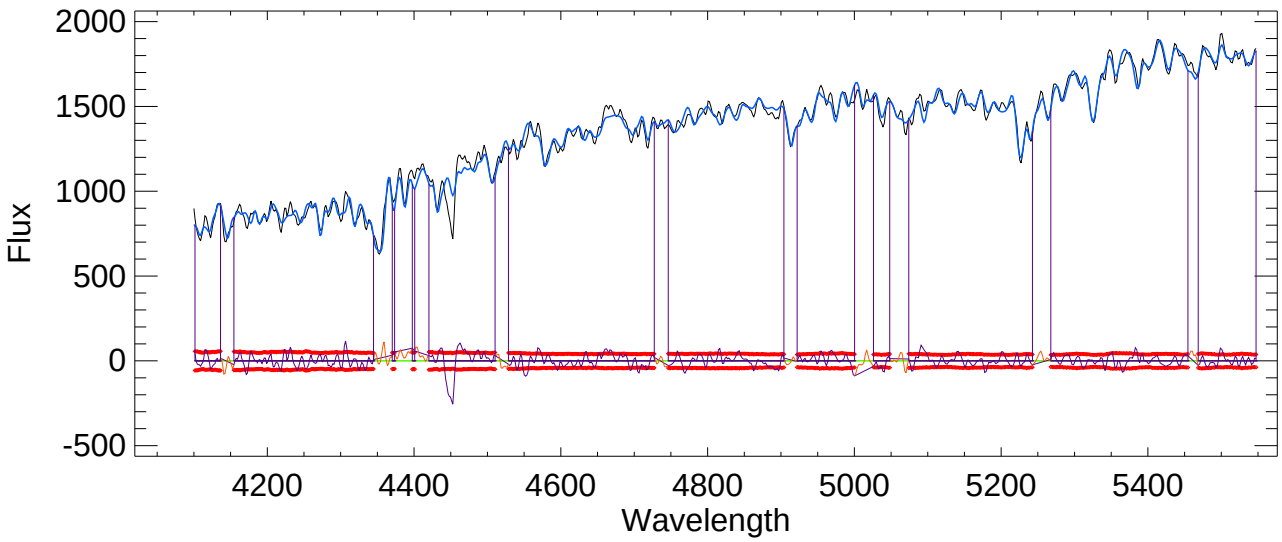

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

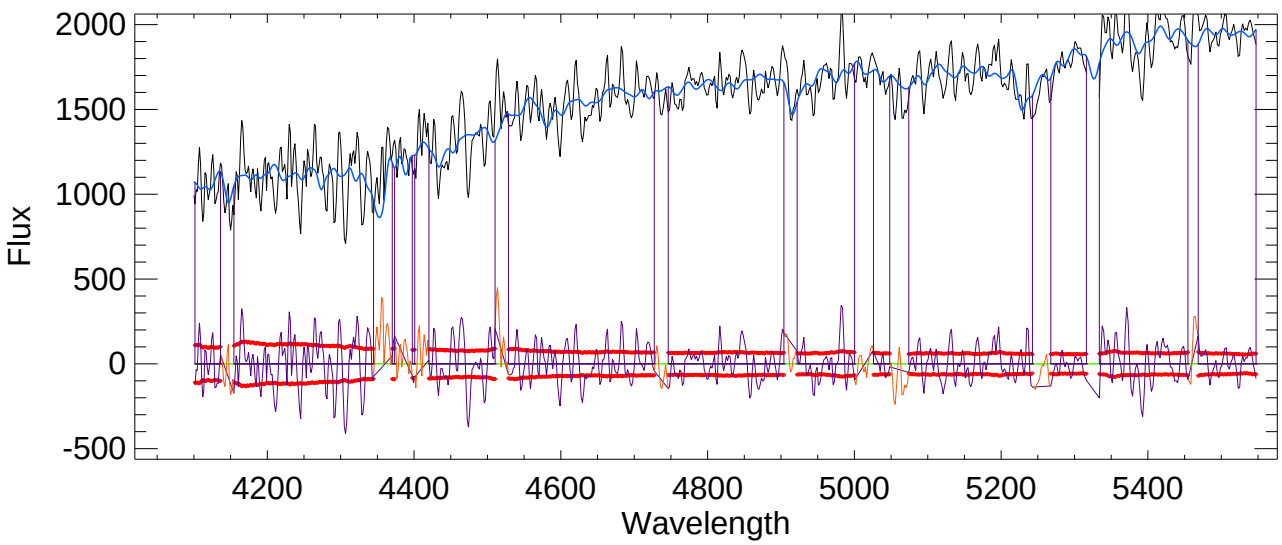

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

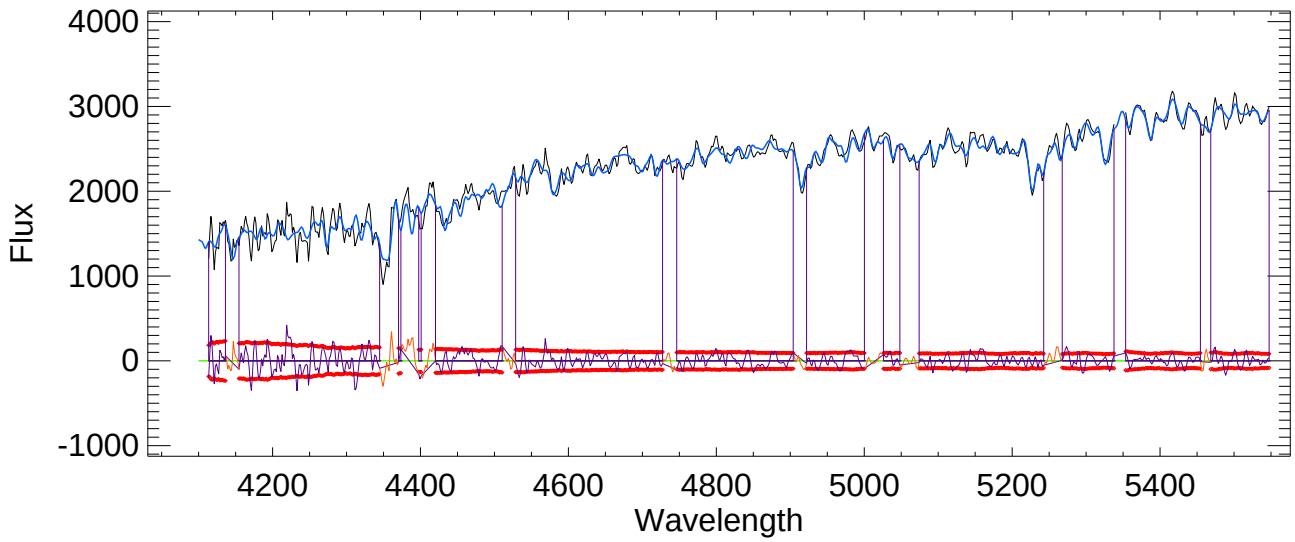

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

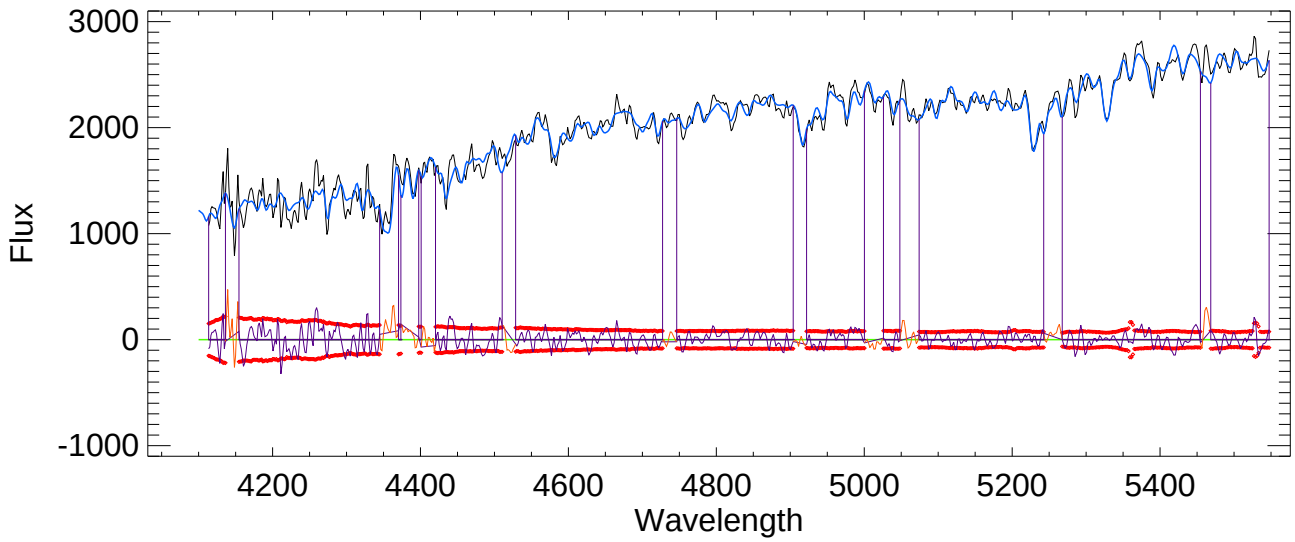

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

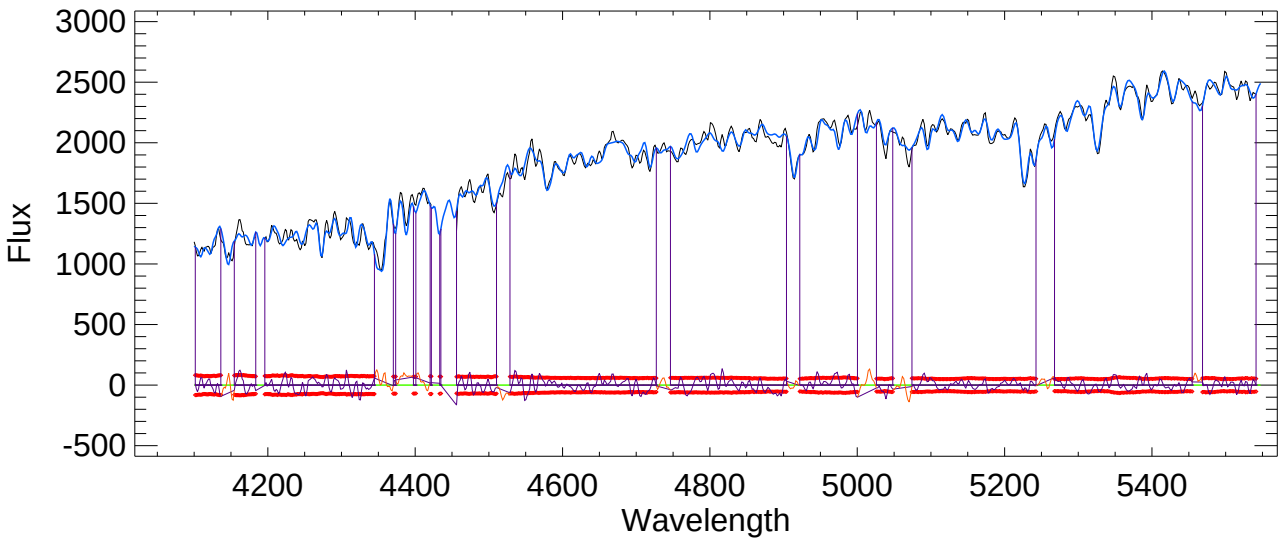

2000
1500
1000
500
0
-500
Flux
4400
4600
4800
5000
5200
5400
Wavelength

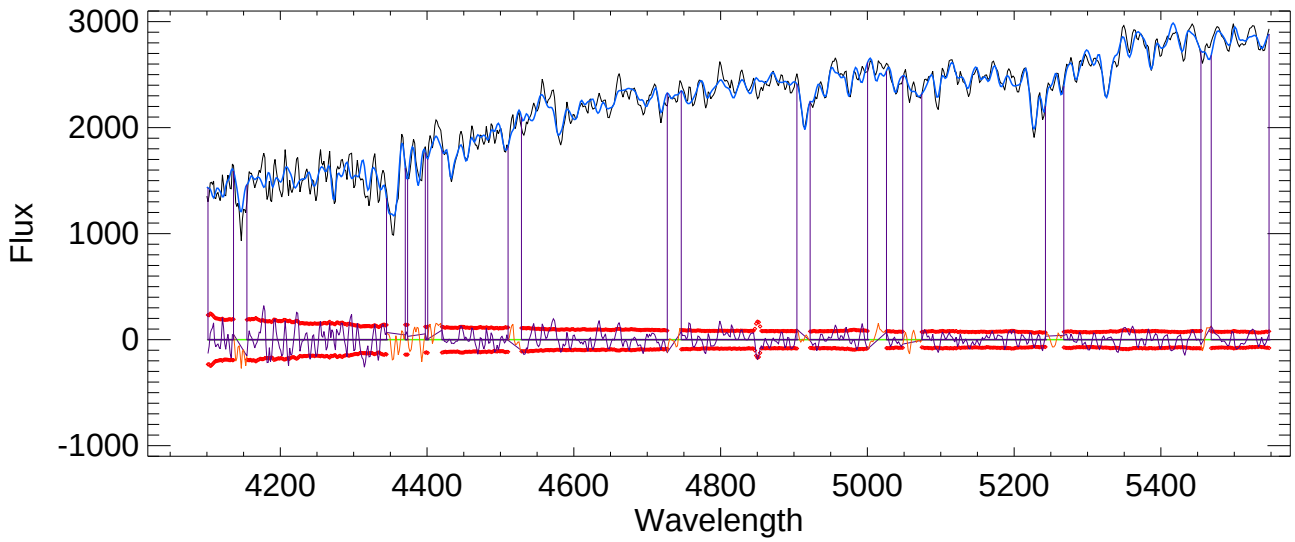

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

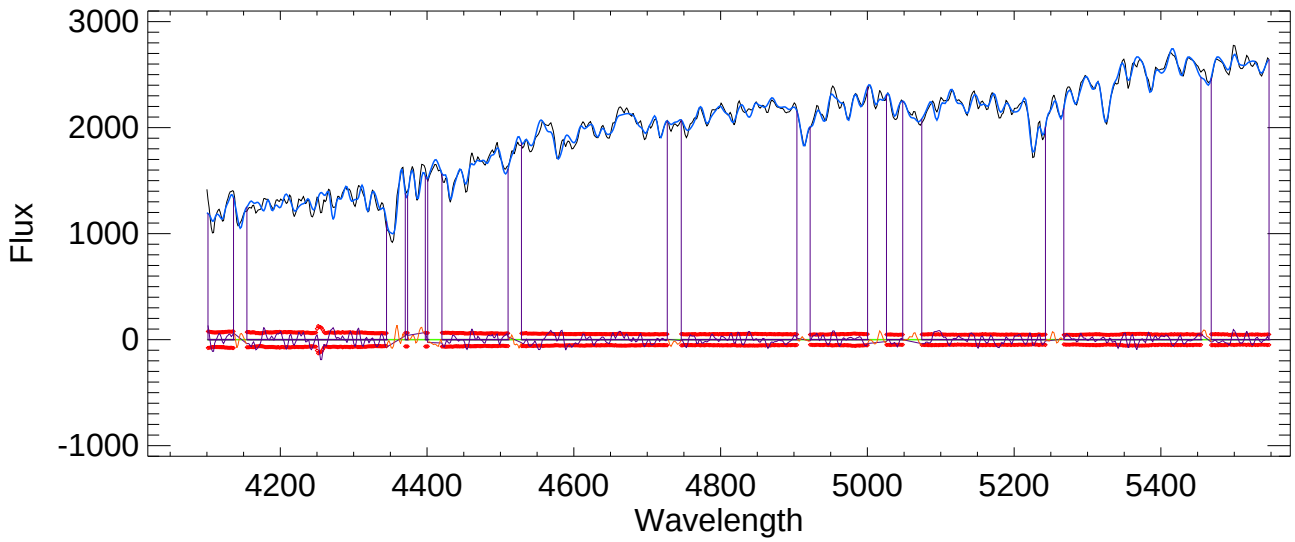

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

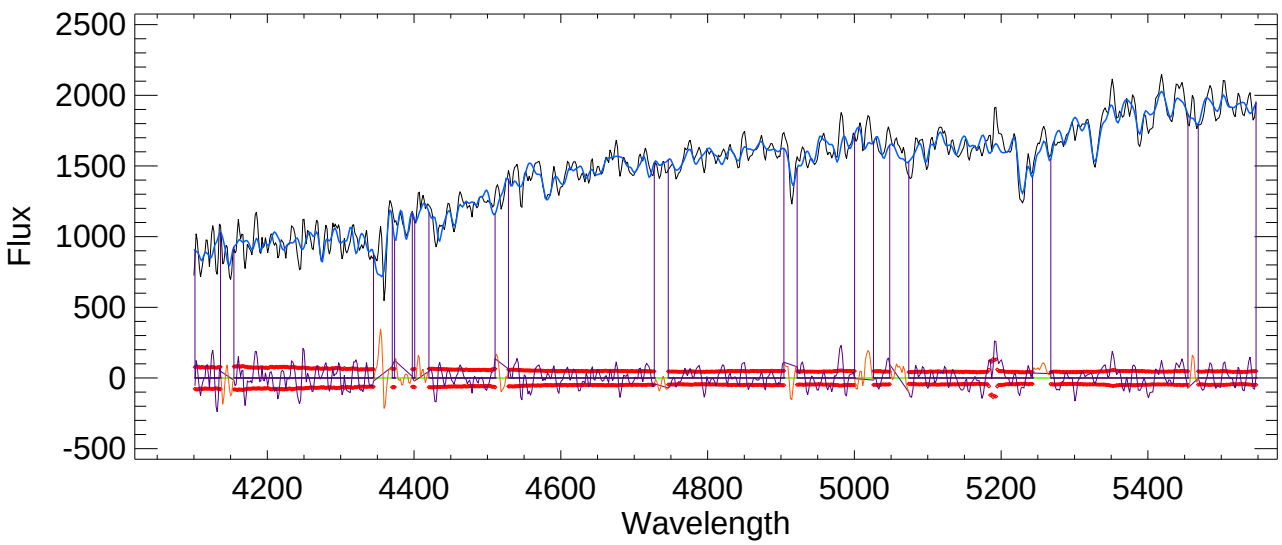

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

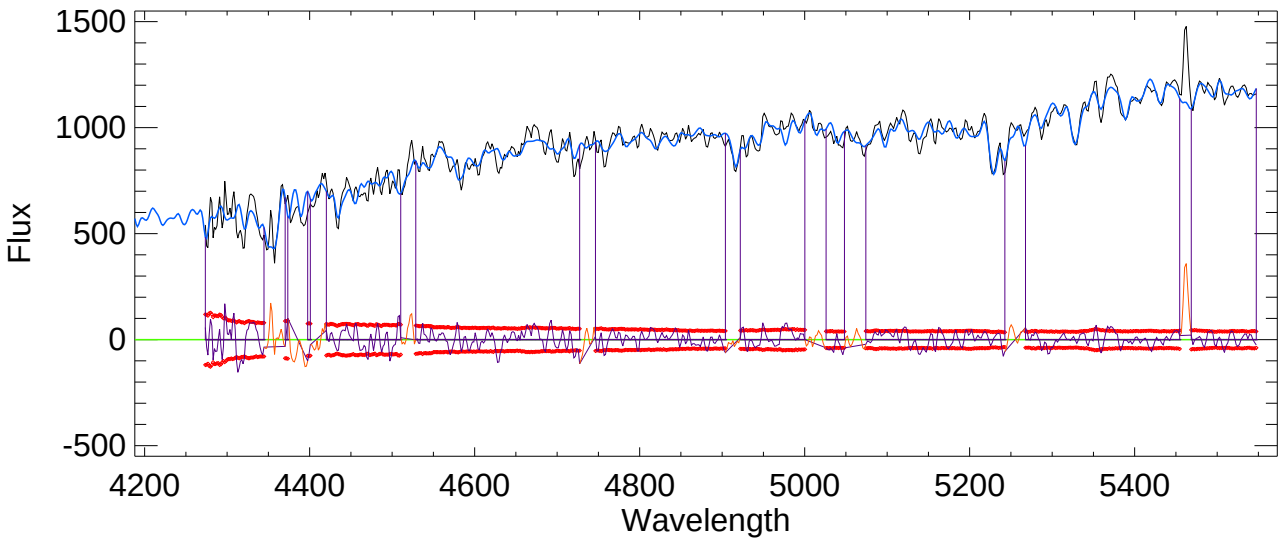

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

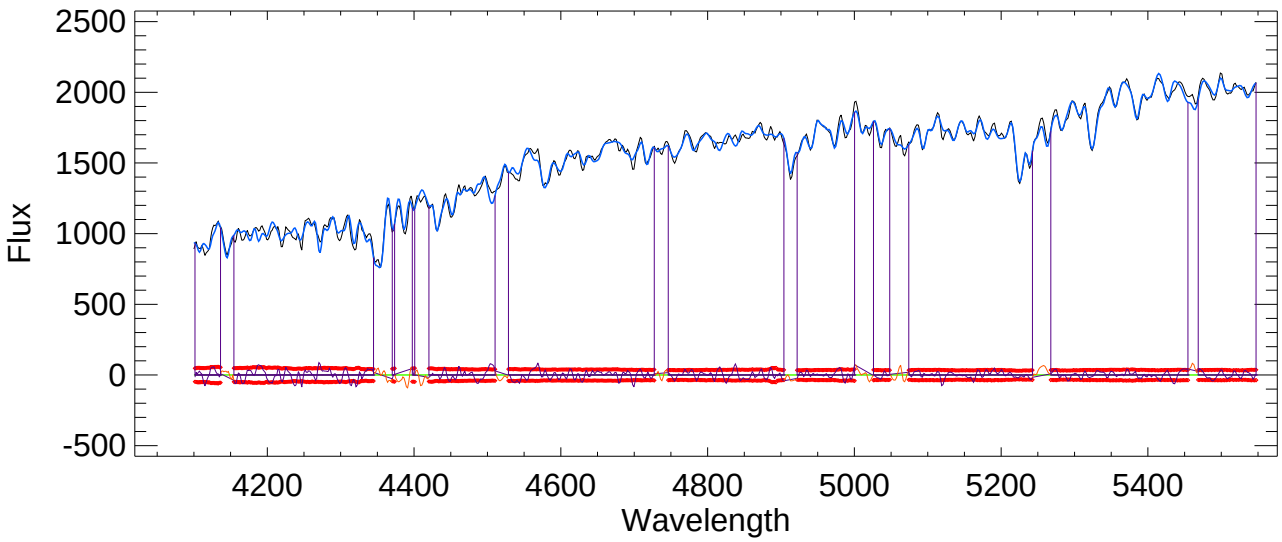

3000
2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

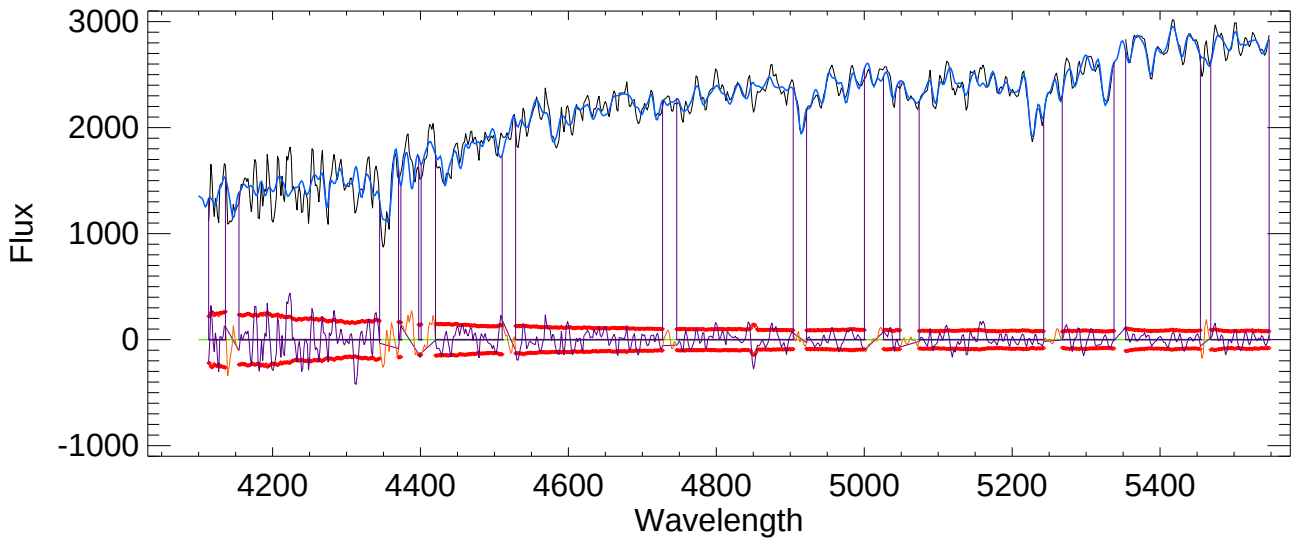

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

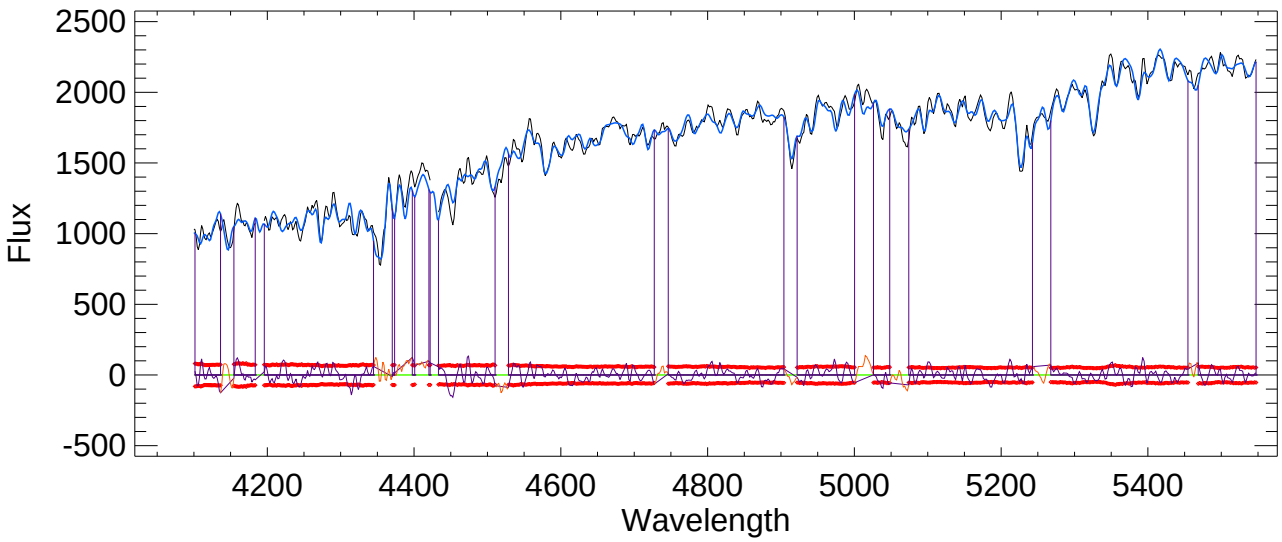

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

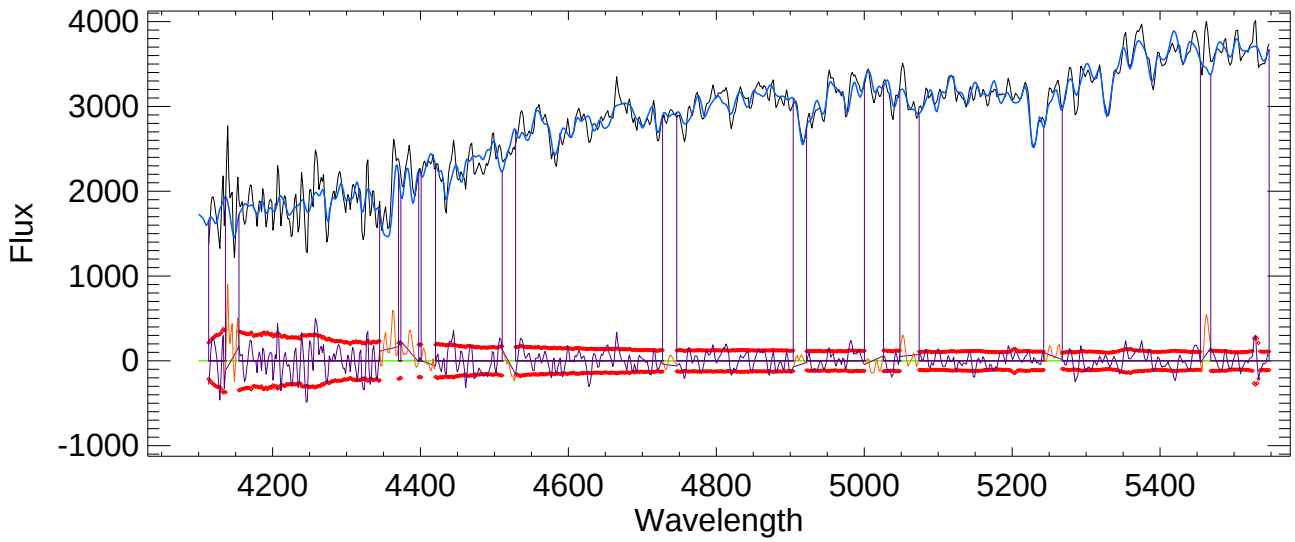

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

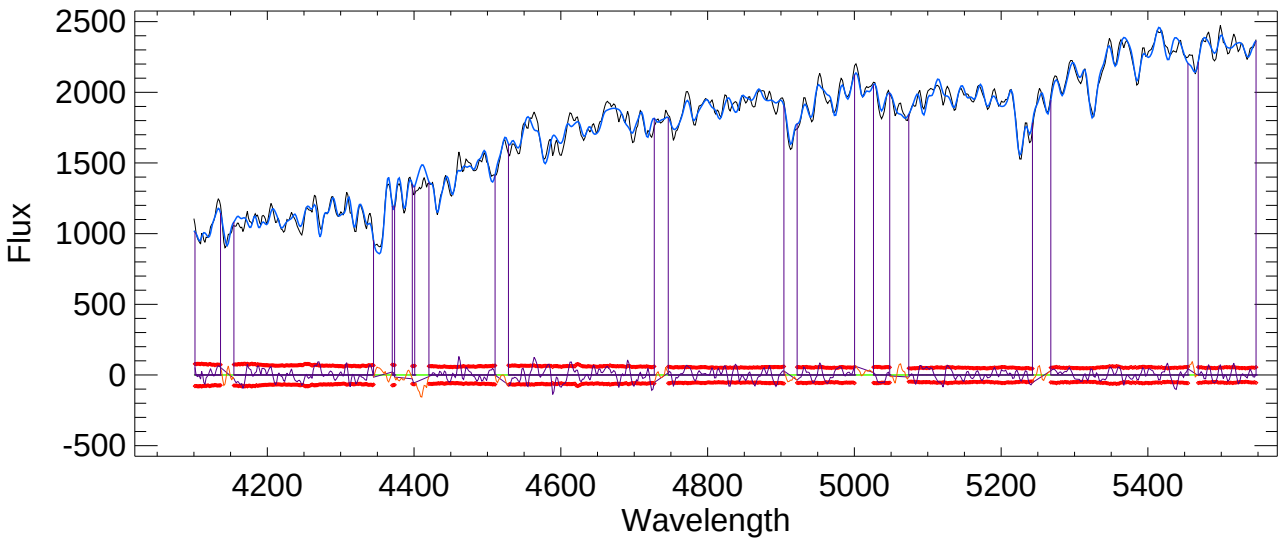

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

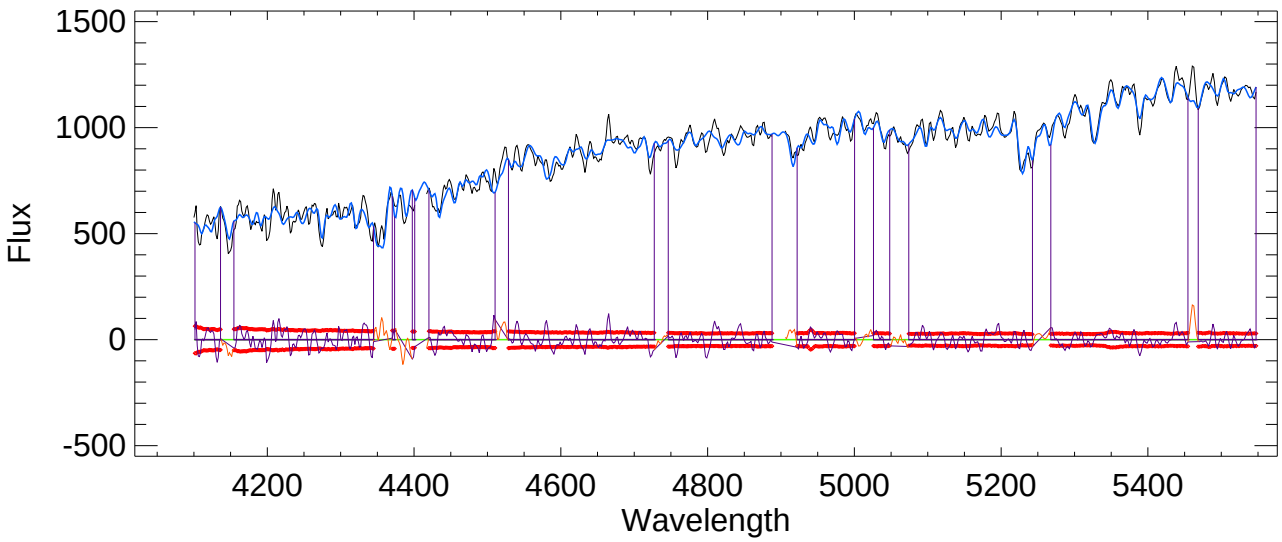

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

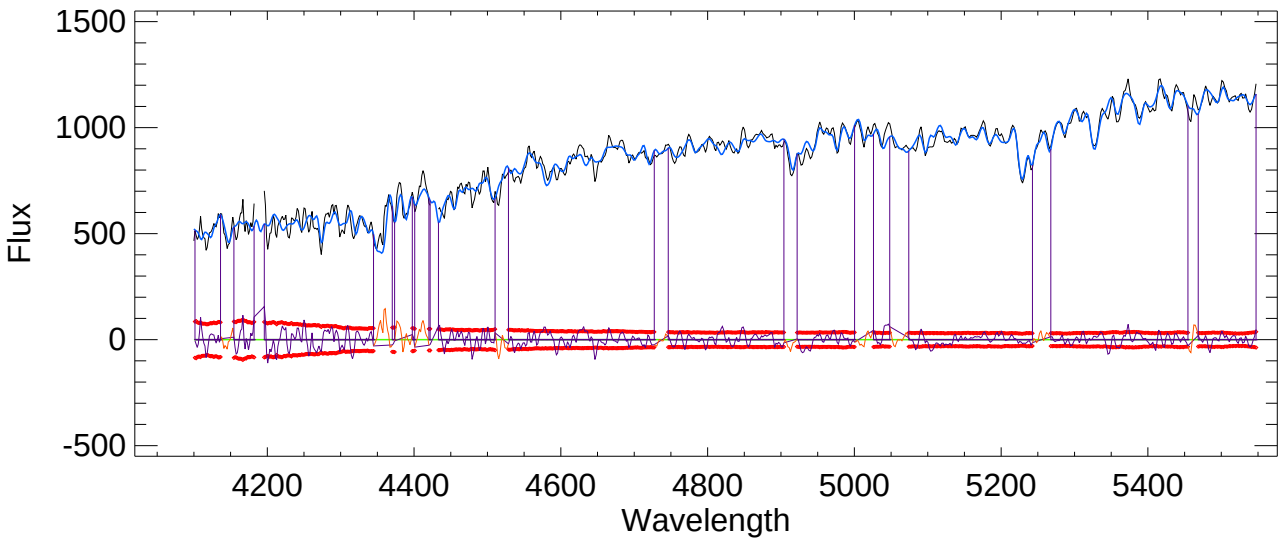

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

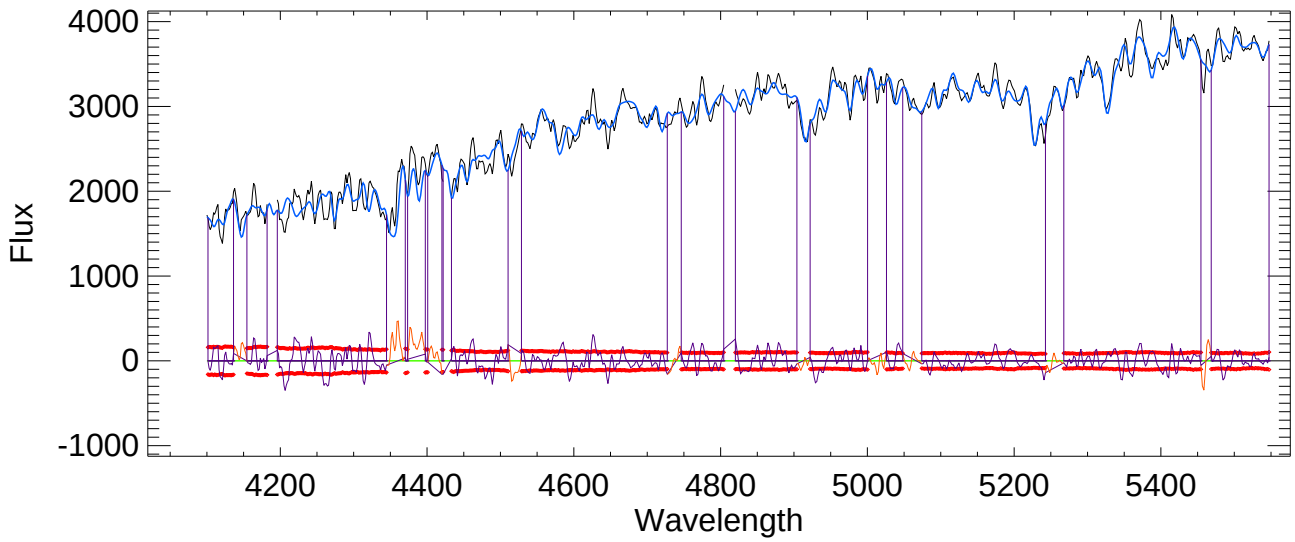

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

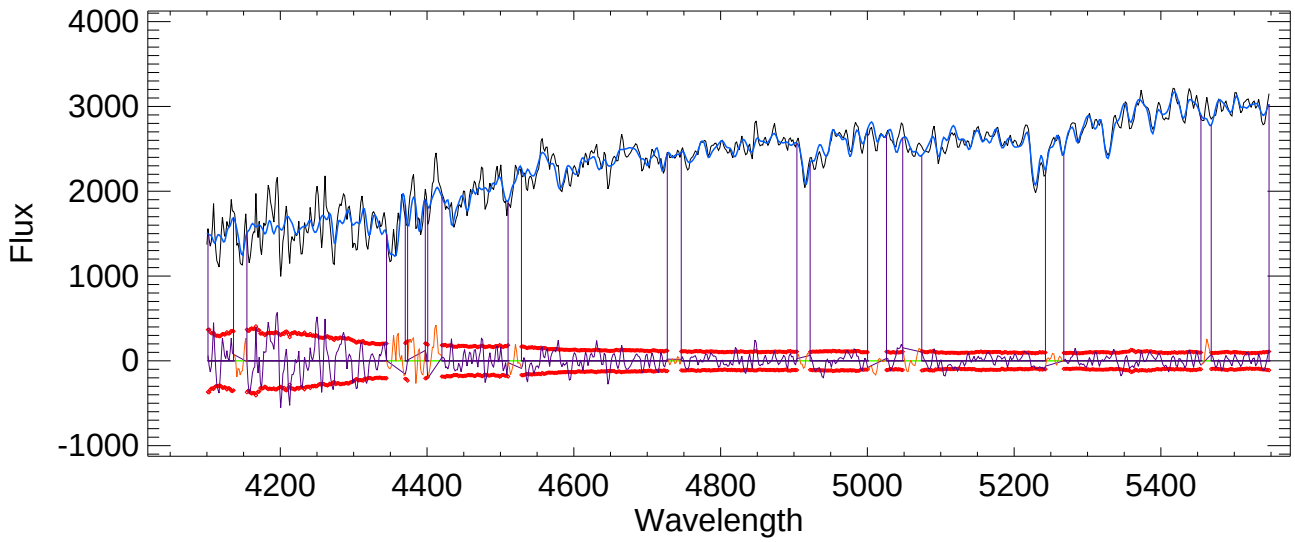

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

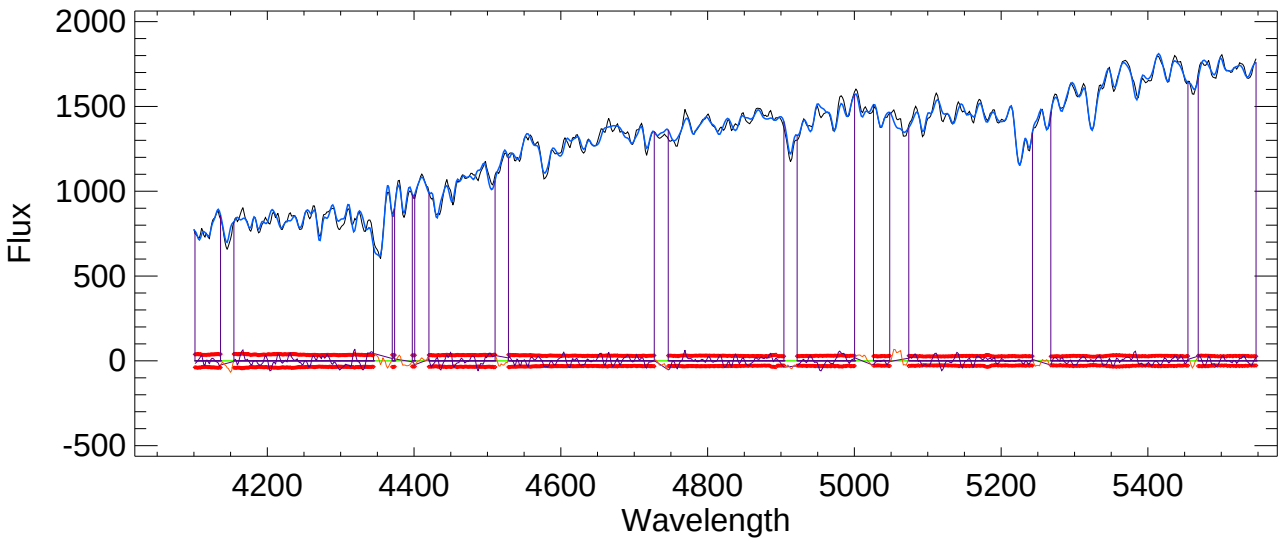

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

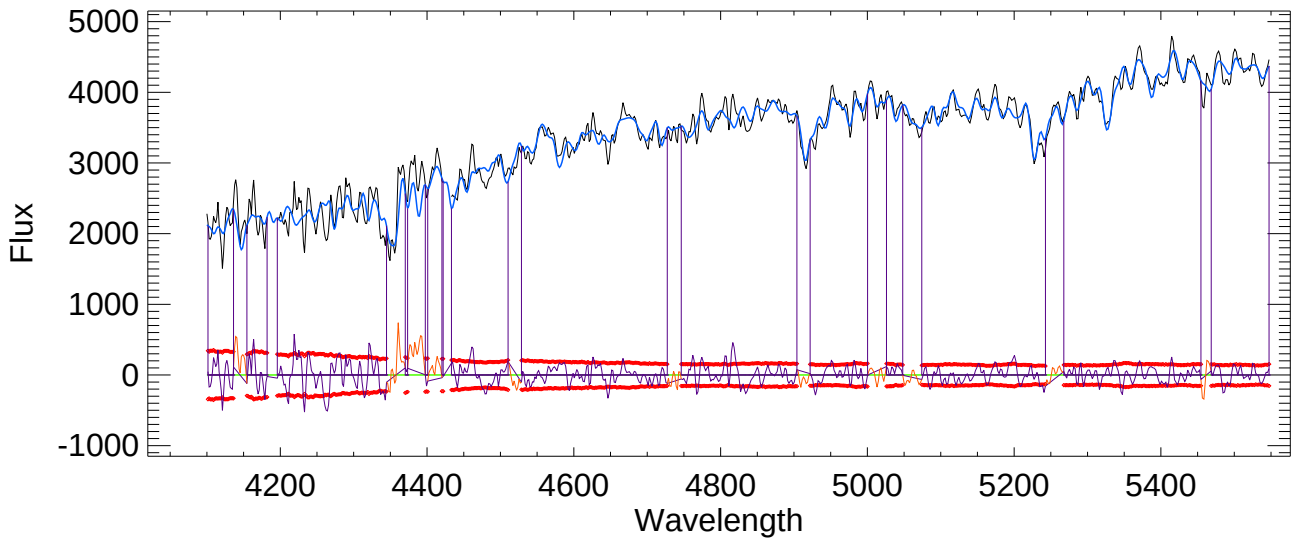

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

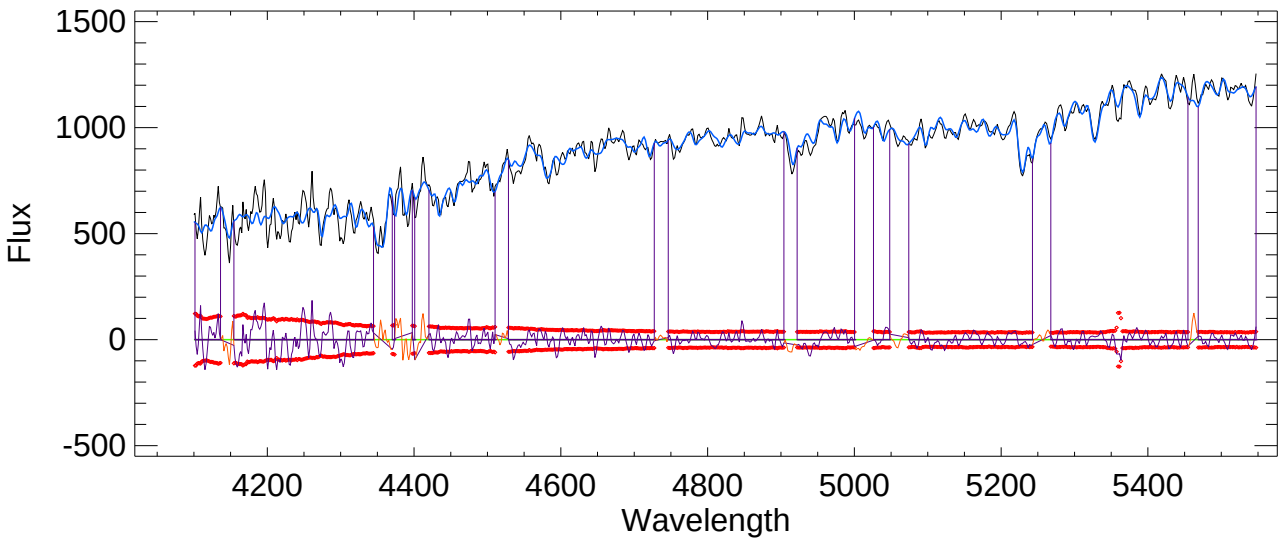

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

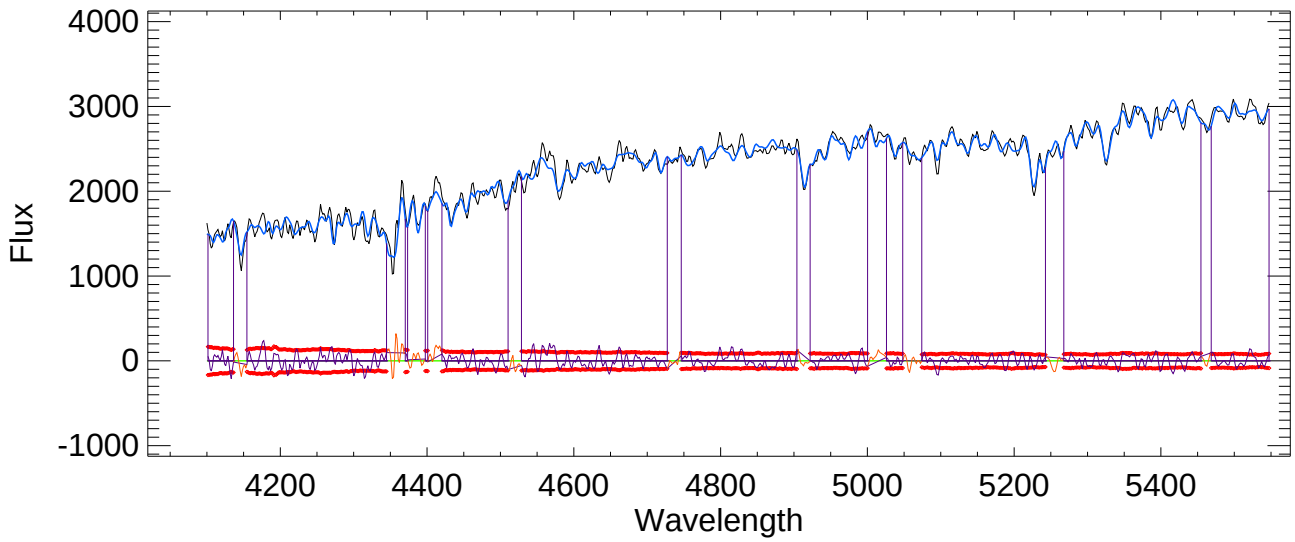

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

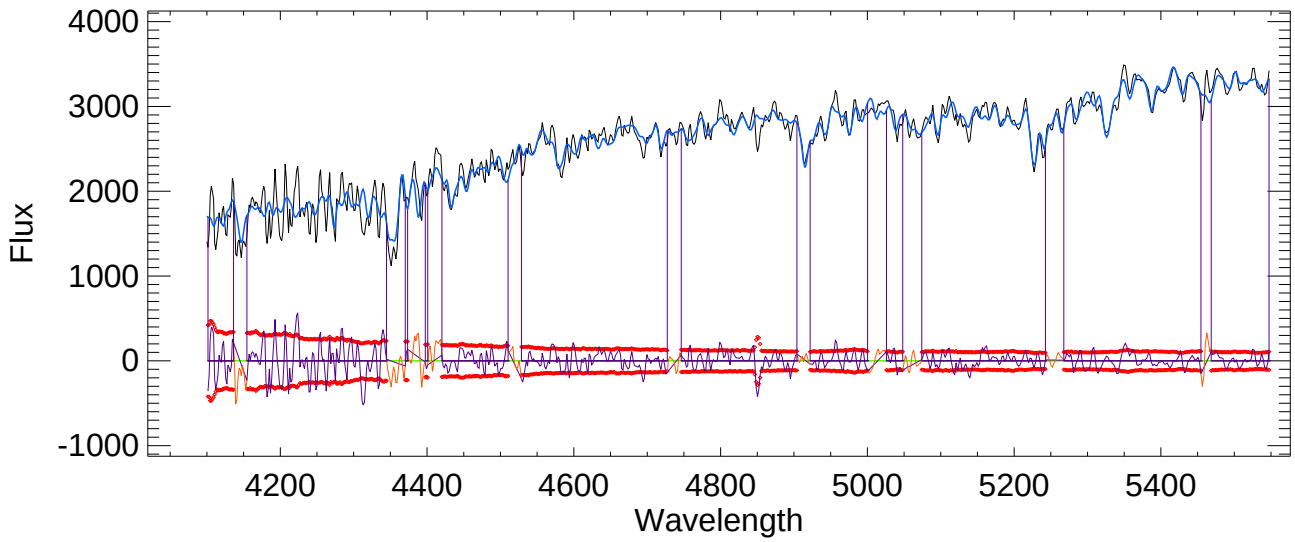

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

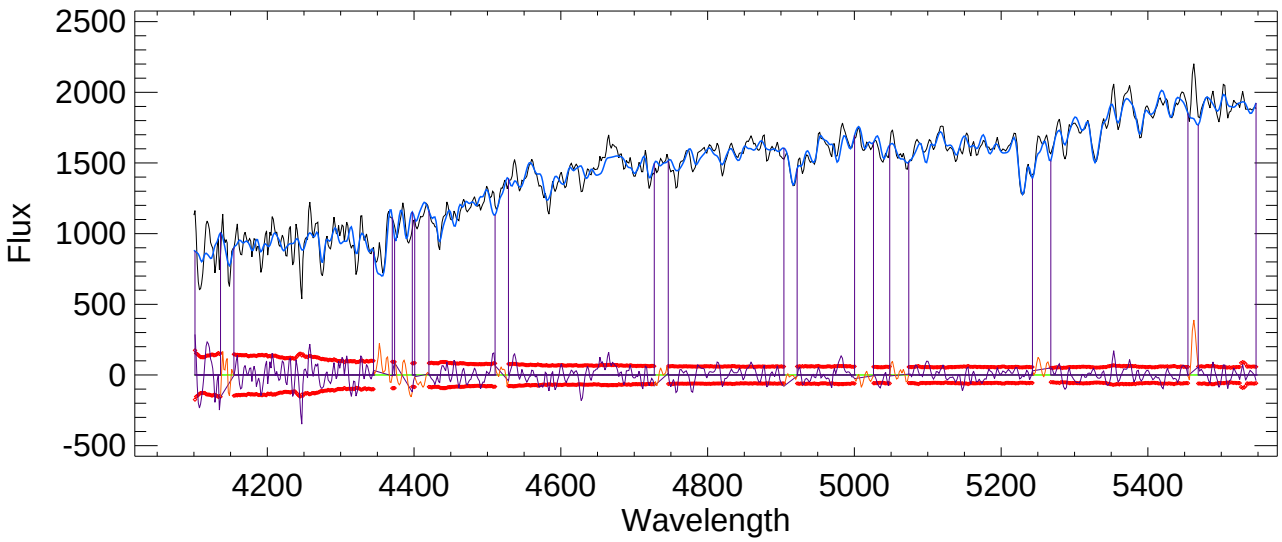

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

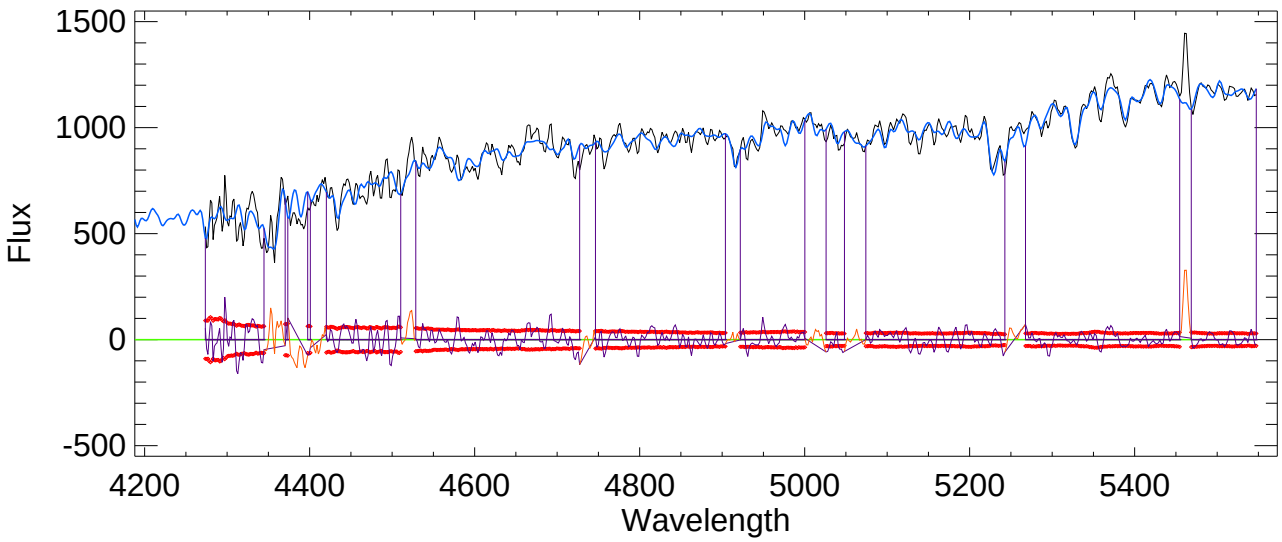

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

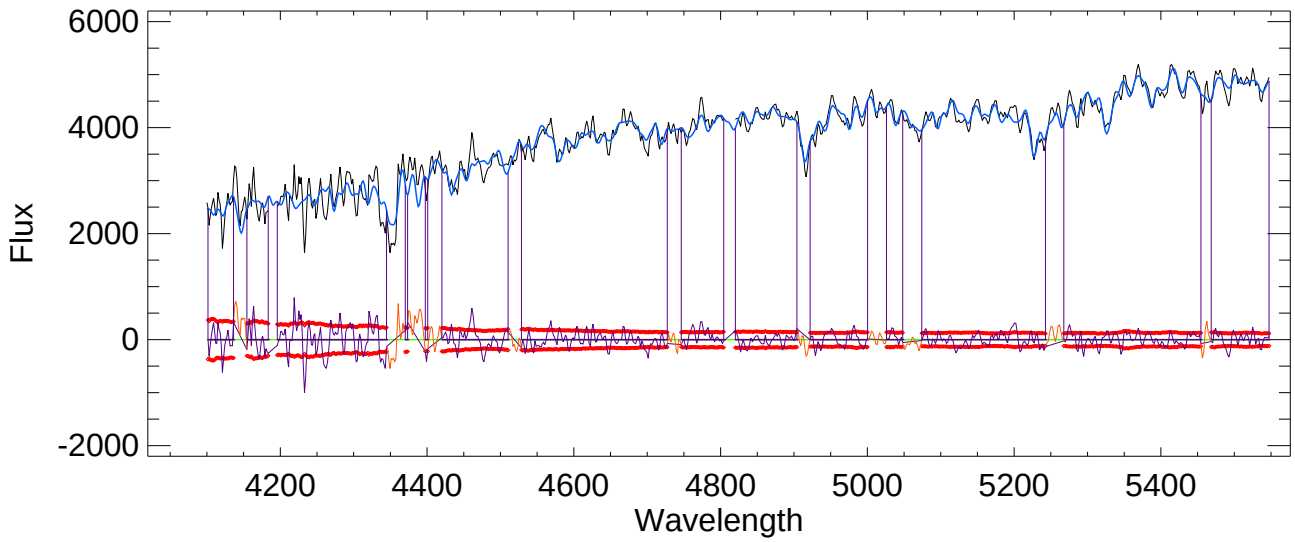

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

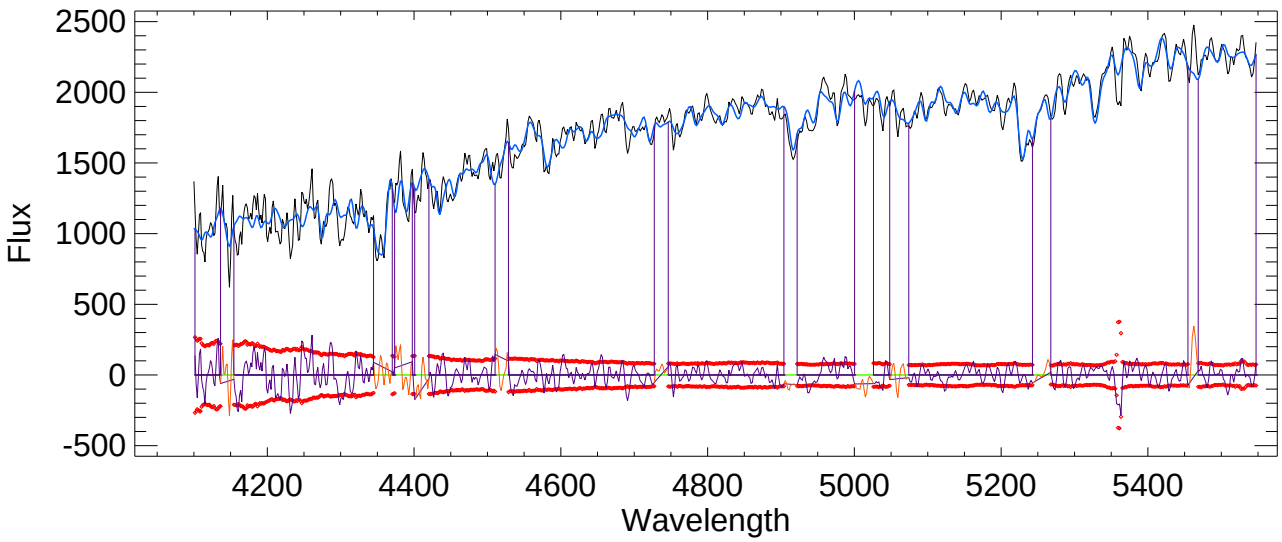

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

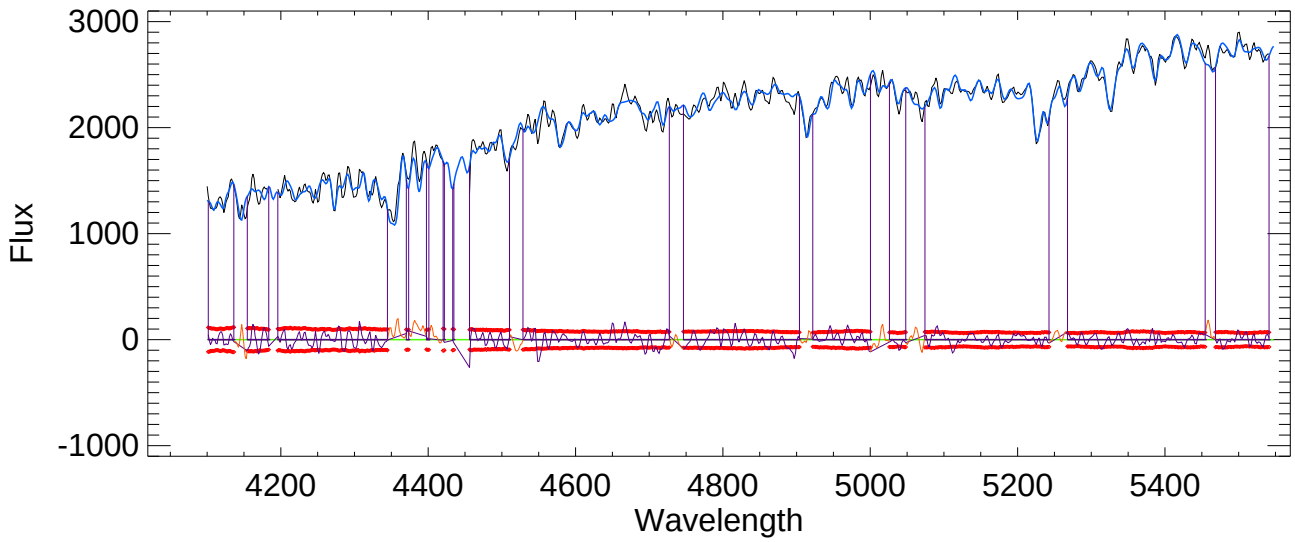

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

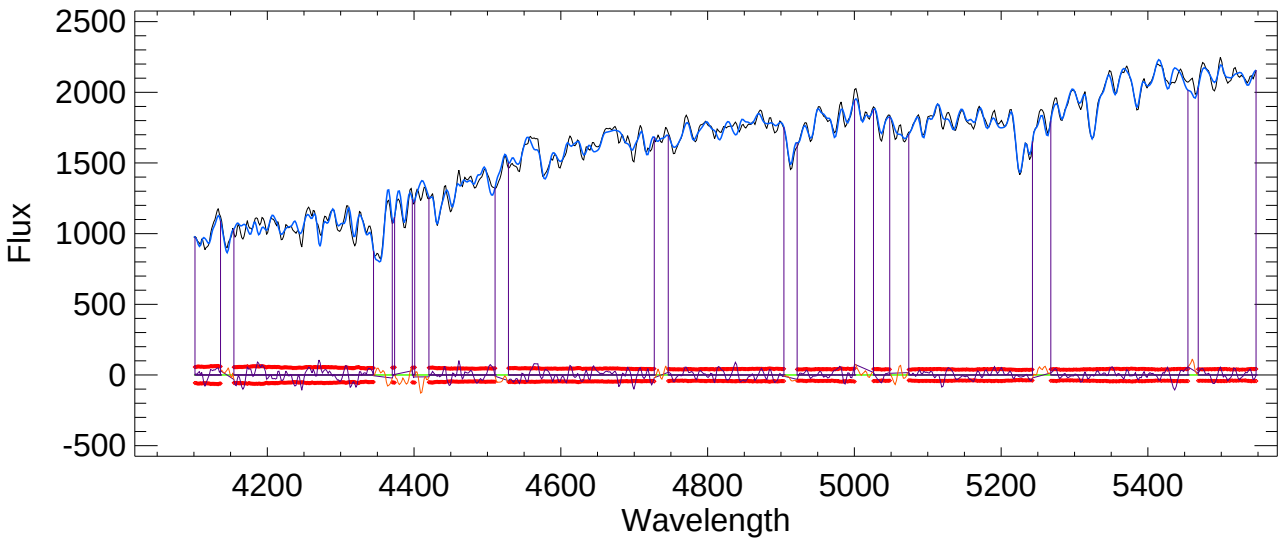

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

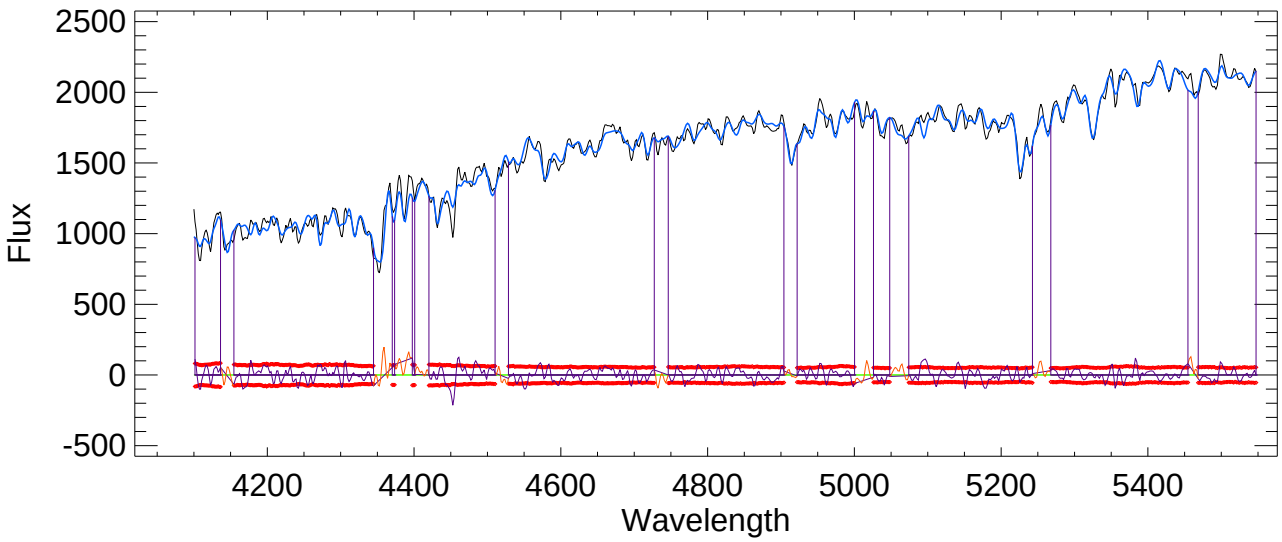

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

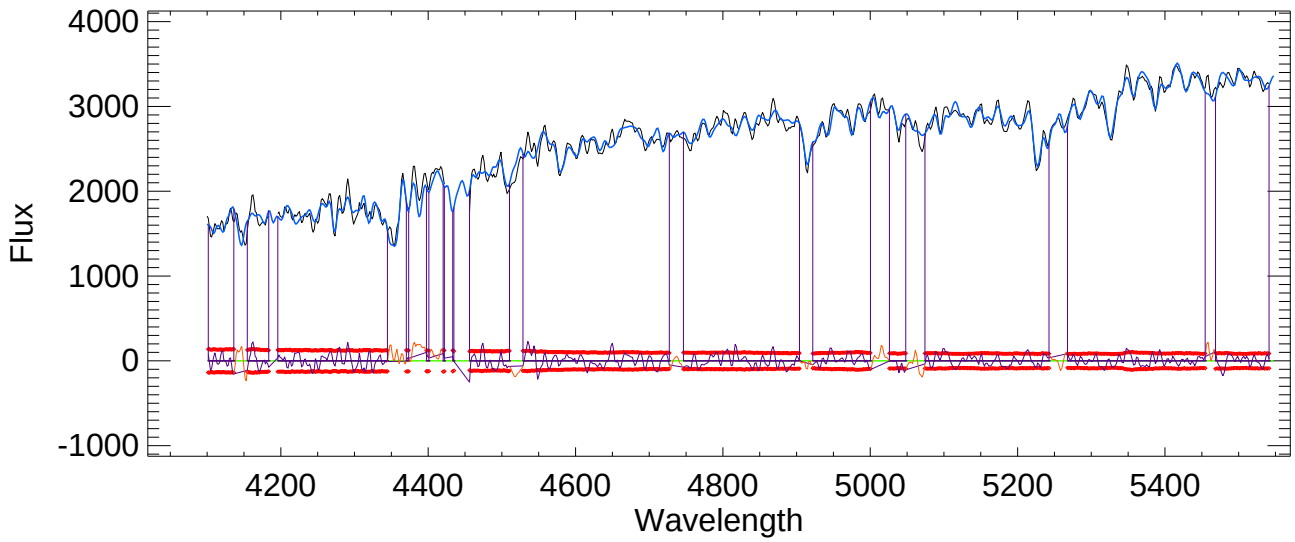

6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

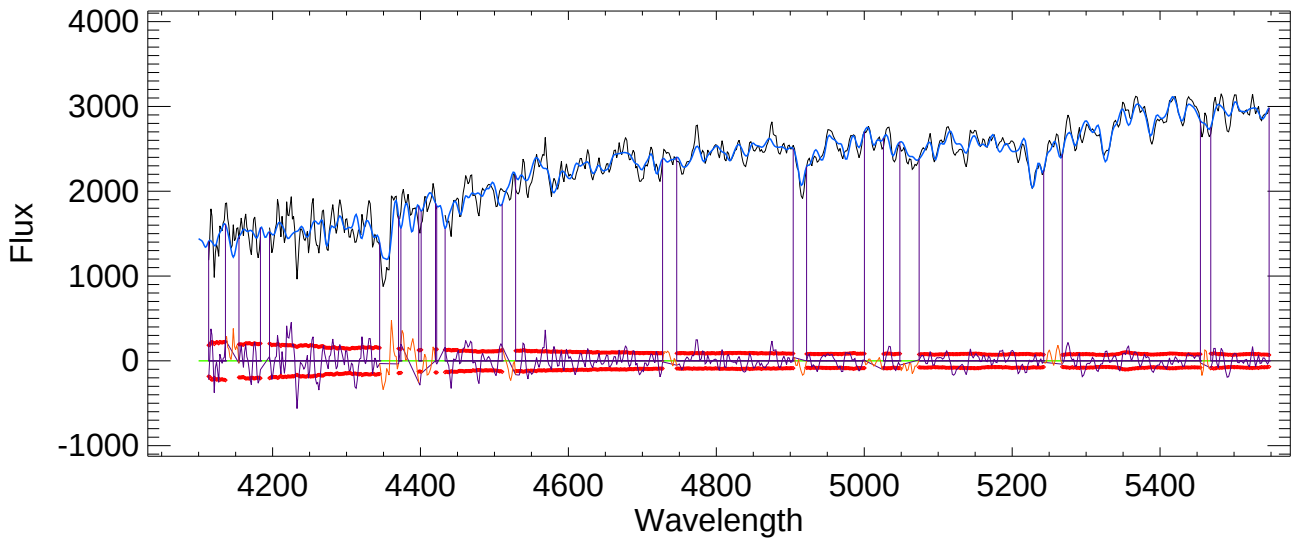

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

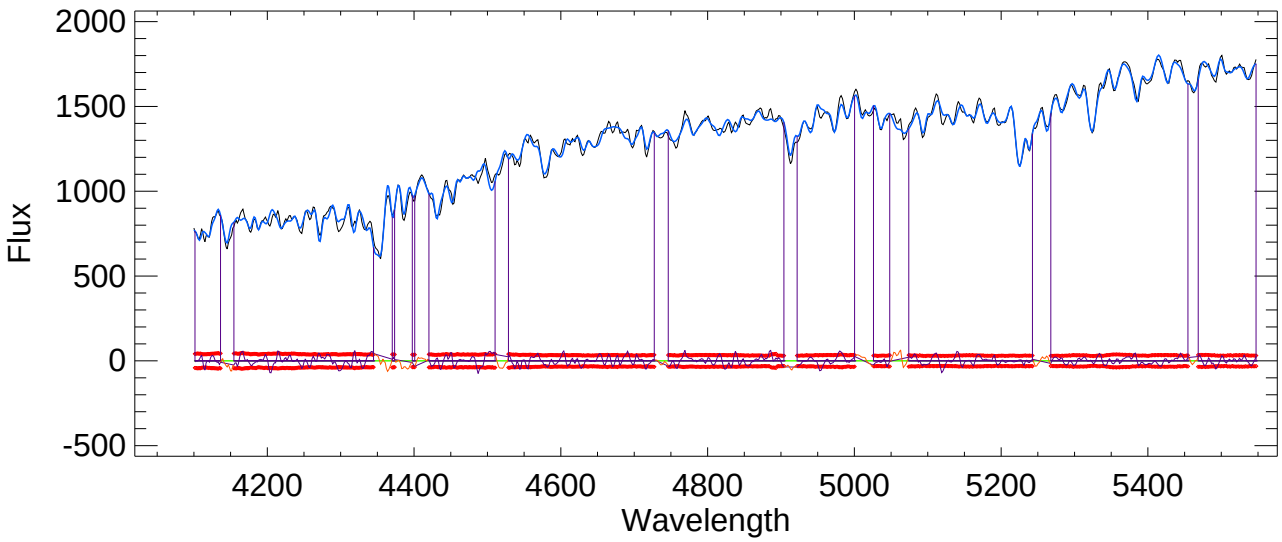

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

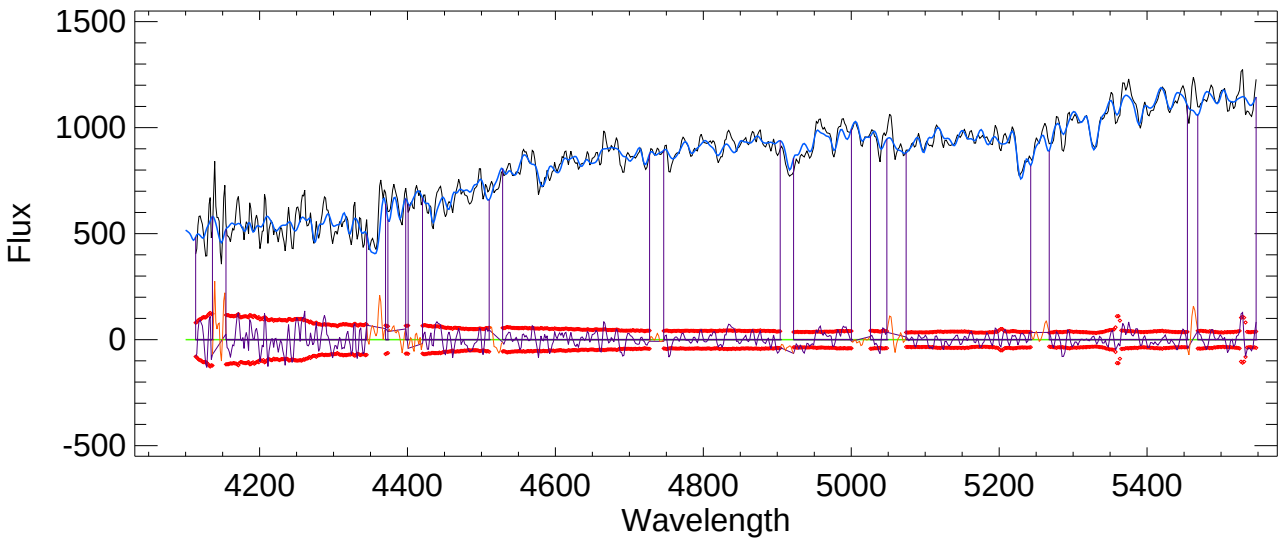

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

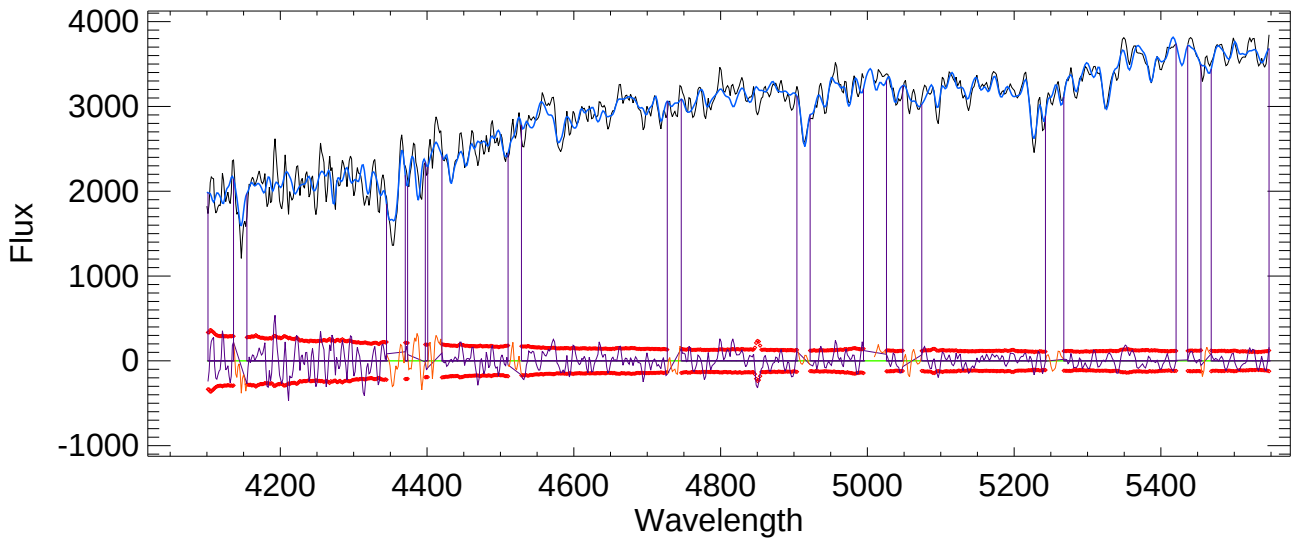

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

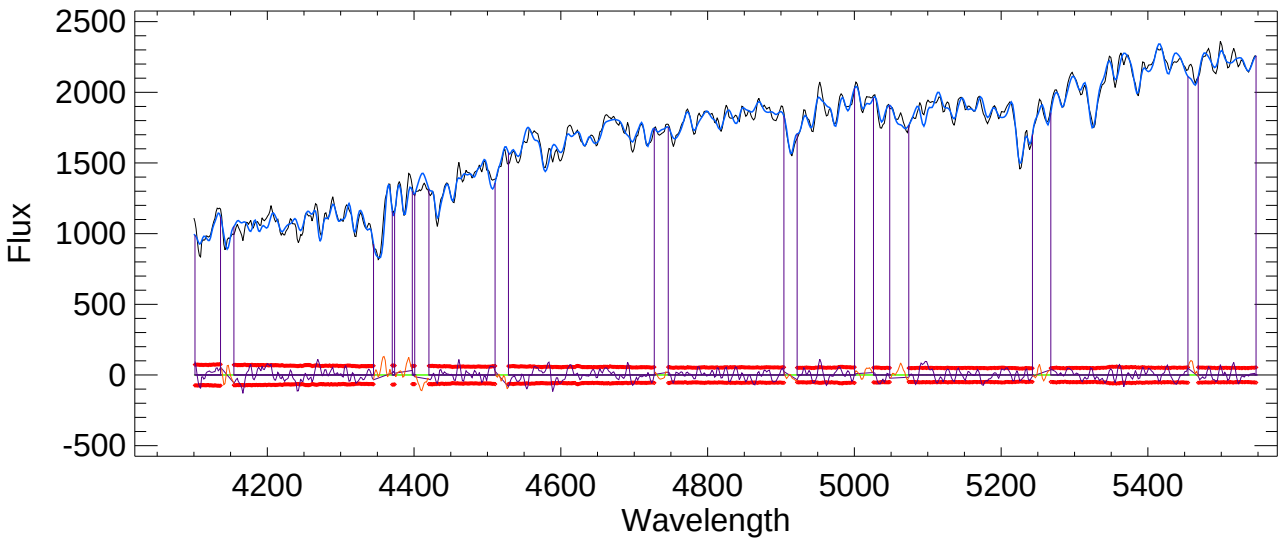

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

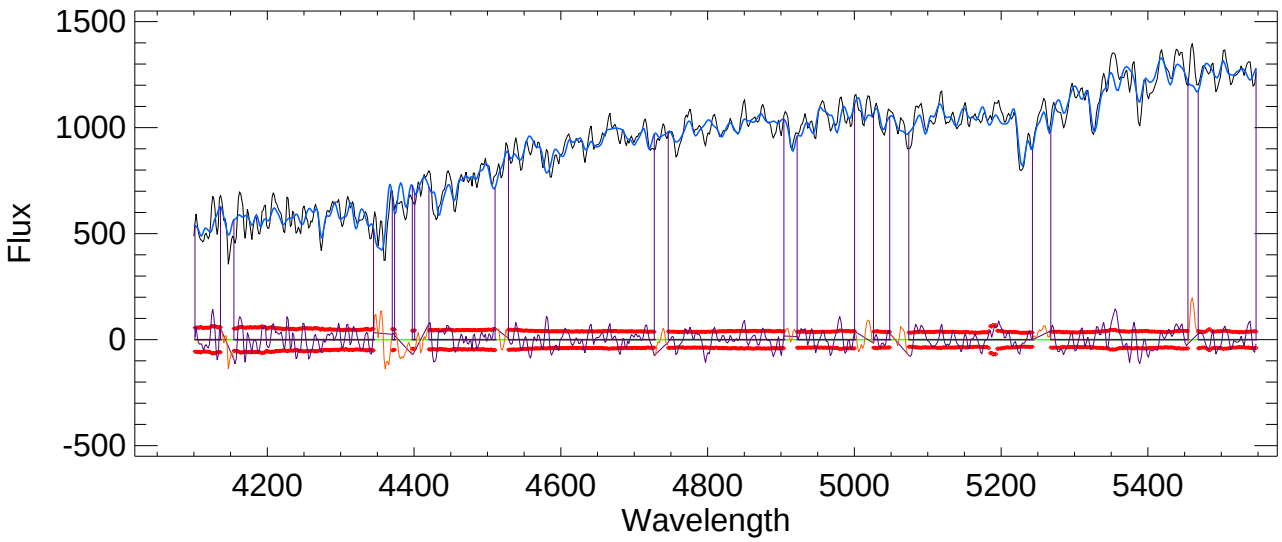

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

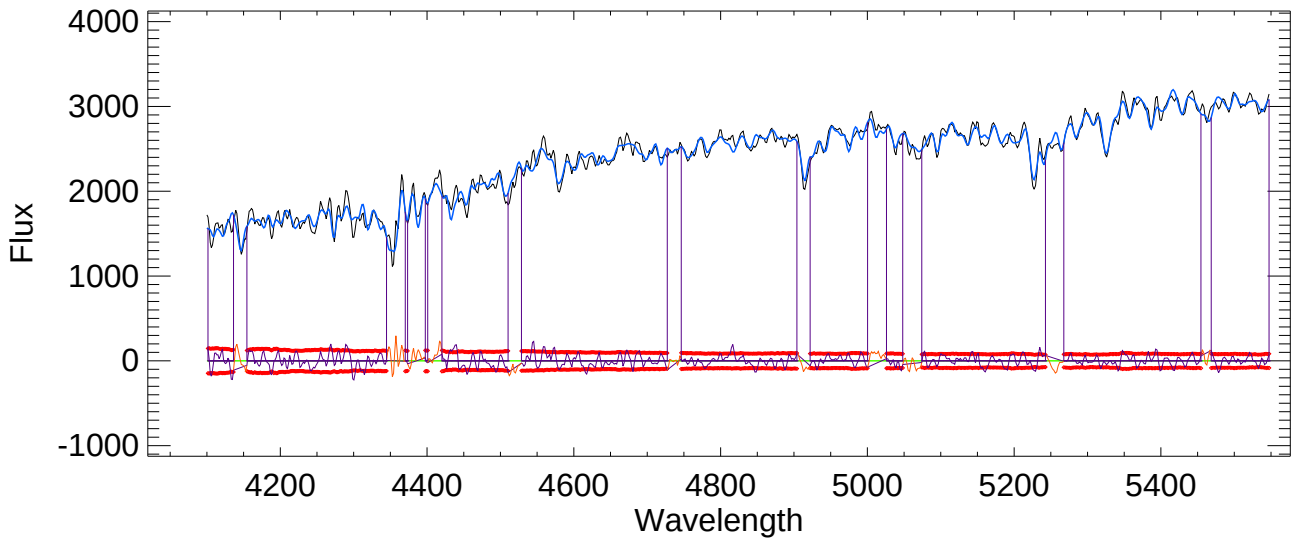

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

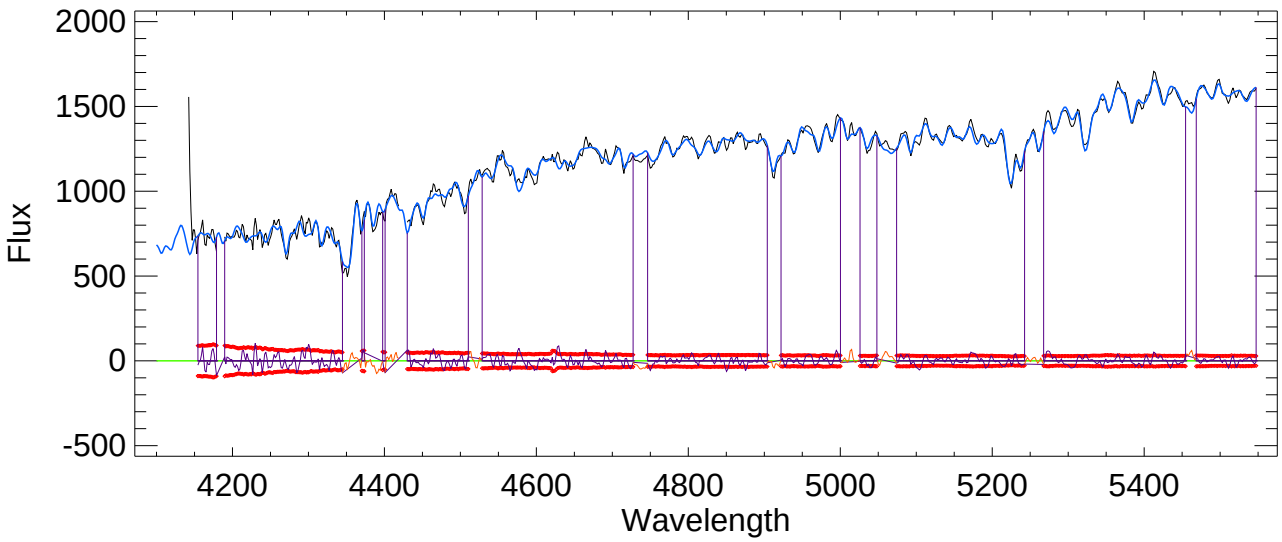

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

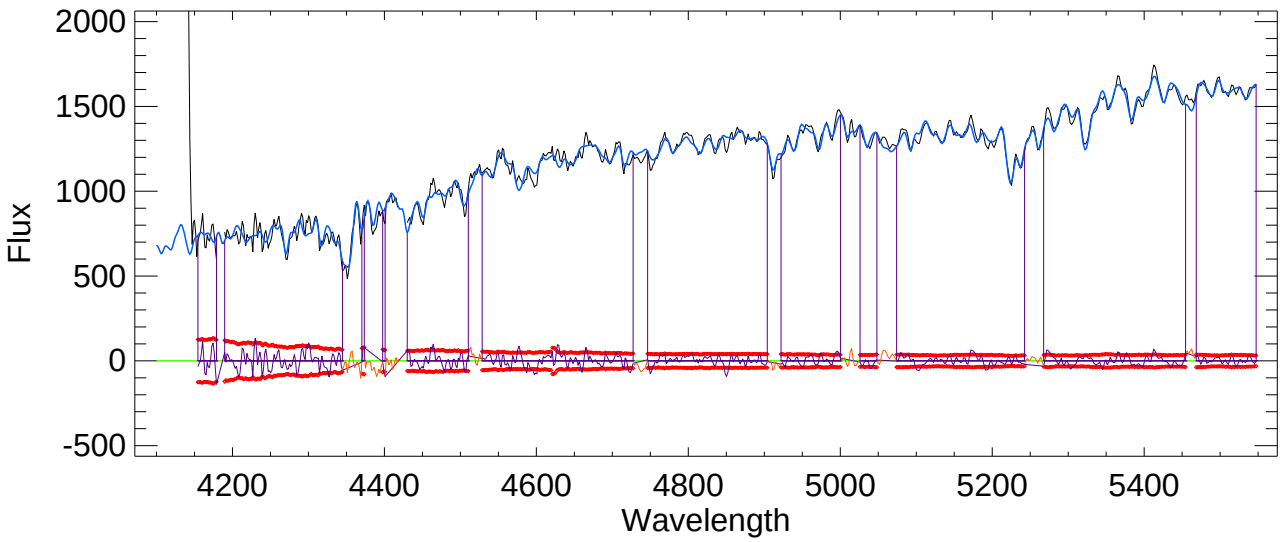

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

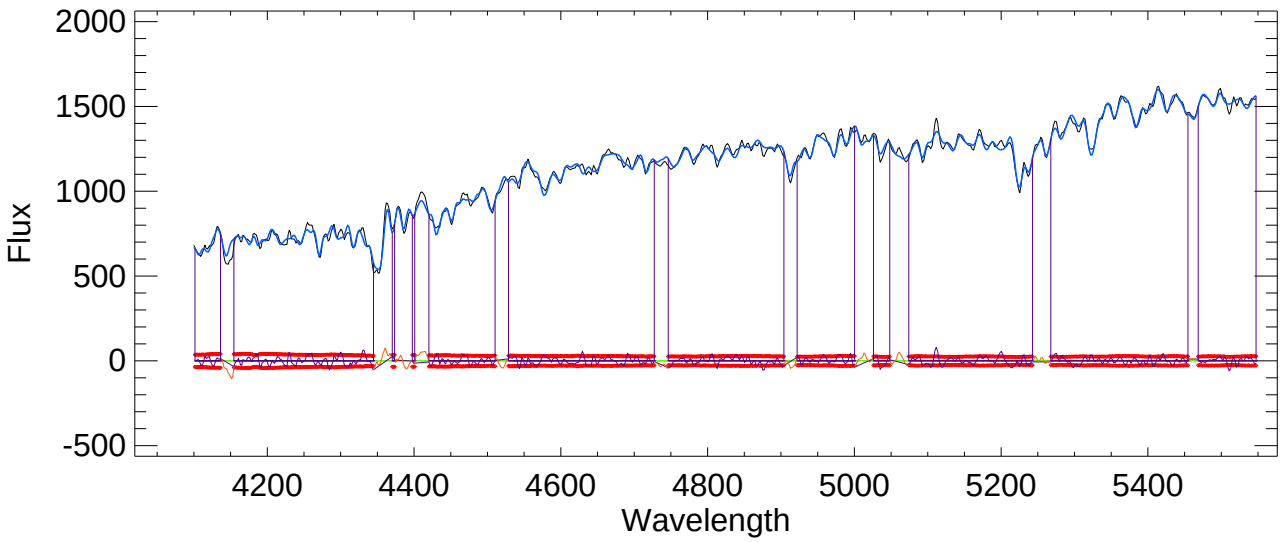

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

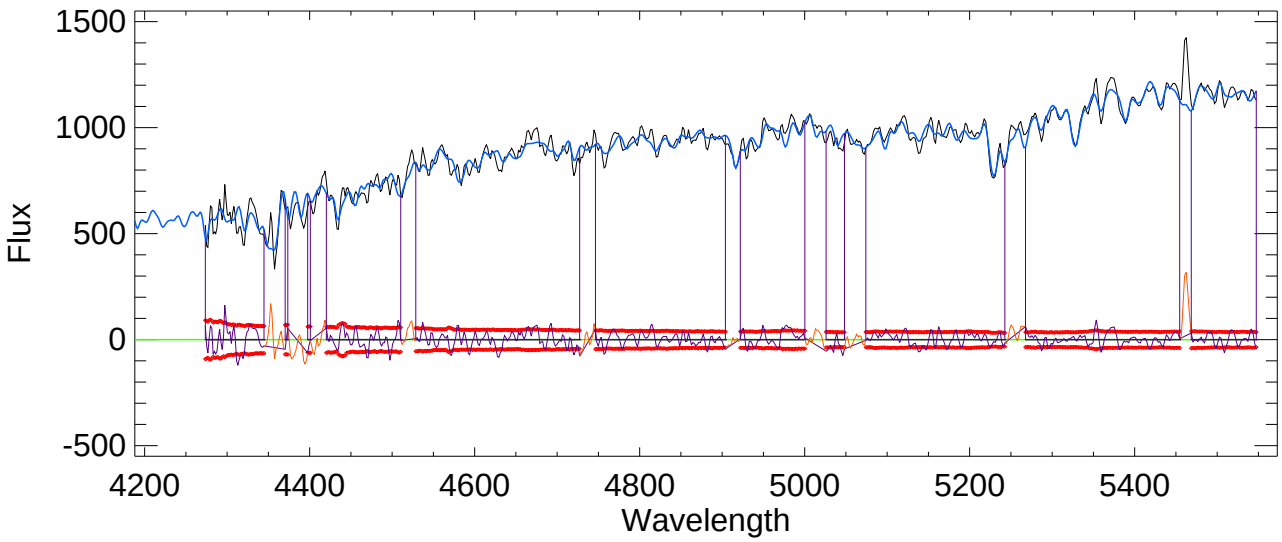

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

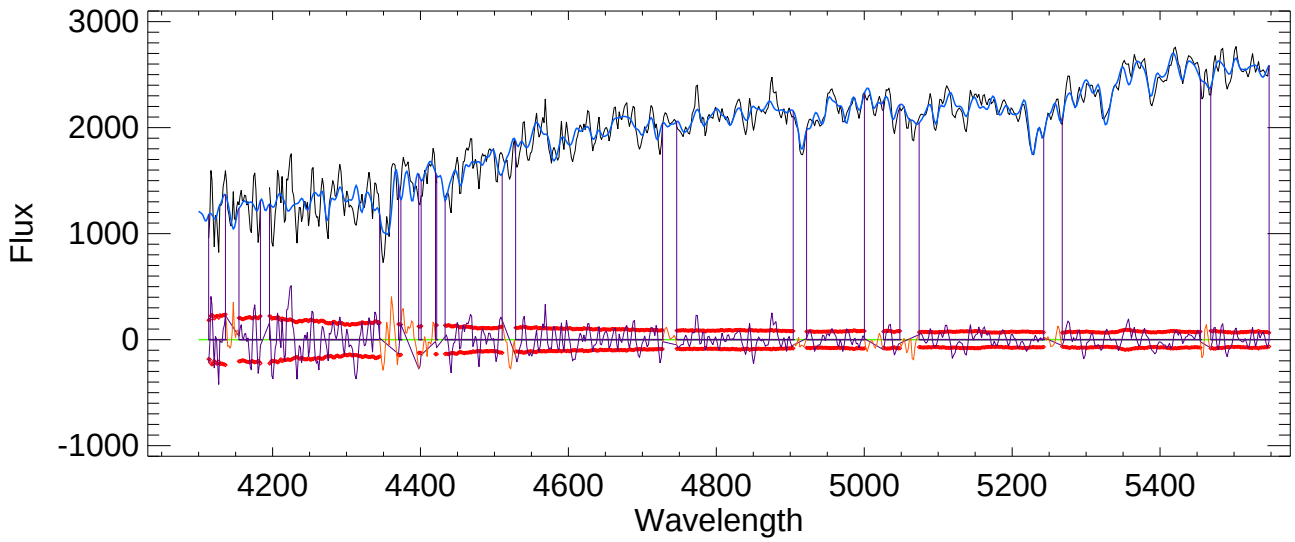

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

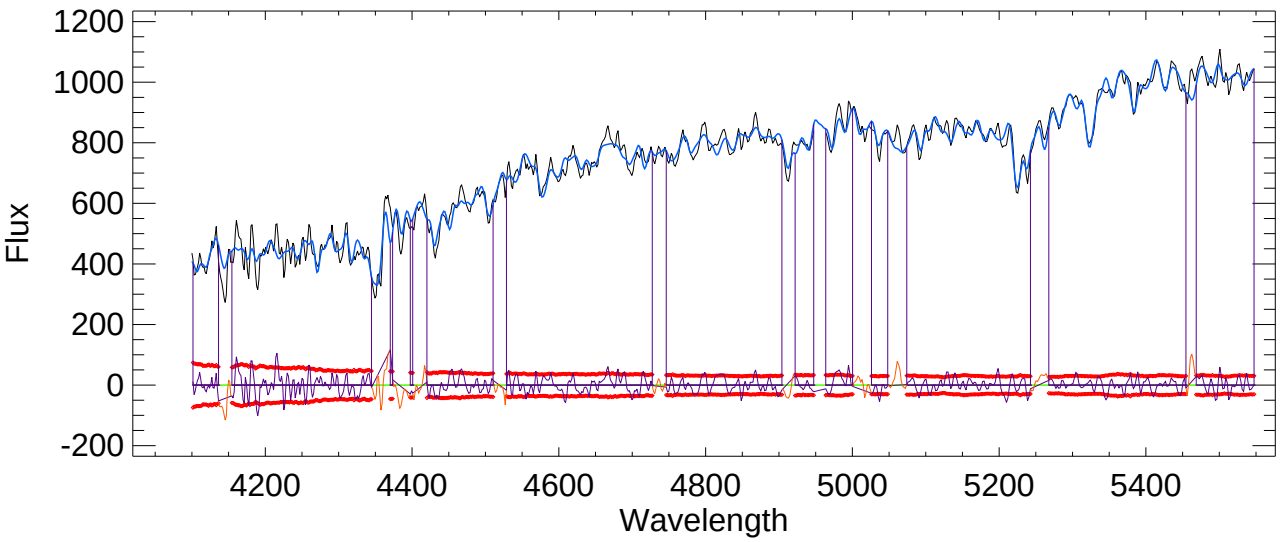

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

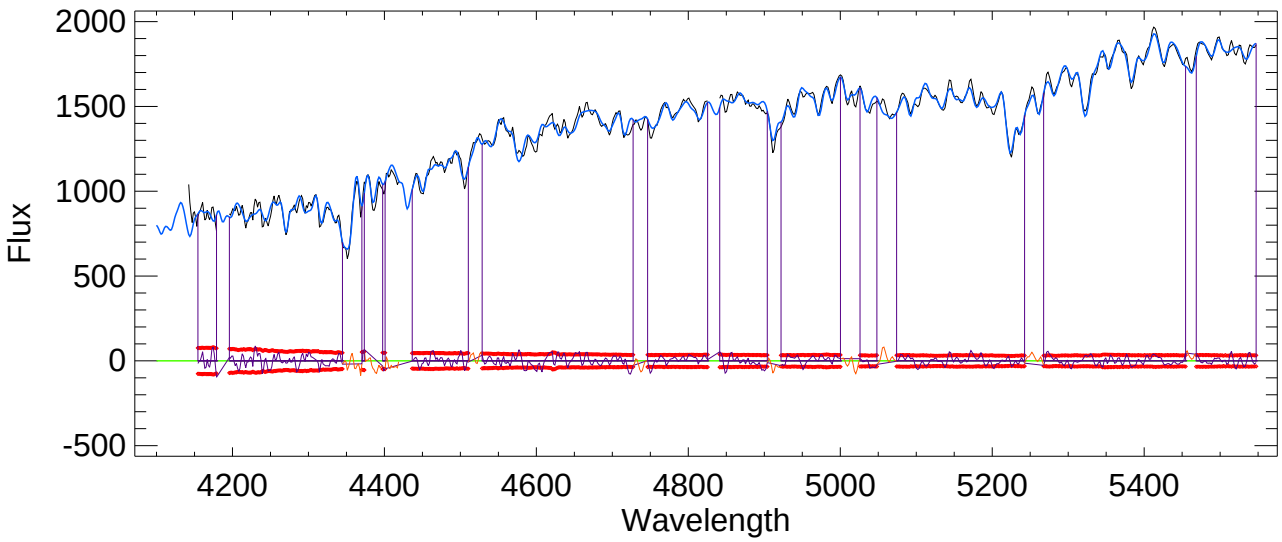

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

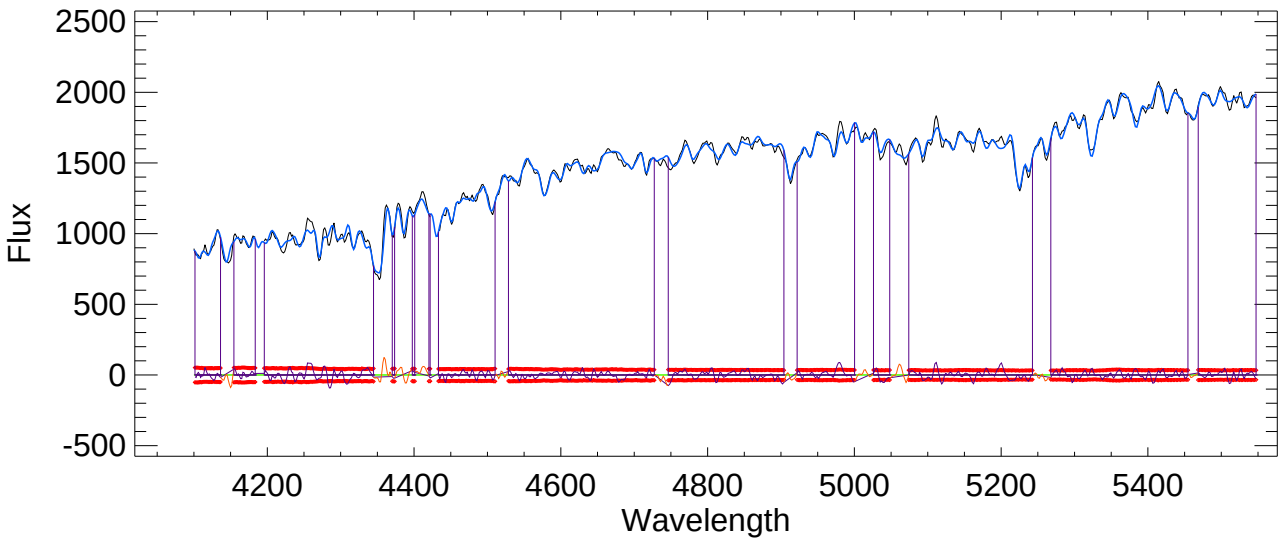

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

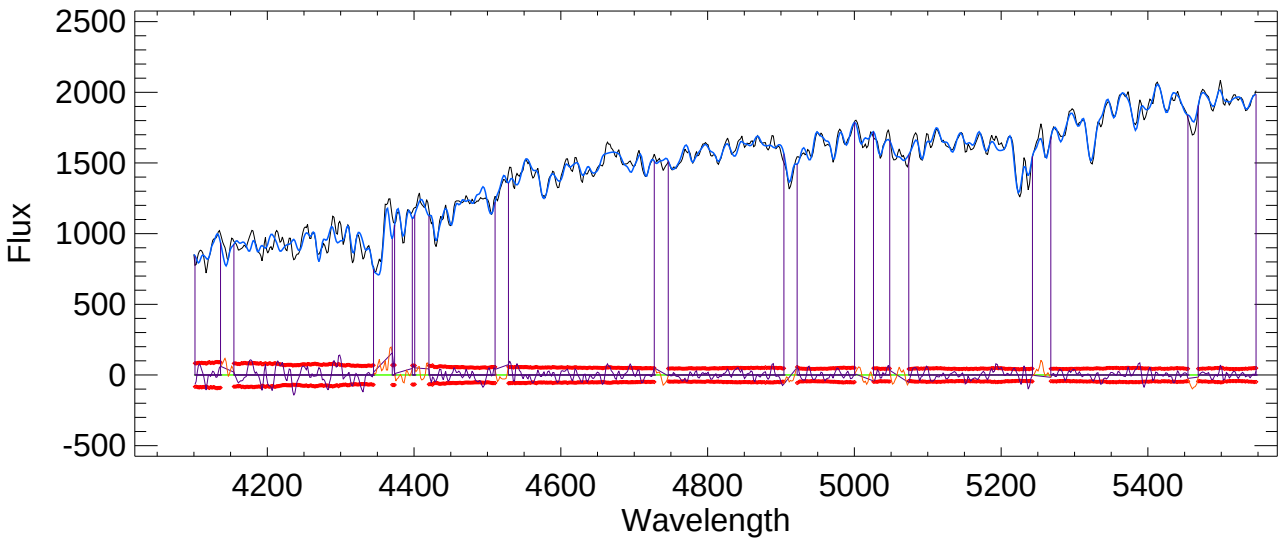

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

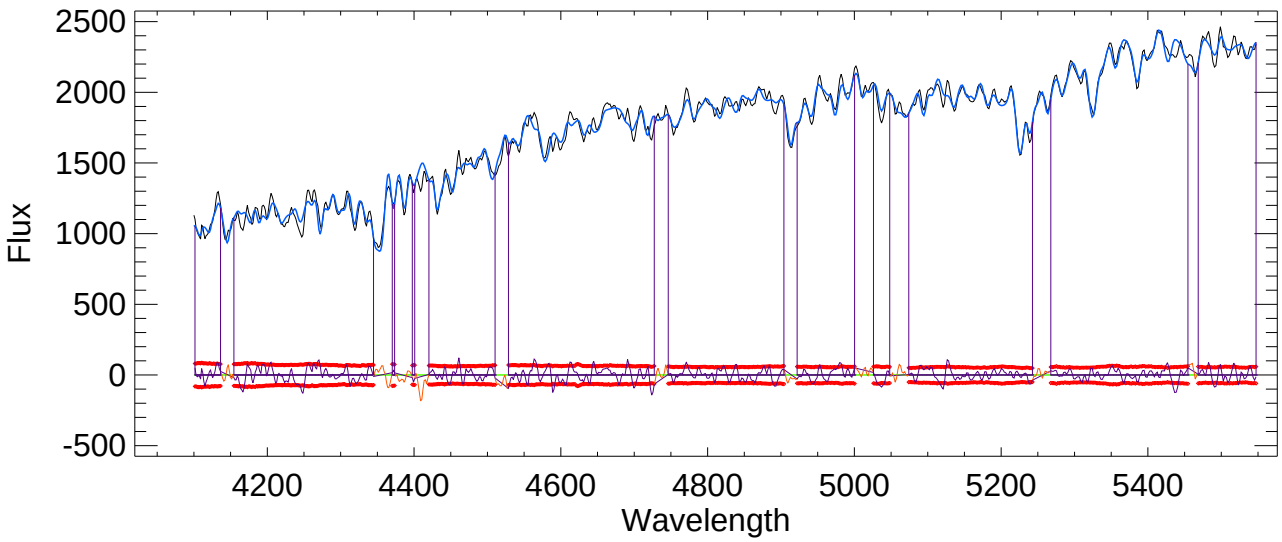

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

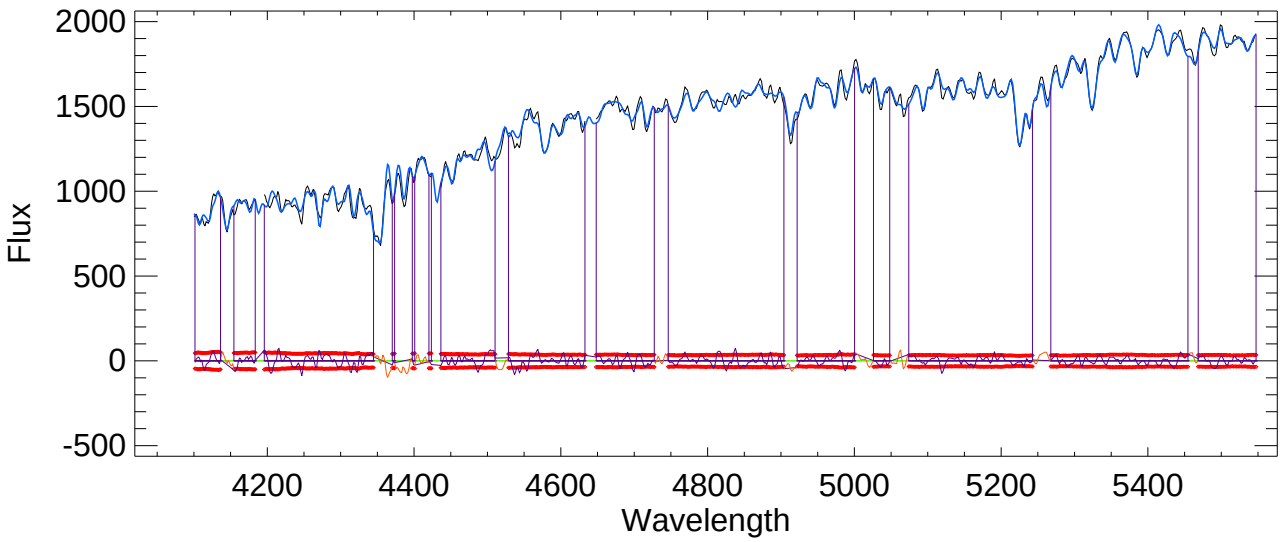

1200
1000
800
600
400
200
0
-200
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

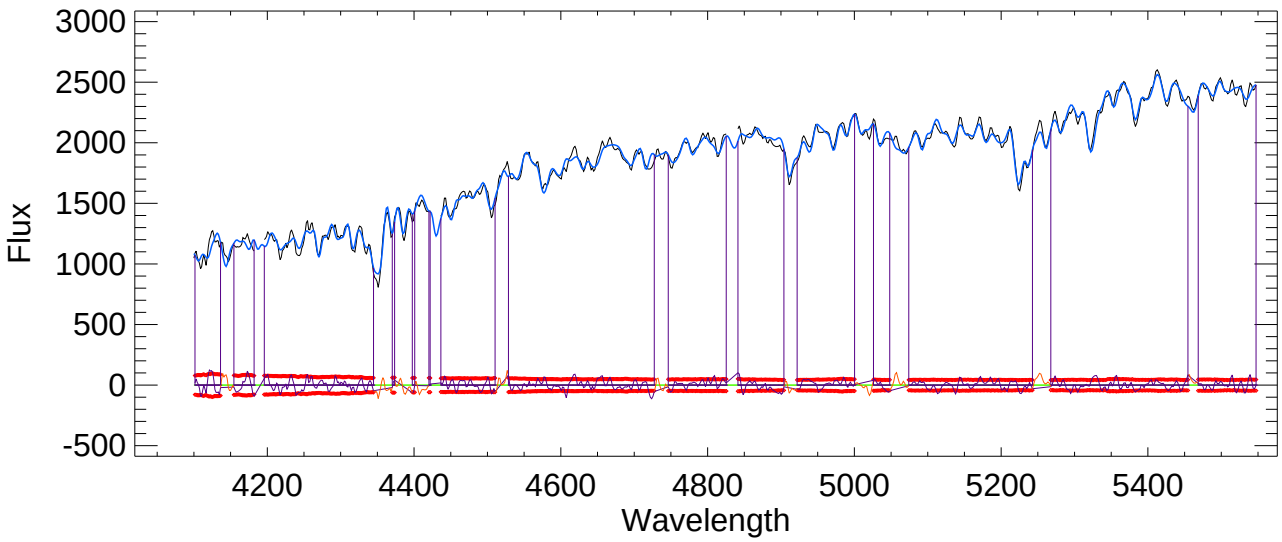

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

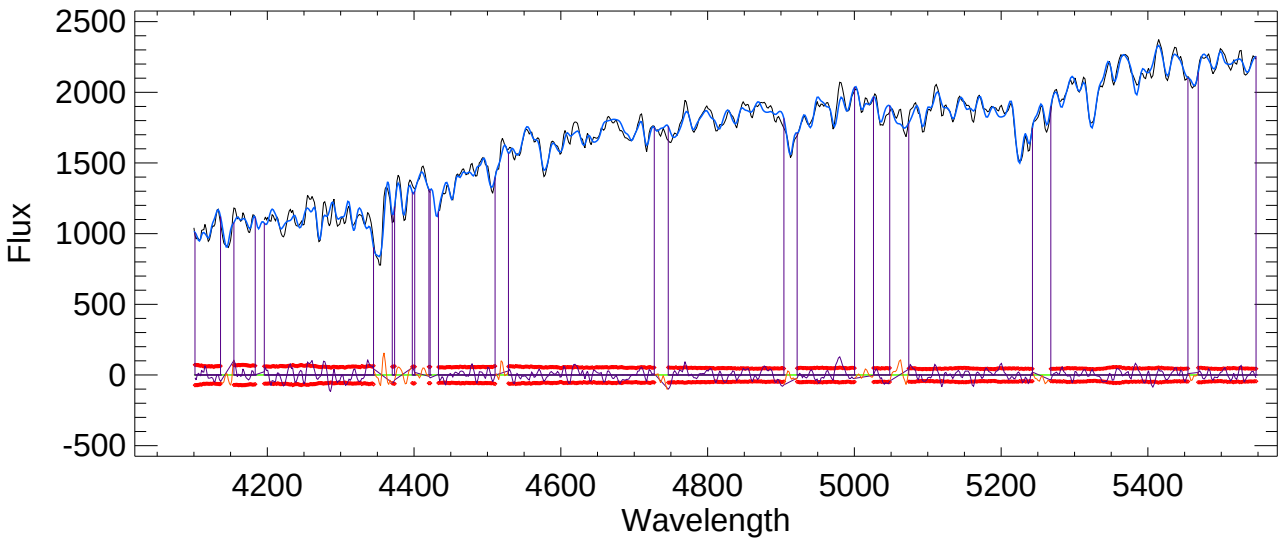

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

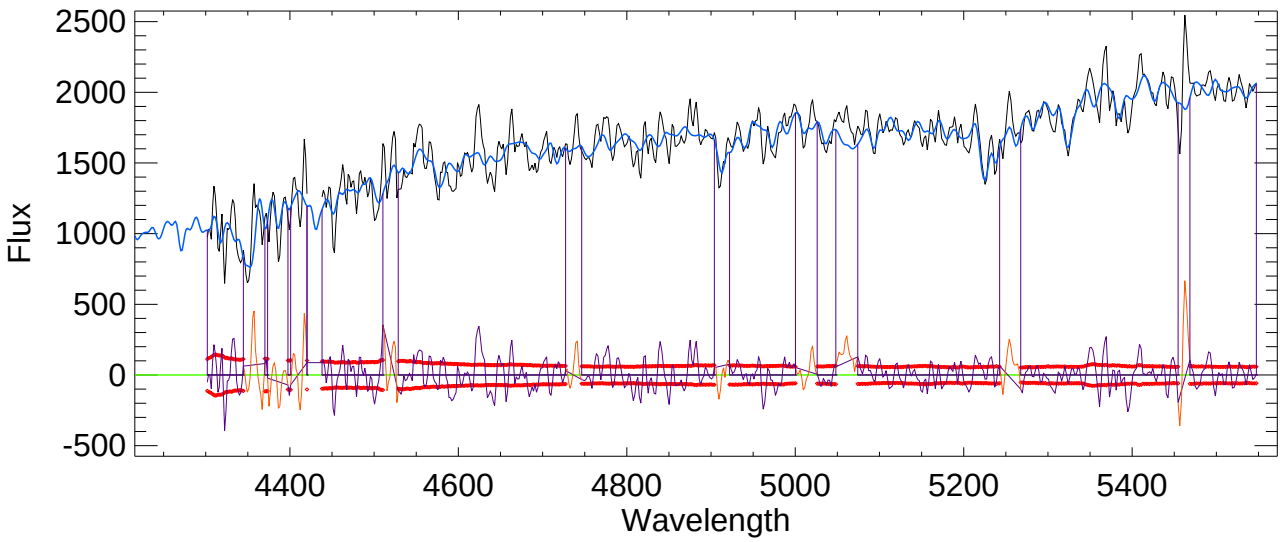

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

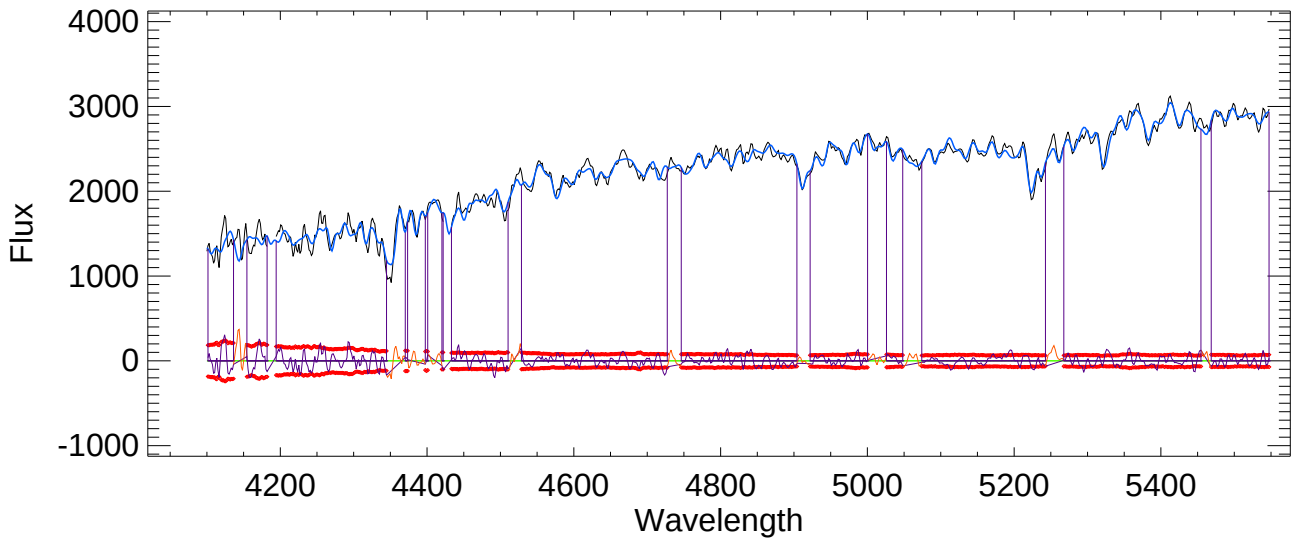

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

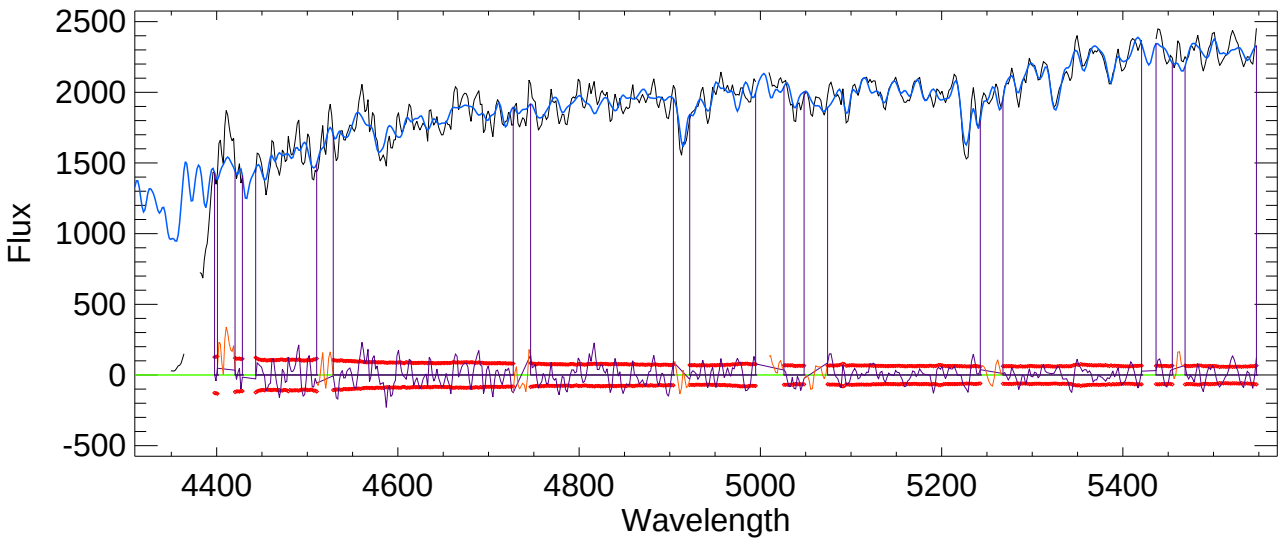

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

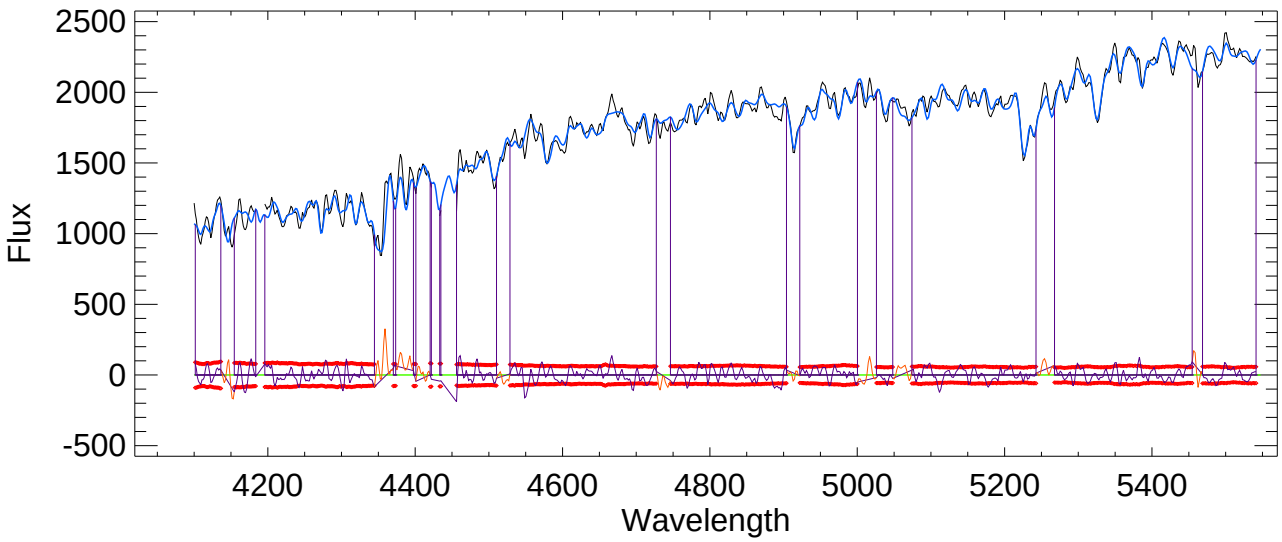

3000
2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

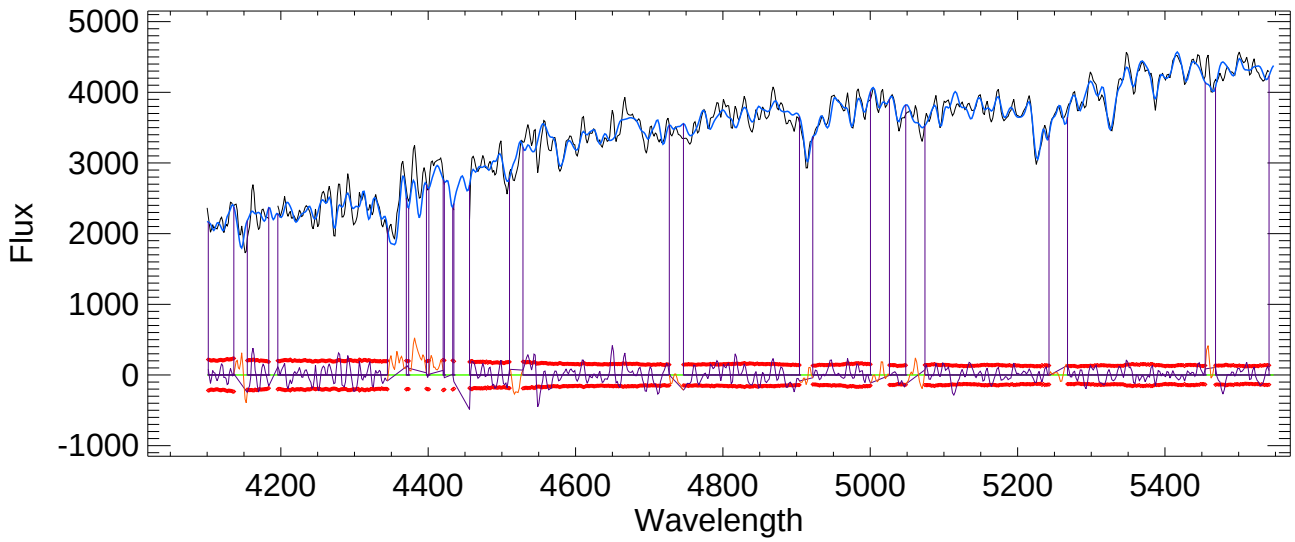

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

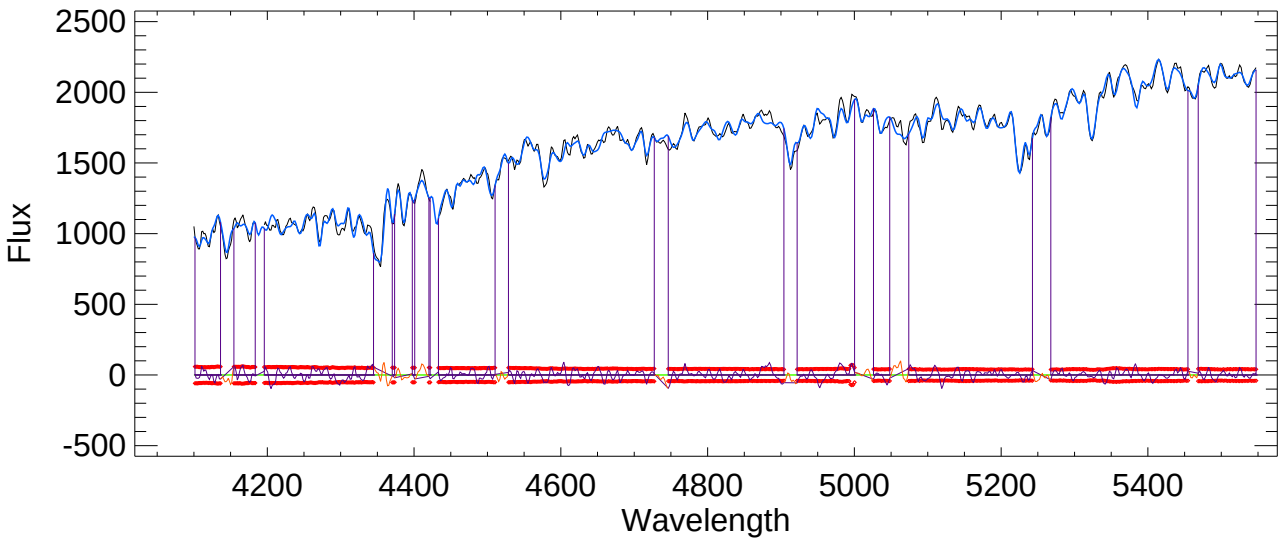

2500
2000
1500
1000
500
0
-500
Flux
4400
4600
4800
5000
5200
5400
Wavelength

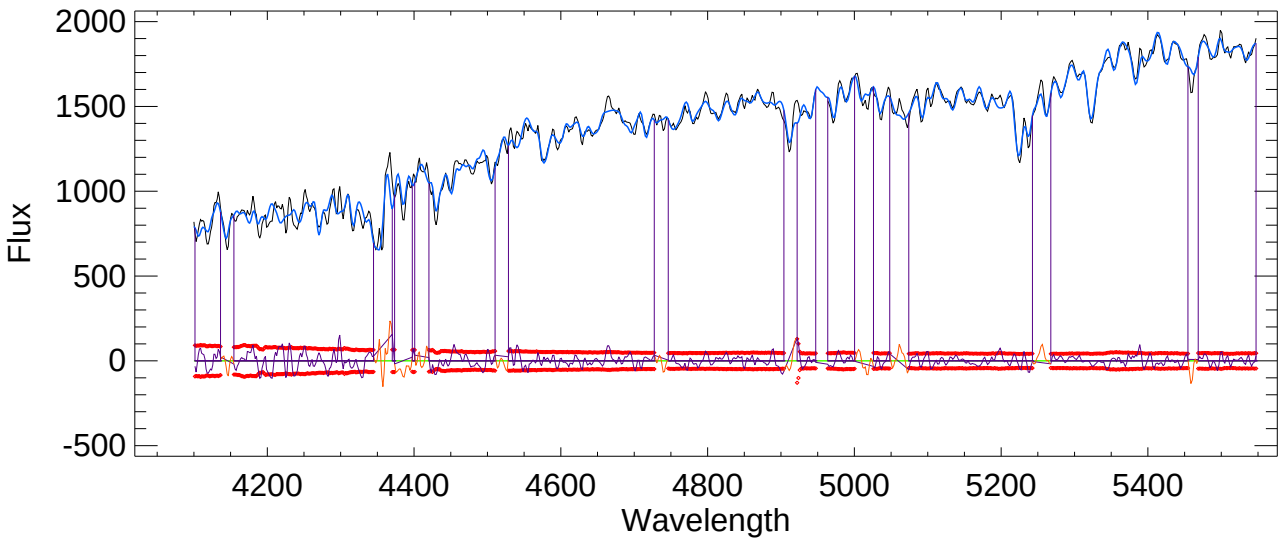

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

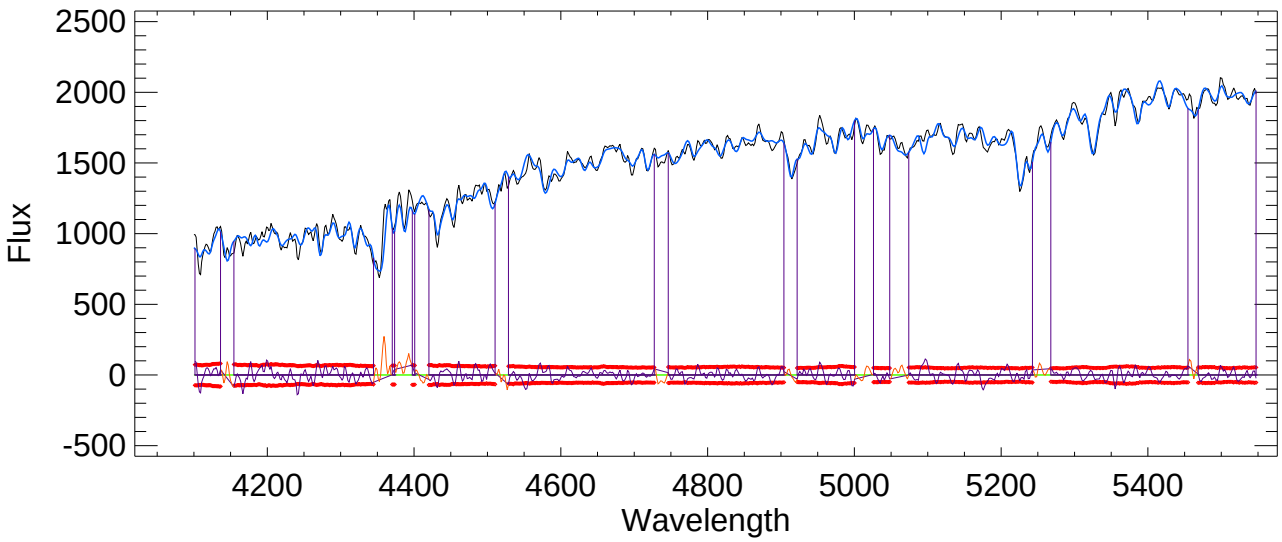

2500
2000
1500
1000
500
0
-500
Flux
4400
4600
4800
5000
5200
5400
Wavelength

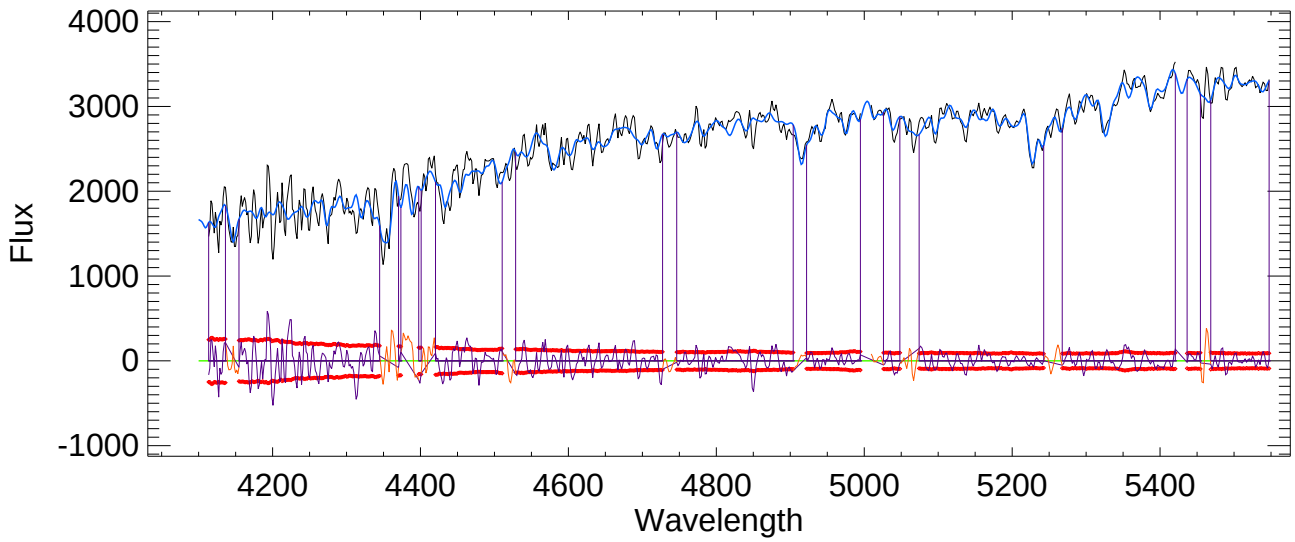

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

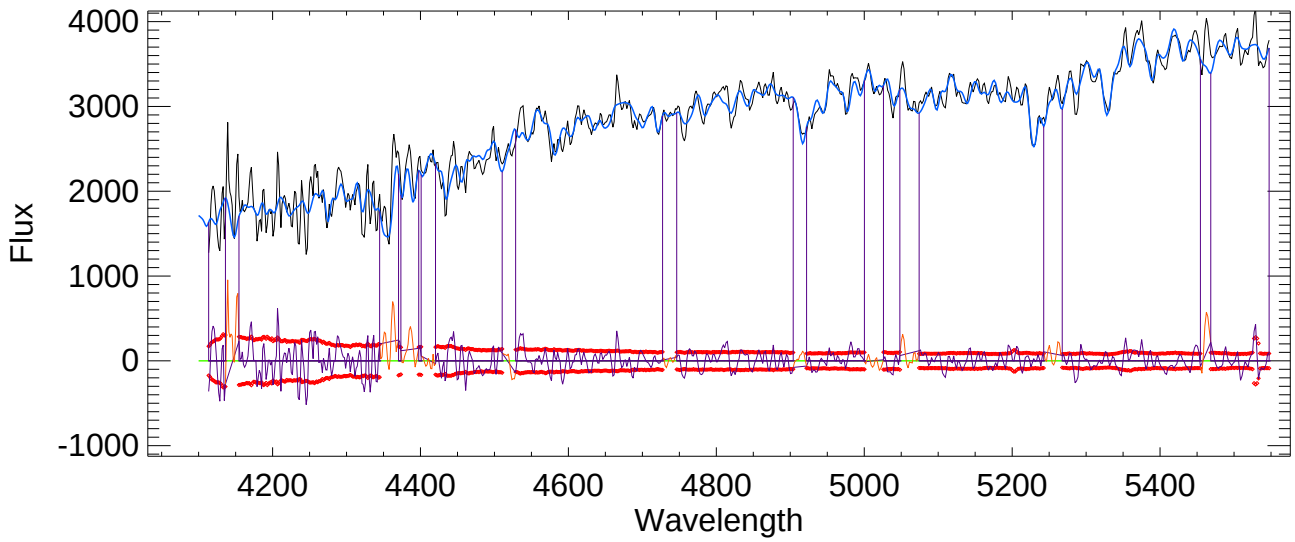

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

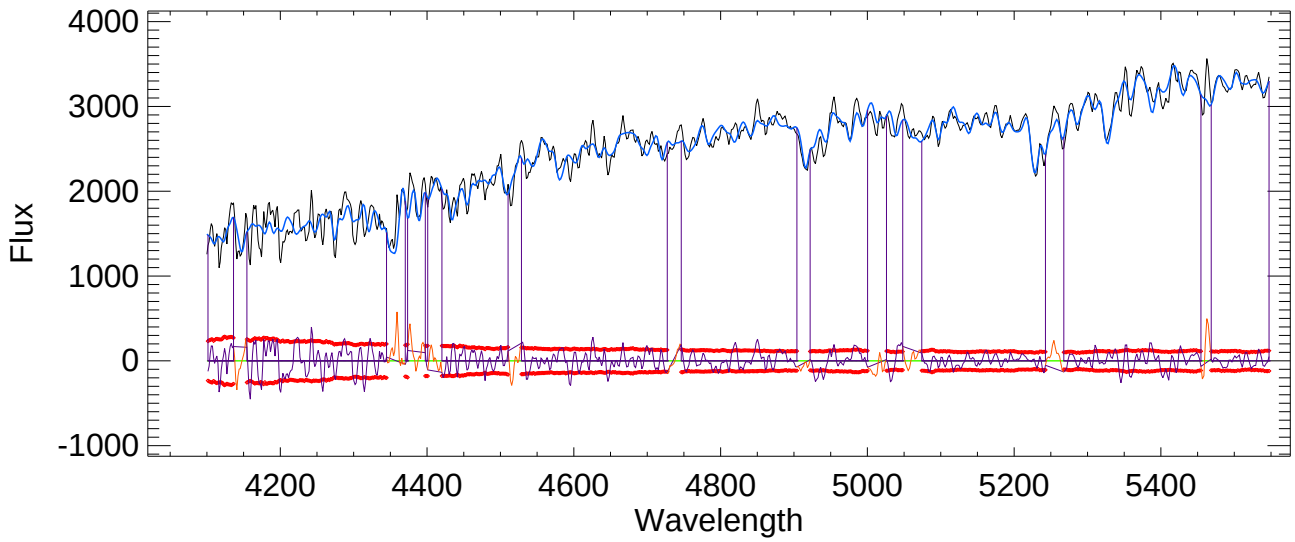

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

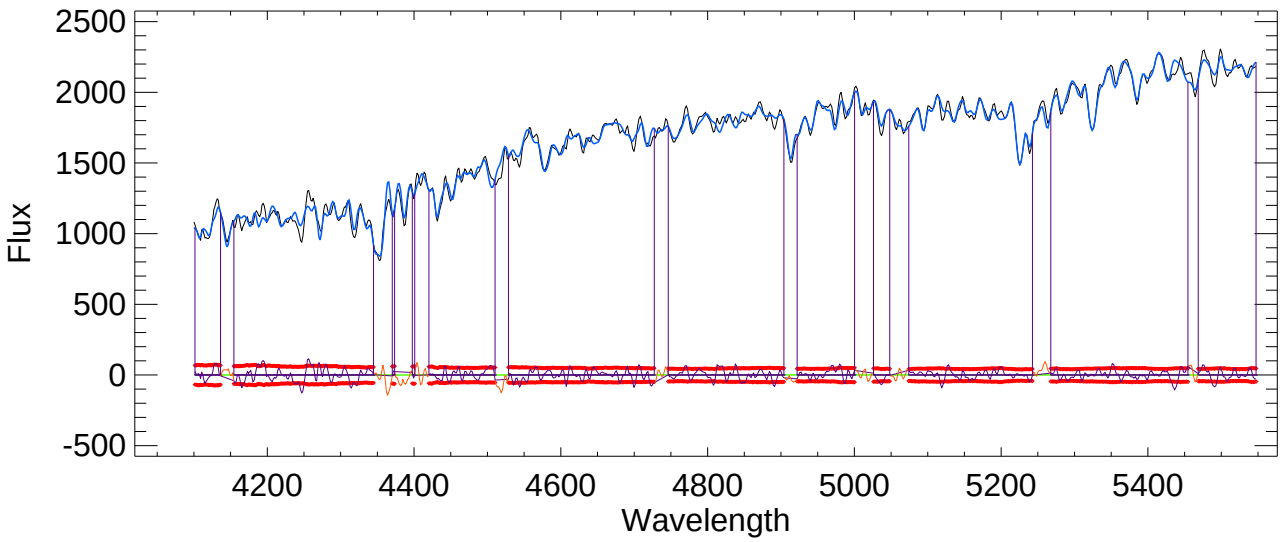

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

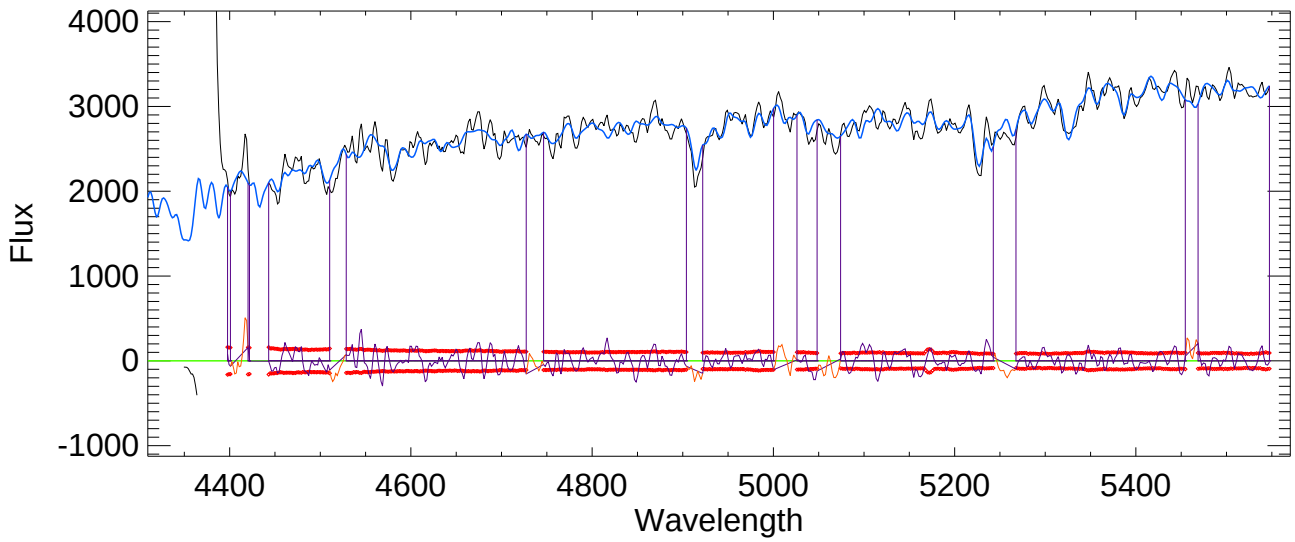

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

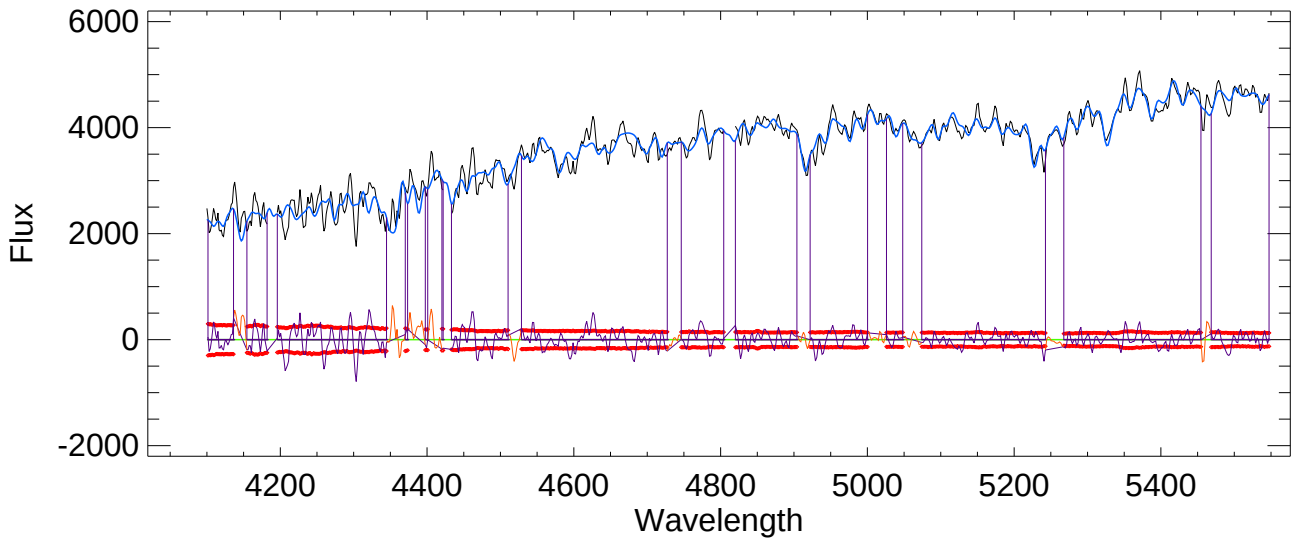

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

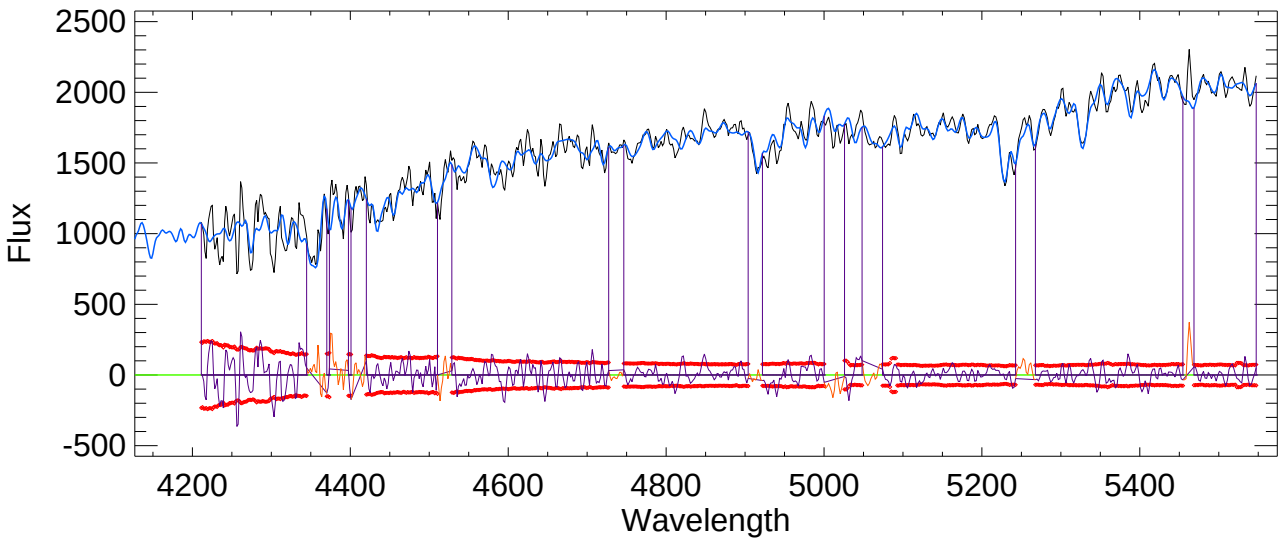

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

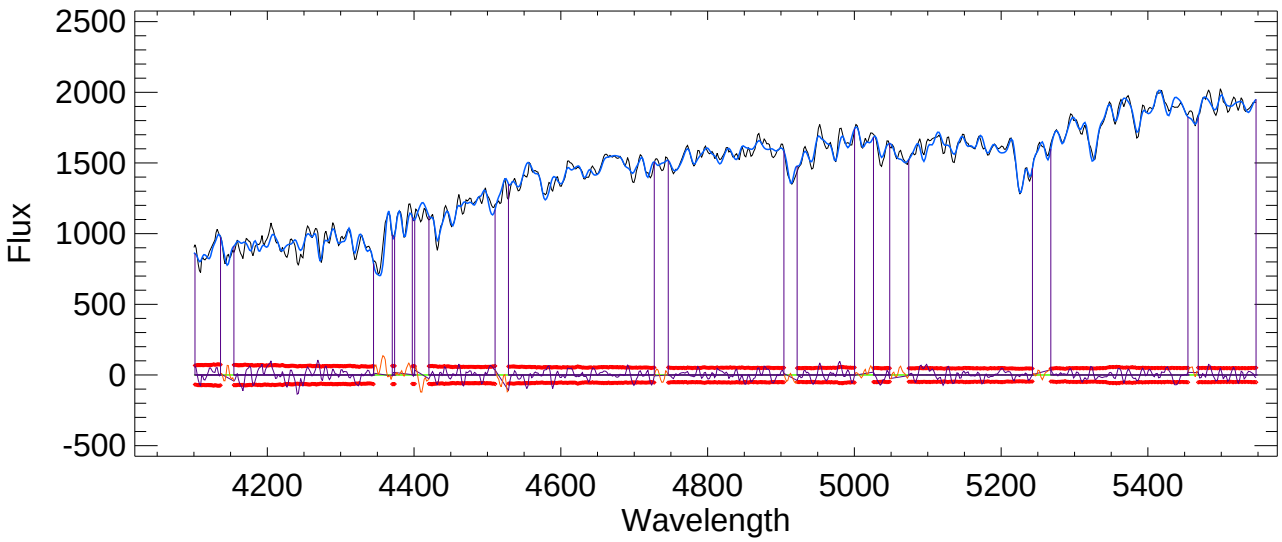

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

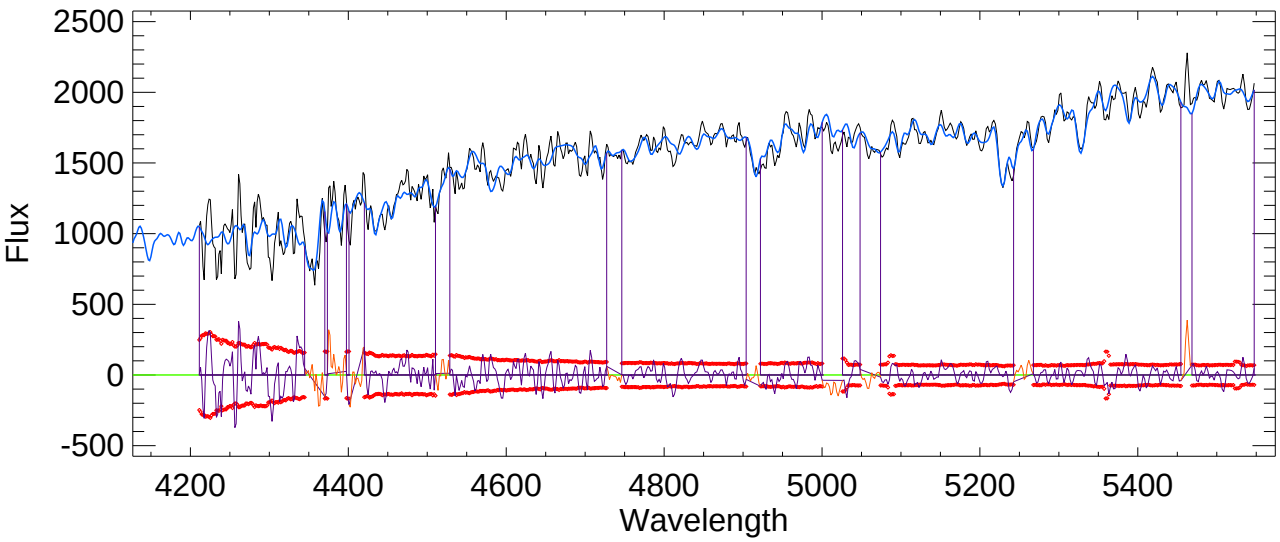

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

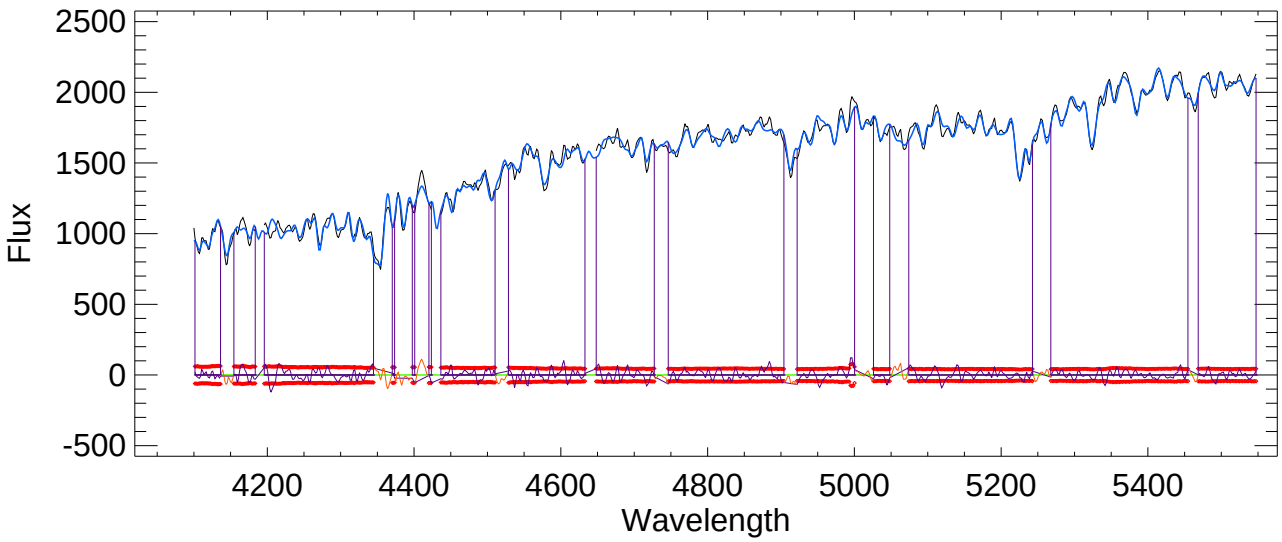

4000
3000
2000
1000
0
-1000
Flux
4400
4600
4800
5000
5200
5400
Wavelength

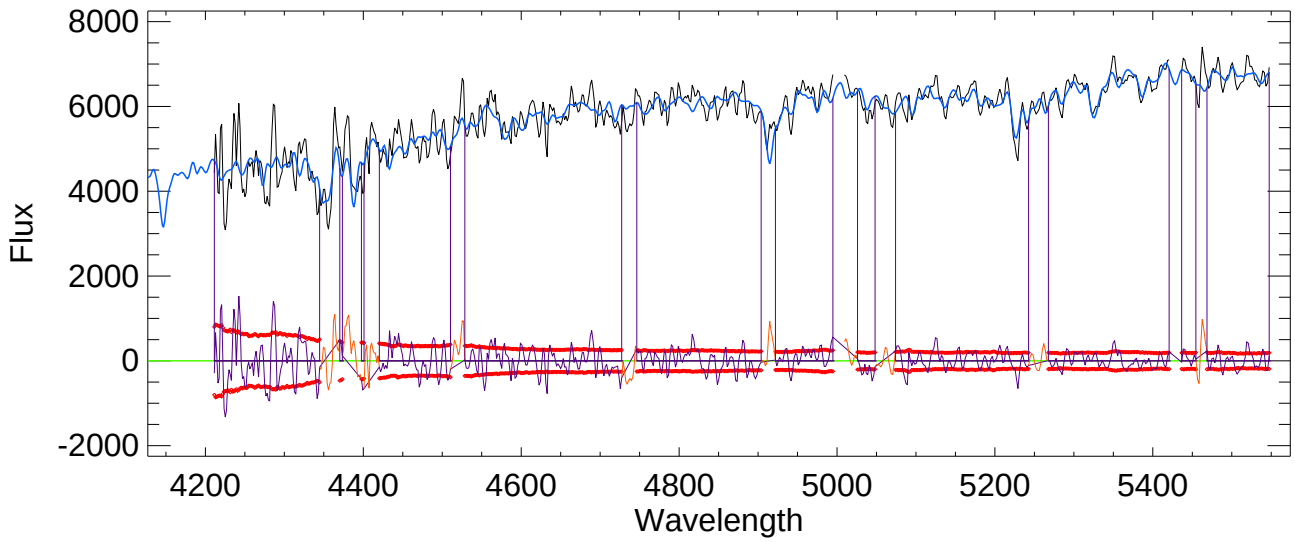

6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

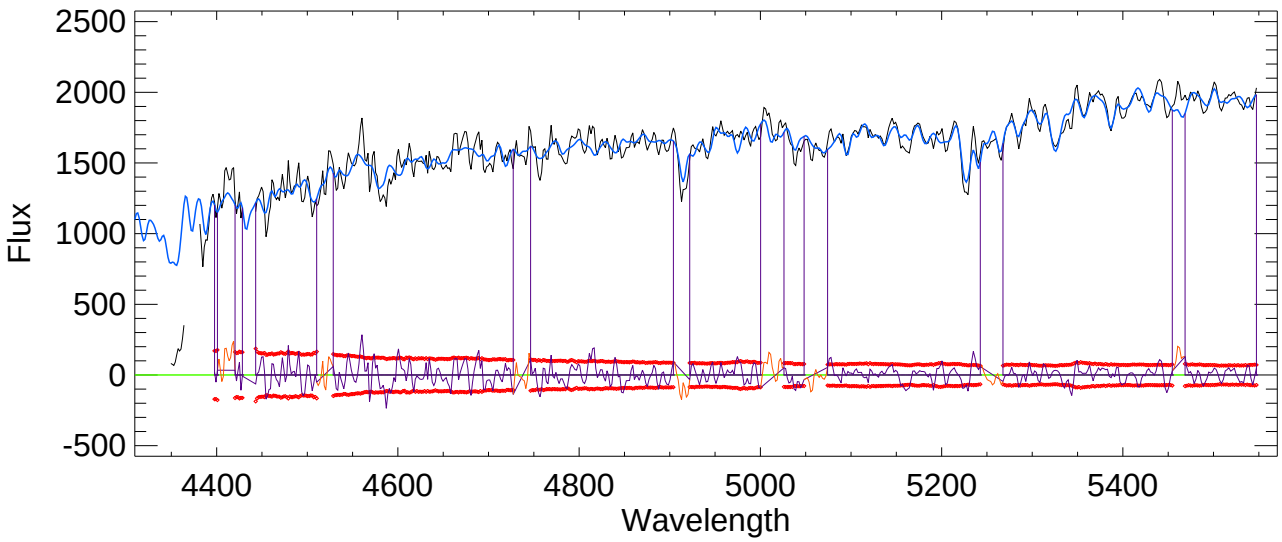

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

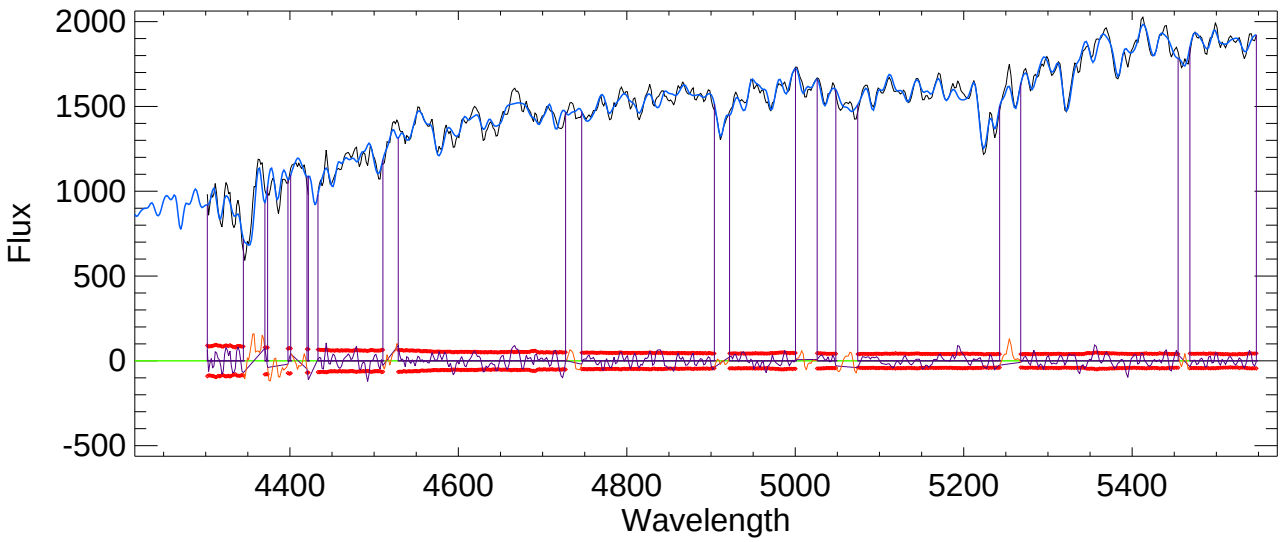

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

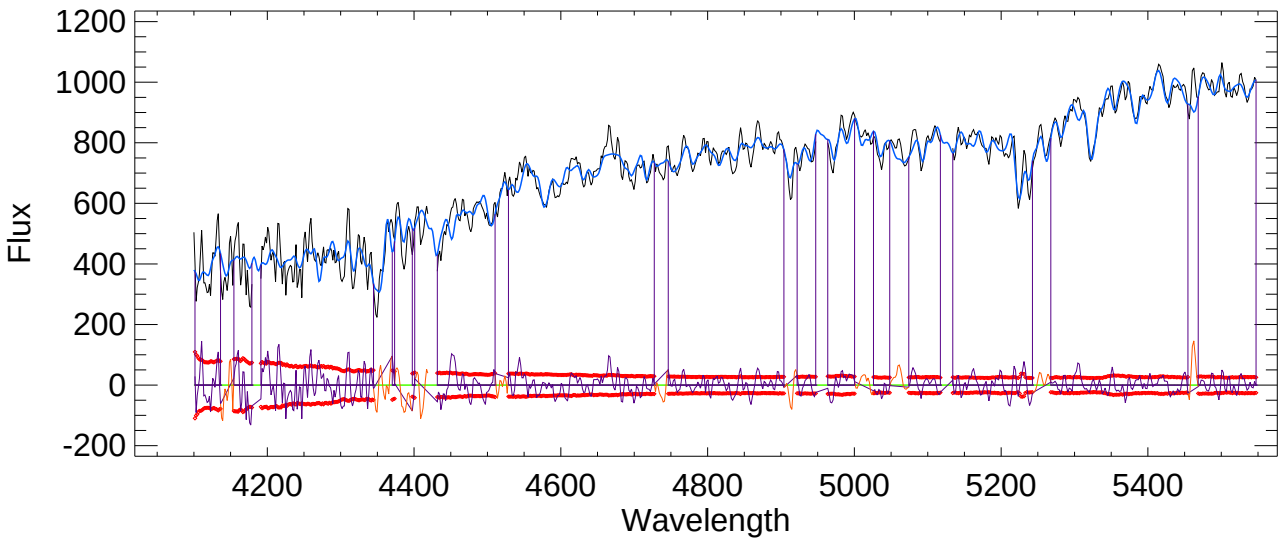

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

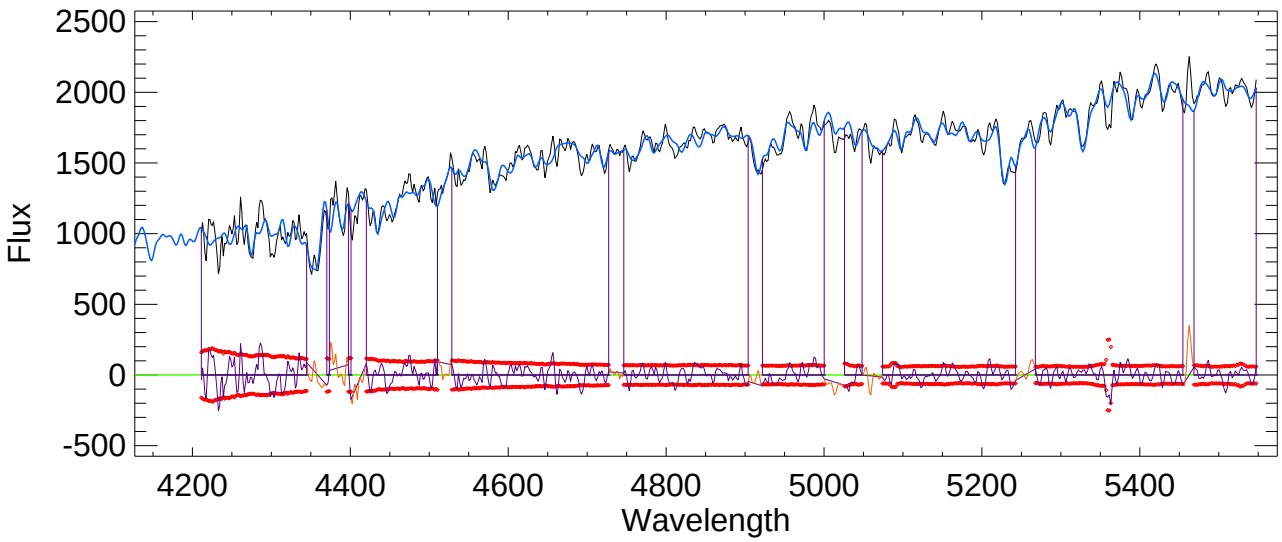

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

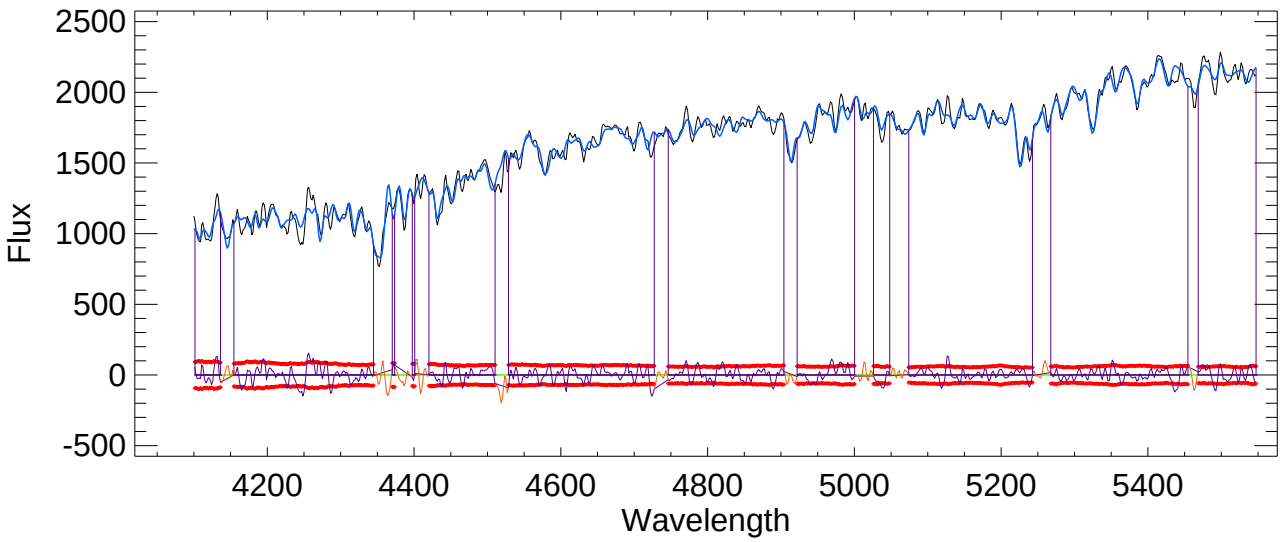

8000
6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

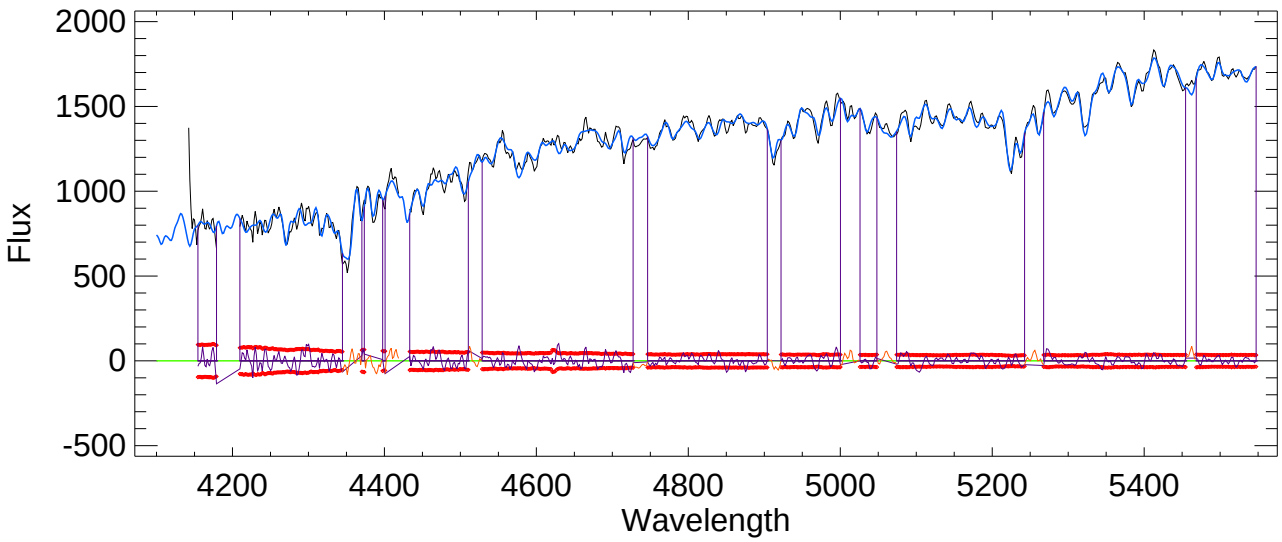

2500
2000
1500
1000
500
0
-500
Flux
4400
4600
4800
5000
5200
5400
Wavelength

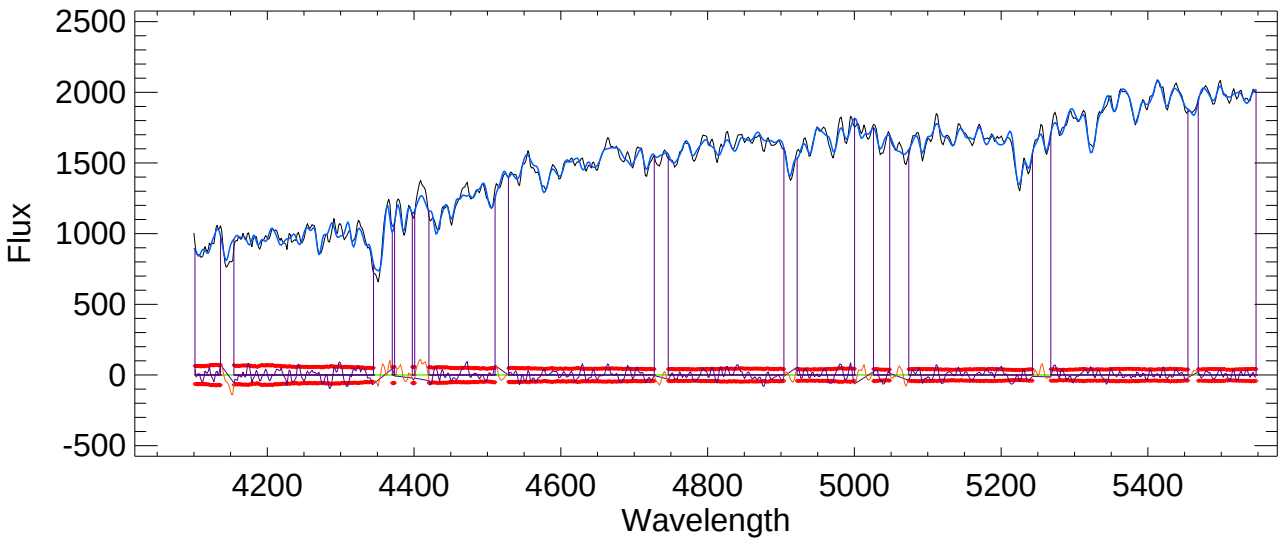

2000
1500
1000
500
0
-500
Flux
4400
4600
4800
5000
5200
5400
Wavelength

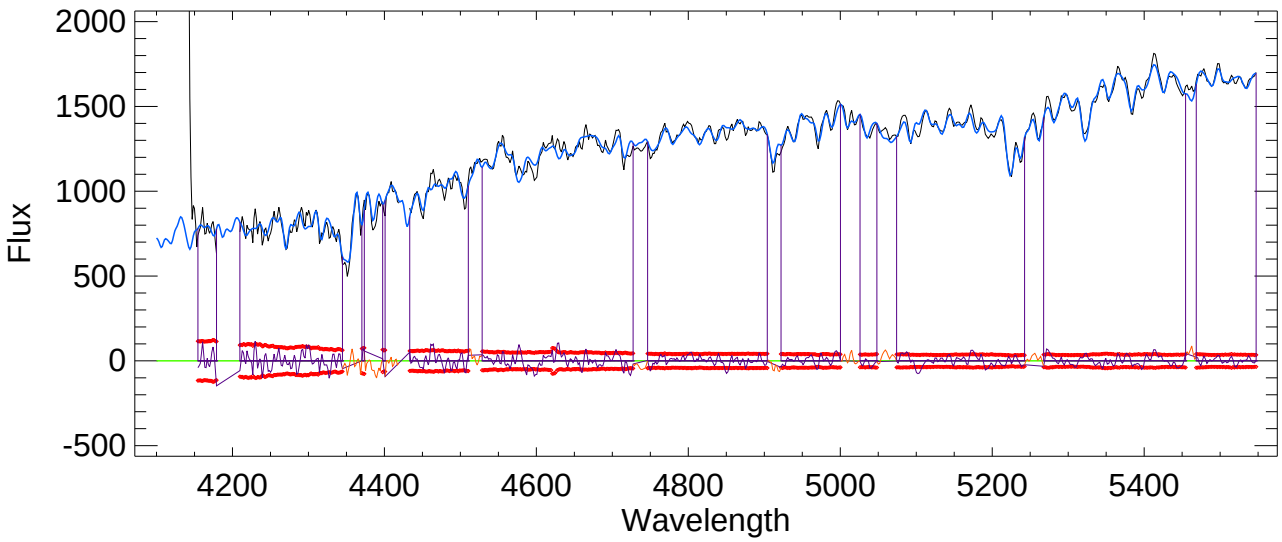

1200
1000
800
600
400
200
0
-200
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

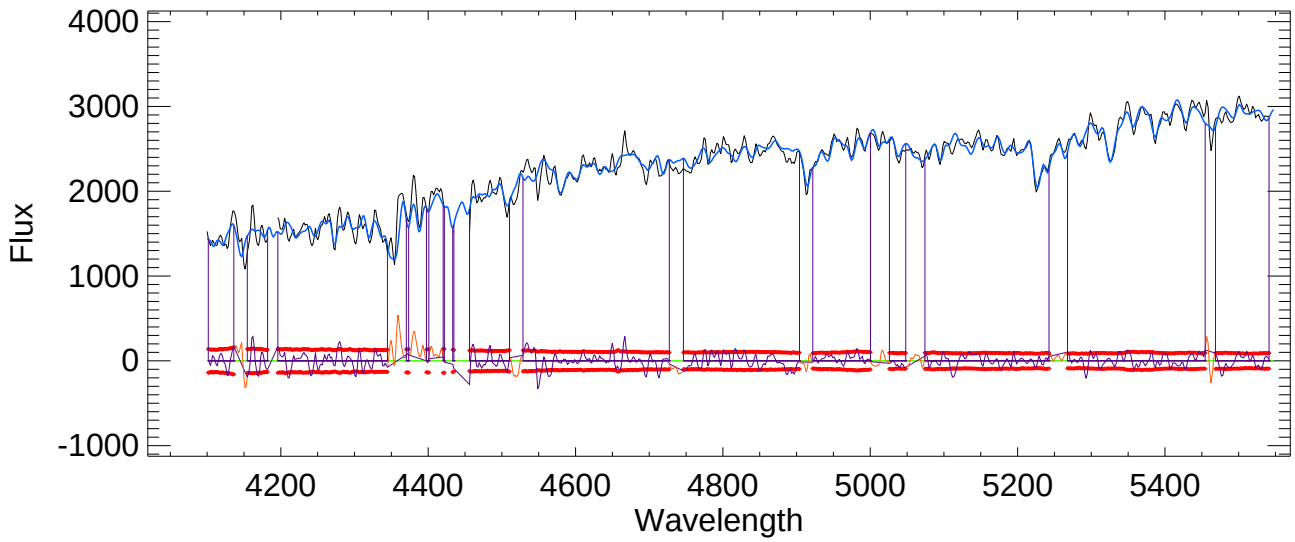

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

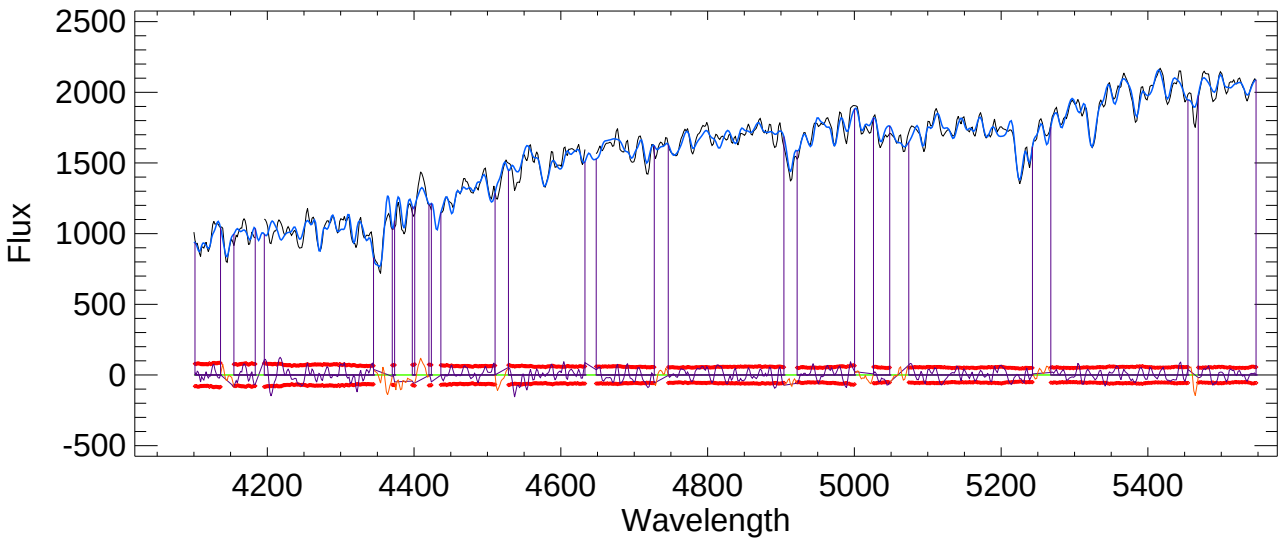

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

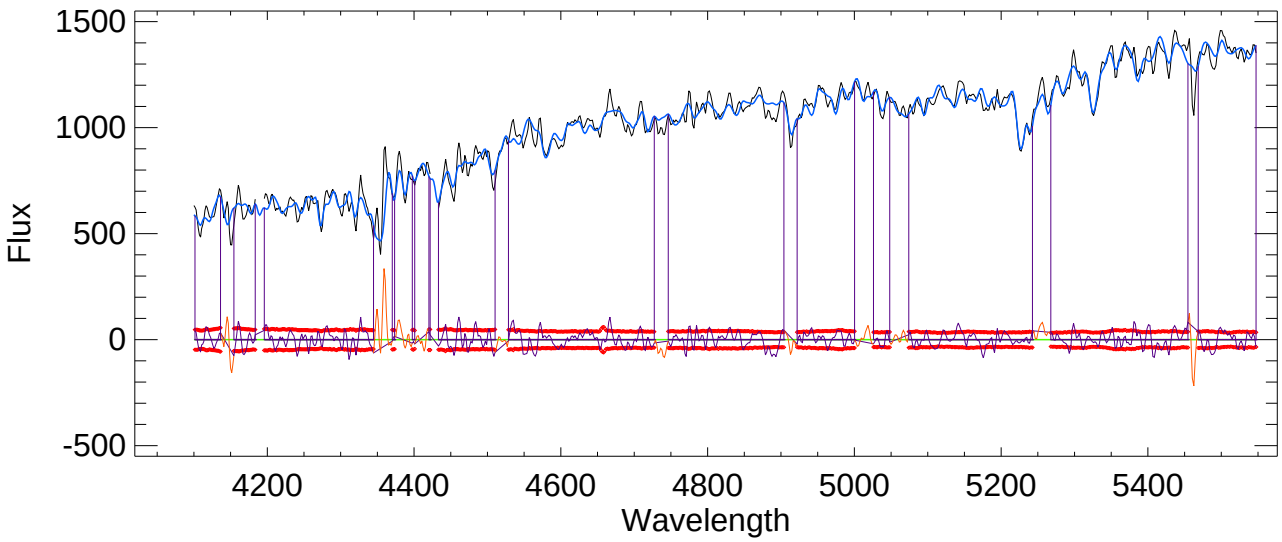

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

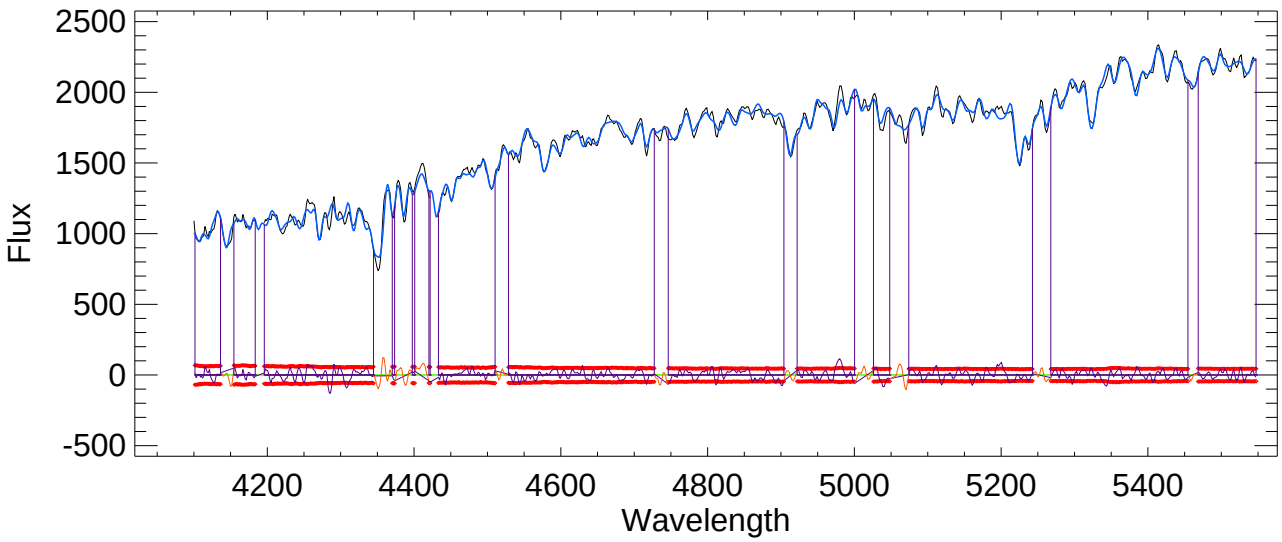

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

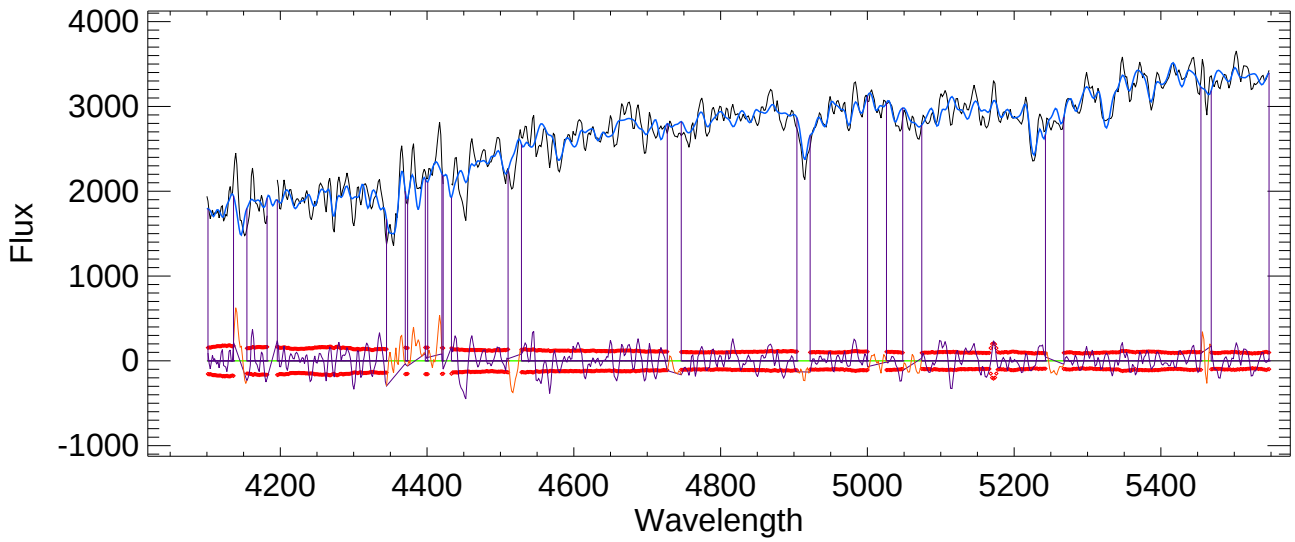

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

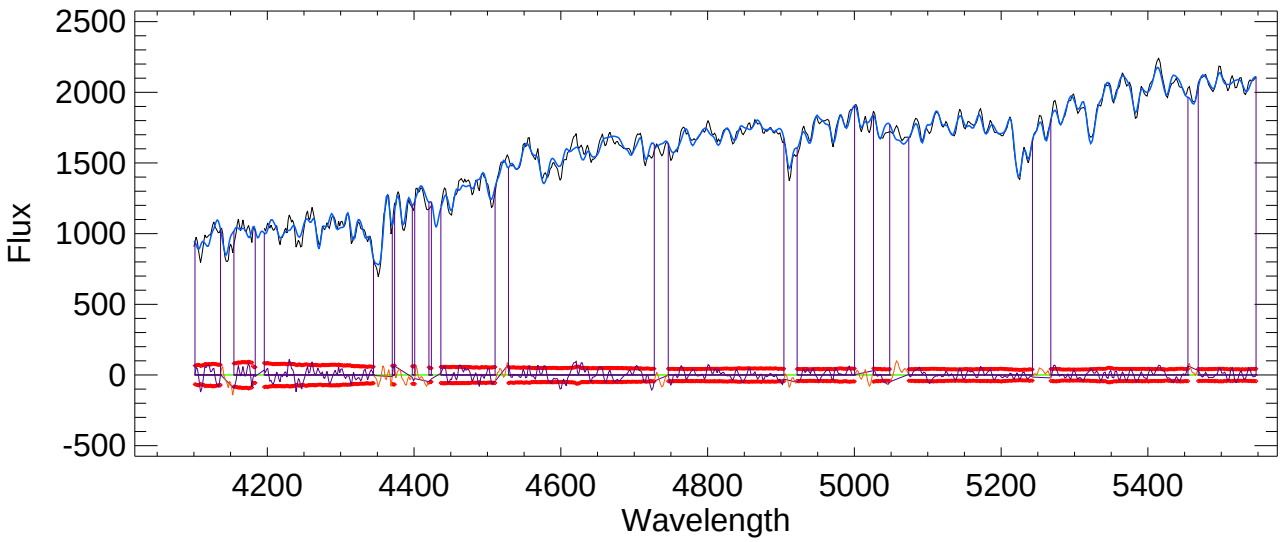

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

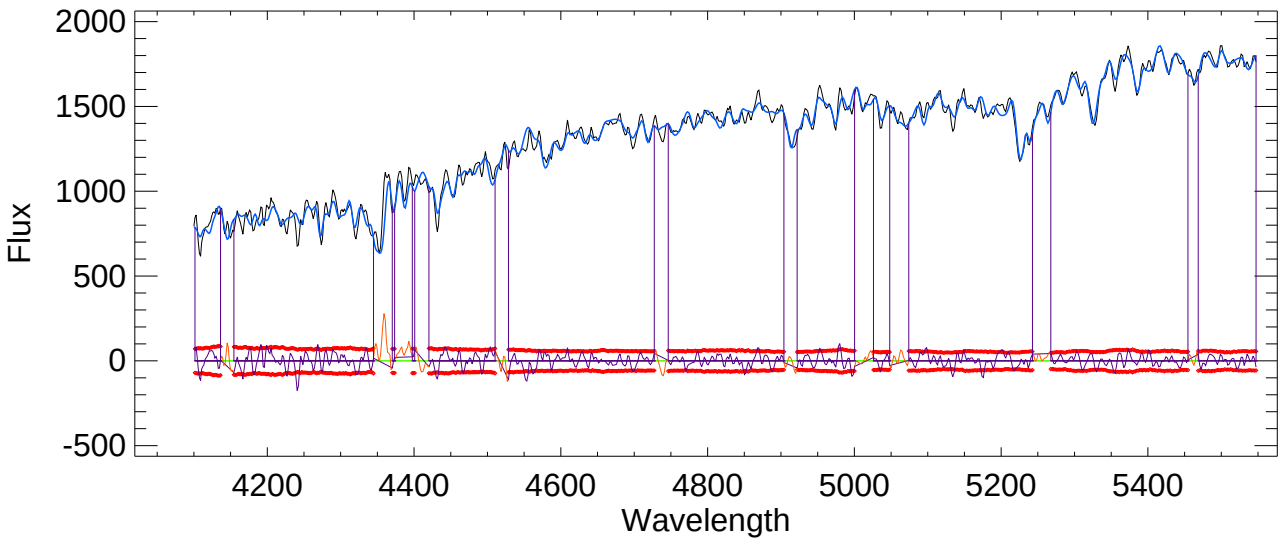

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

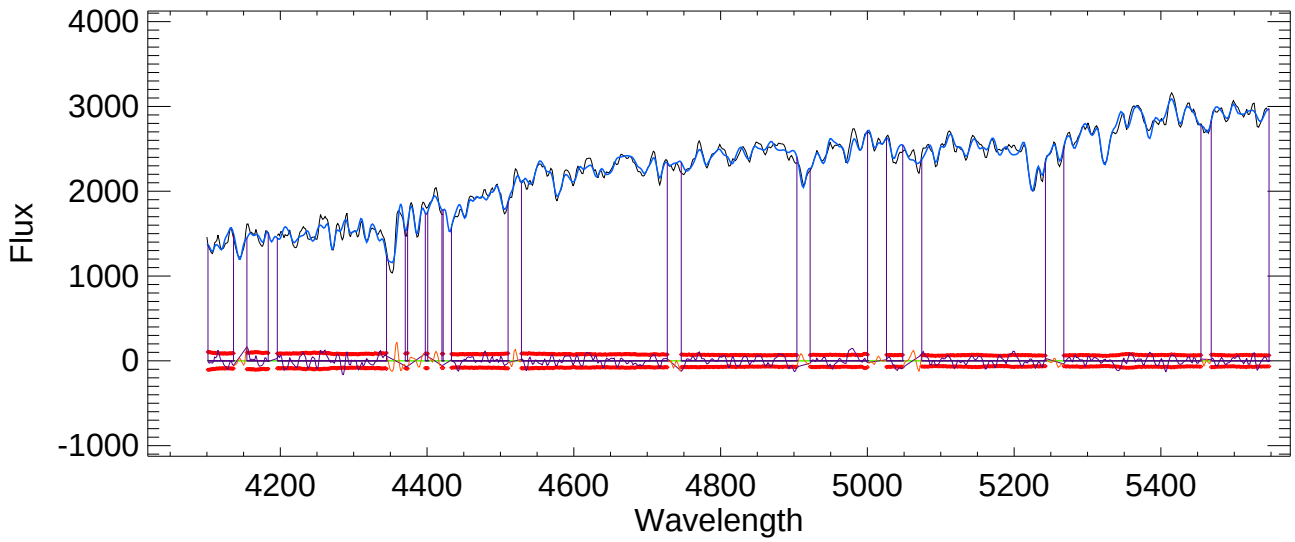

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

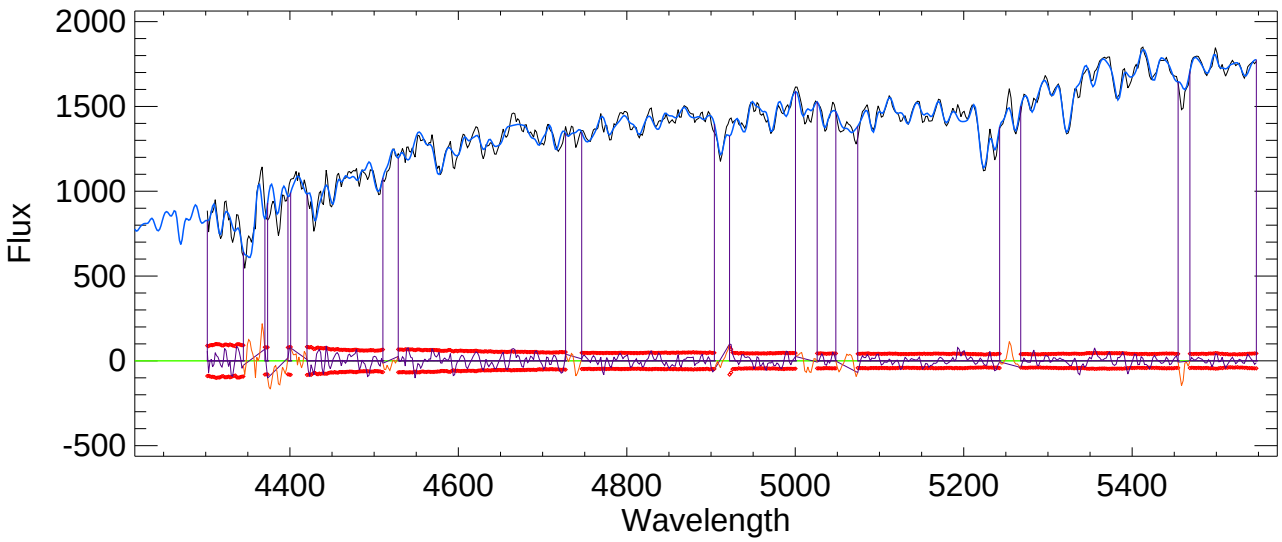

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

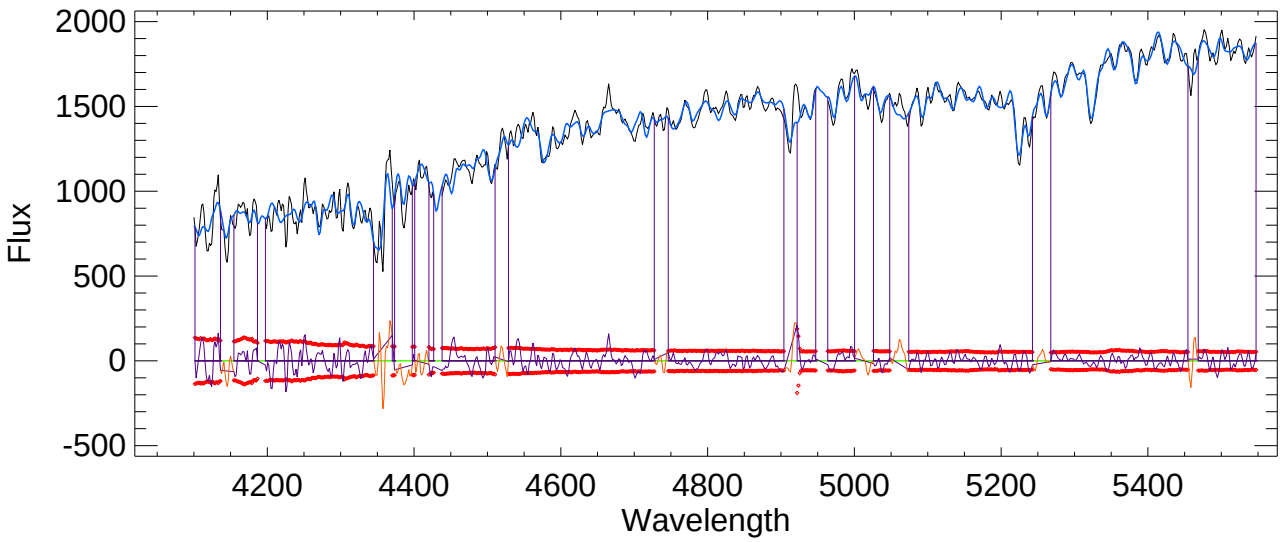

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

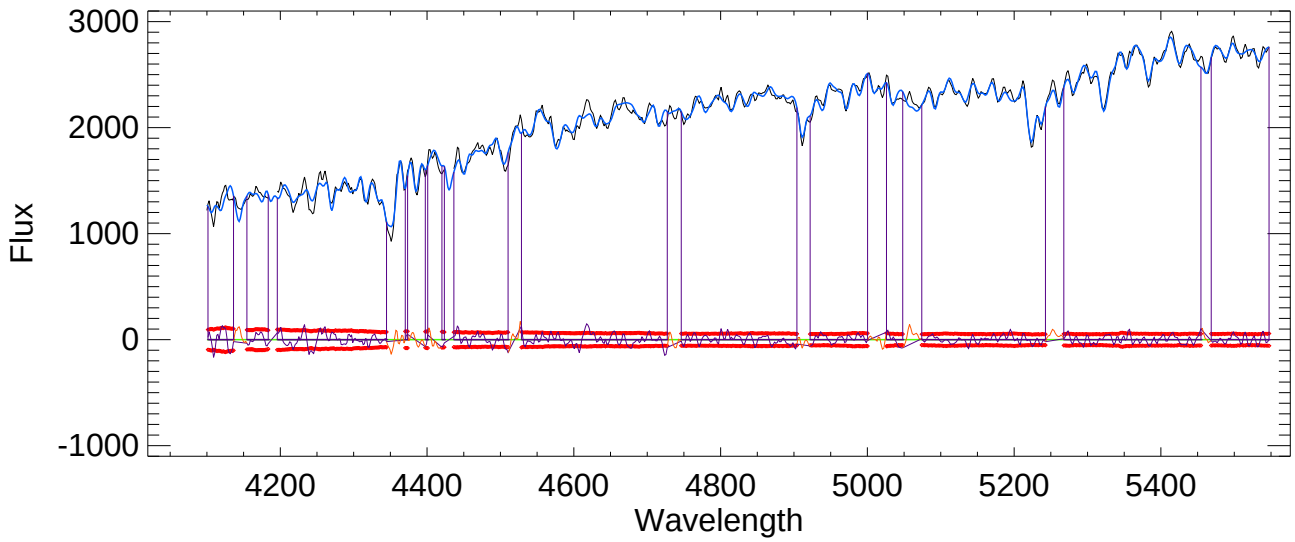

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

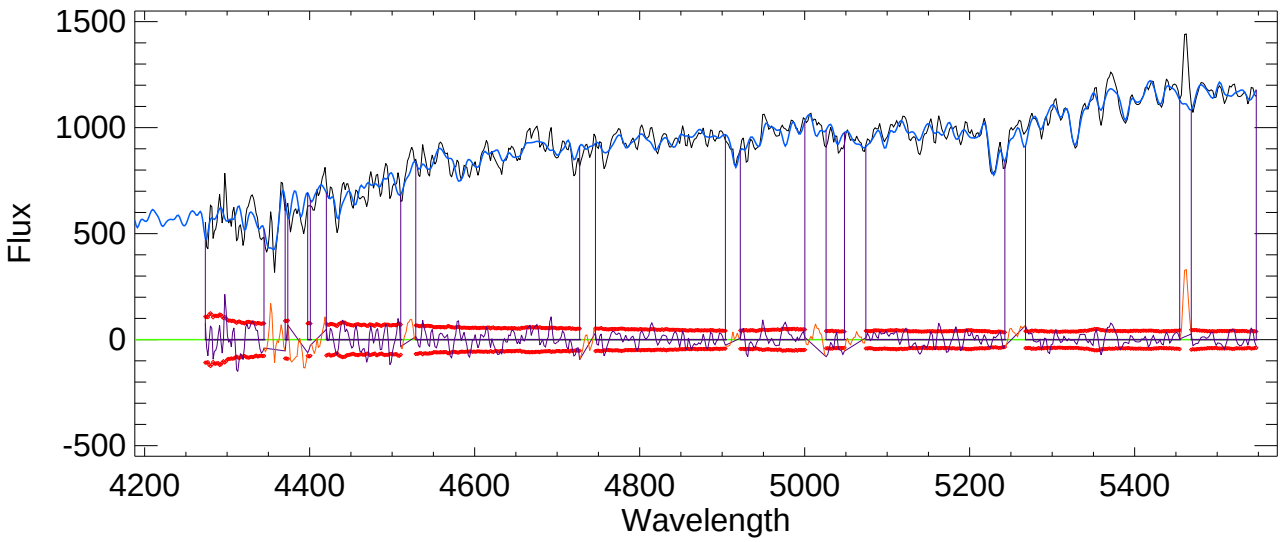

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

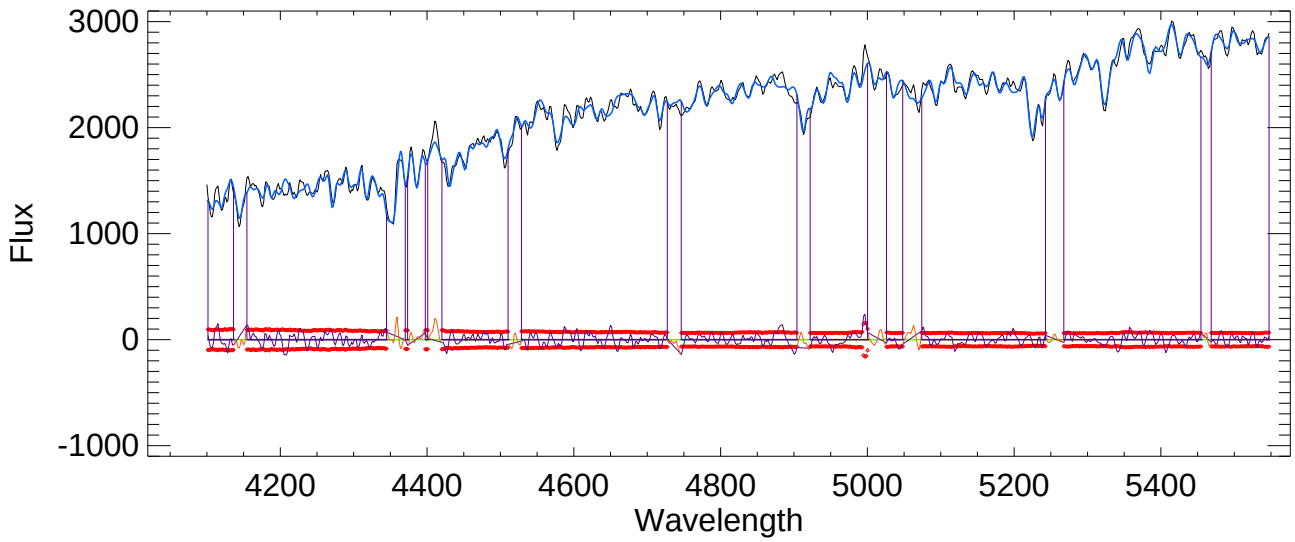

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

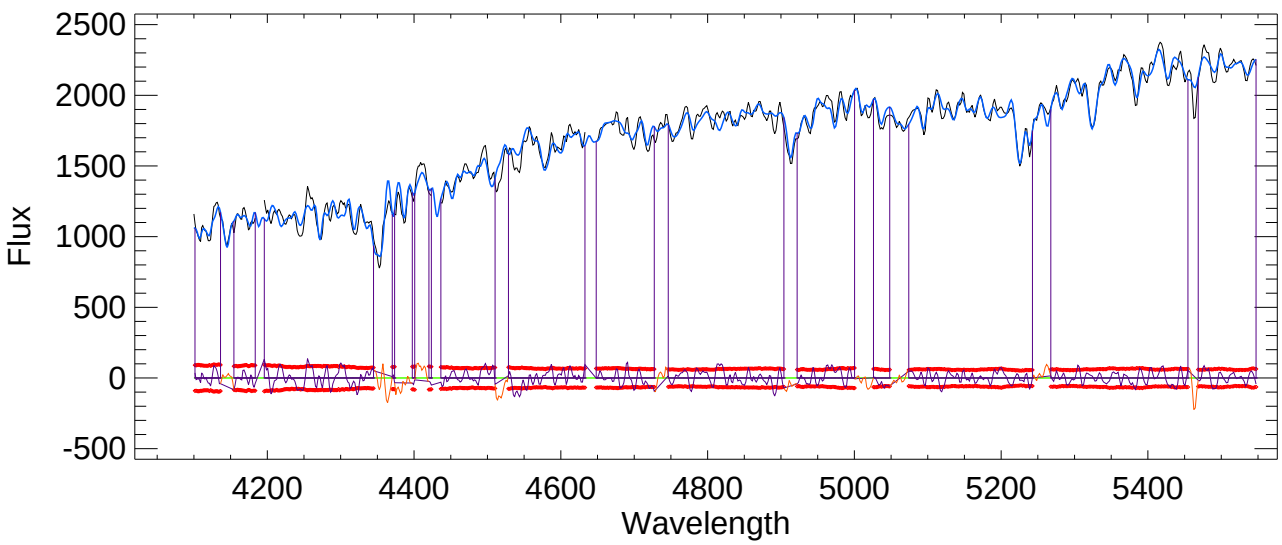

2000
1500
1000
500
0
-500
Flux
4400
4600
4800
5000
5200
5400
Wavelength

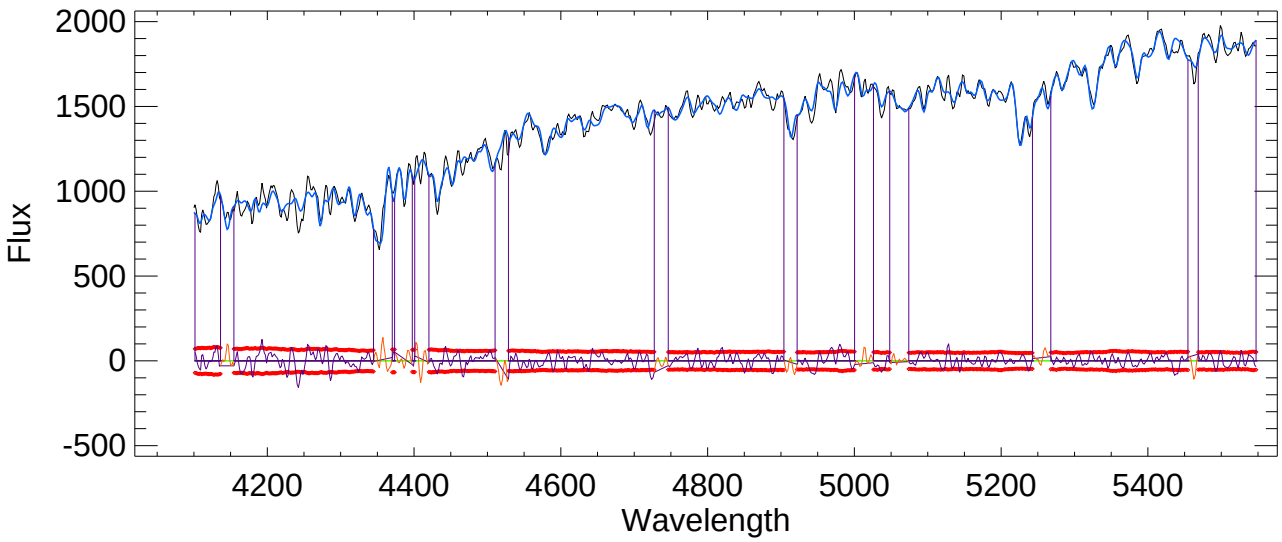

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

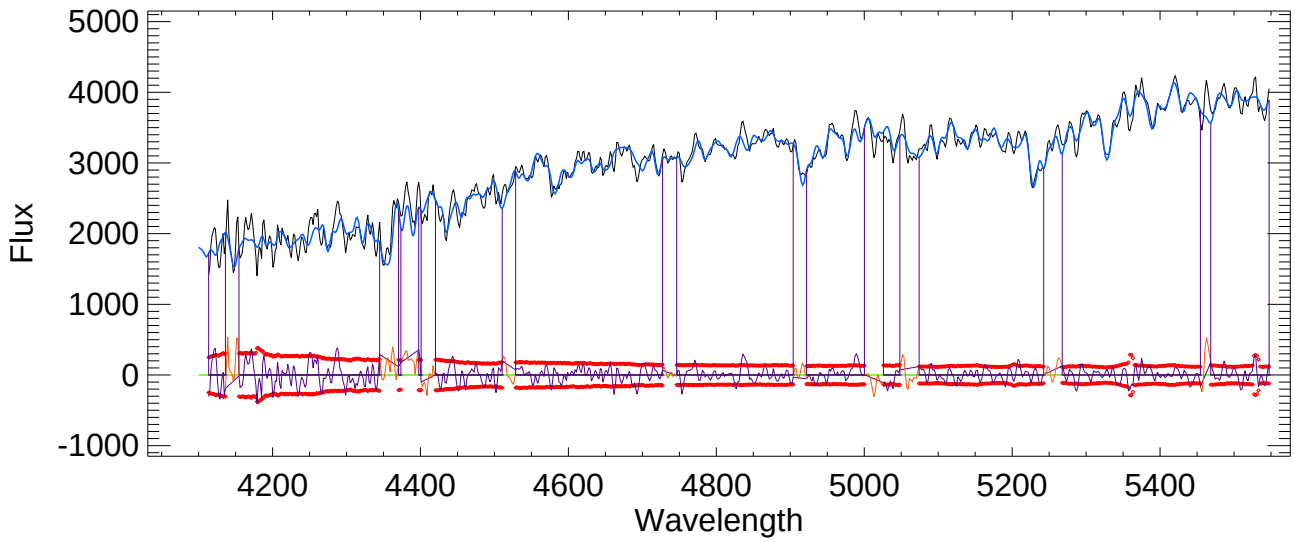

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

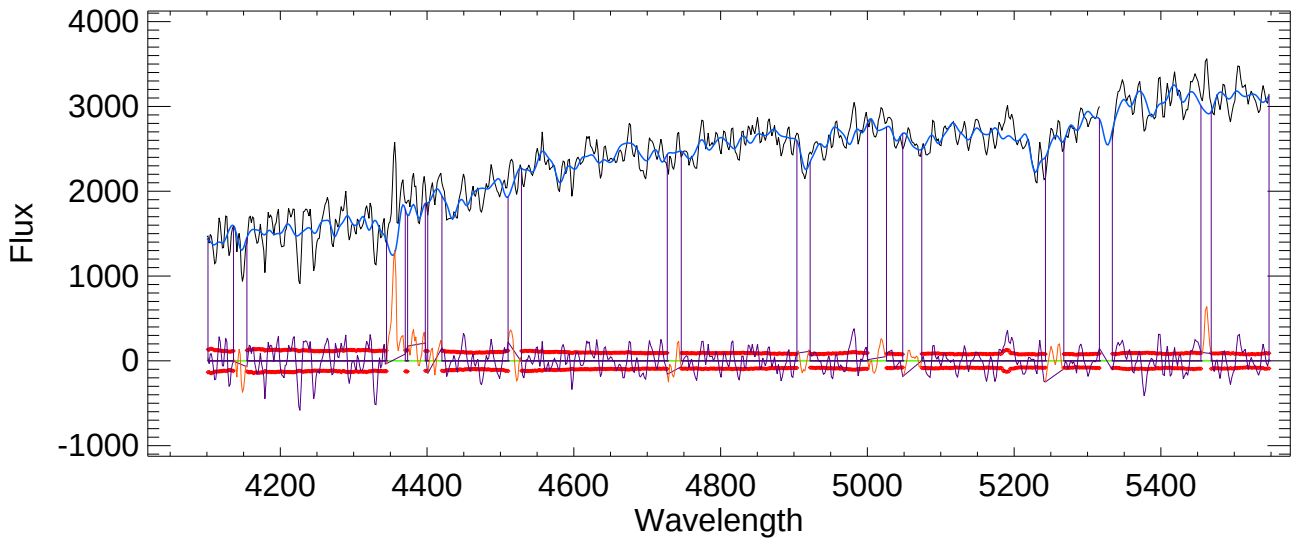

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

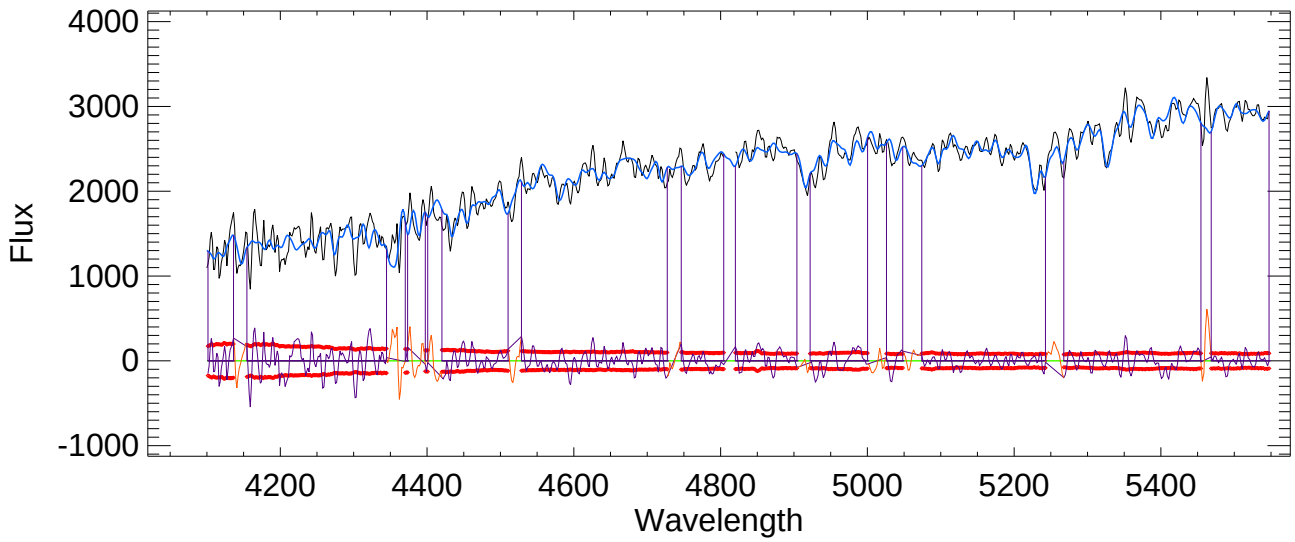

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

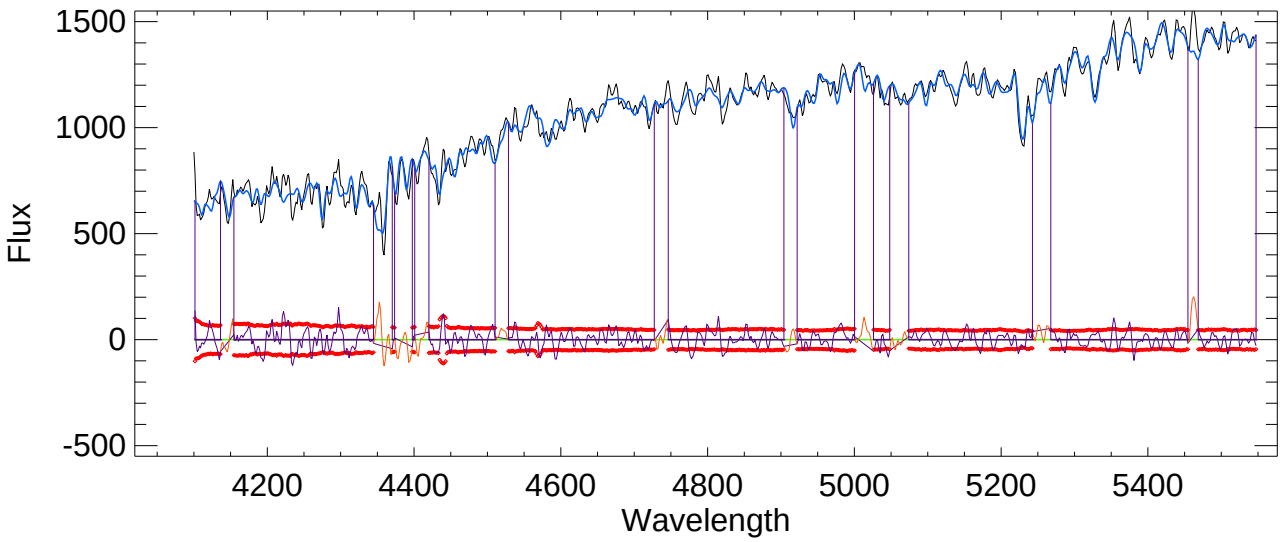

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

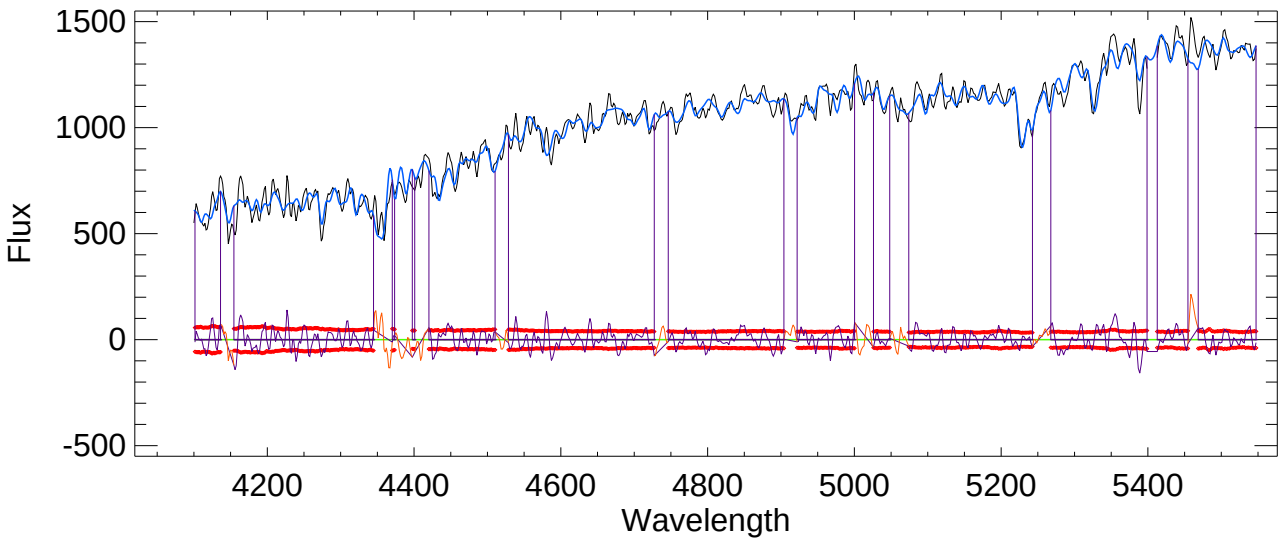

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

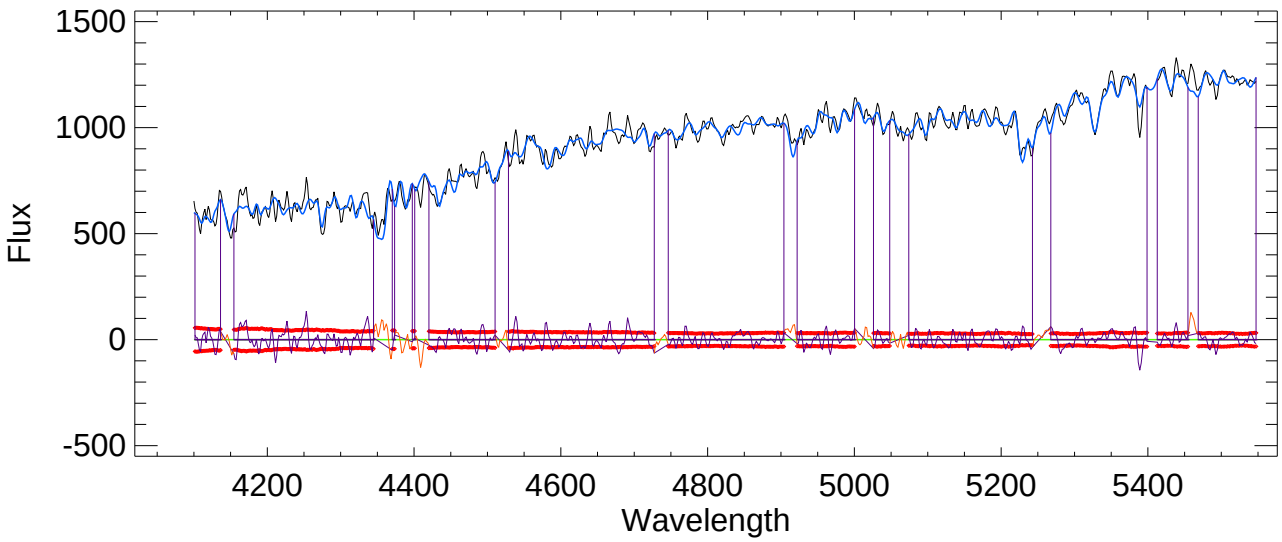

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

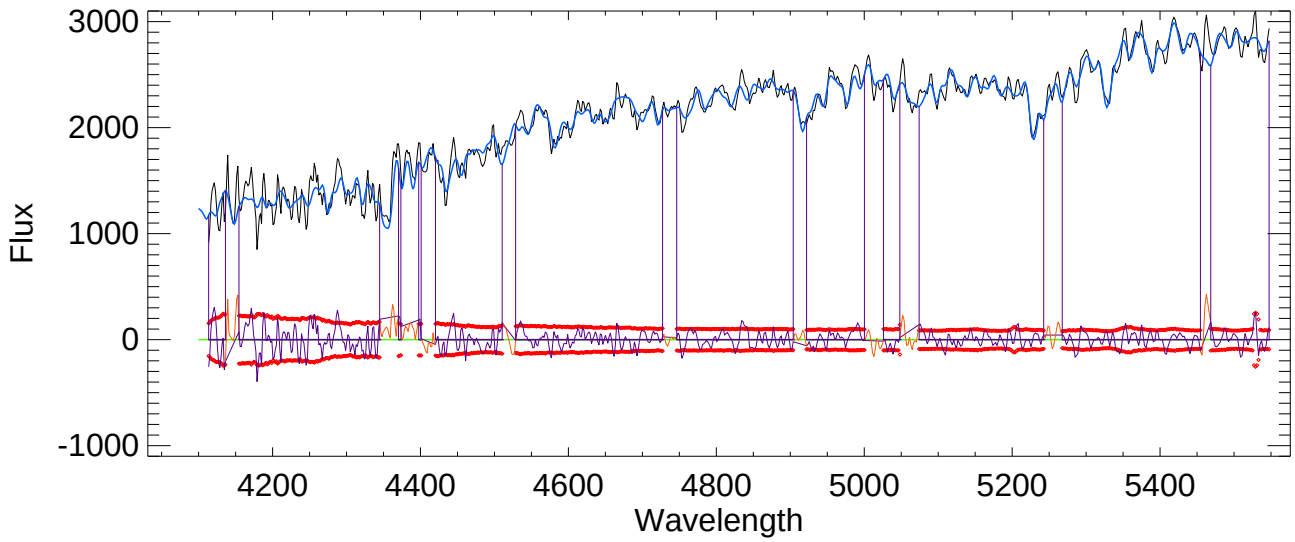

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

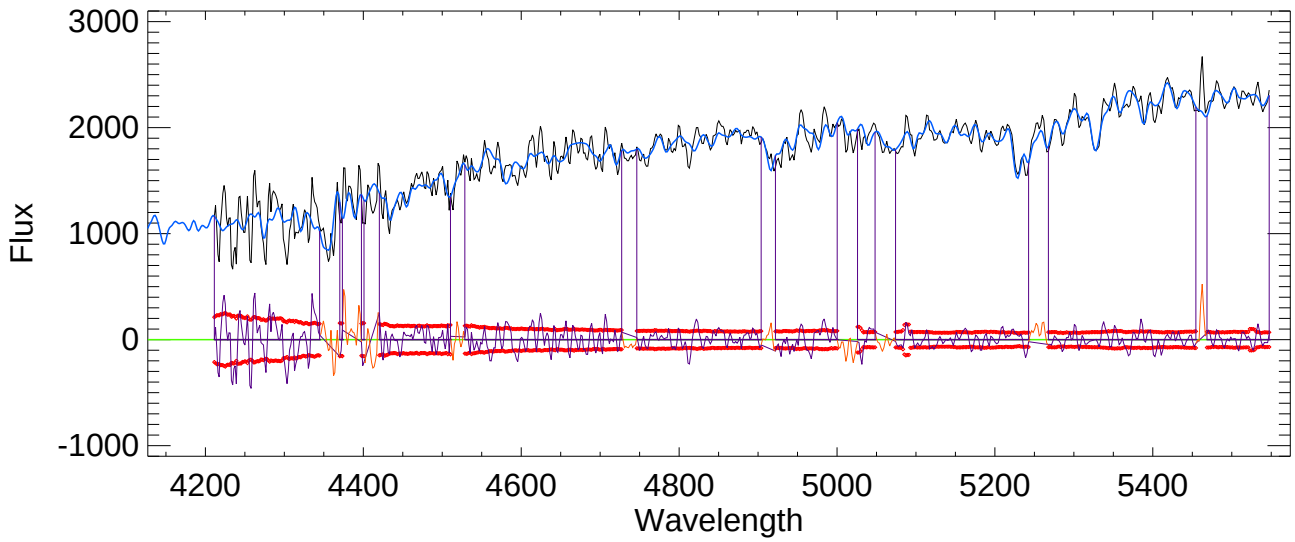

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

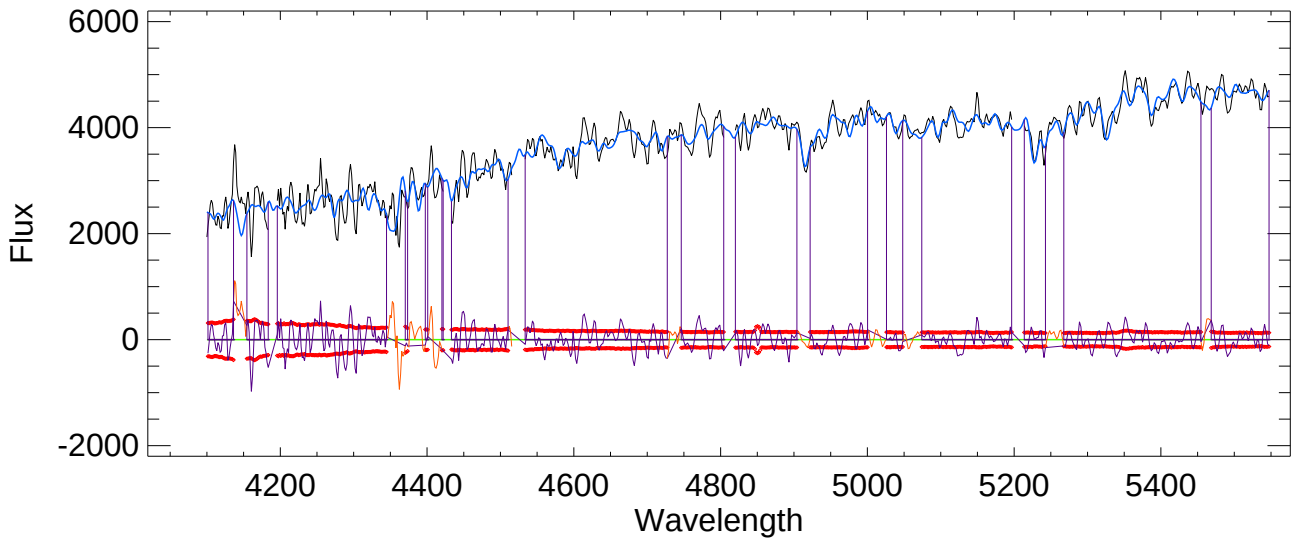

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

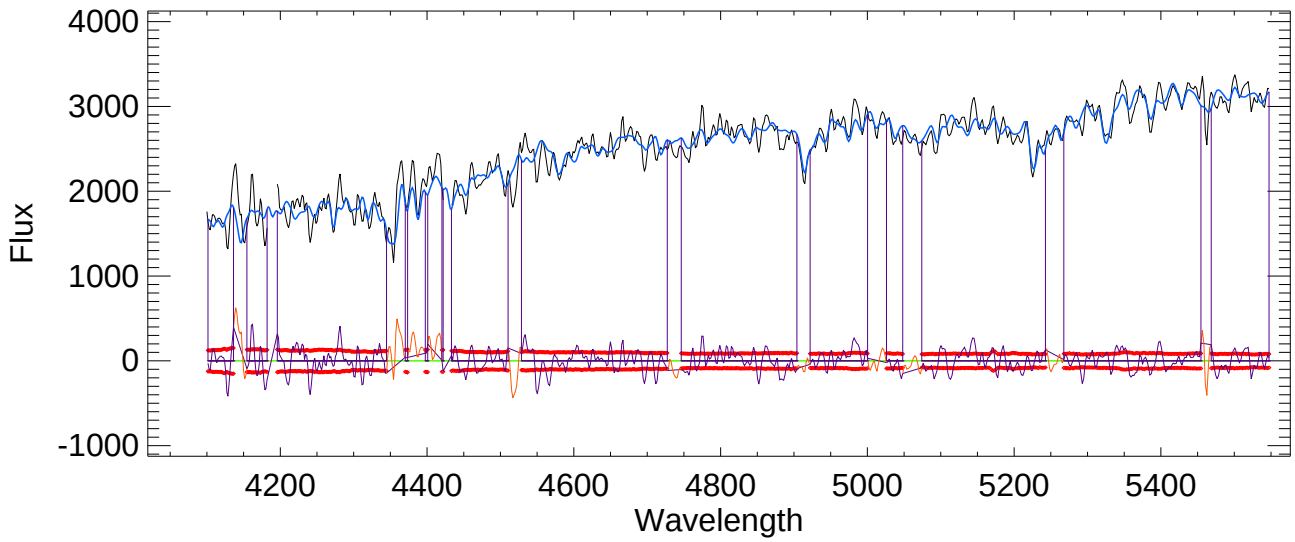

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

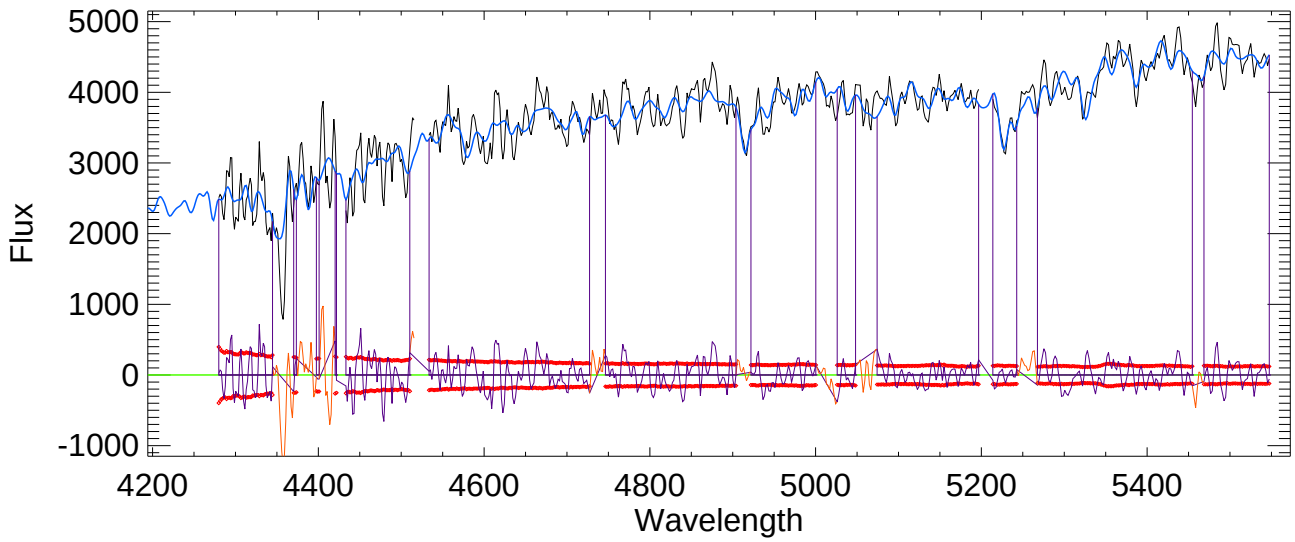

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

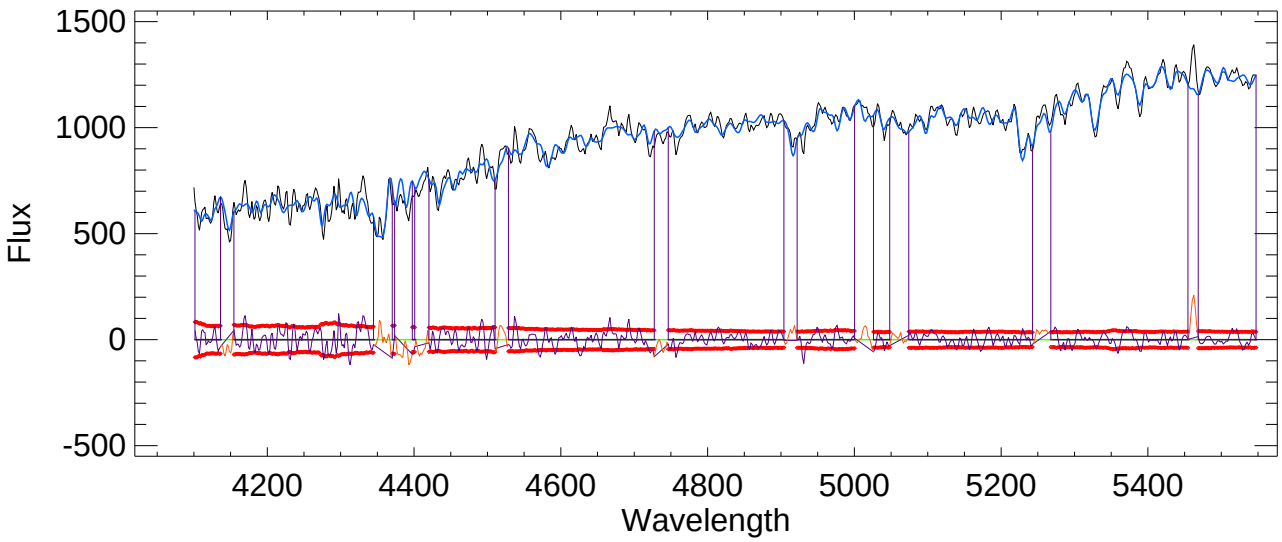

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

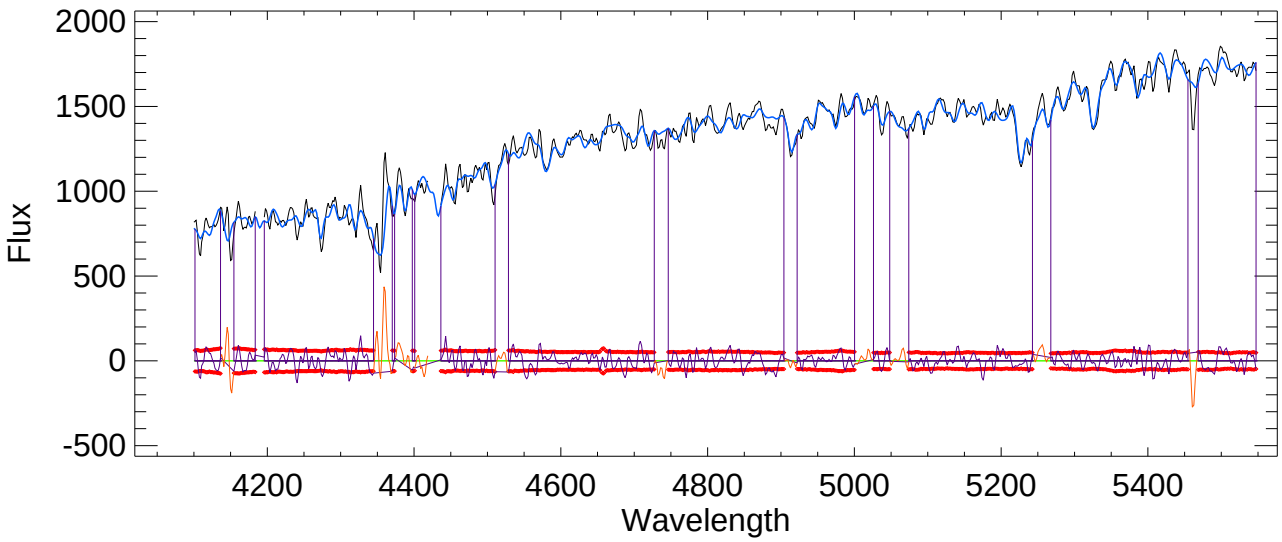

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

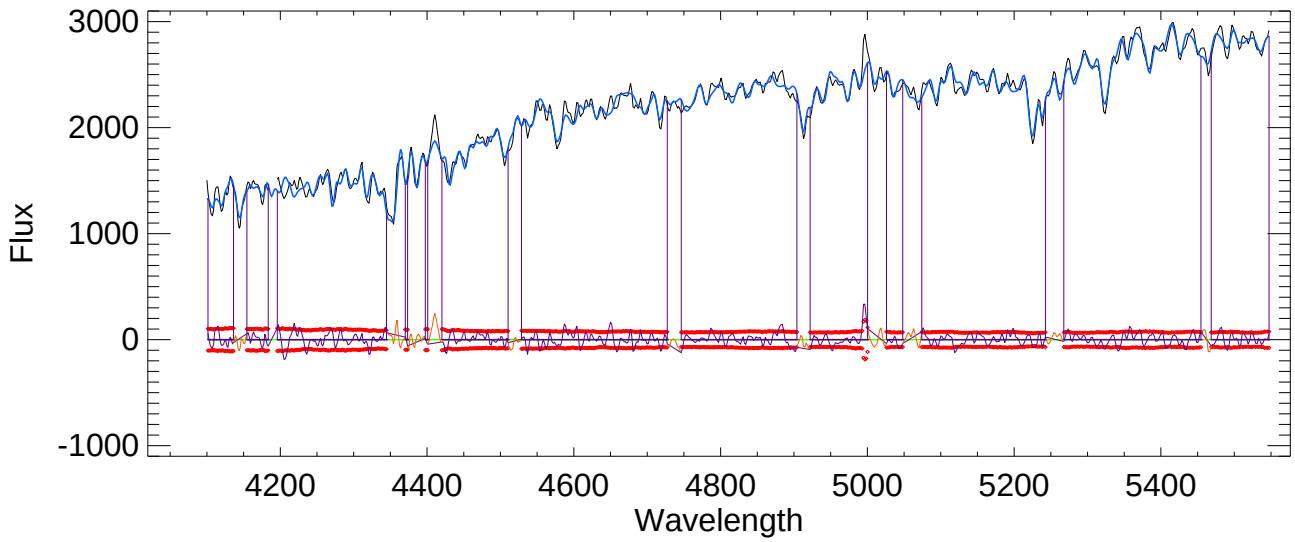

6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

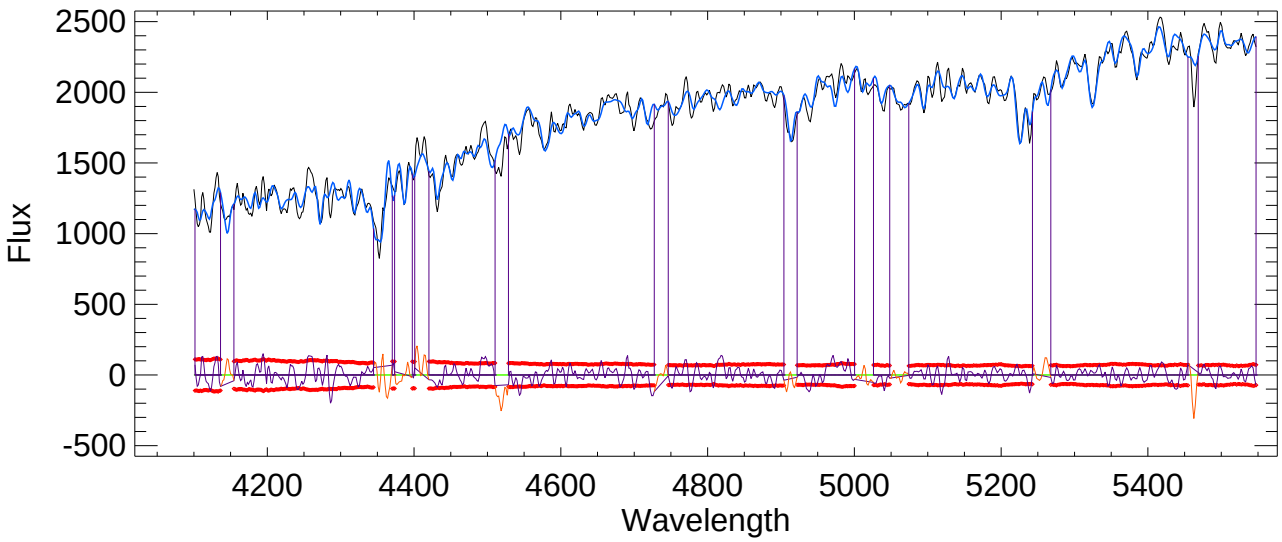

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

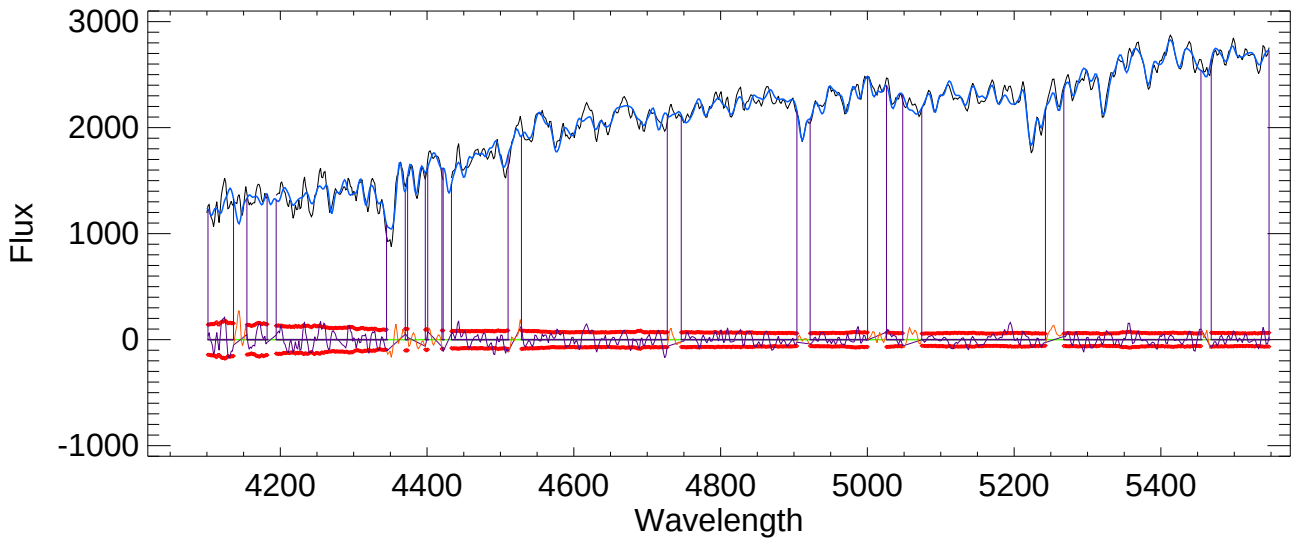

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

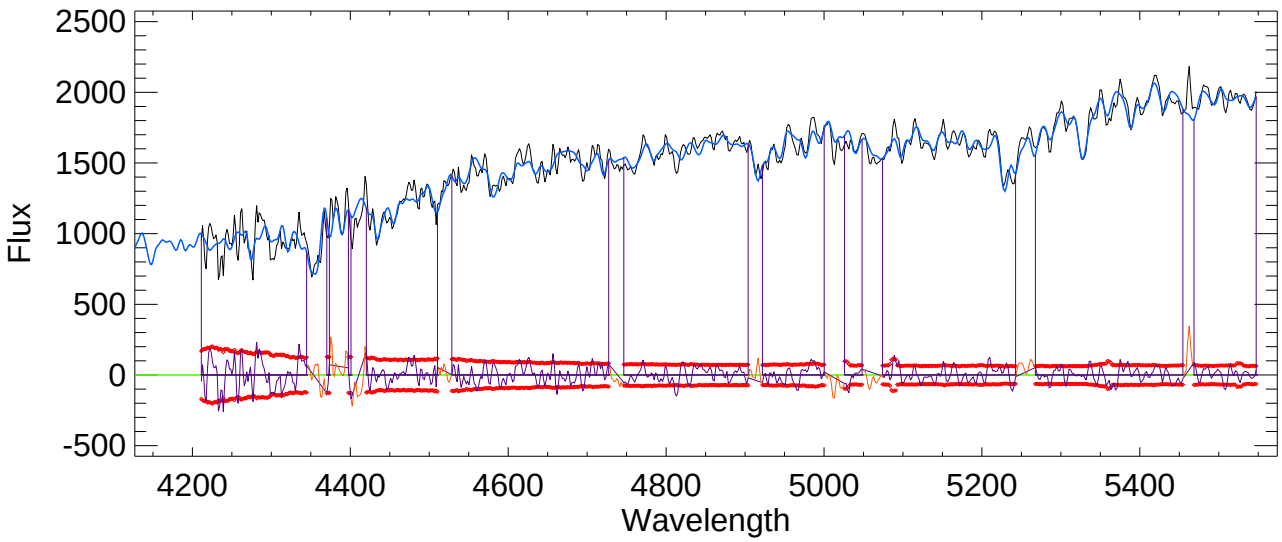

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

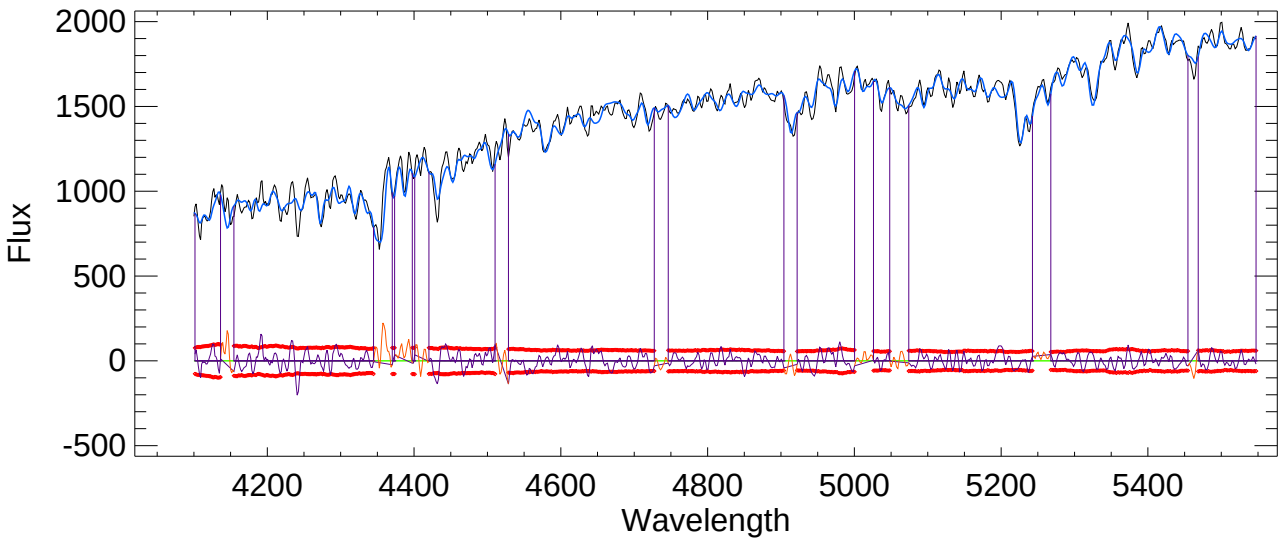

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

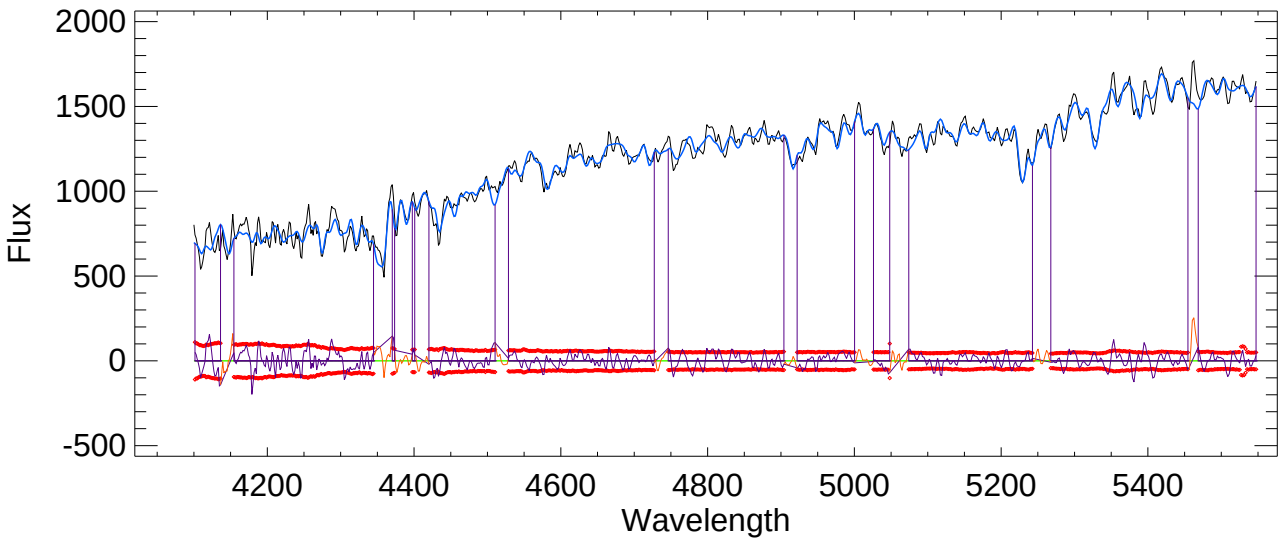

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

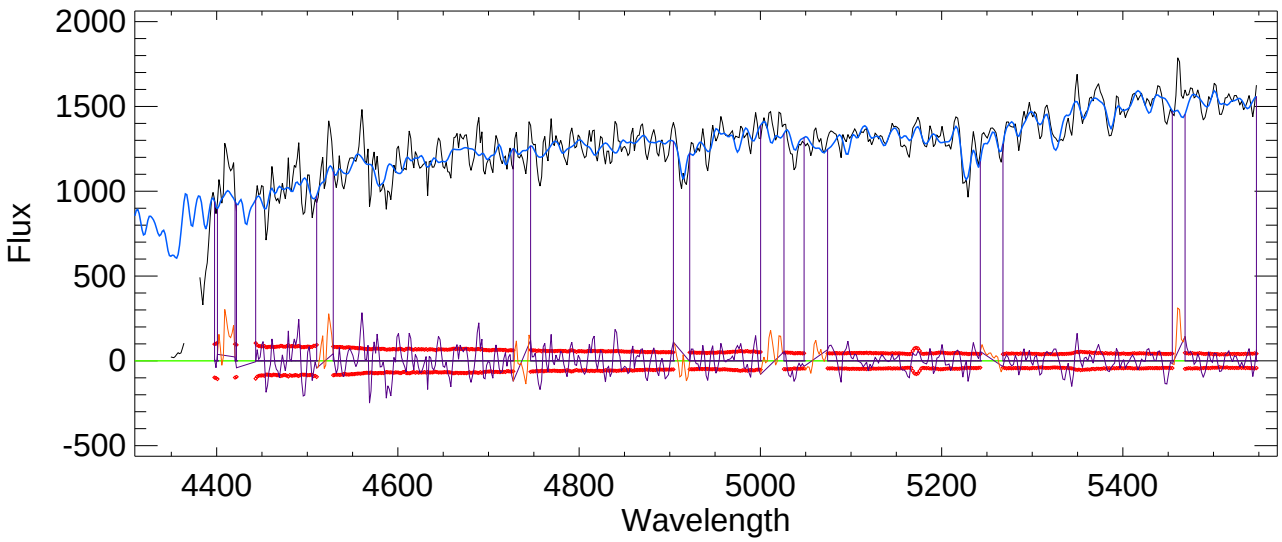

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

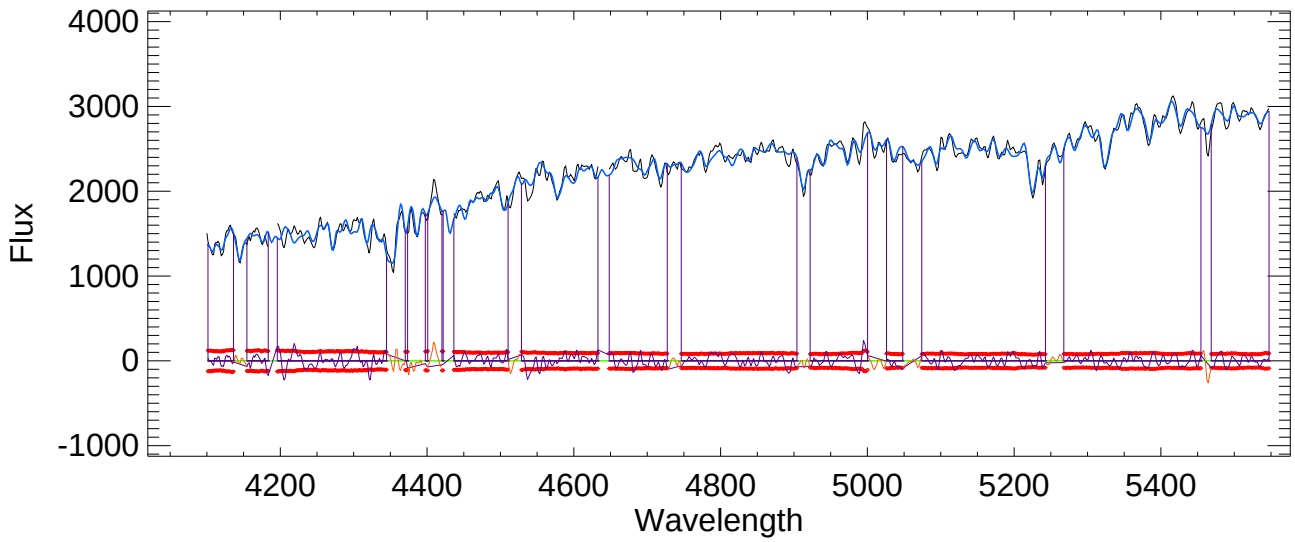

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

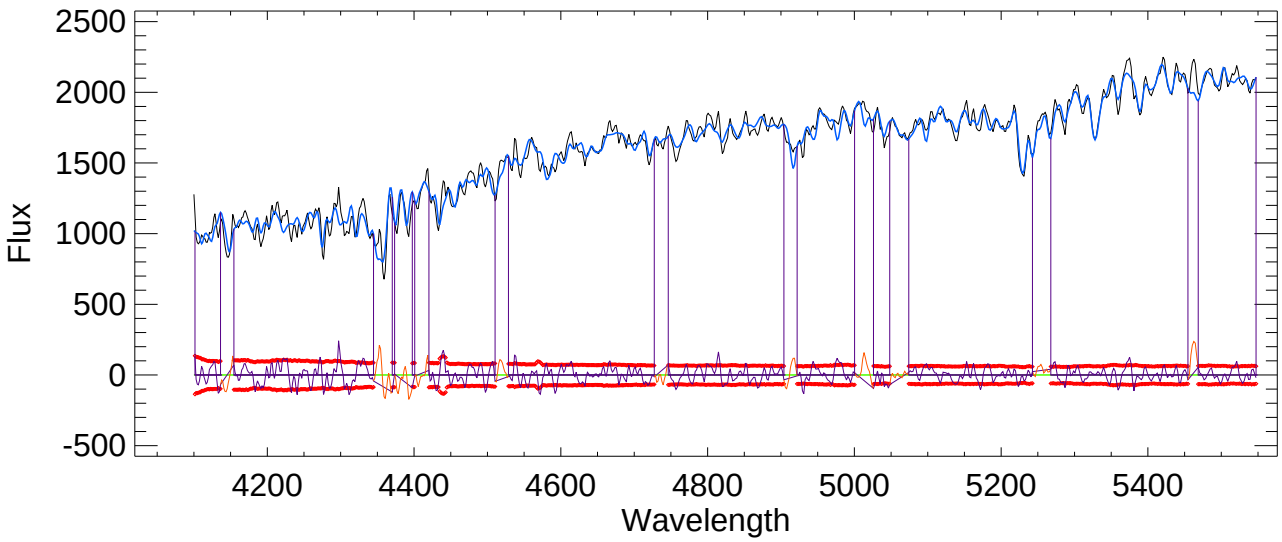

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

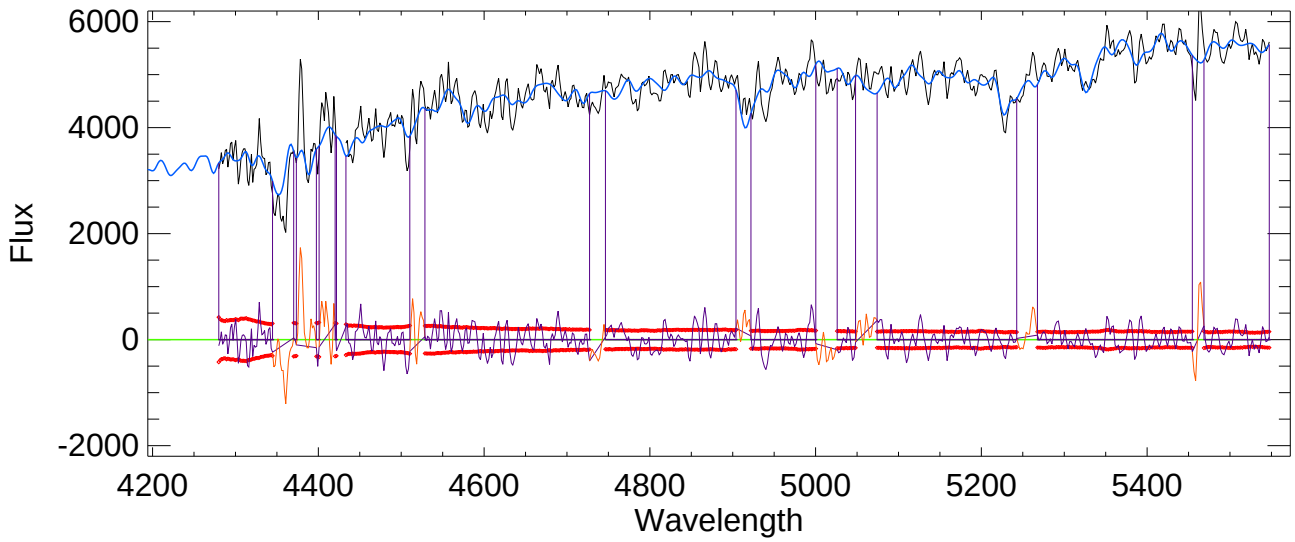

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

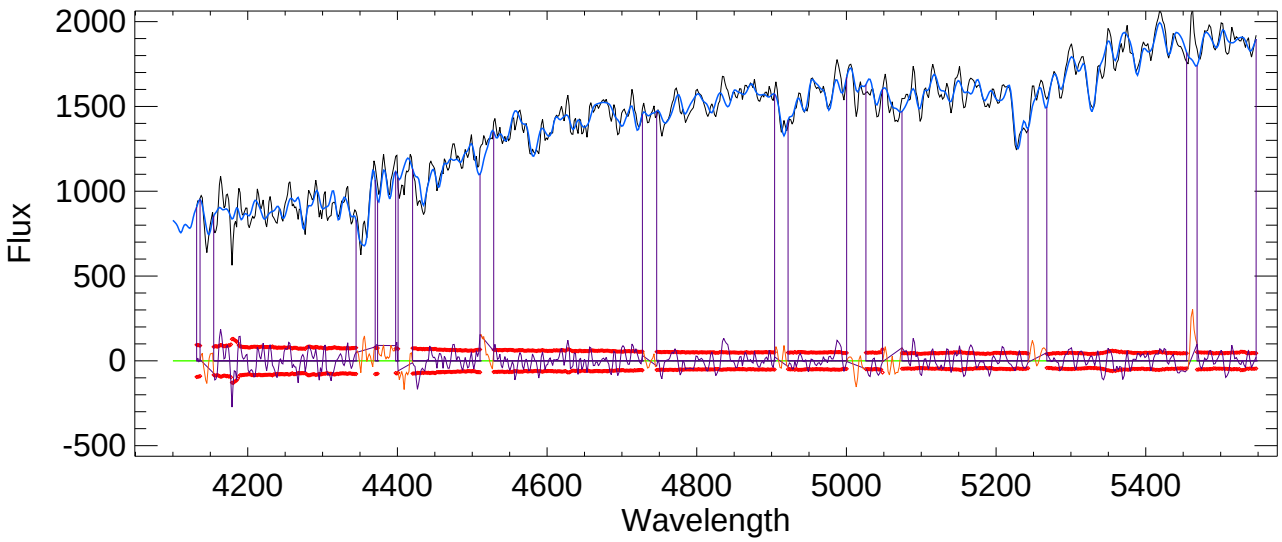

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

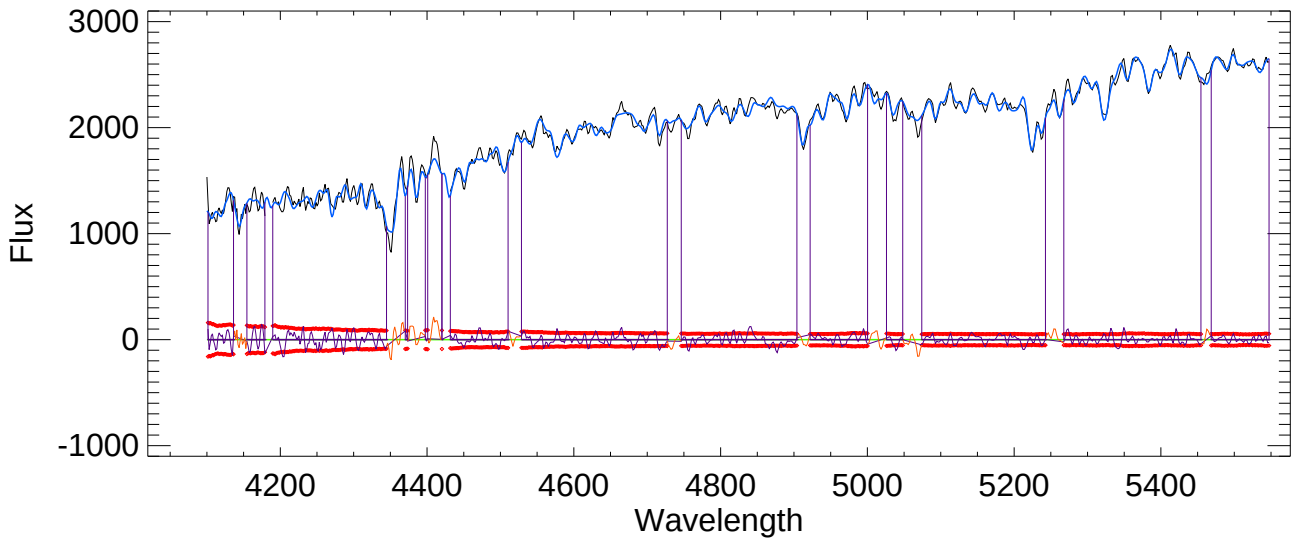

2000
1500
1000
500
0
-500
Flux
4400
4600
4800
5000
5200
5400
Wavelength

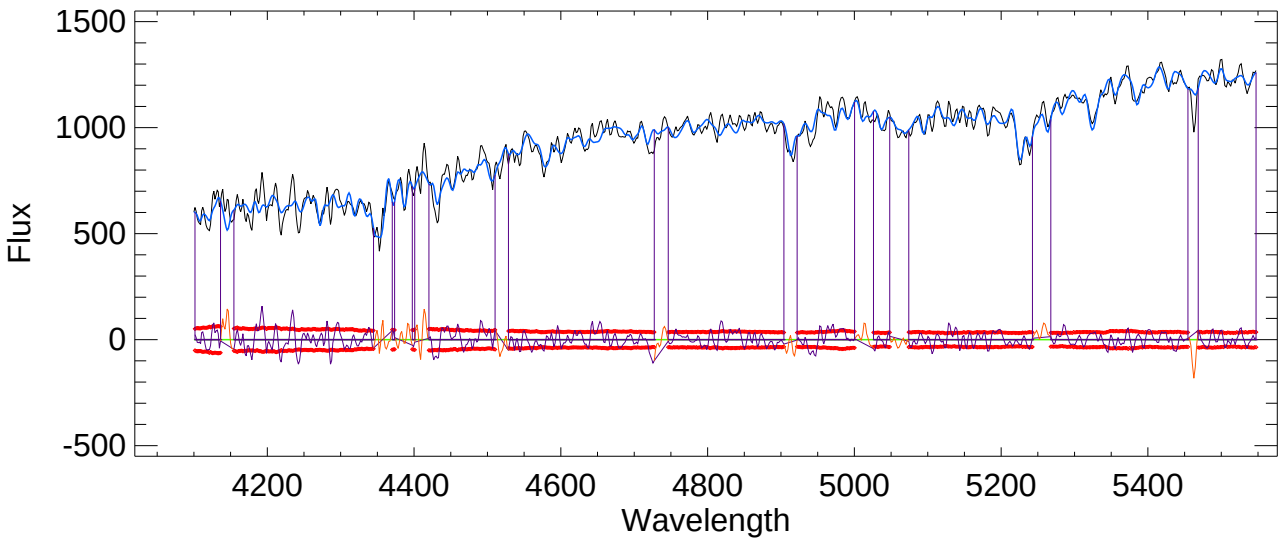

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

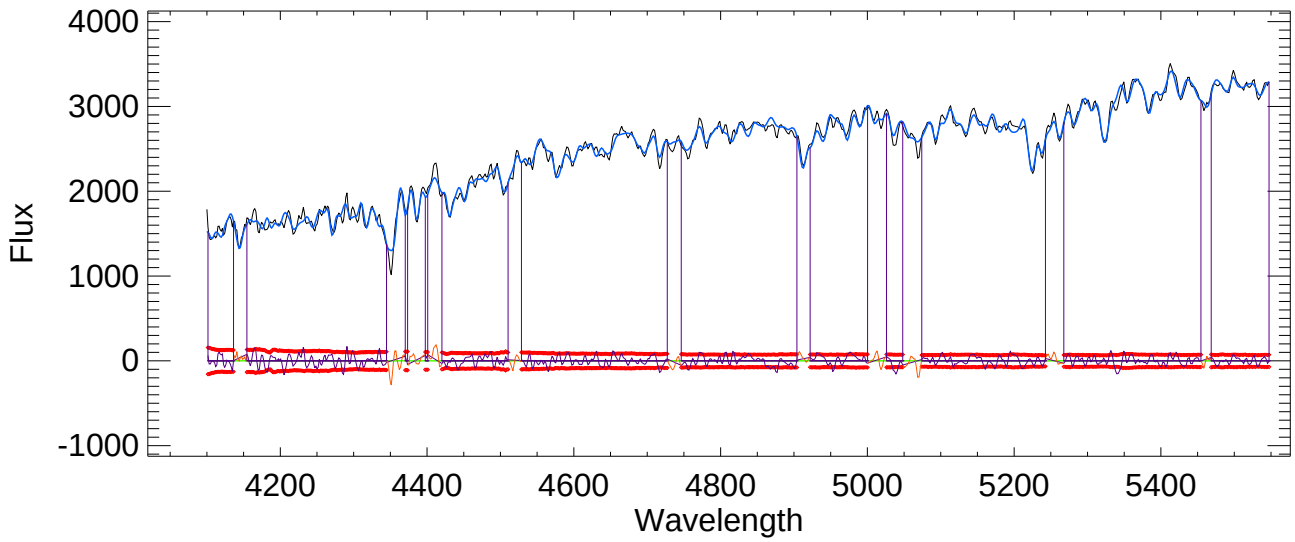

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

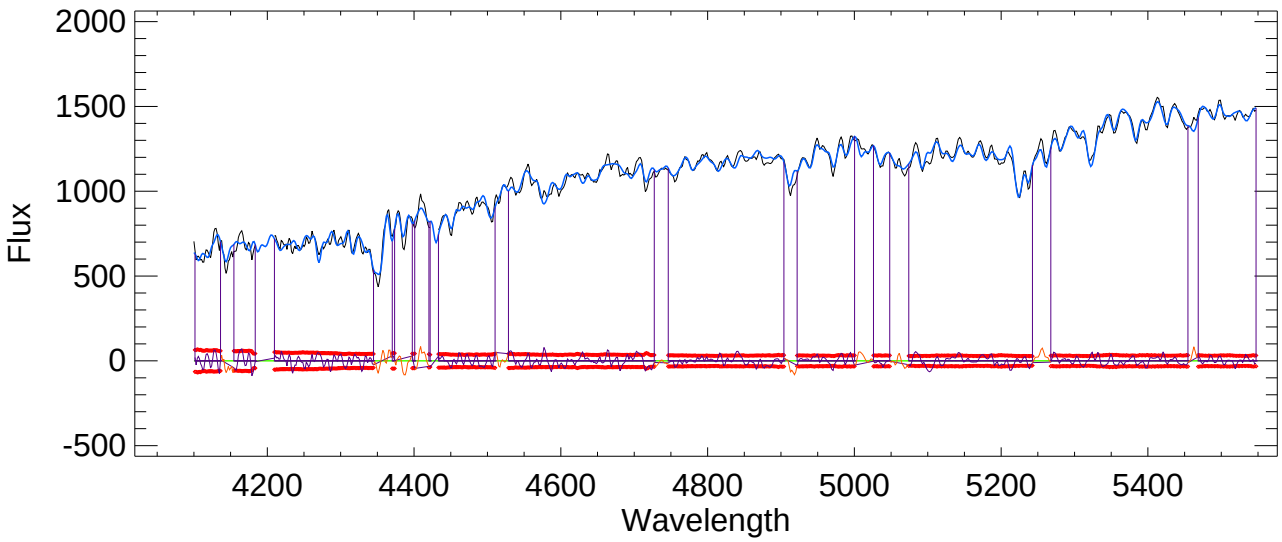

6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

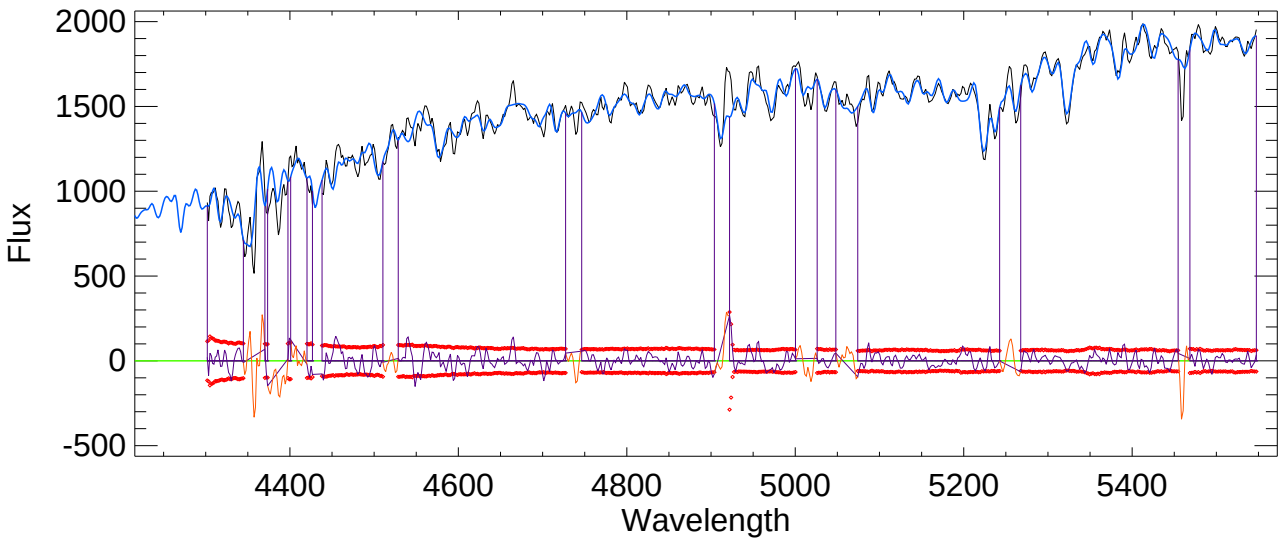

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

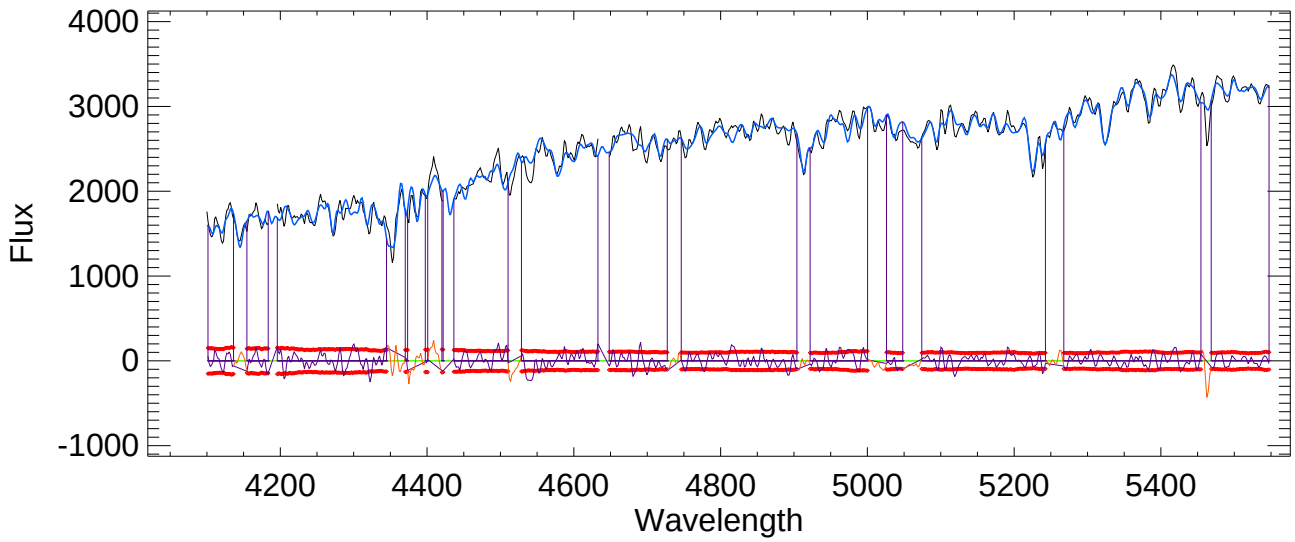

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

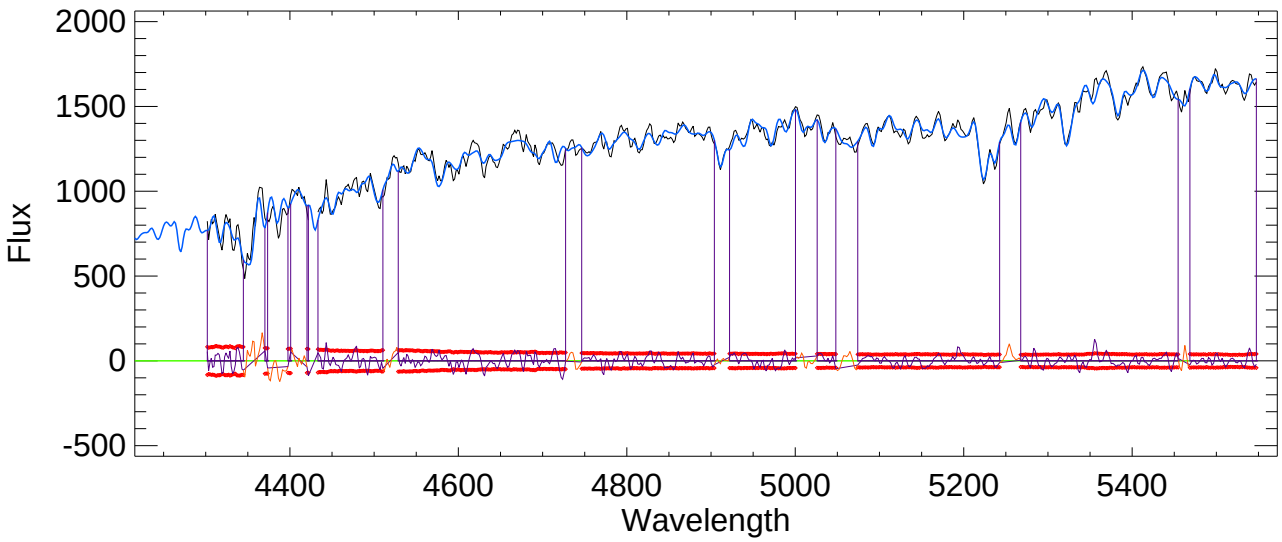

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

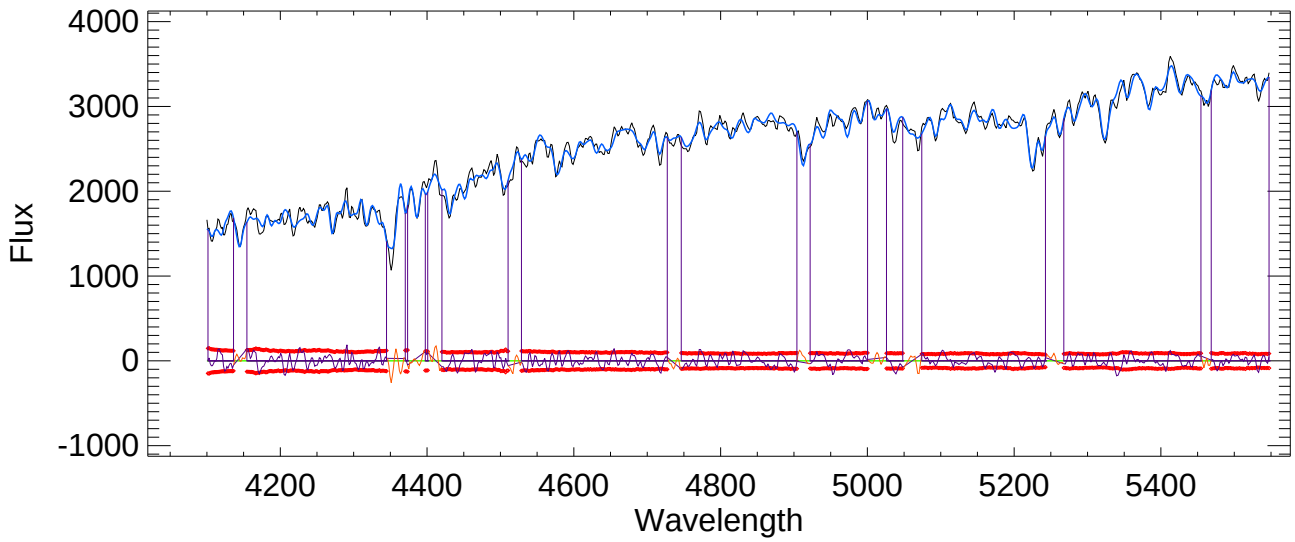

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

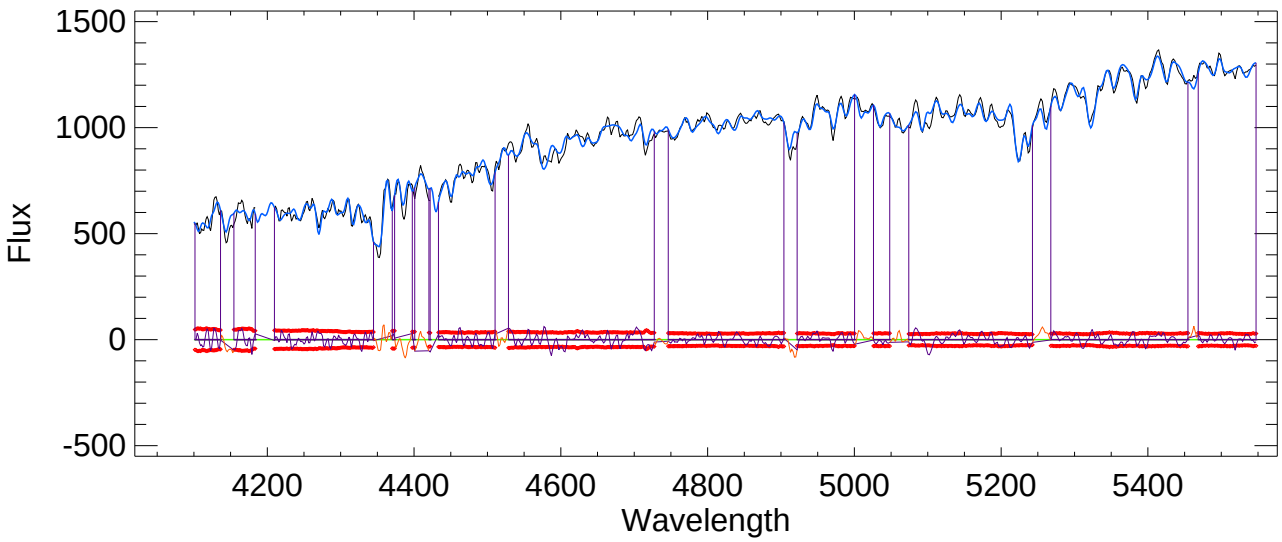

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

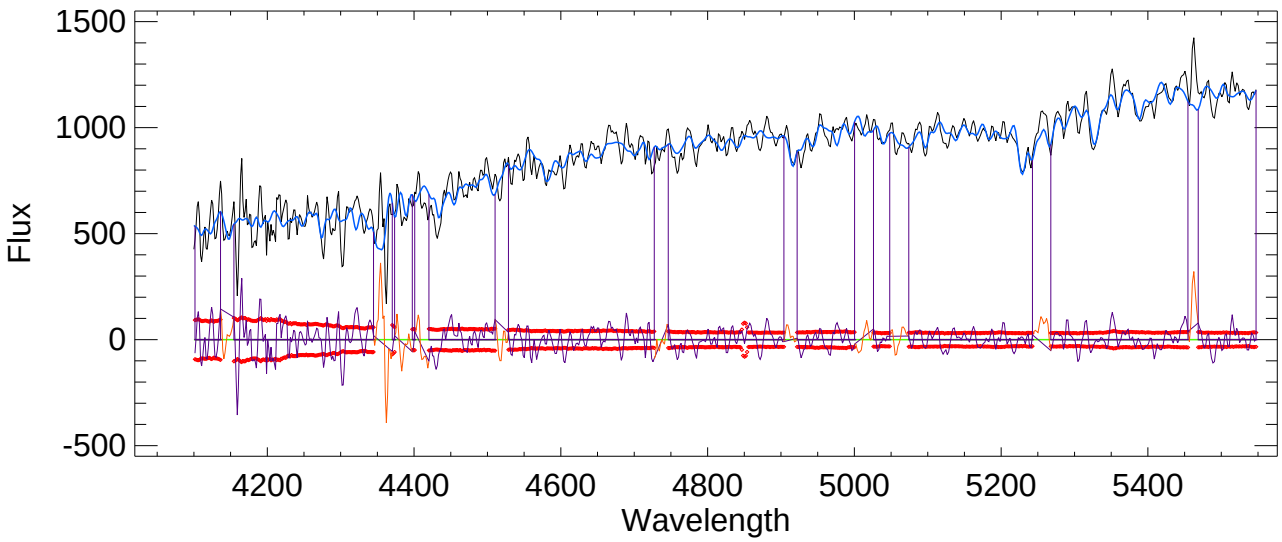

2000
1500
1000
500
0
-500
Flux
4400
4600
4800
5000
5200
5400
Wavelength

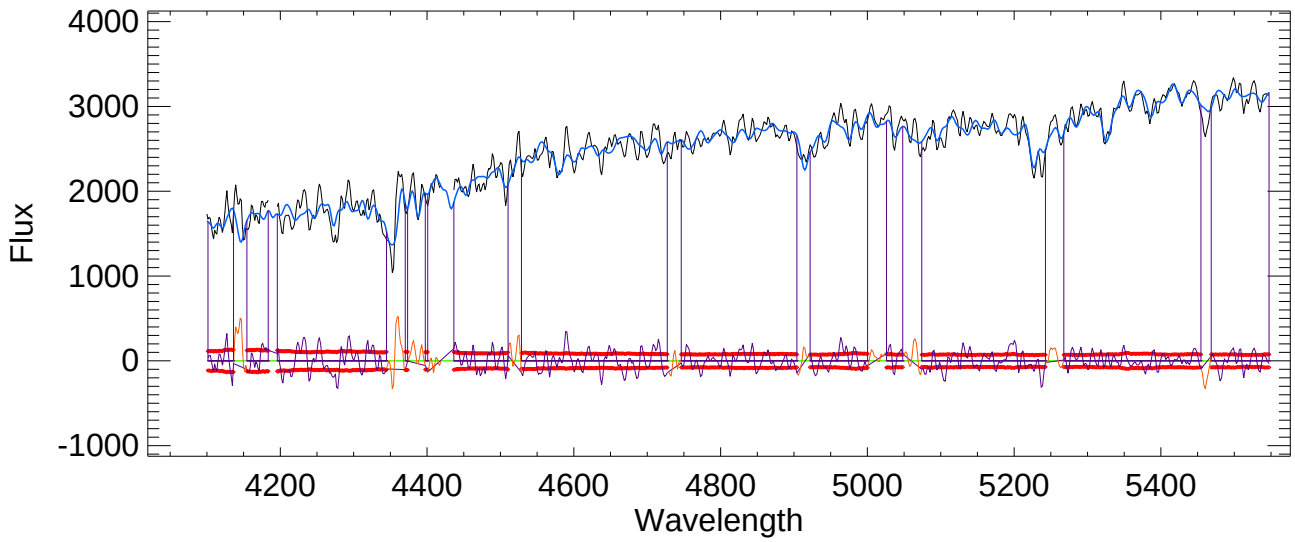

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

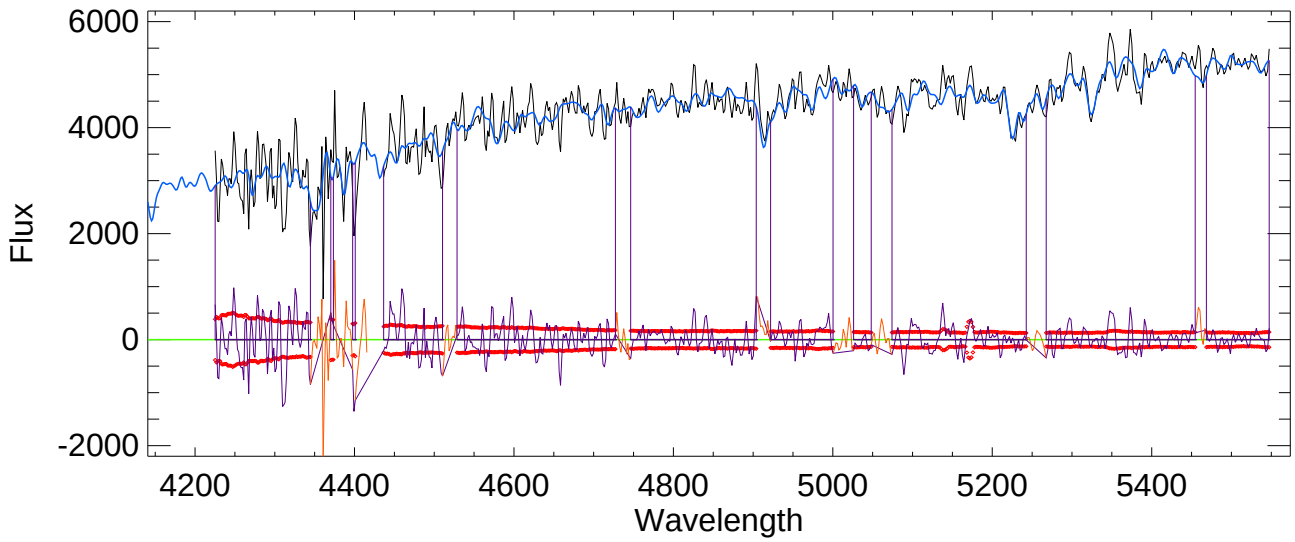

2000
1500
1000
500
0
-500
Flux
4400
4600
4800
5000
5200
5400
Wavelength

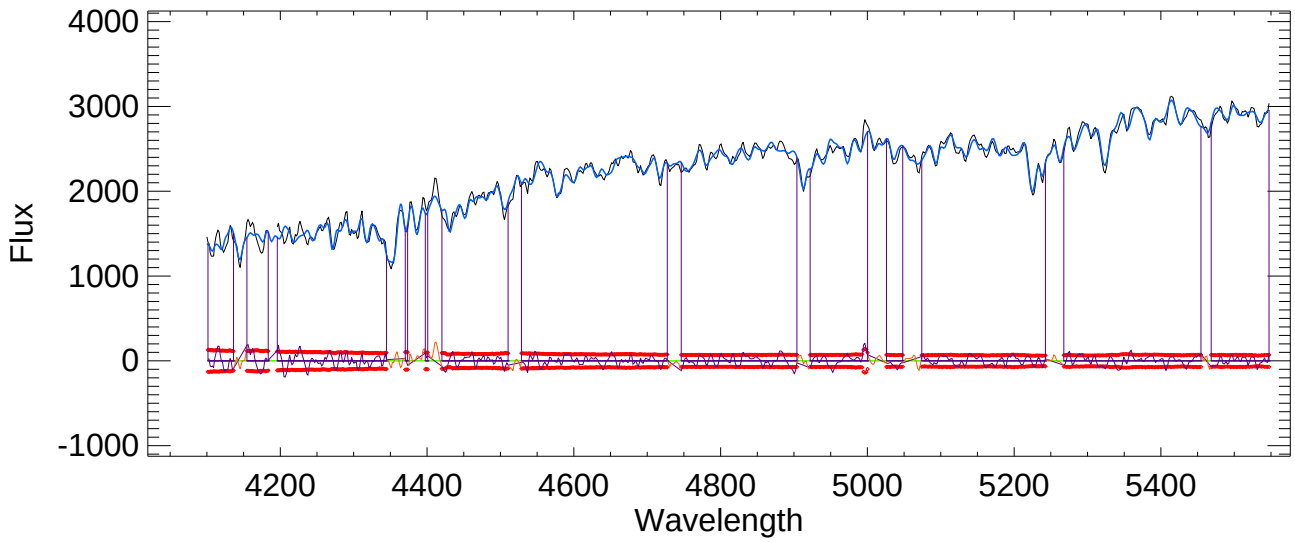

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

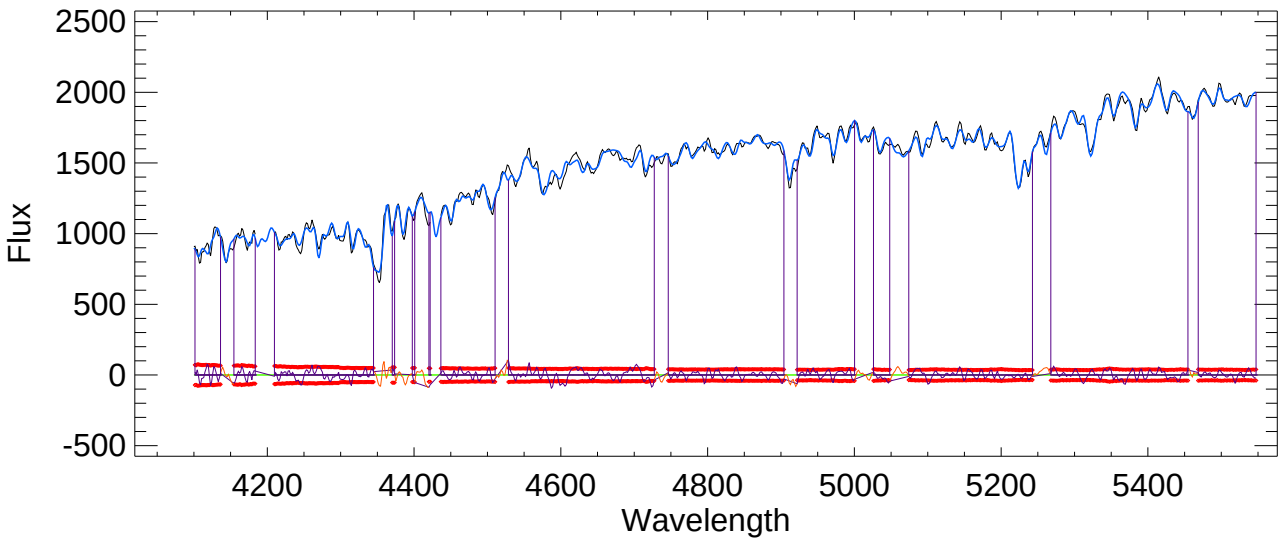

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

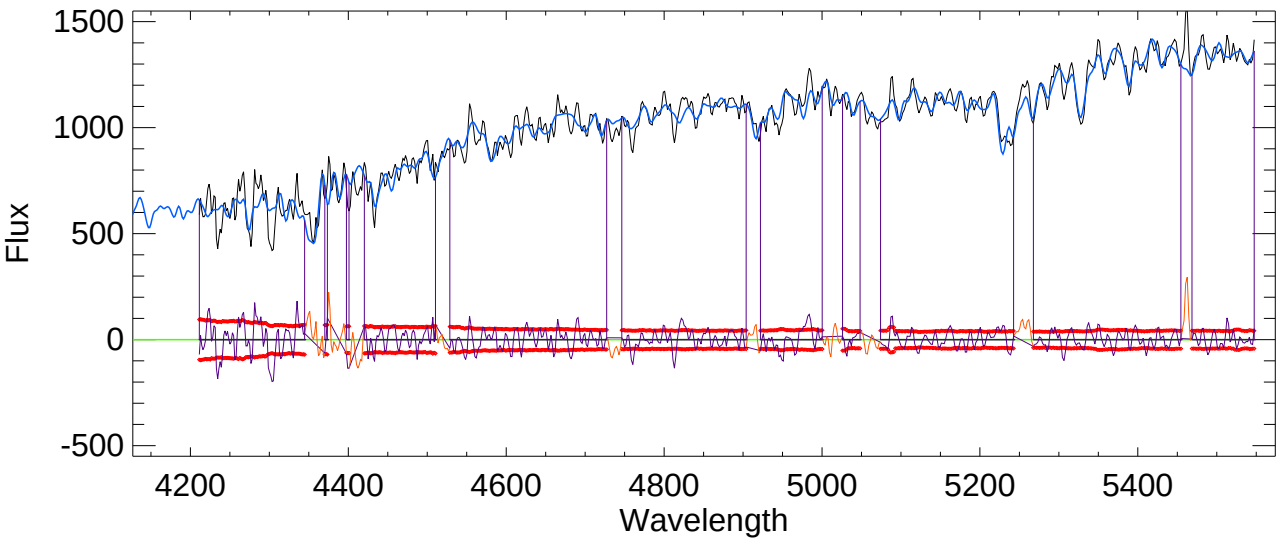

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

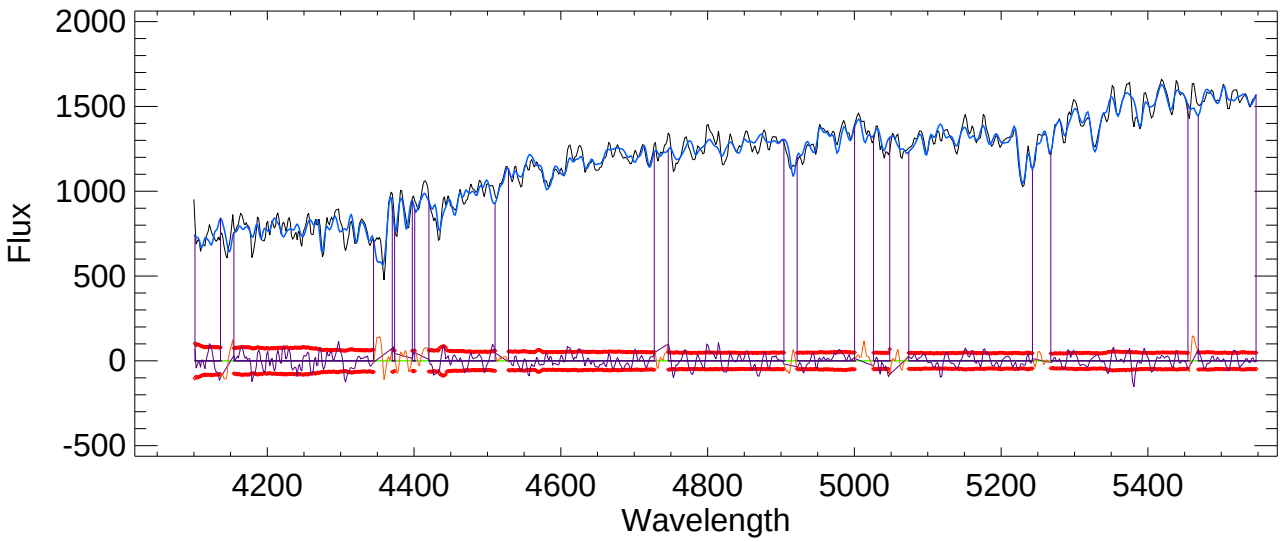

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

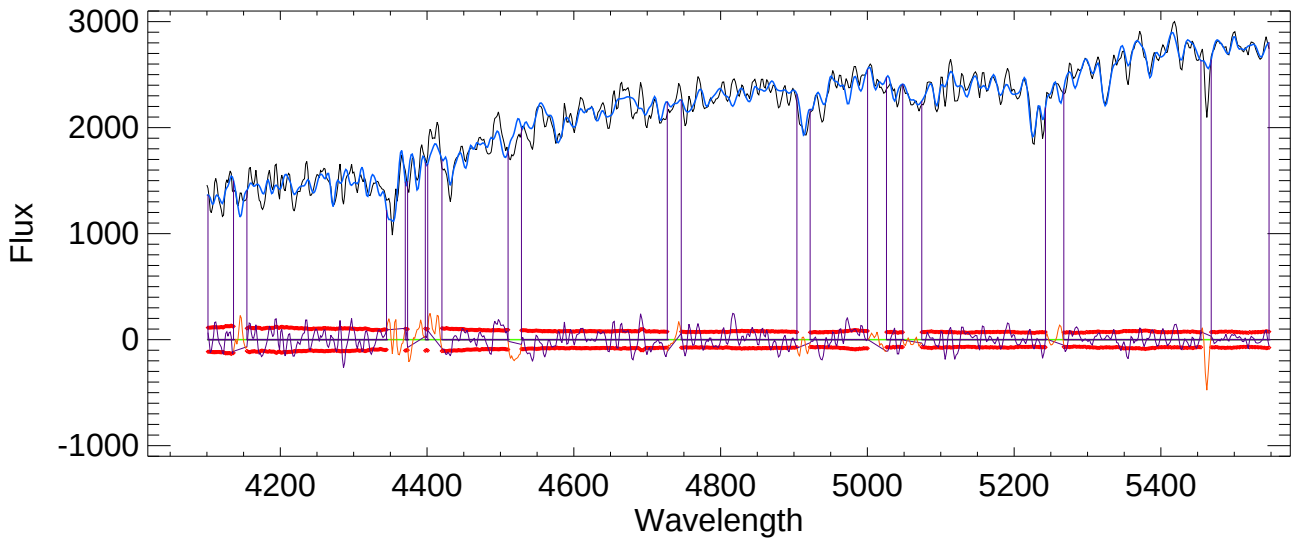

6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

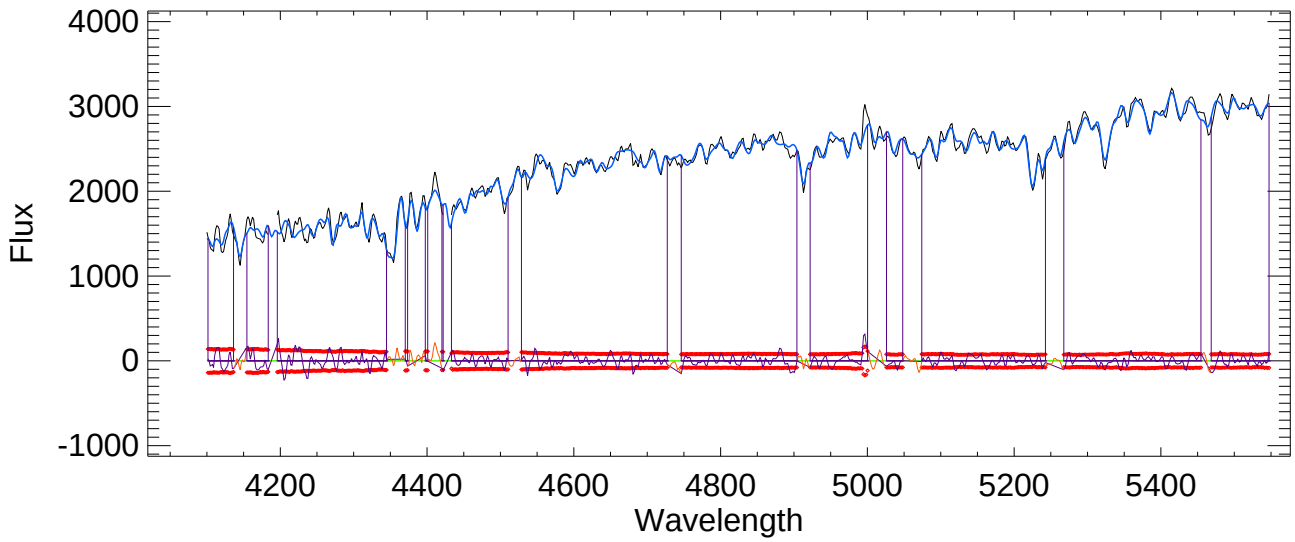

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

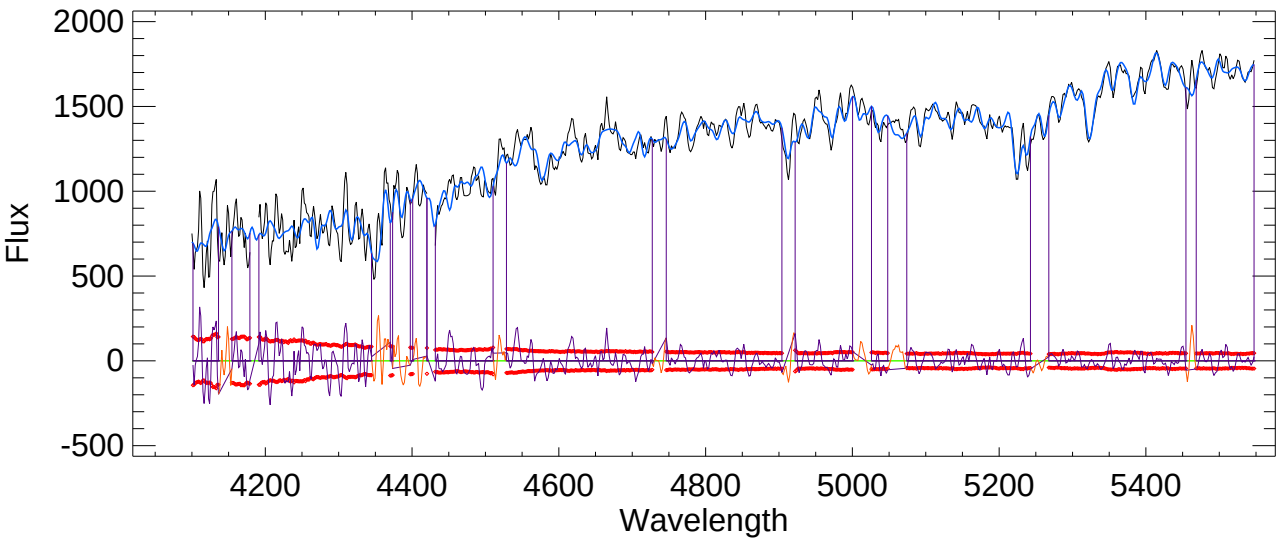

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

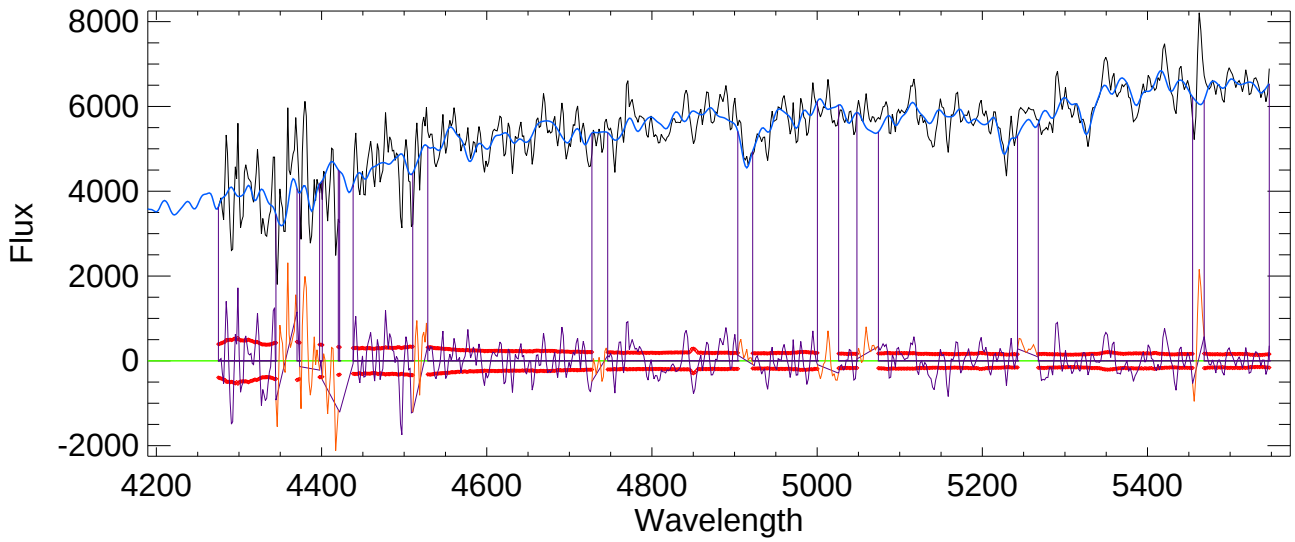

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

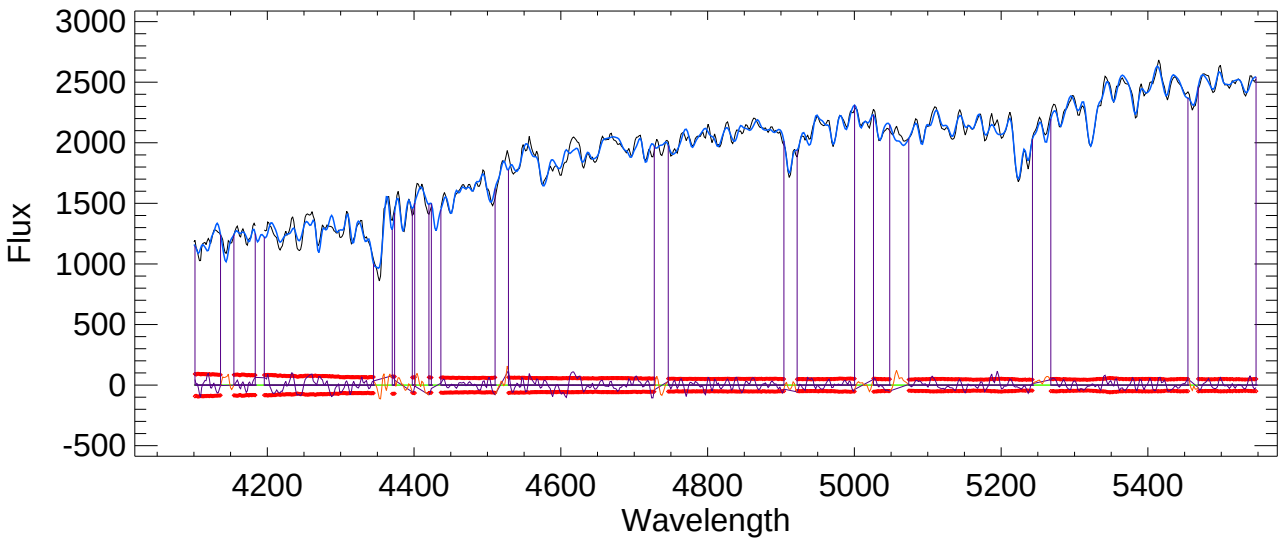

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

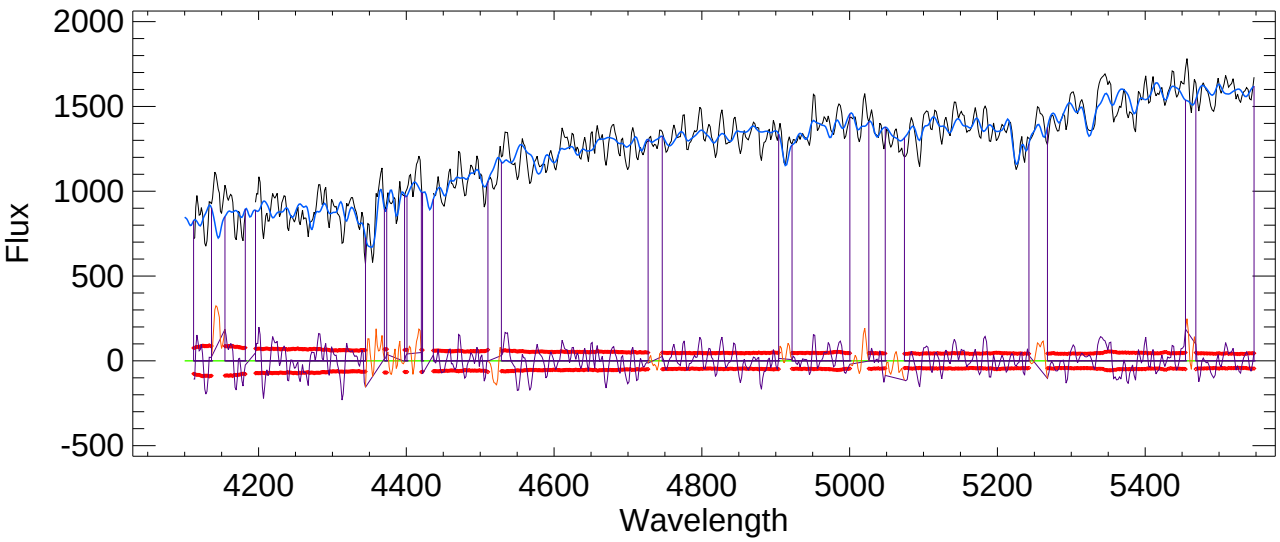

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

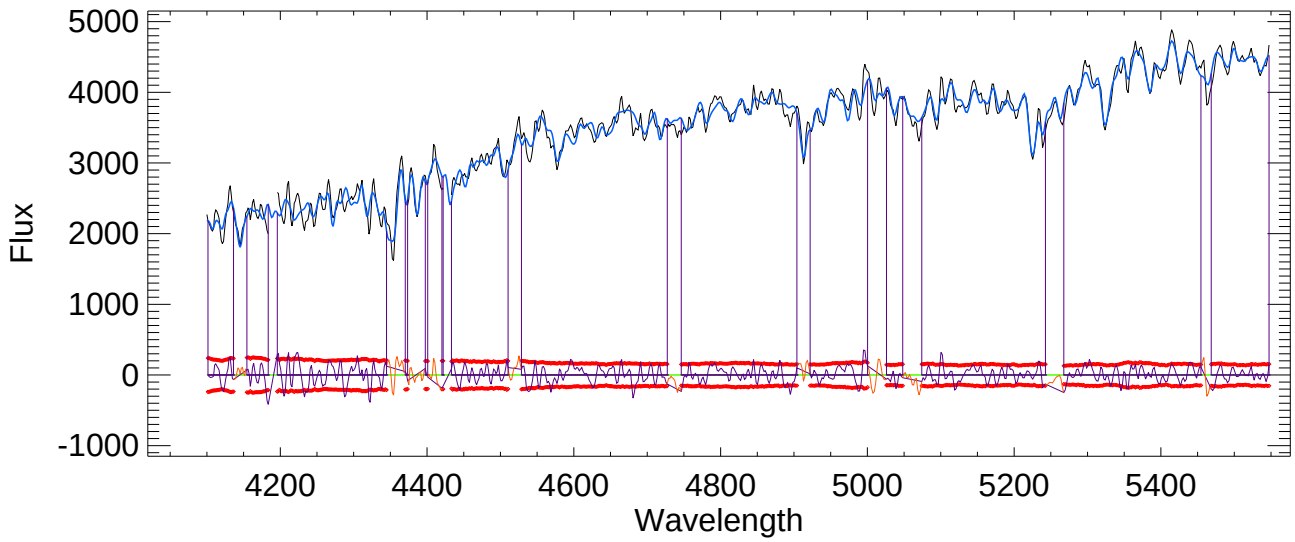

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

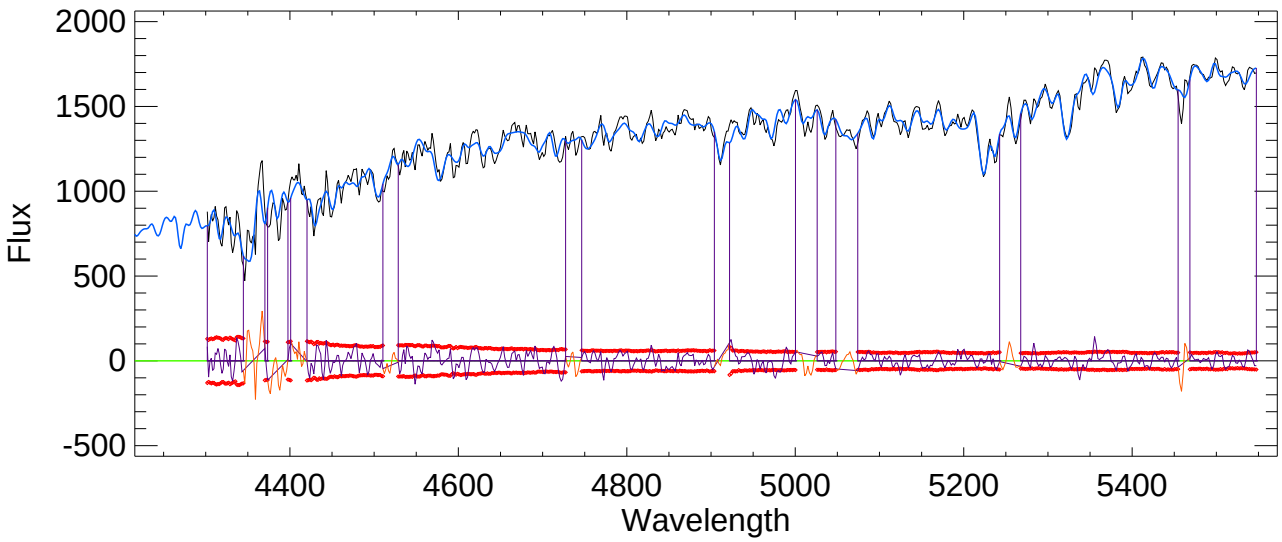

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

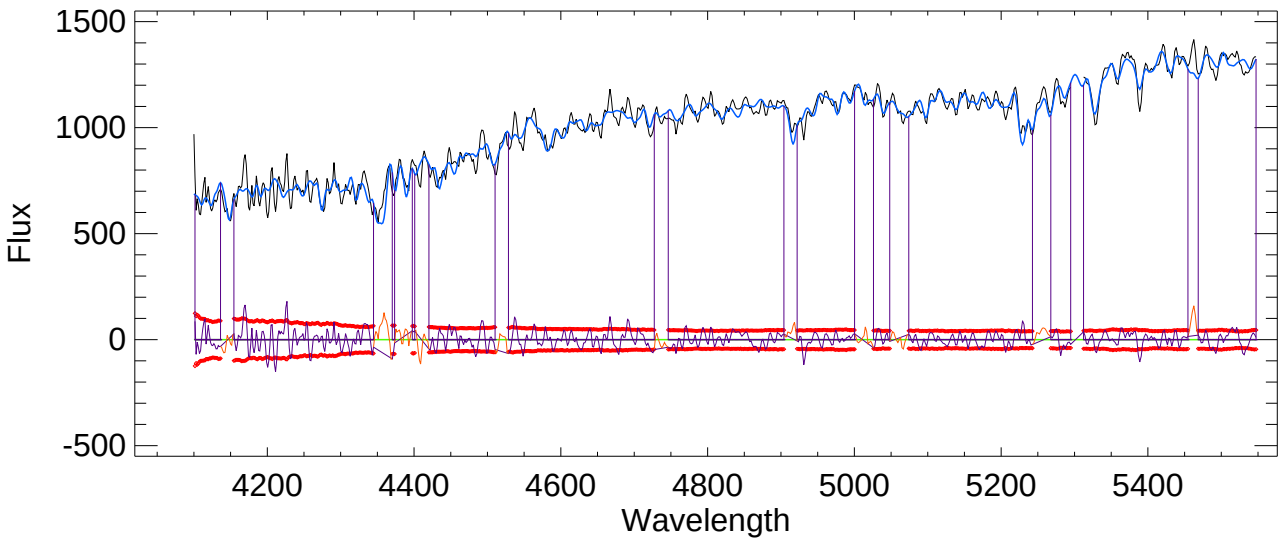

8000
6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

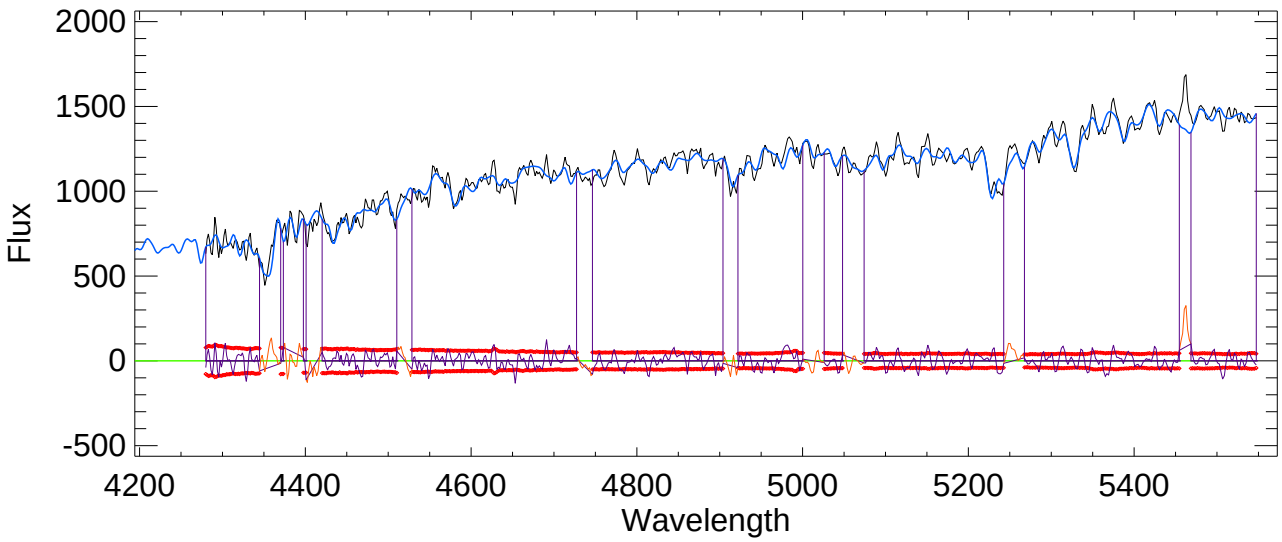

3000
2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

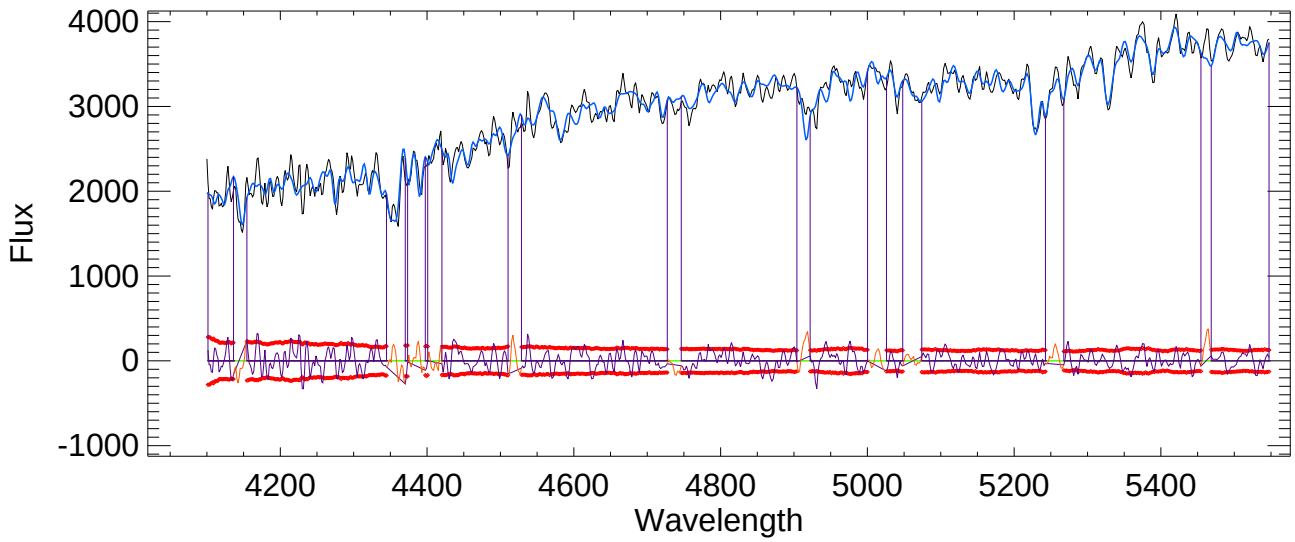

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

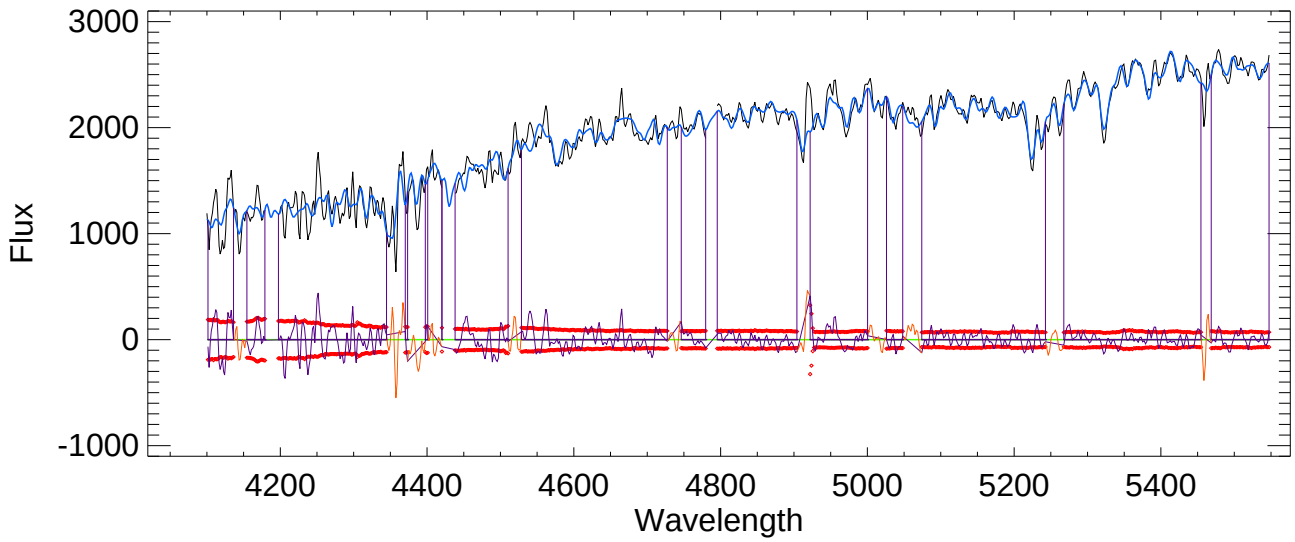

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

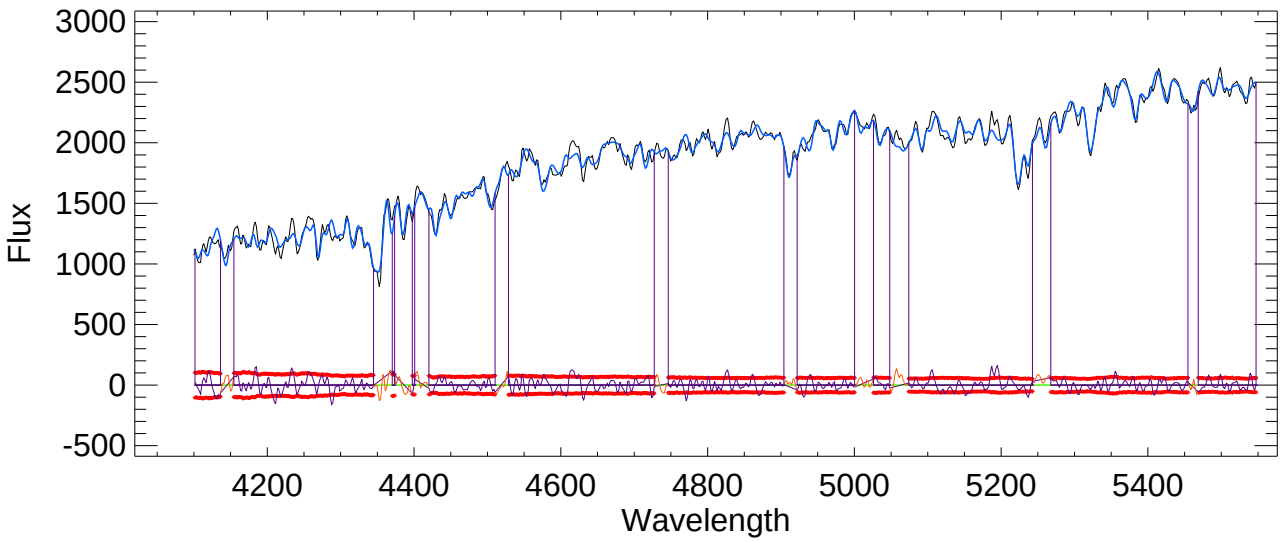

2000
1500
1000
500
0
-500
Flux
4400
4600
4800
5000
5200
5400
Wavelength

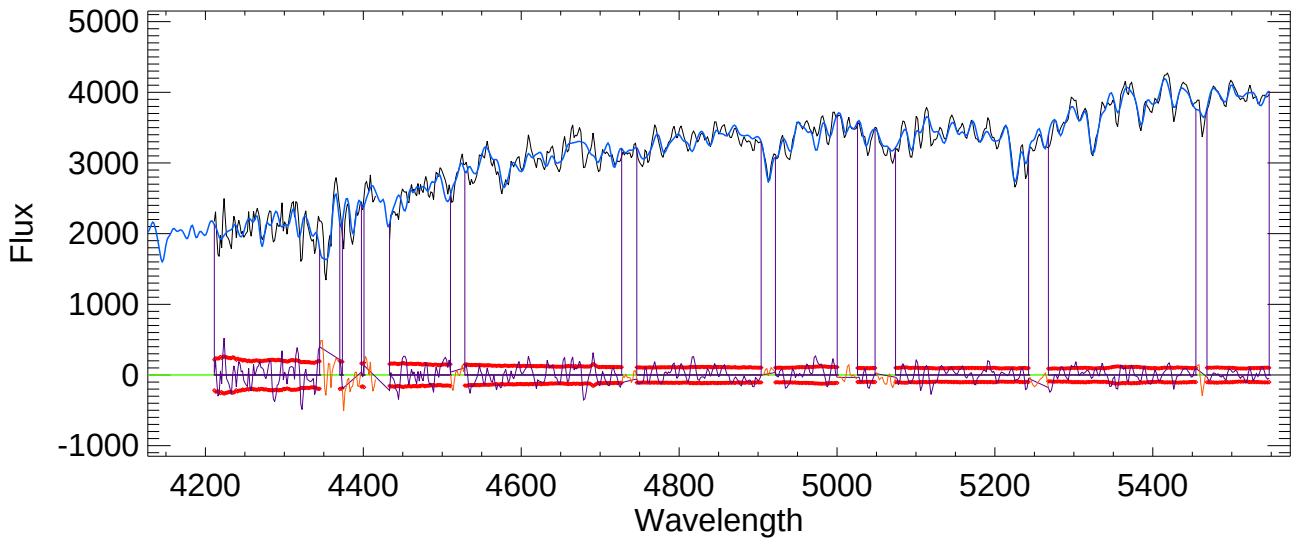

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

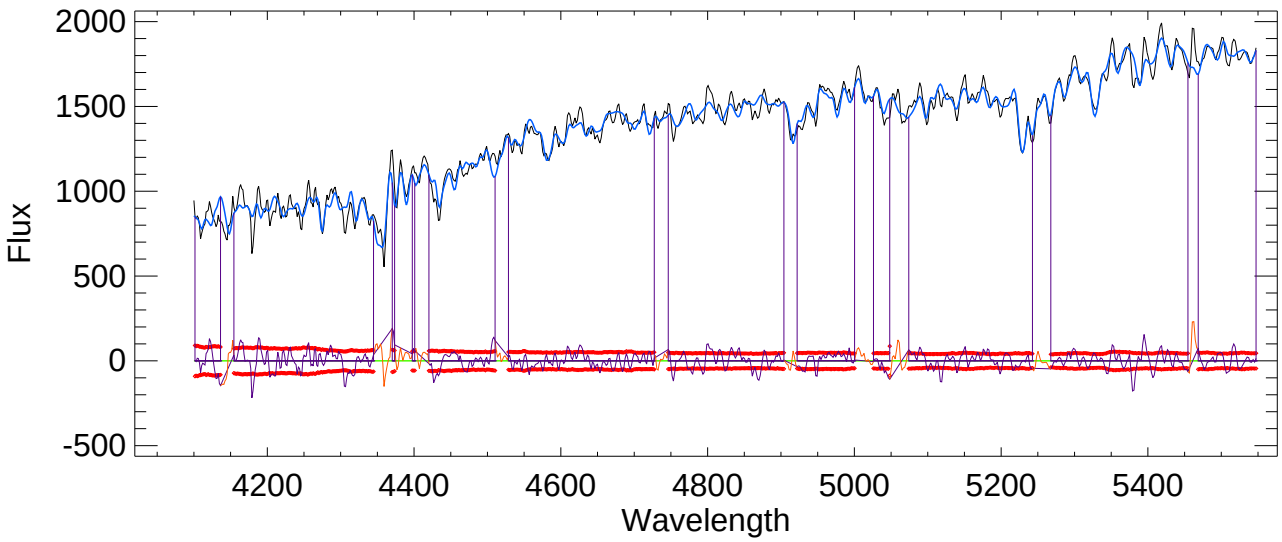

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

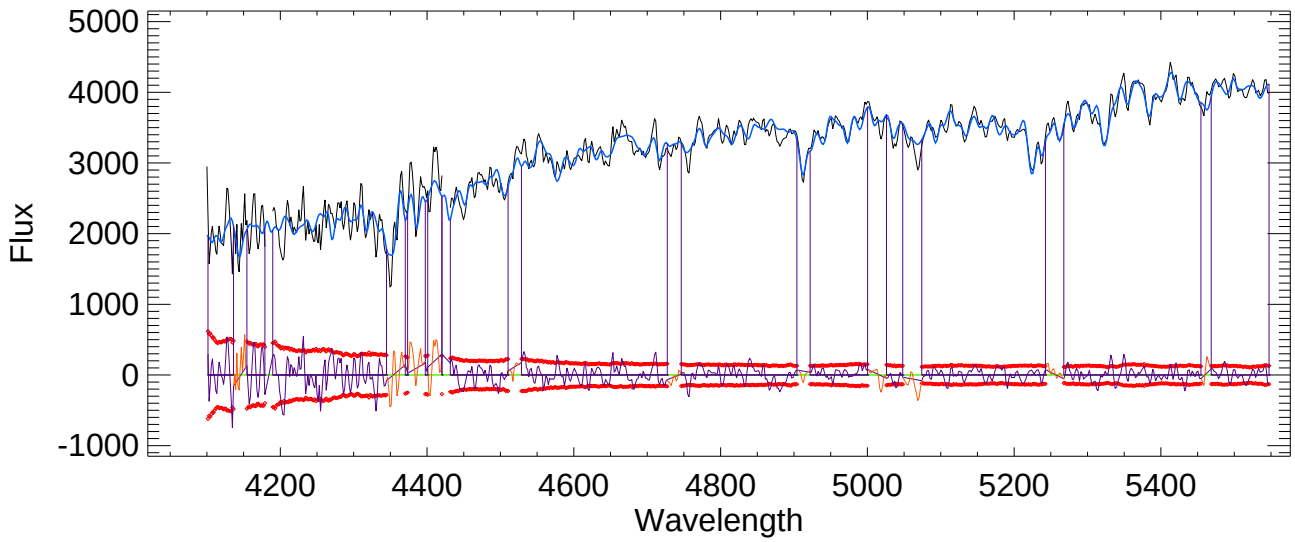

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

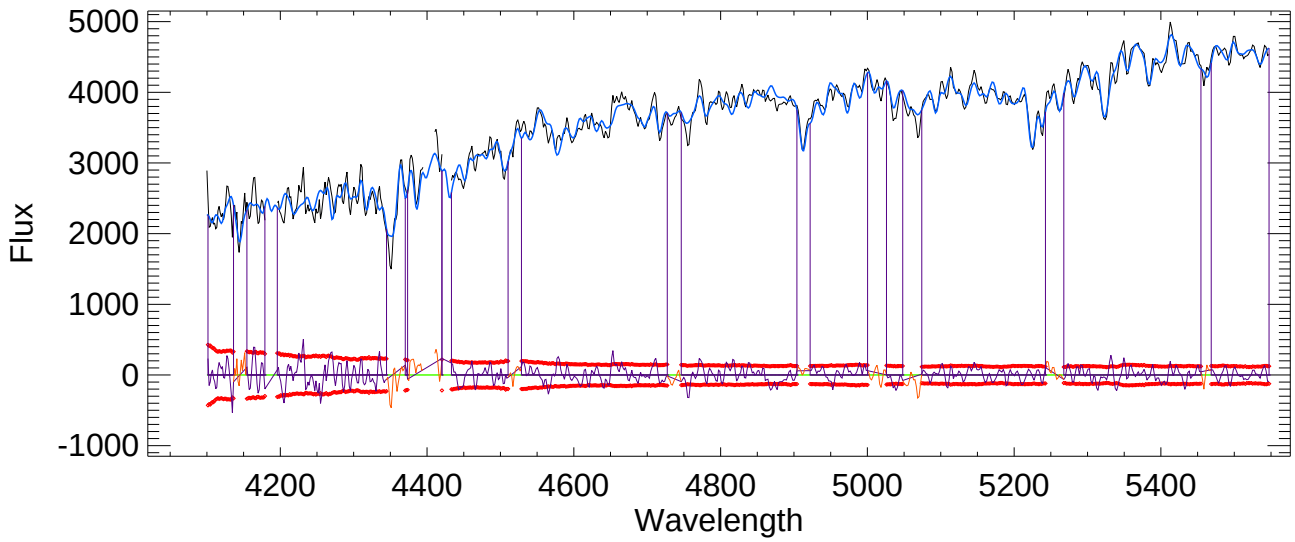

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

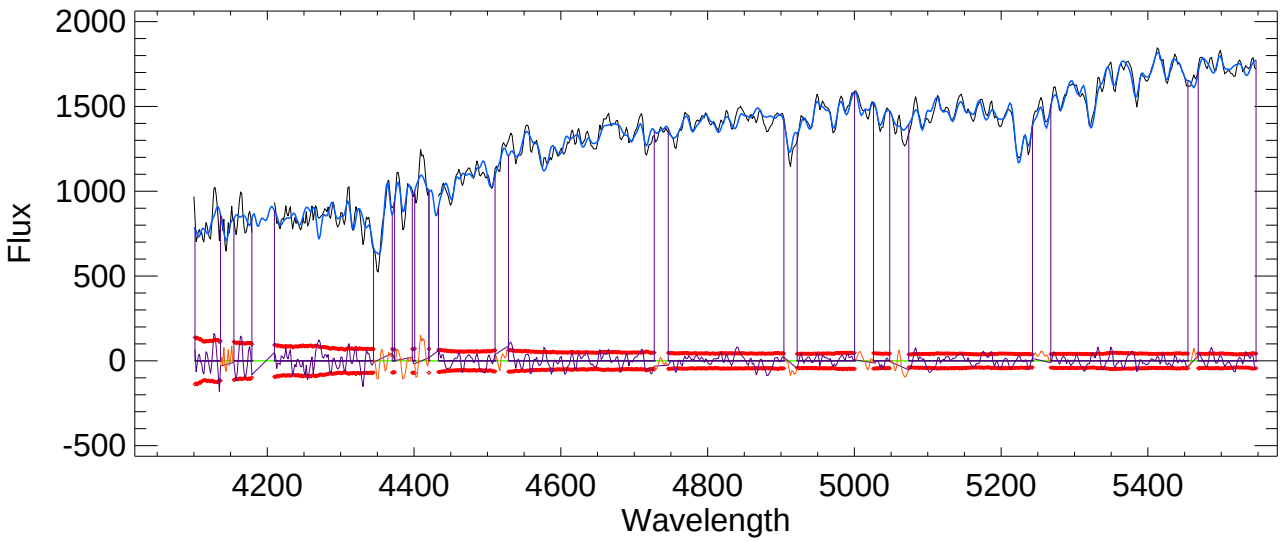

3000
2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

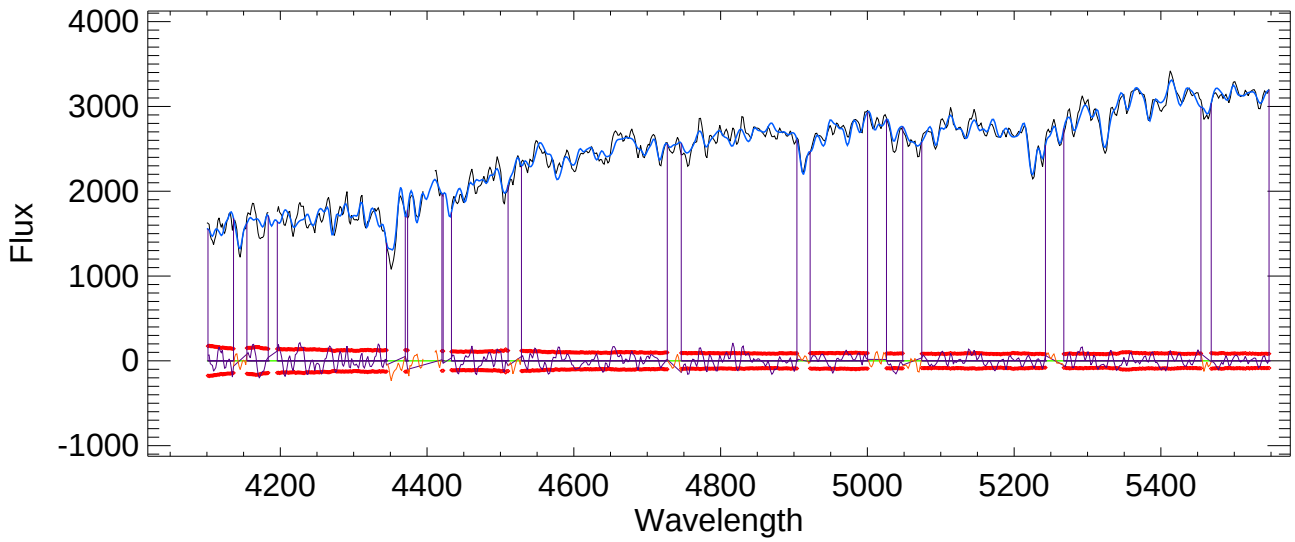

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

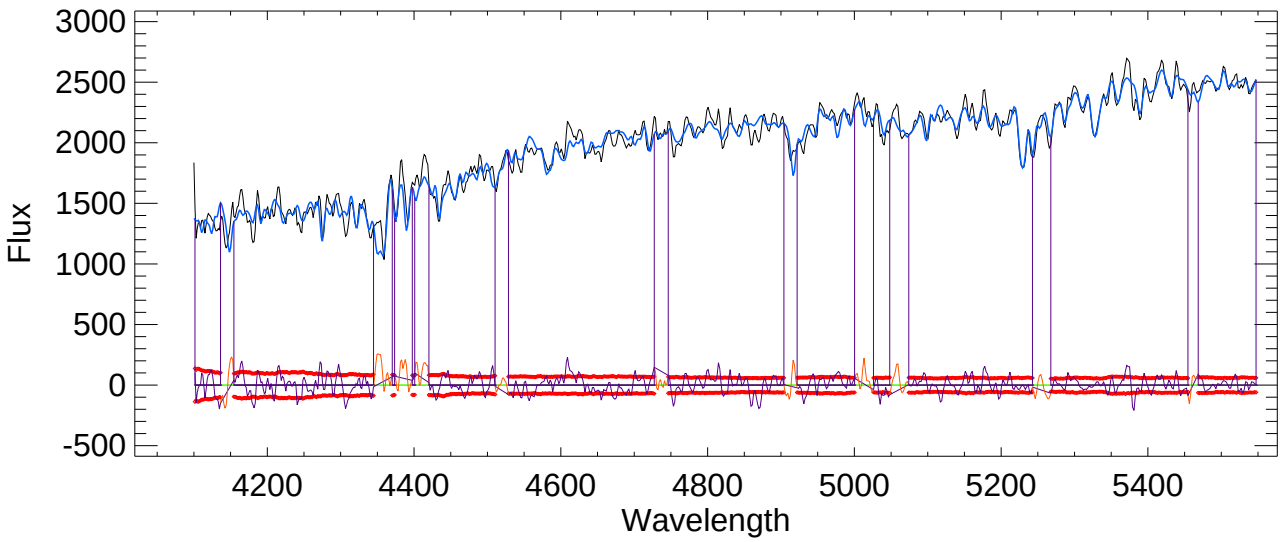

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

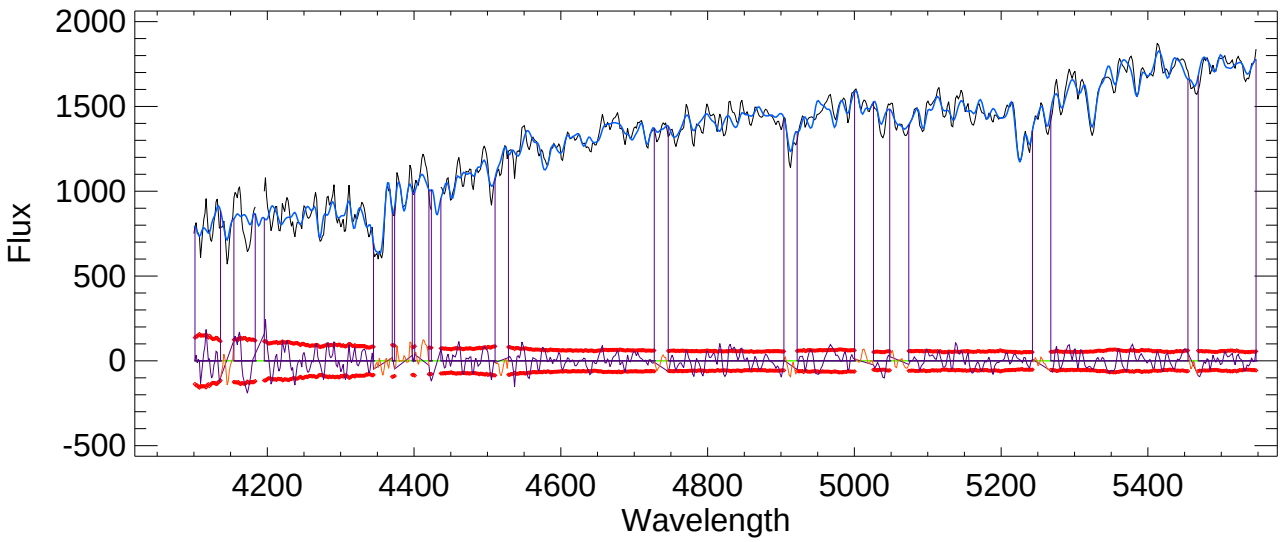

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

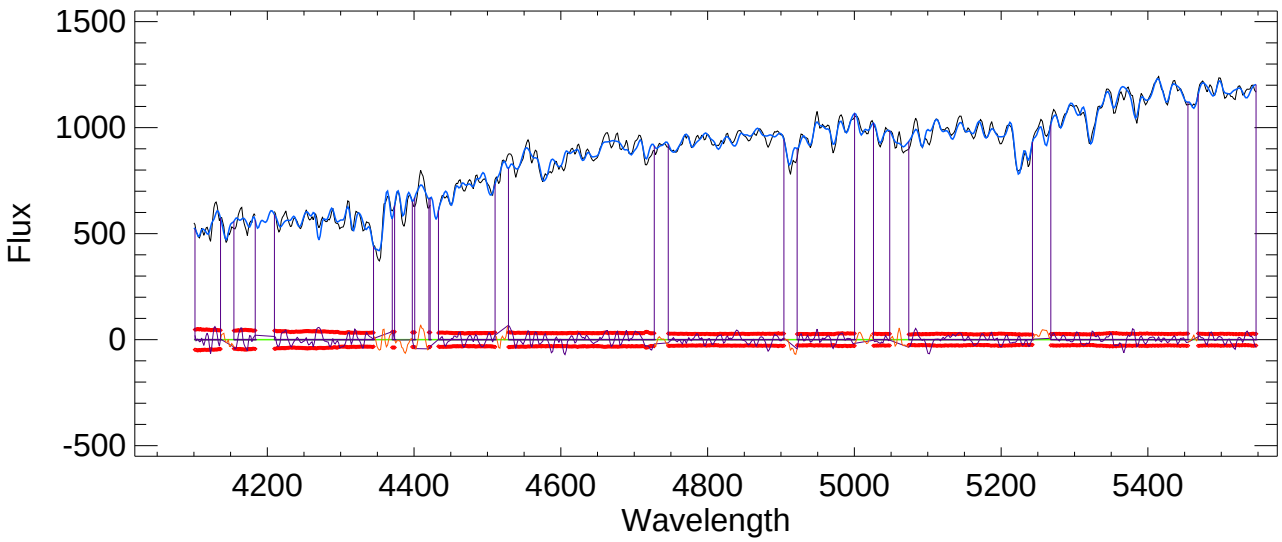

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

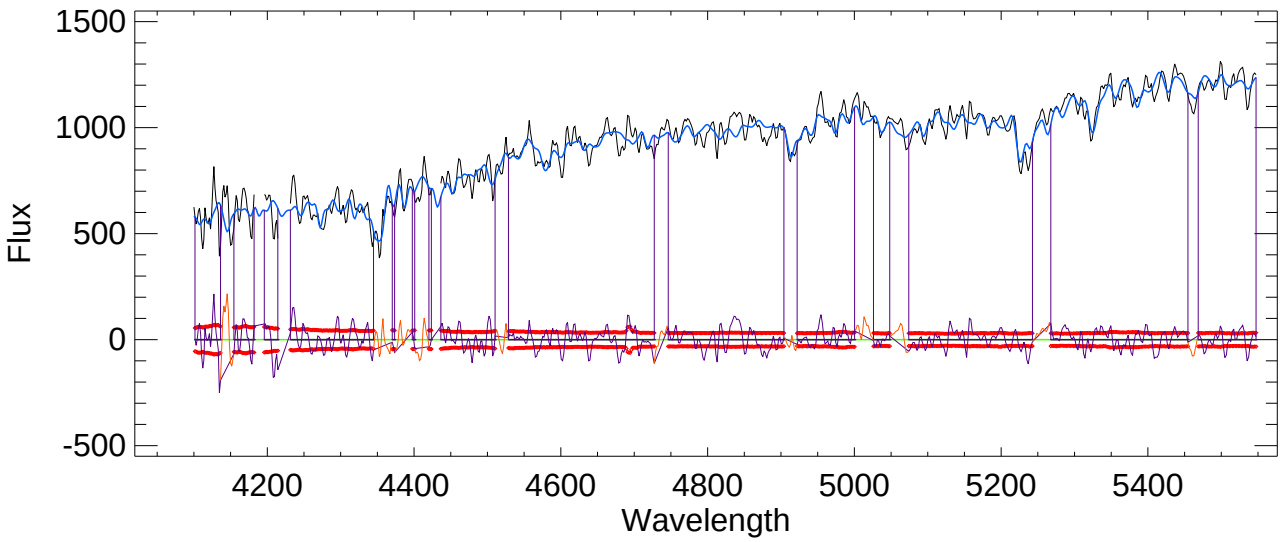

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

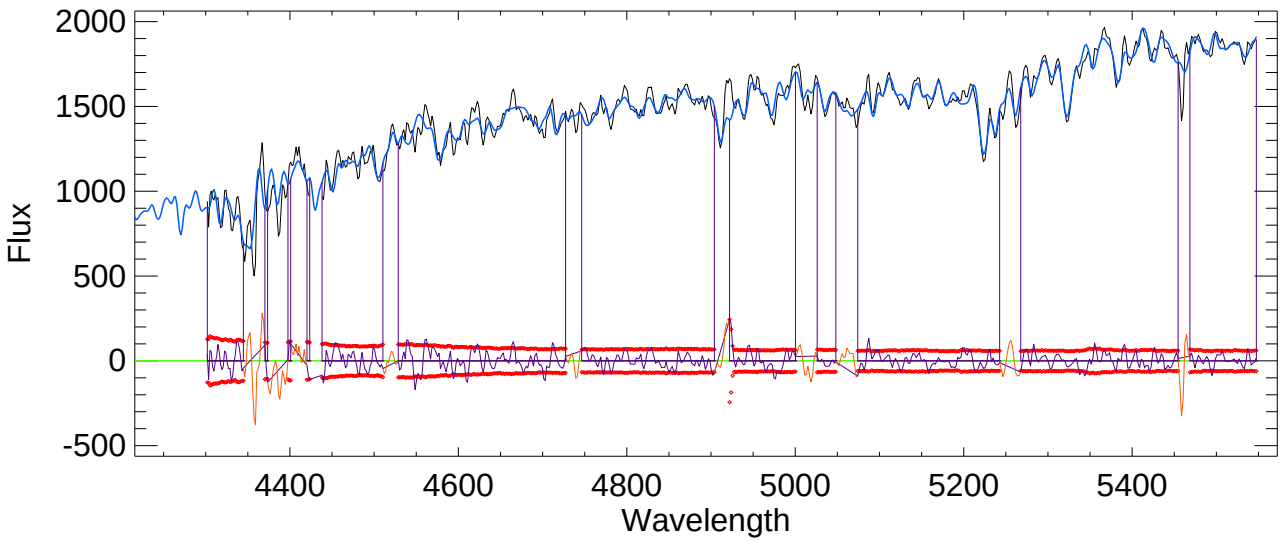

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

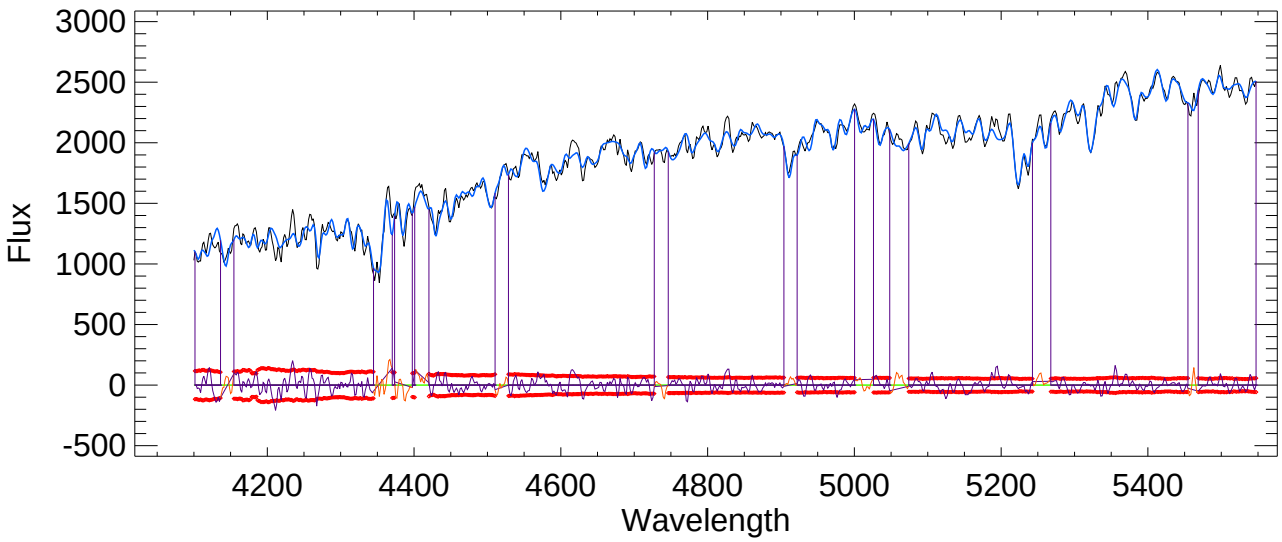

3000
2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

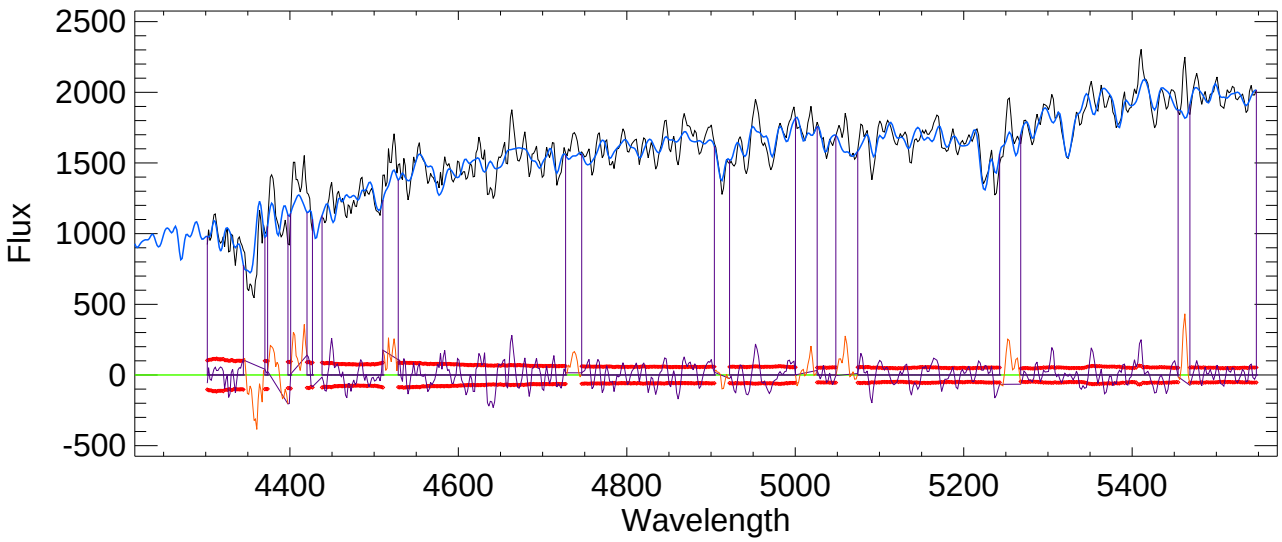

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

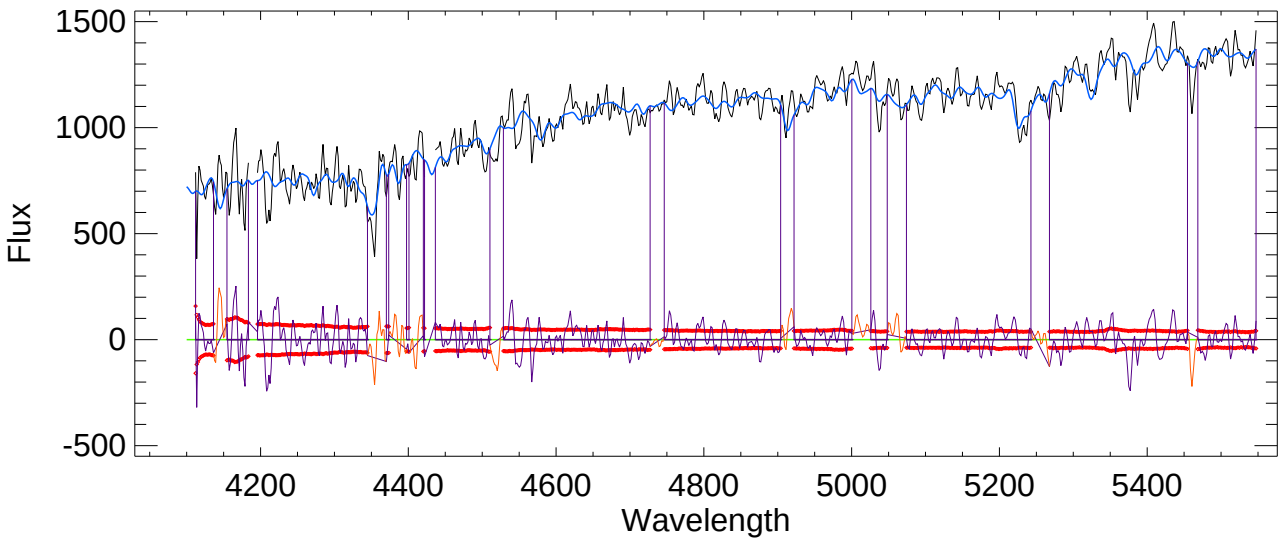

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

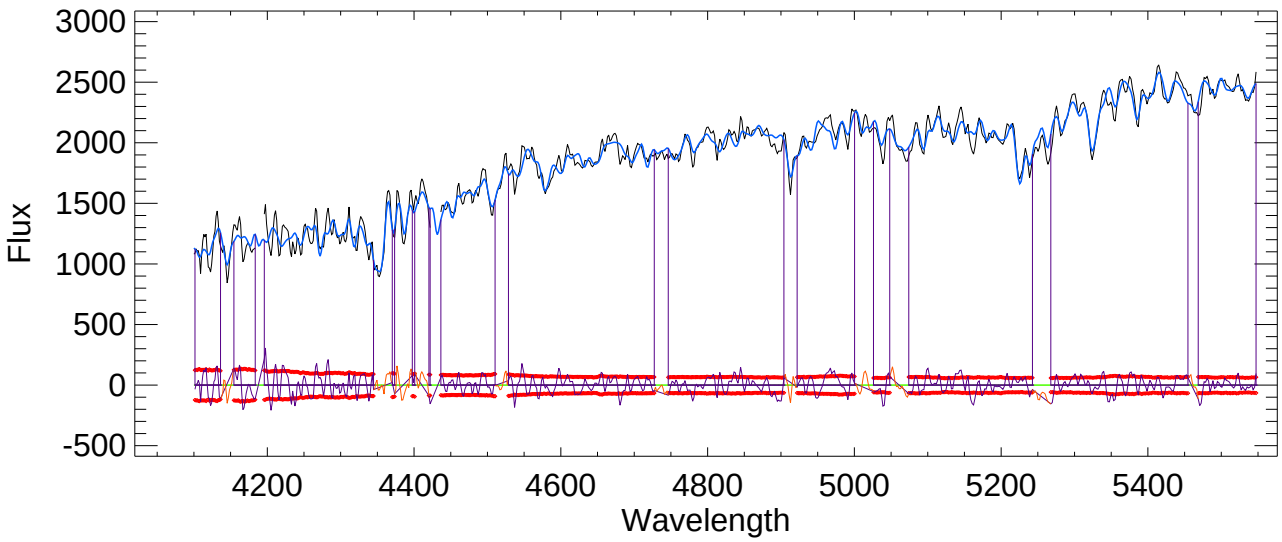

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

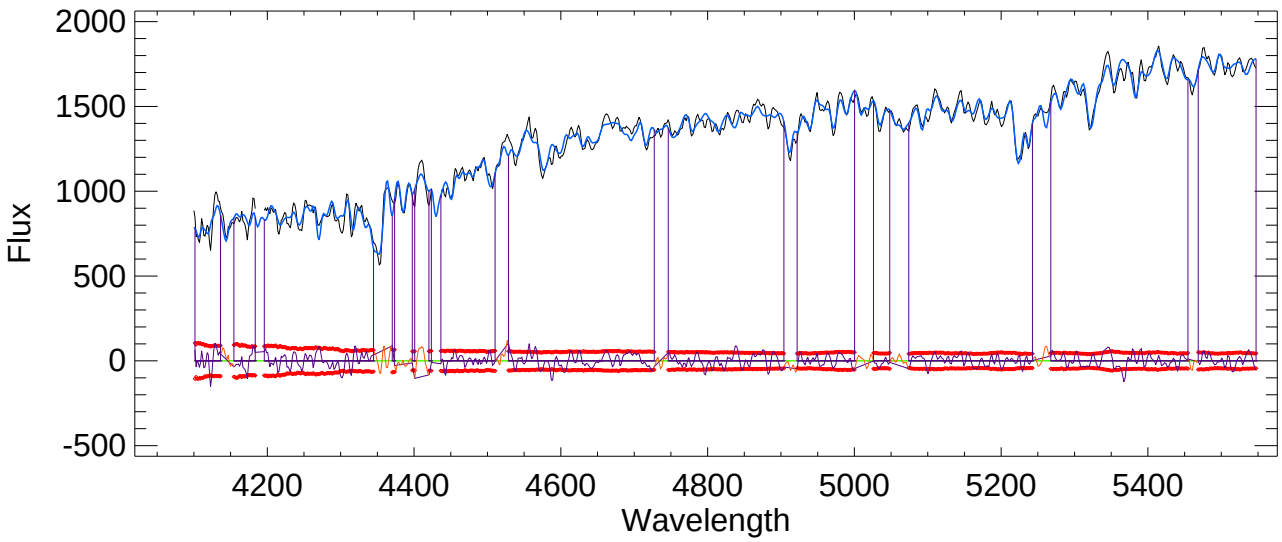

2000
1500
1000
500
0
-500
Flux
4400
4600
4800
5000
5200
5400
Wavelength

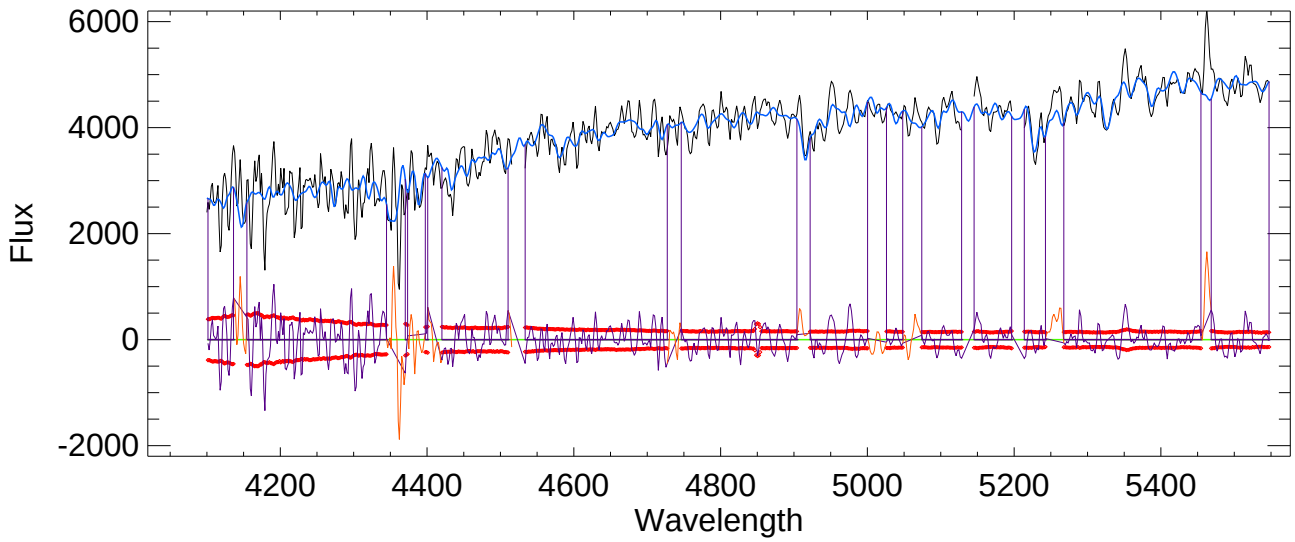

3000
2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

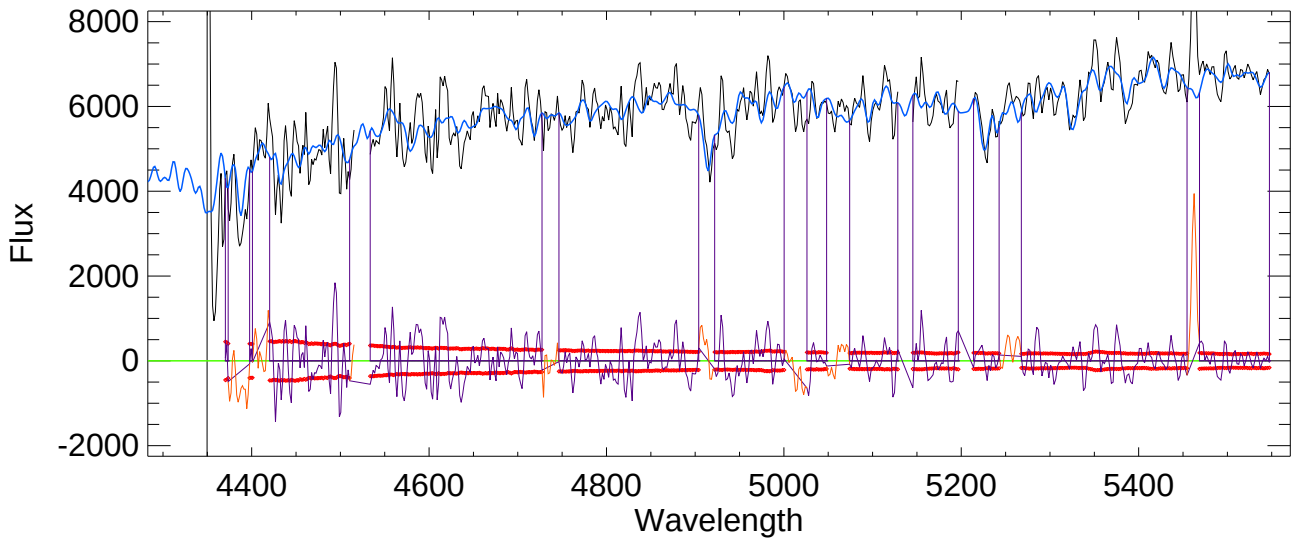

2500
2000
1500
1000
500
0
-500
Flux
4400
4600
4800
5000
5200
5400
Wavelength

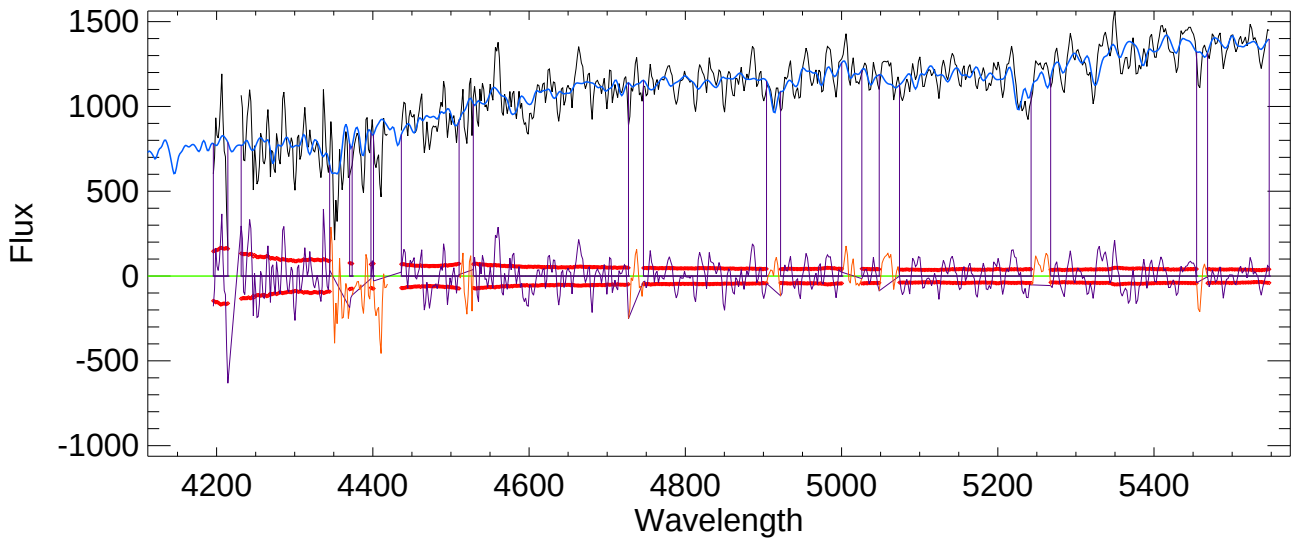

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

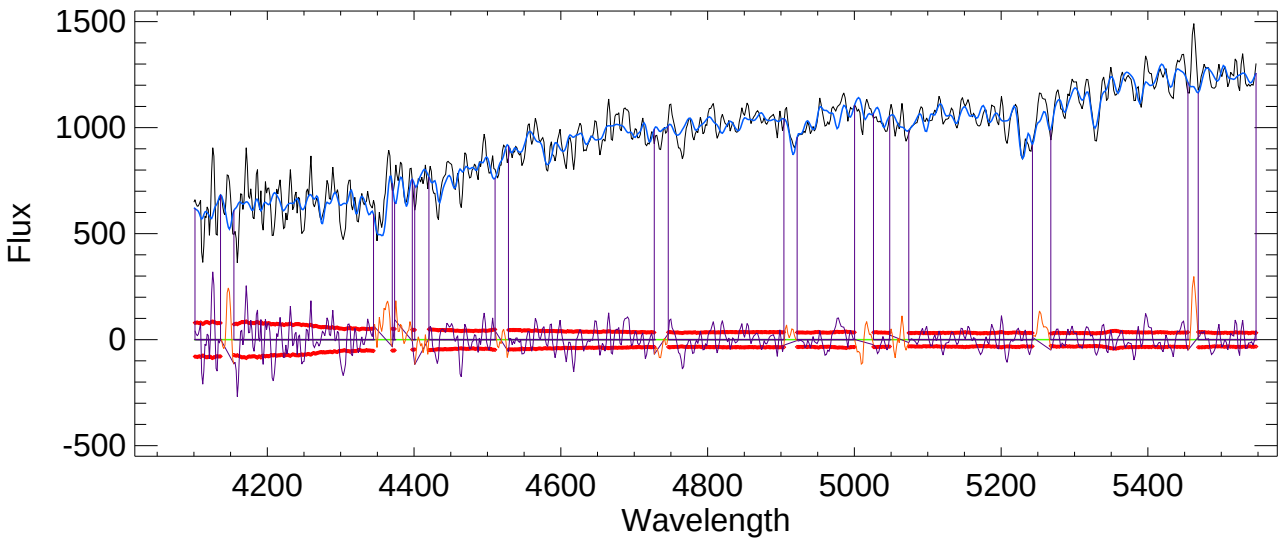

3000
2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

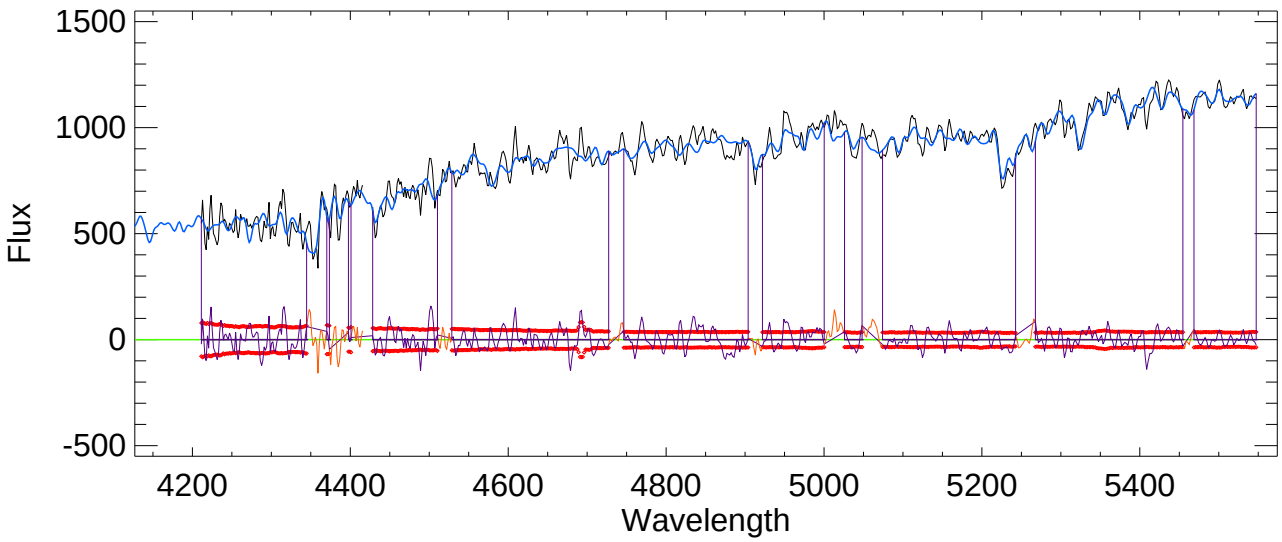

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

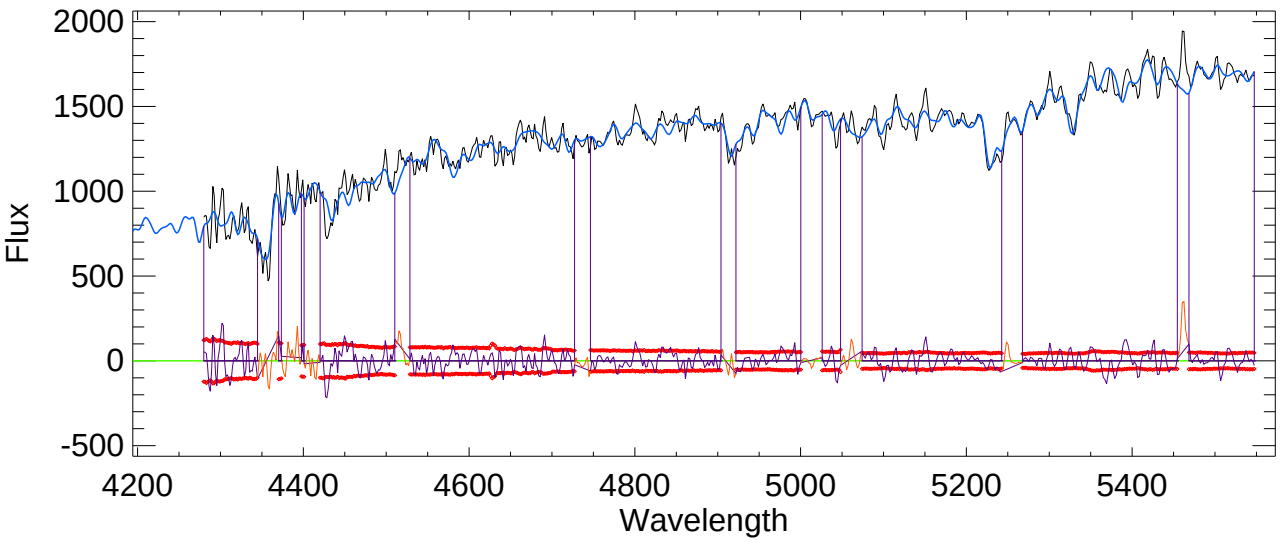

6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

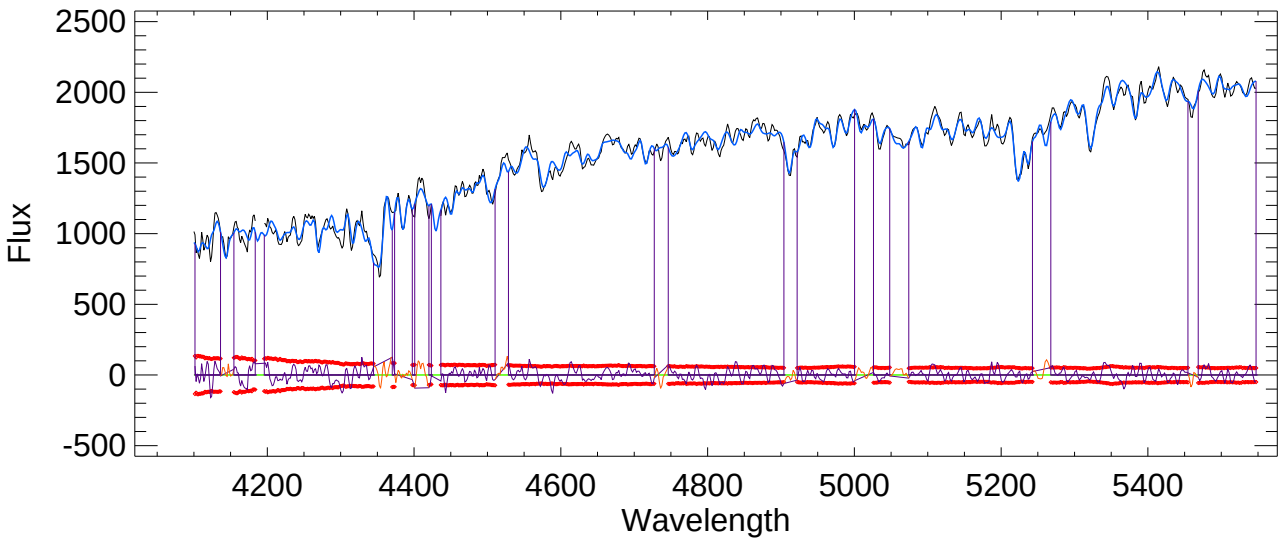

8000
6000
4000
2000
0
-2000
Flux
4400
4600
4800
5000
5200
5400
Wavelength

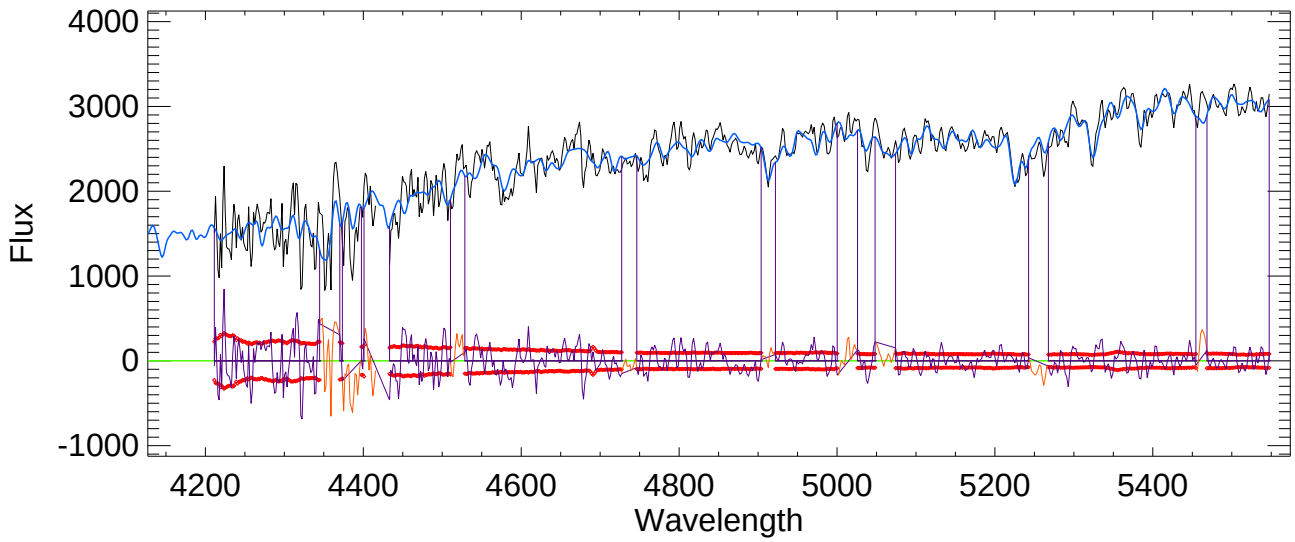

1500
1000
500
0
-500
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

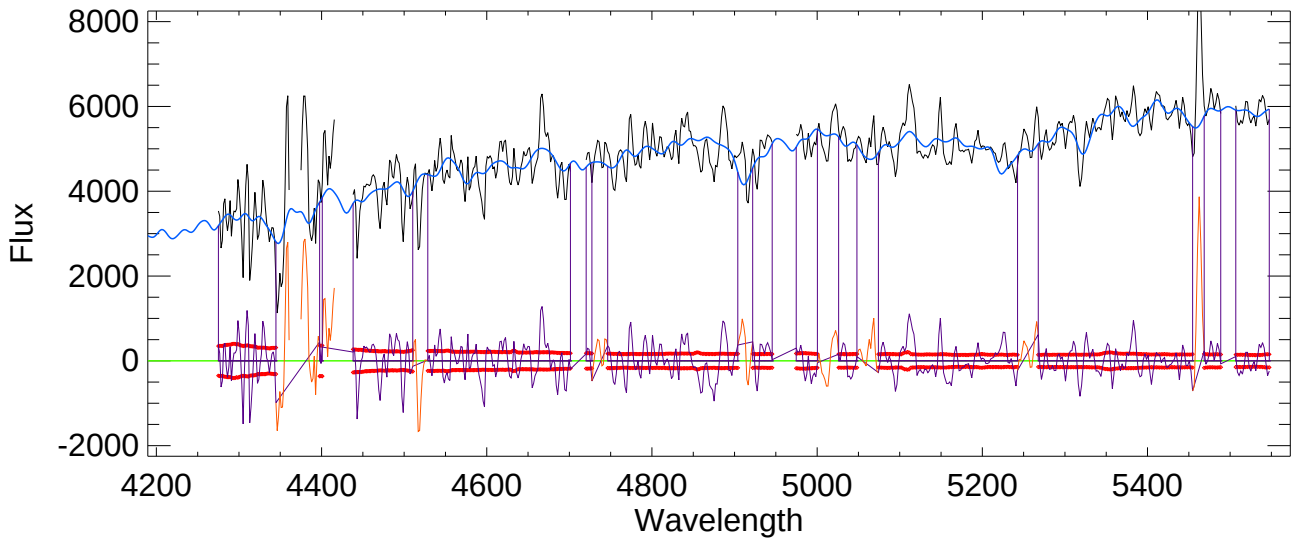

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

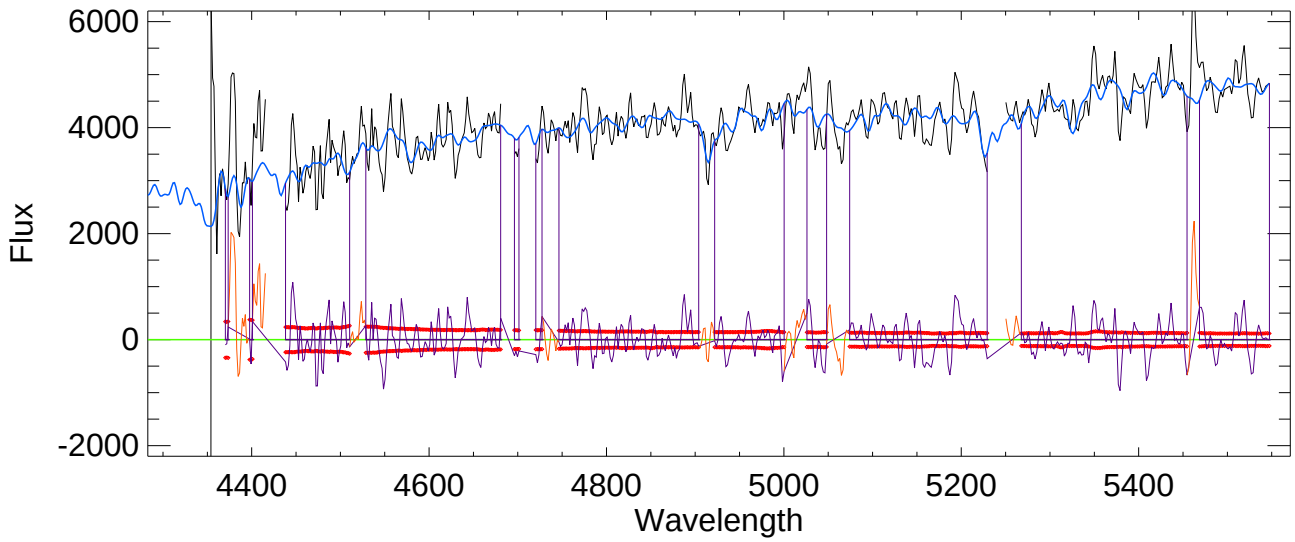

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

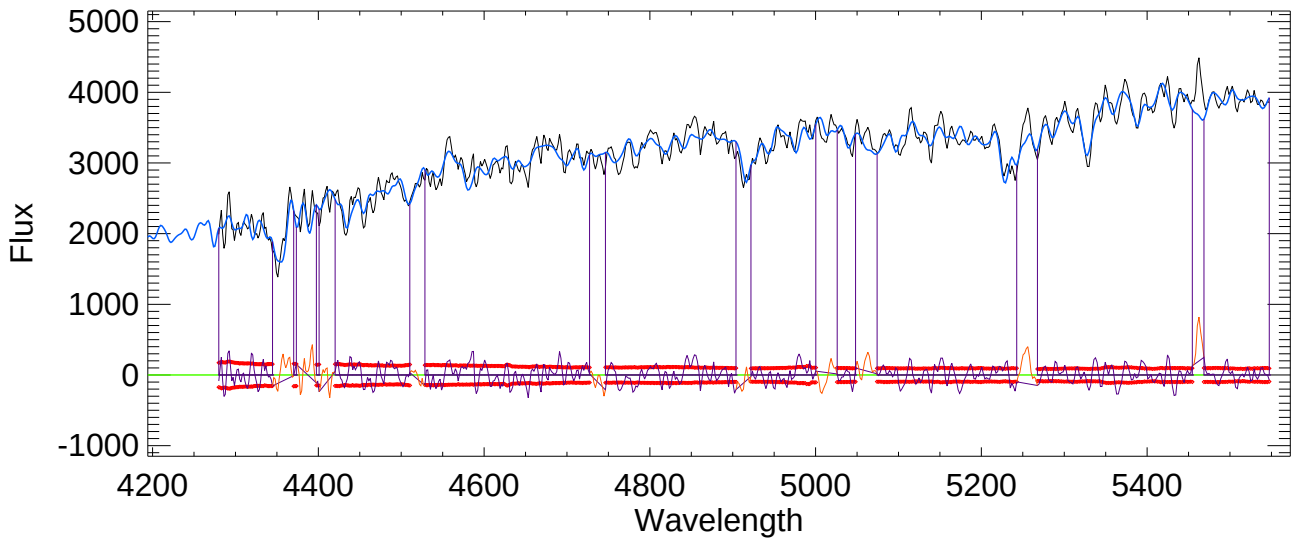

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

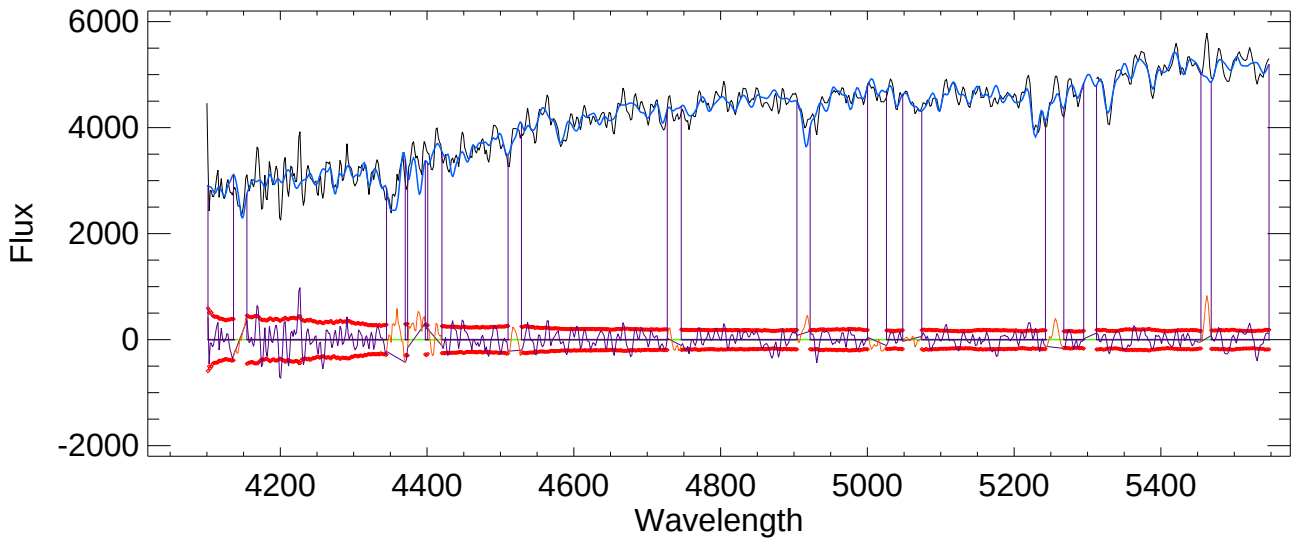

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

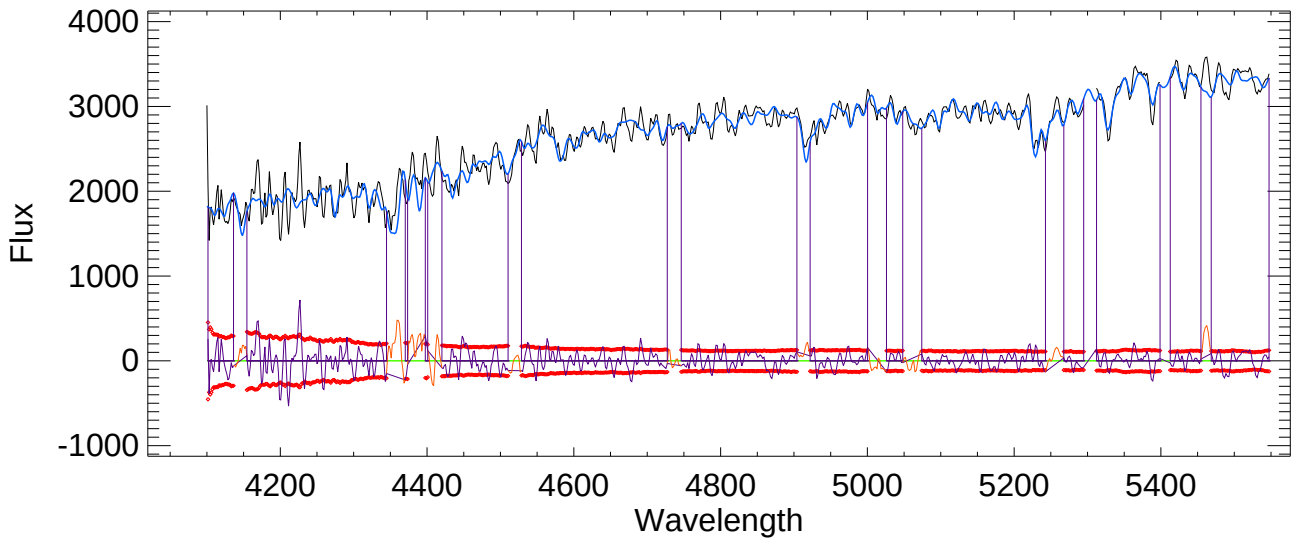

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

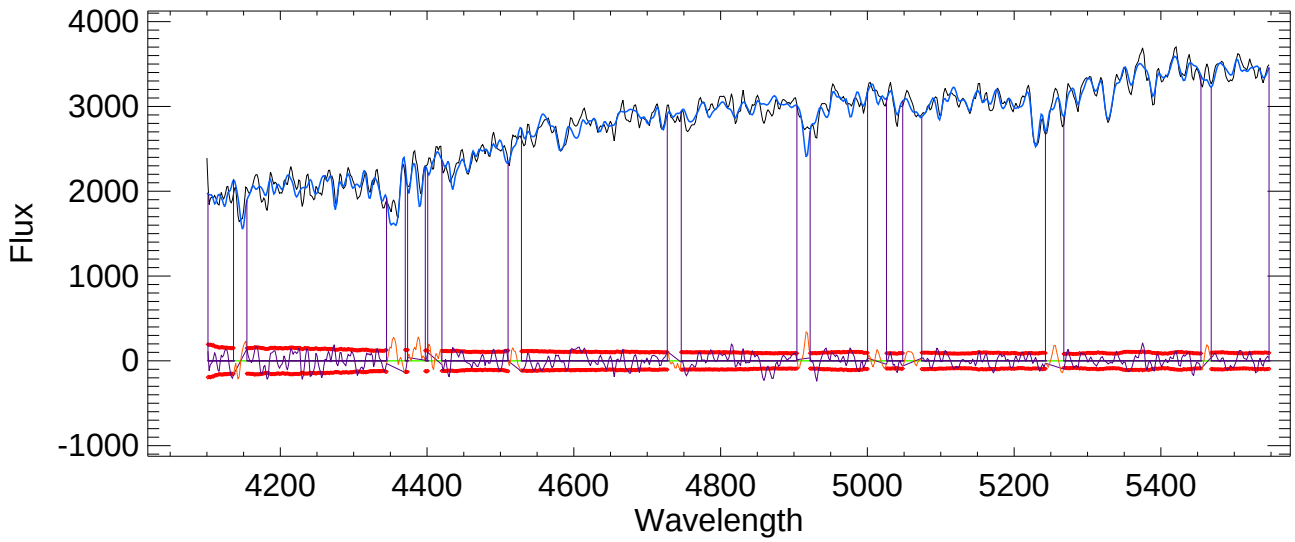

8000
6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

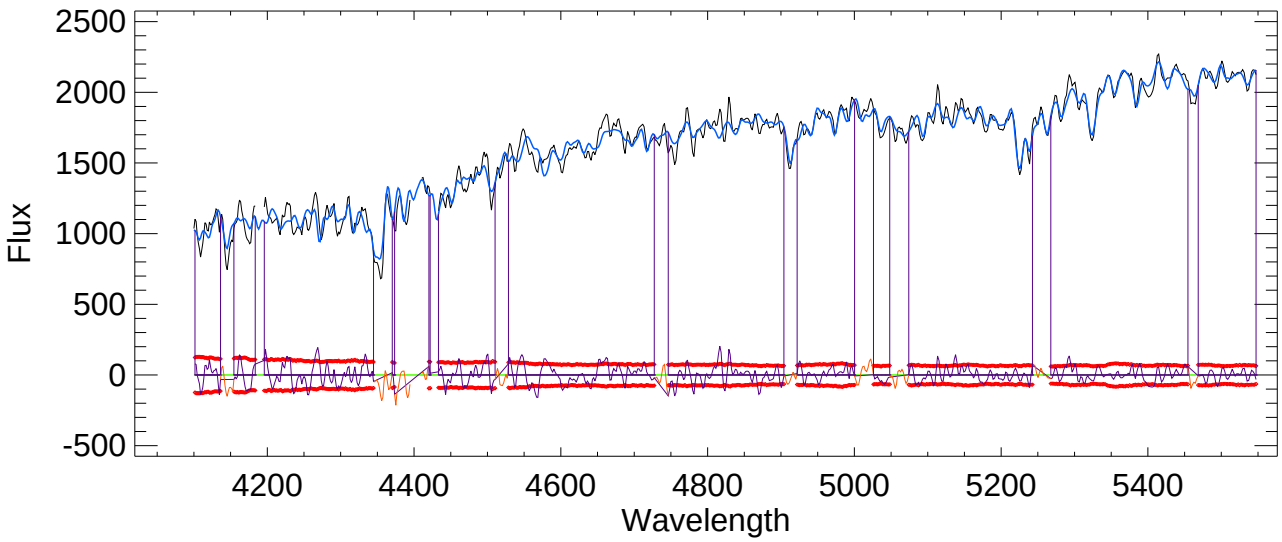

6000
4000
2000
0
-2000
Flux
4400
4600
4800
5000
5200
5400
Wavelength

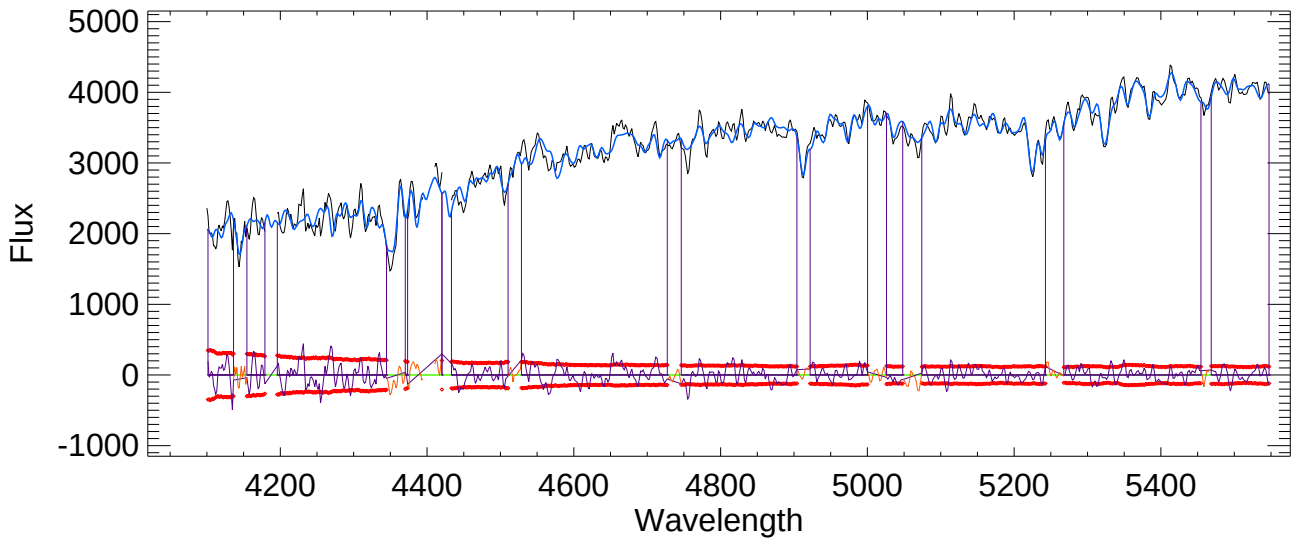

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

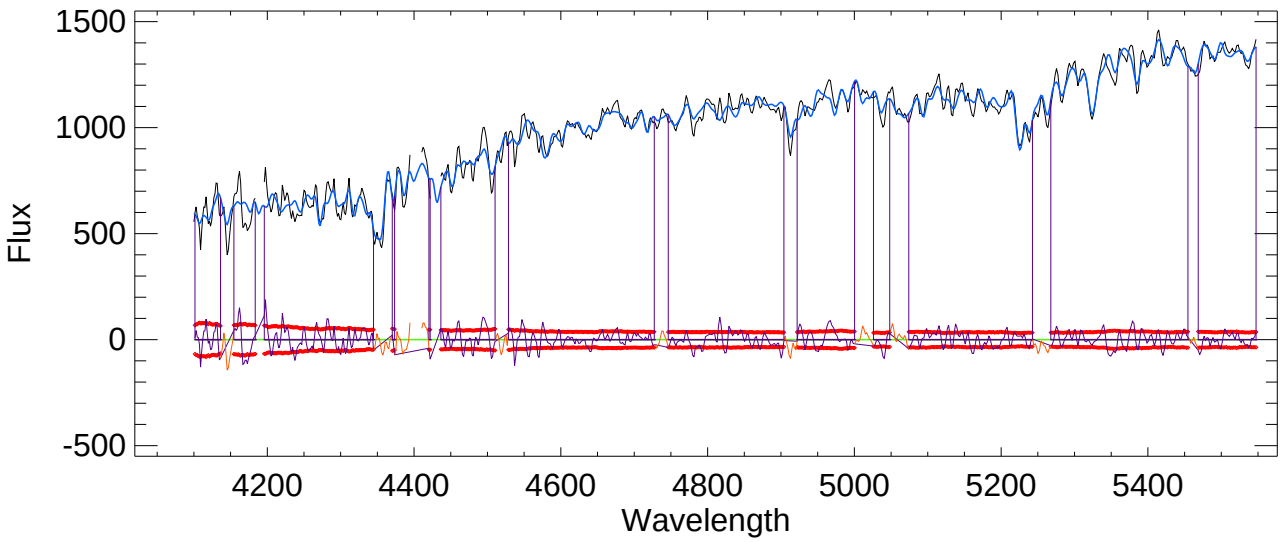

6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

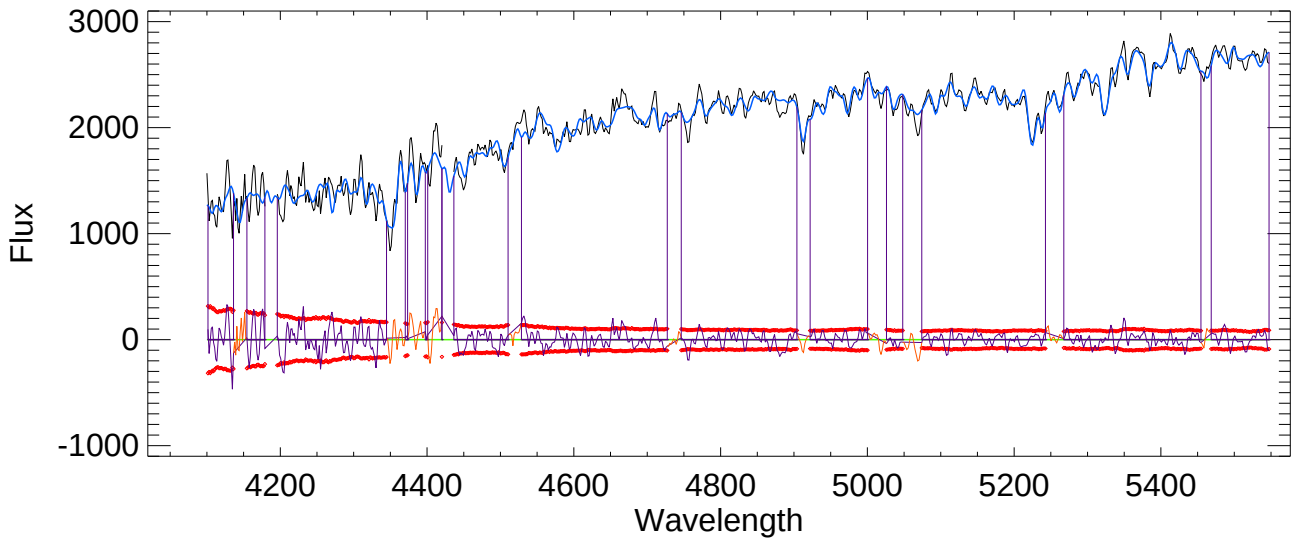

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

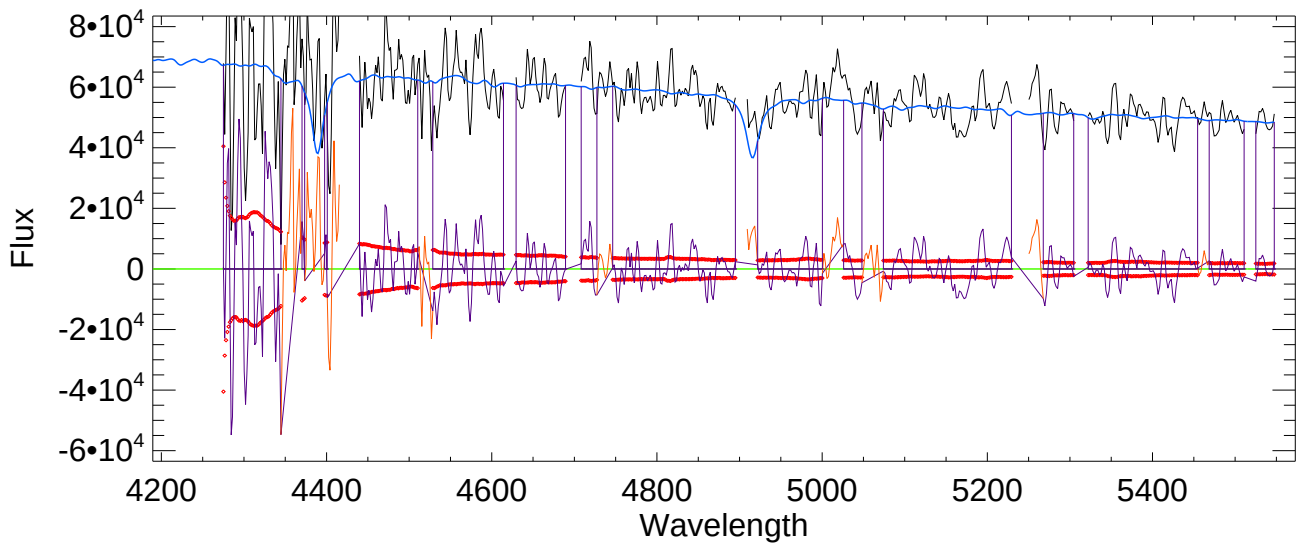

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

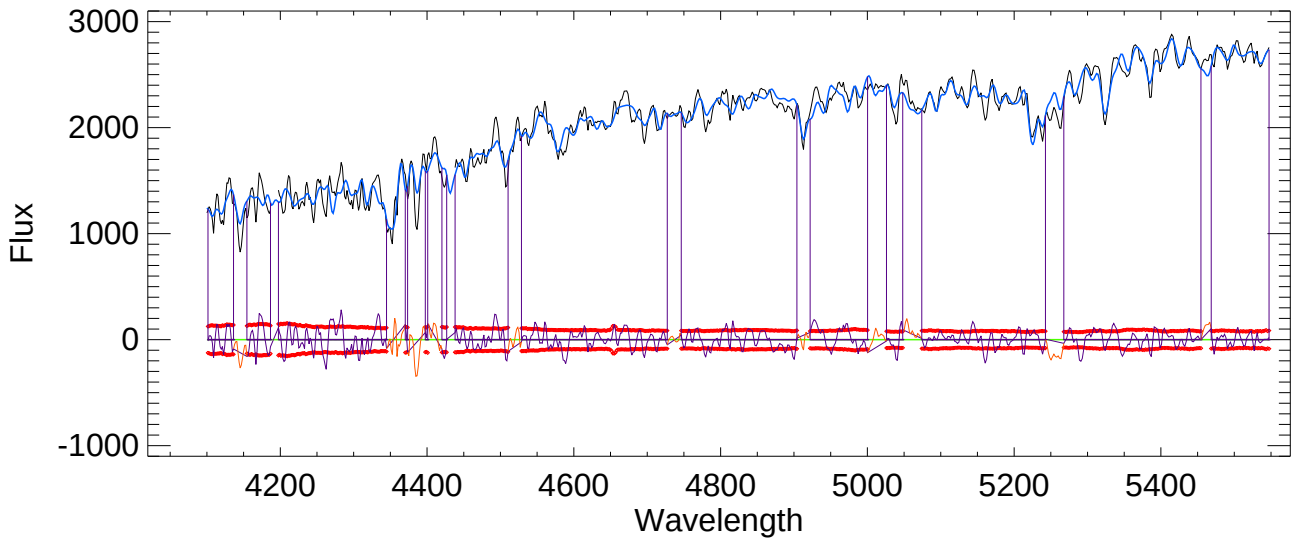

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

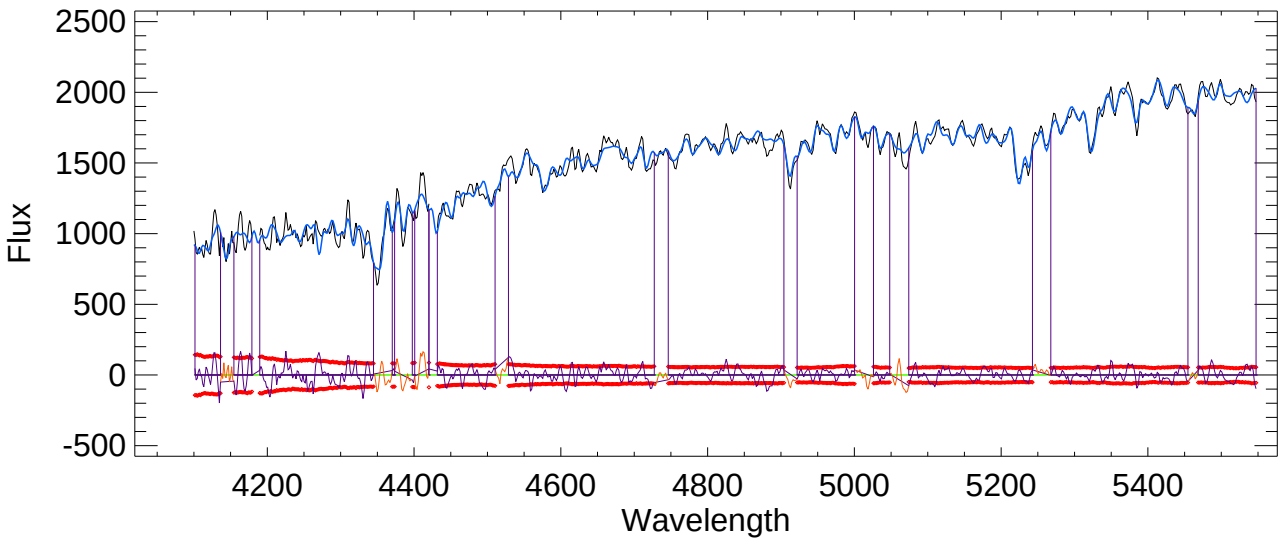

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

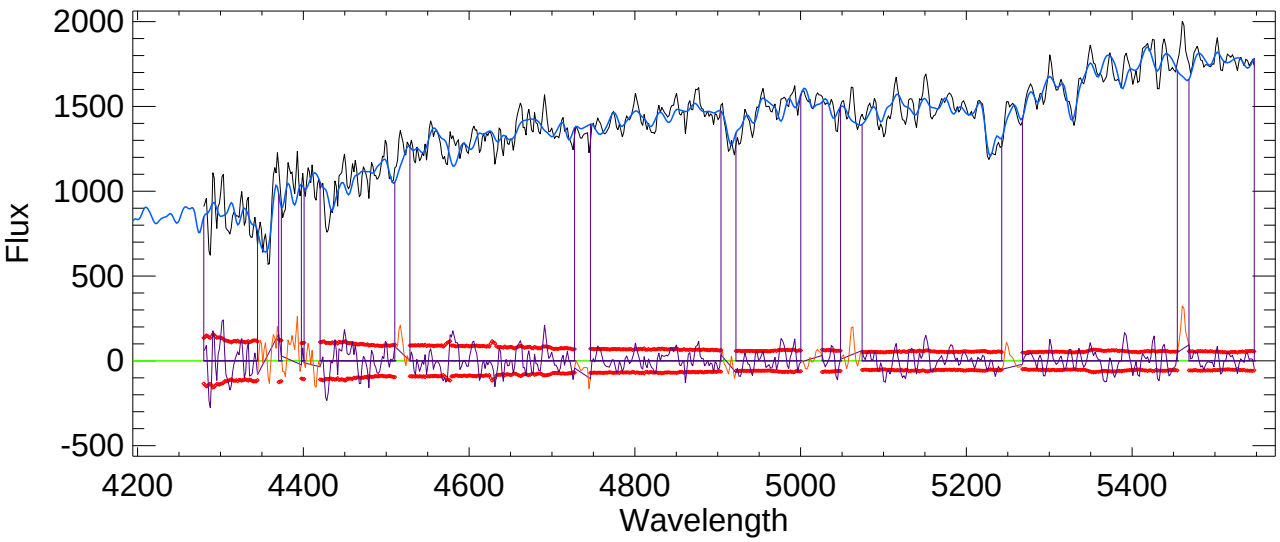

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

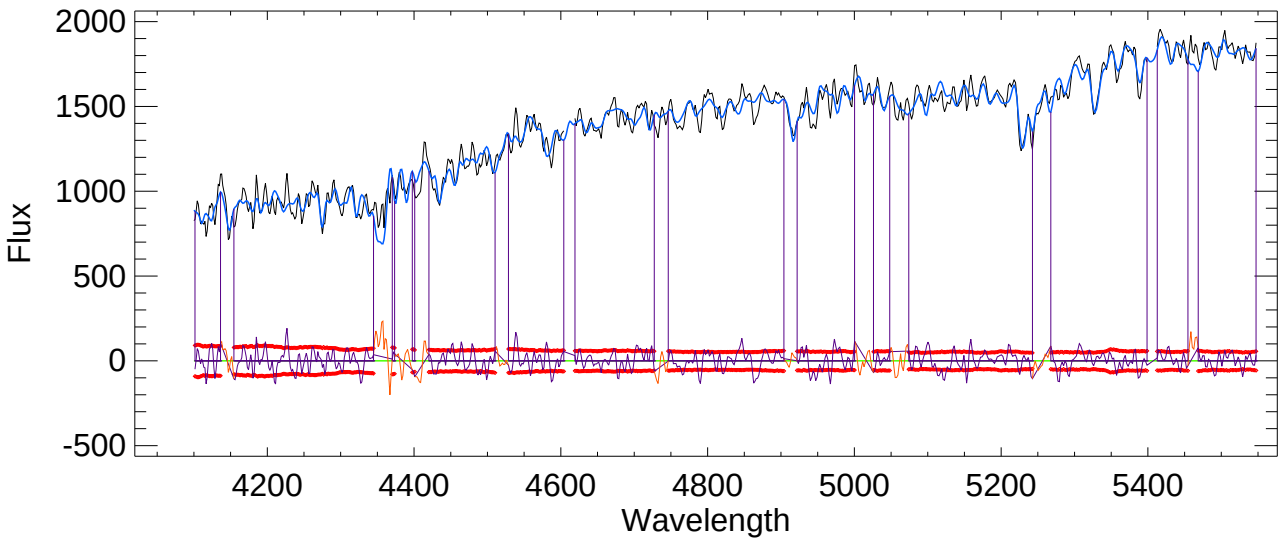

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

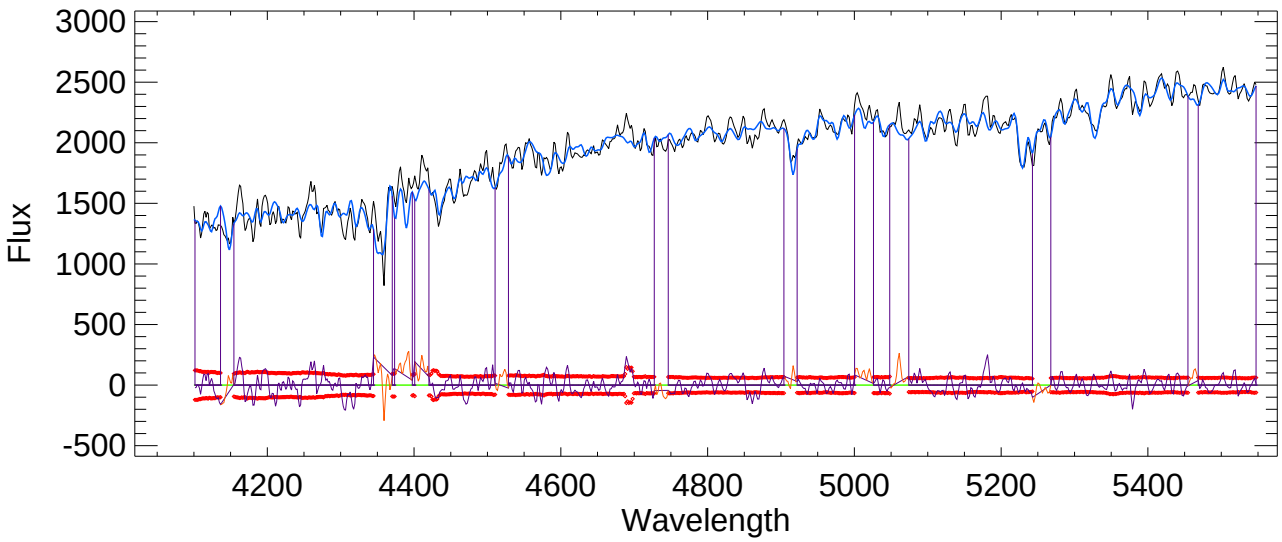

8•10^4
6•10^4
4•10^4
2•10^4
0
-2•10^4
-4•10^4
-6•10^4
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

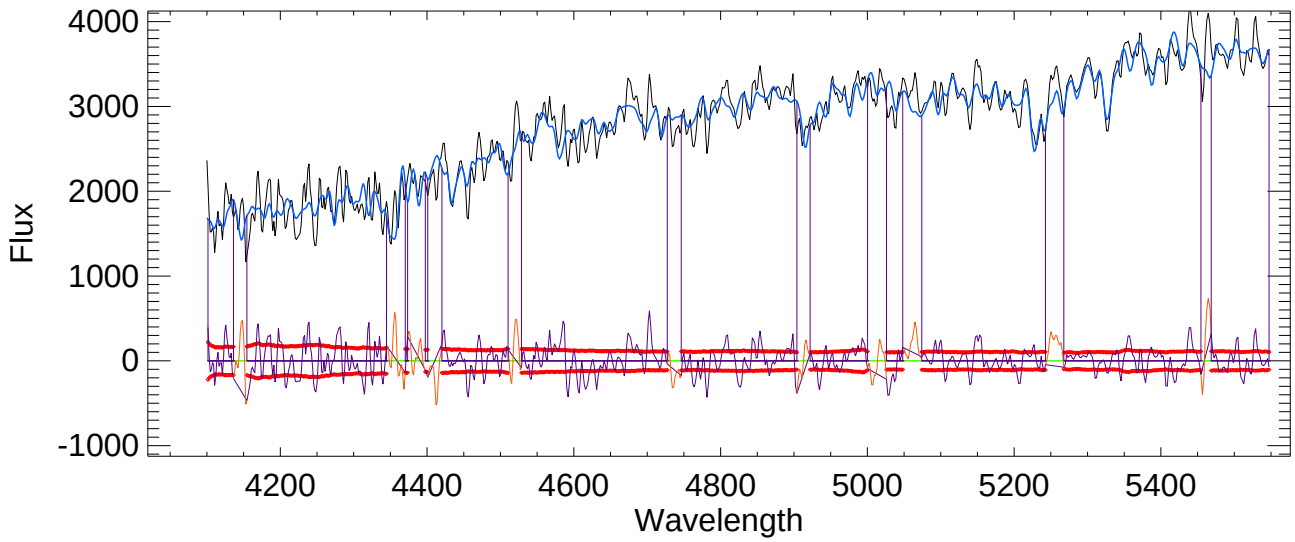

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

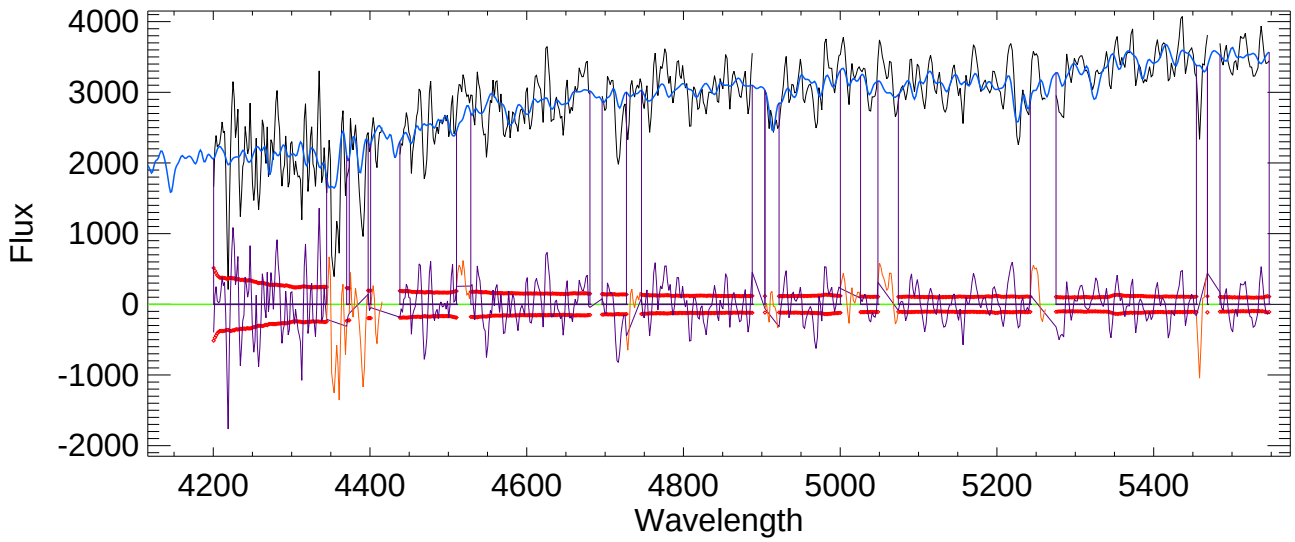

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

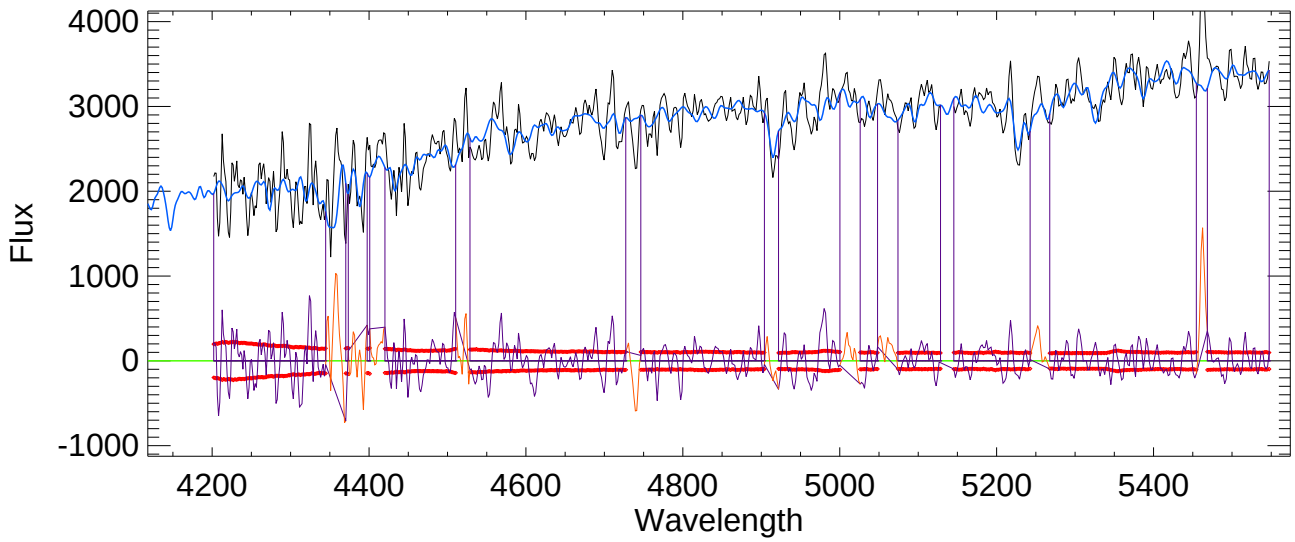

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

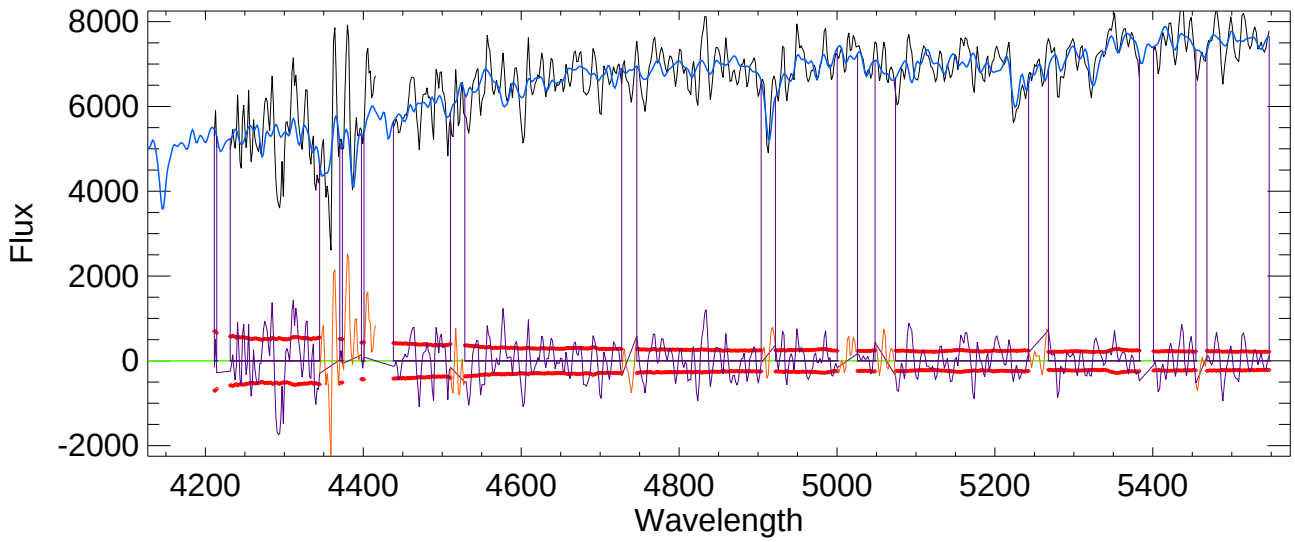

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

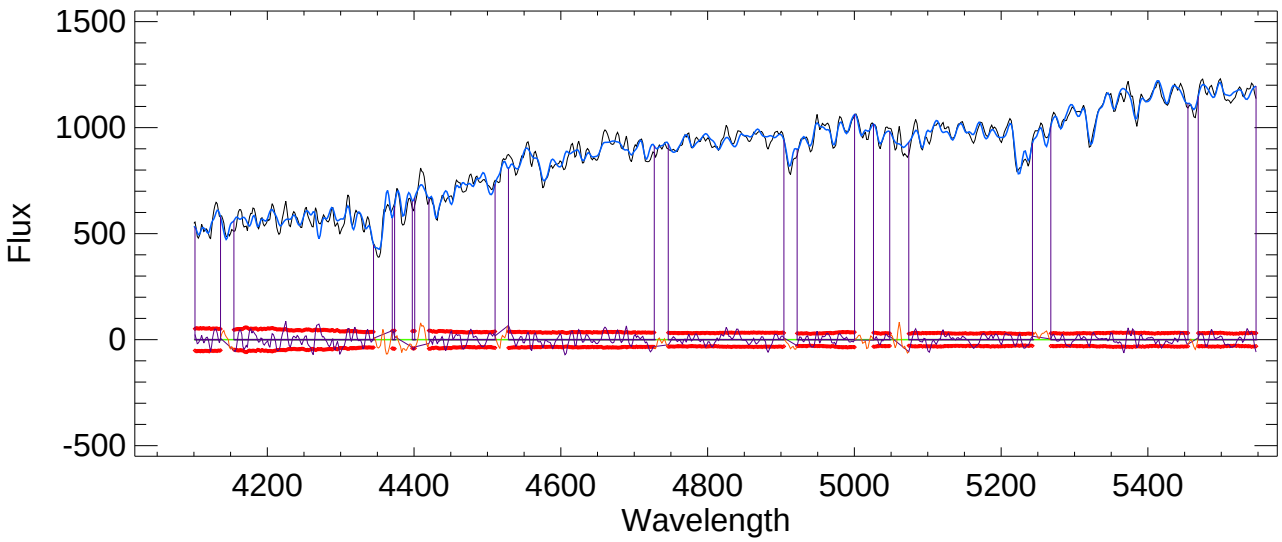

3000
2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

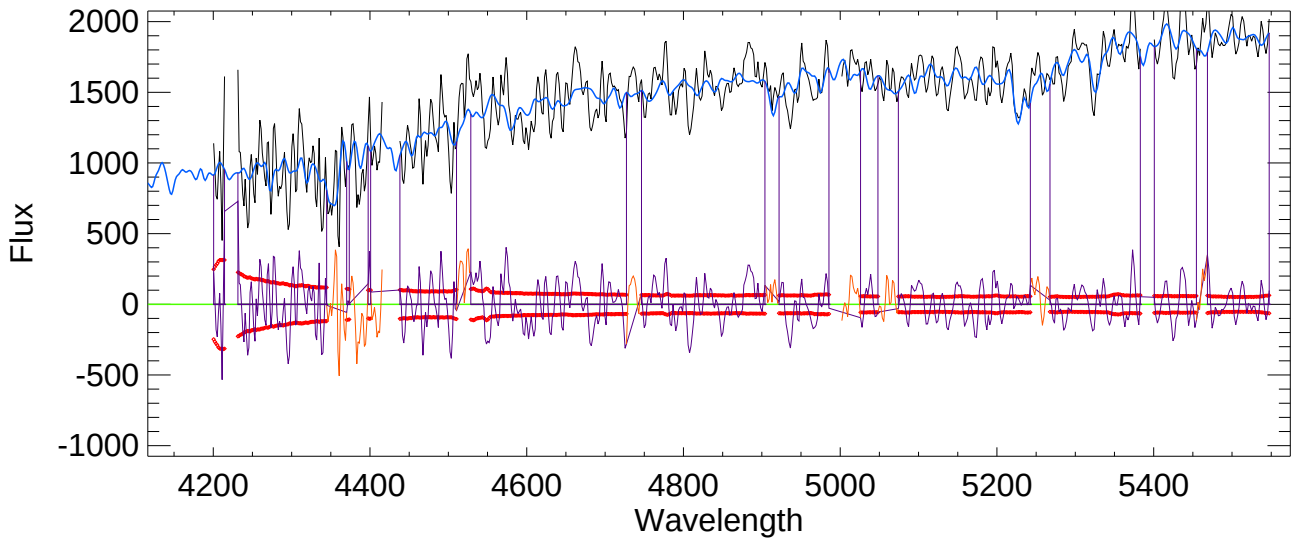

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

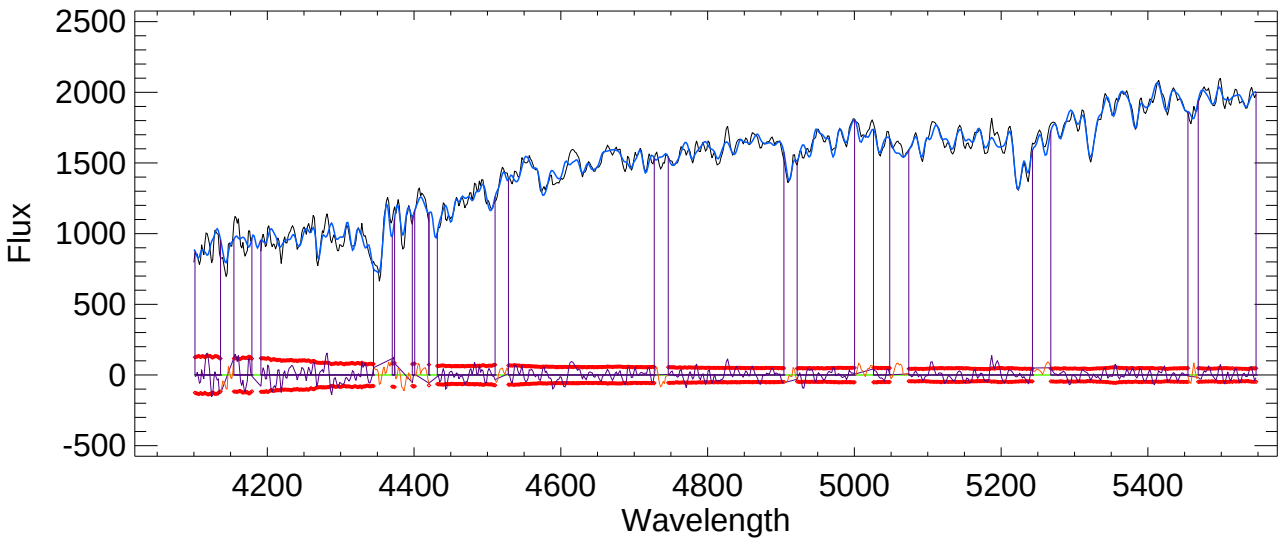

4000
3000
2000
1000
0
-1000
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

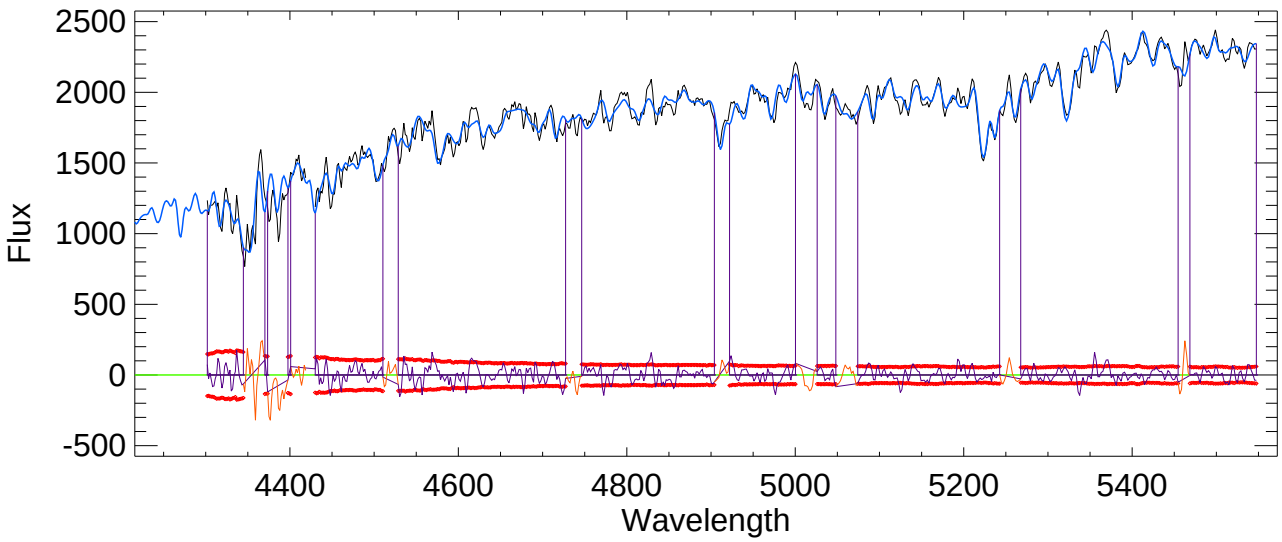

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

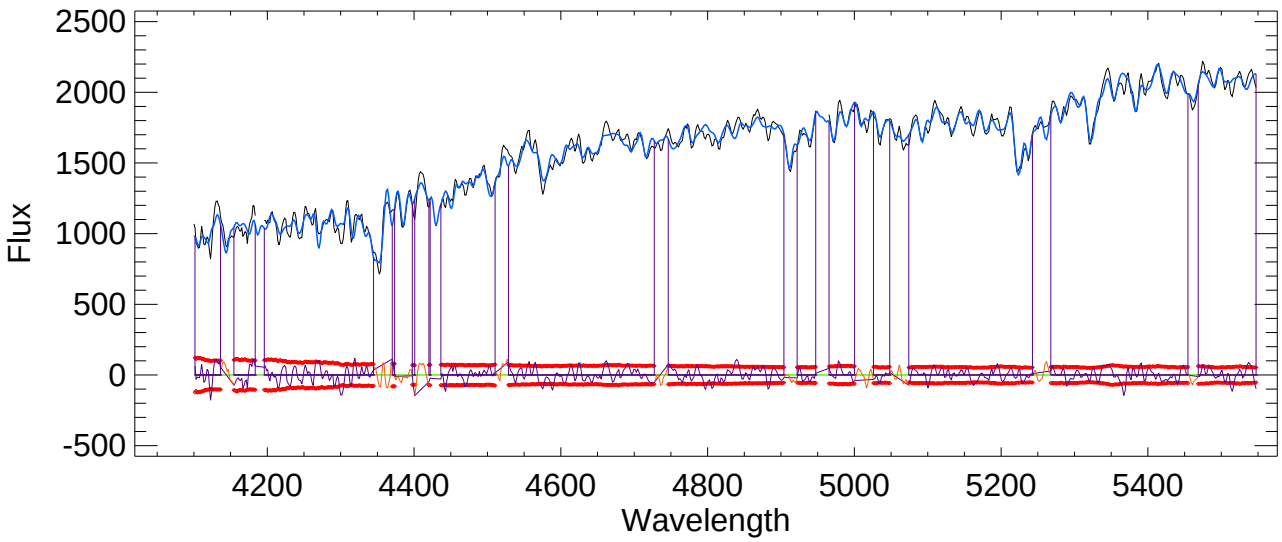

8000
6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

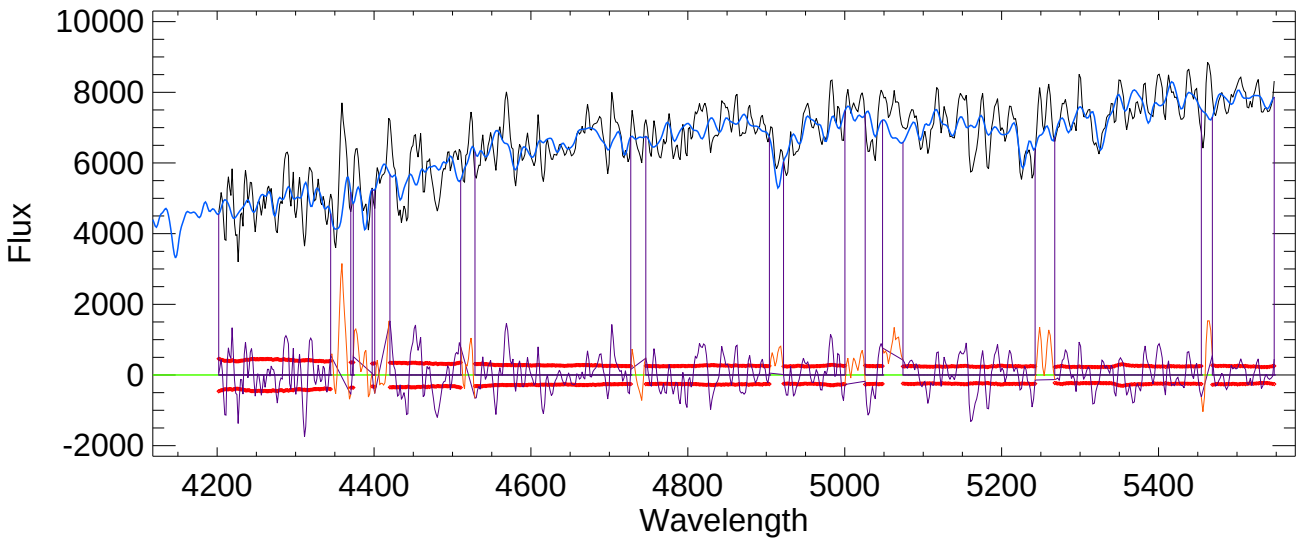

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

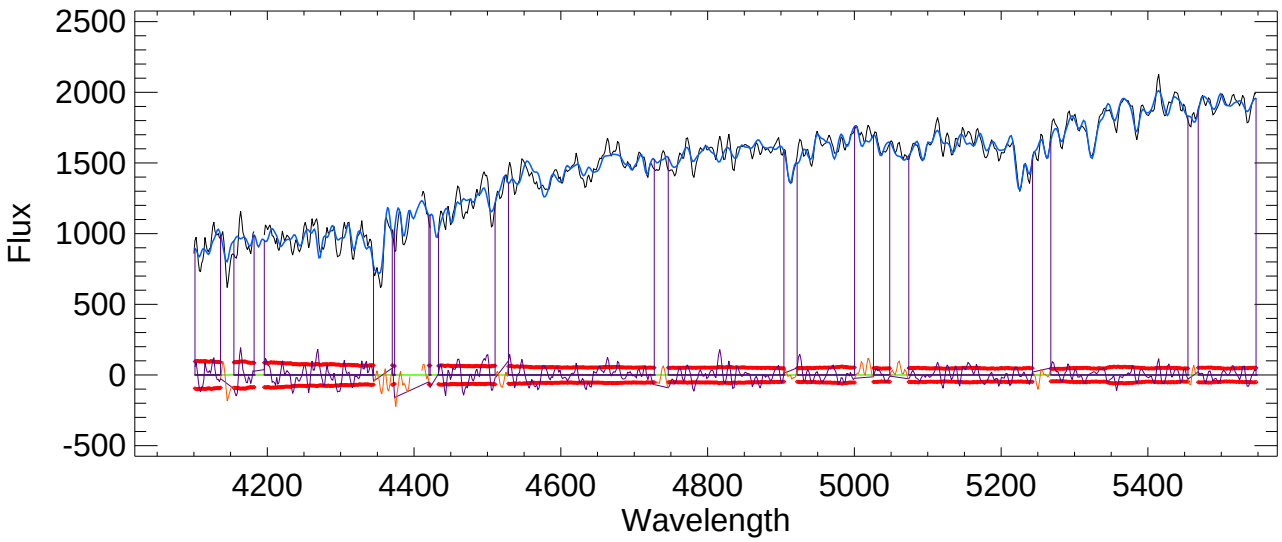

2000
1500
1000
500
0
-500
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

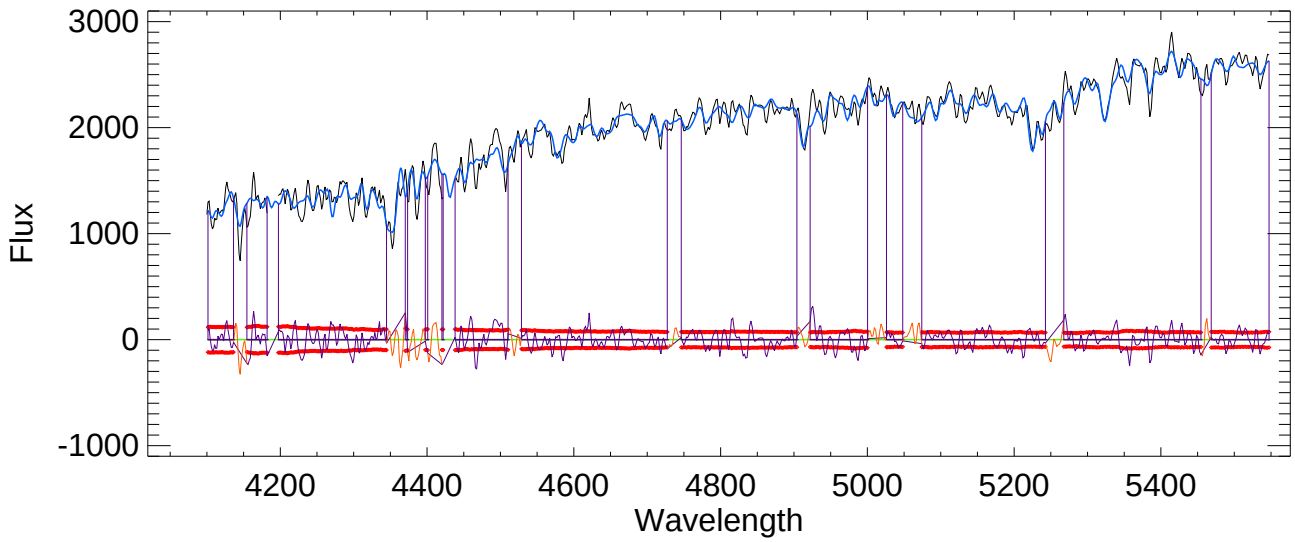

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

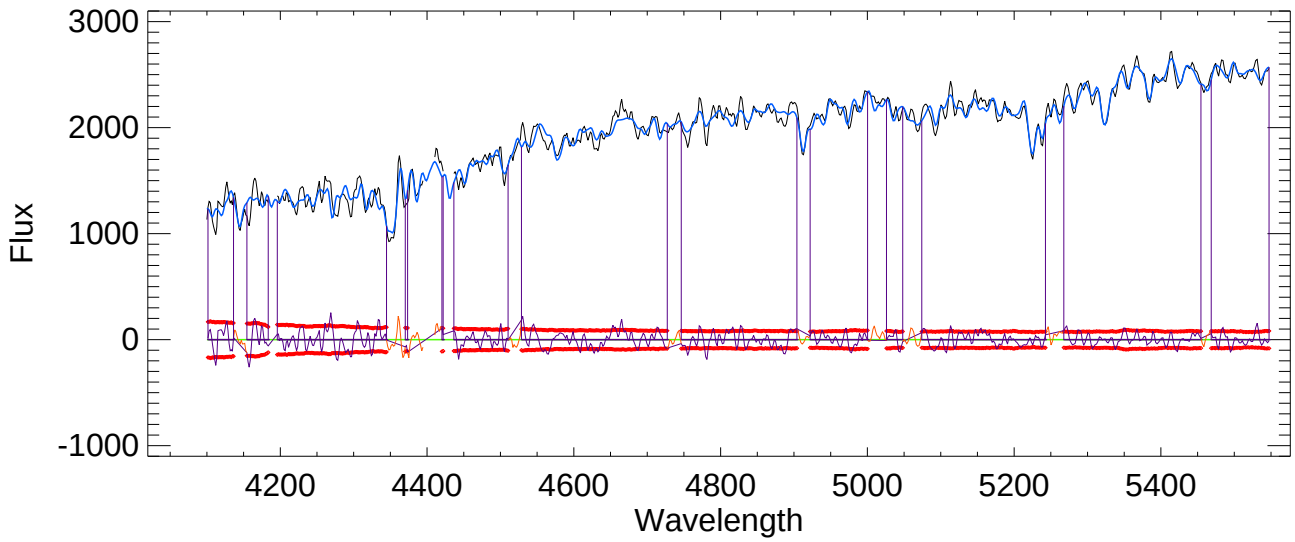

2500
2000
1500
1000
500
0
-500
Flux
4400
4600
4800
5000
5200
5400
Wavelength

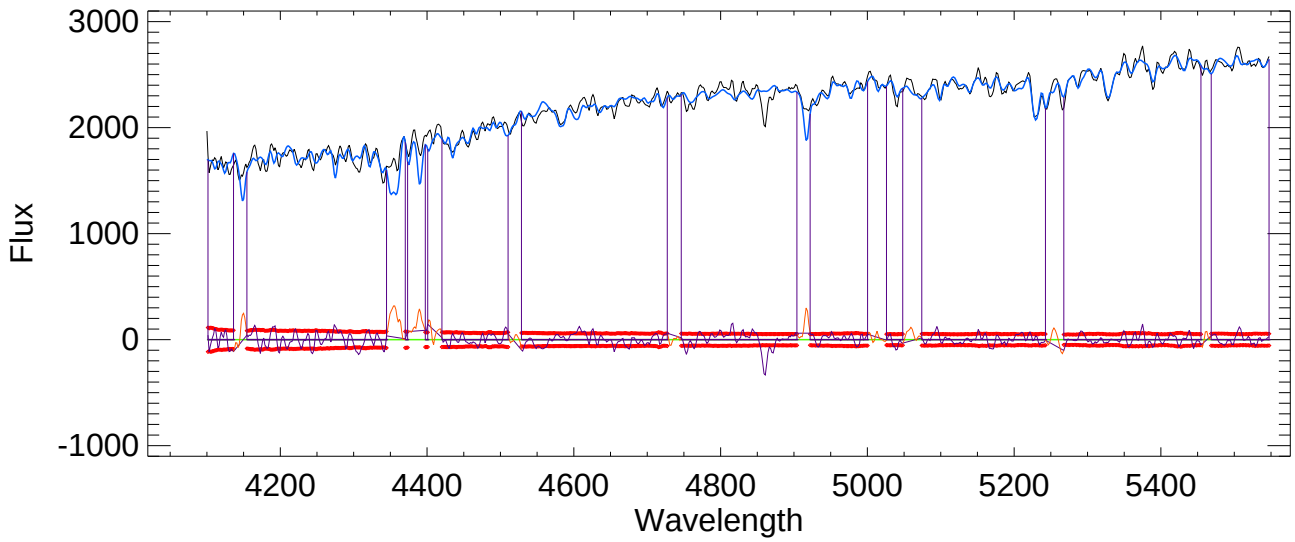

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

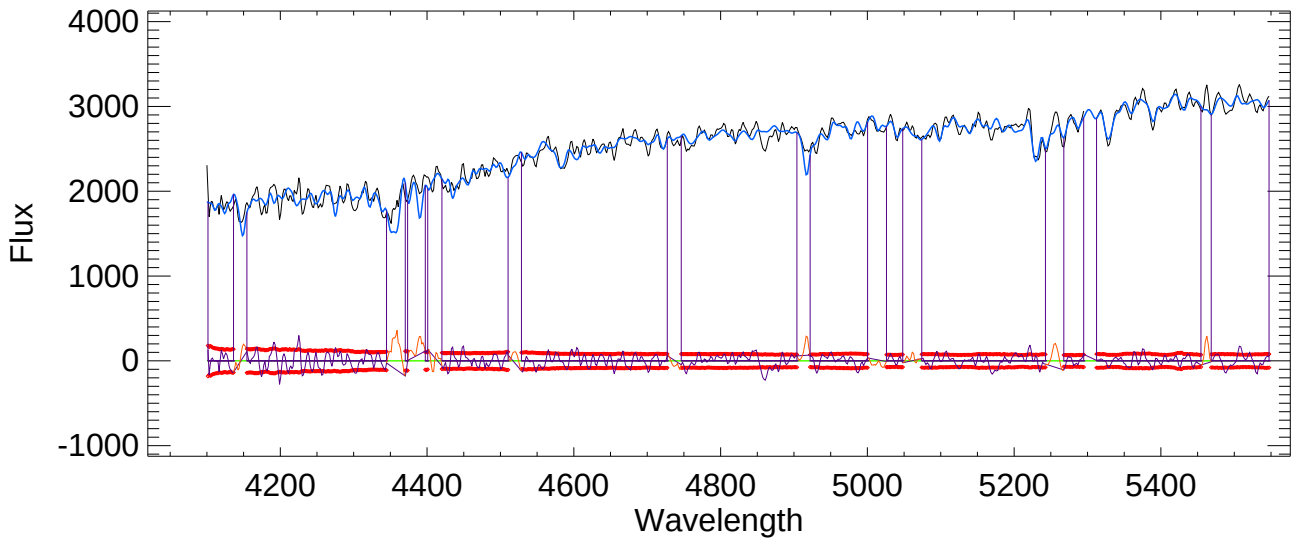

10000
8000
6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

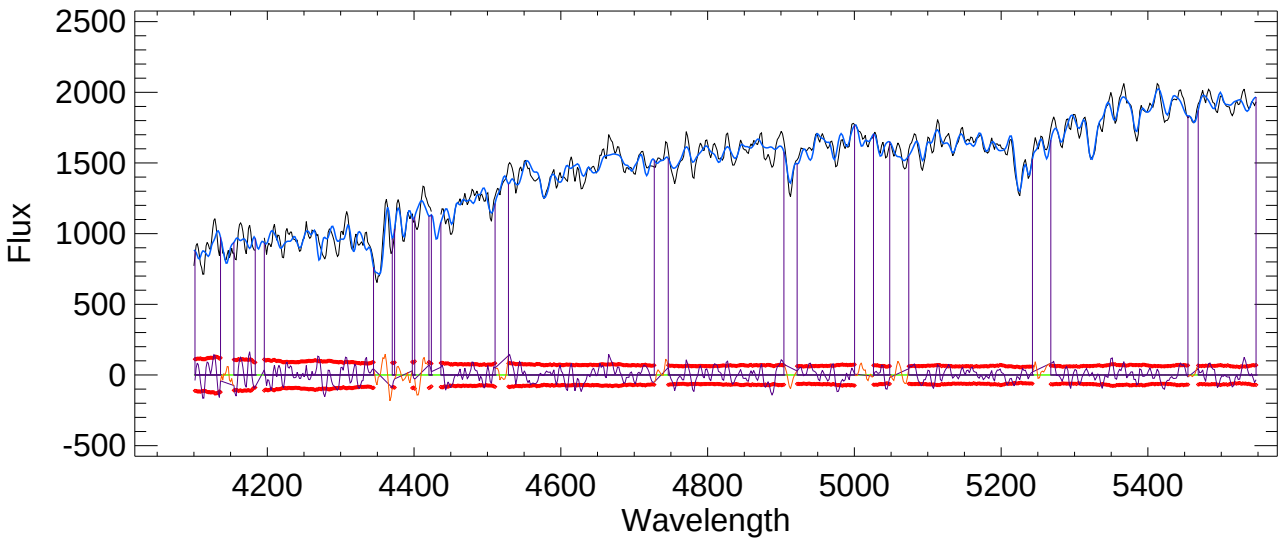

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

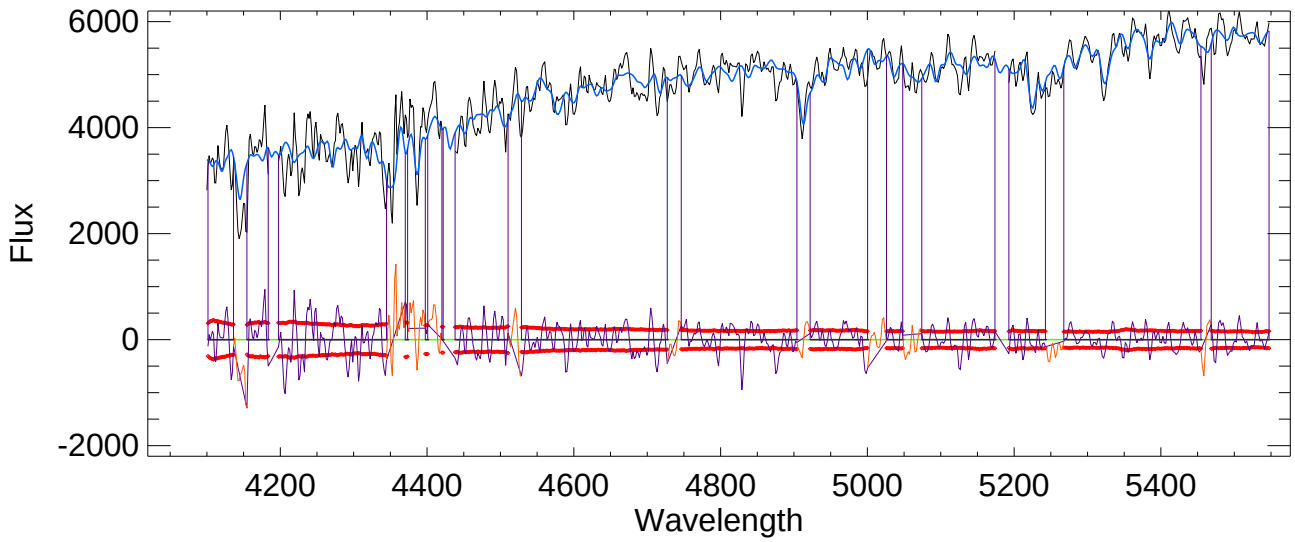

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

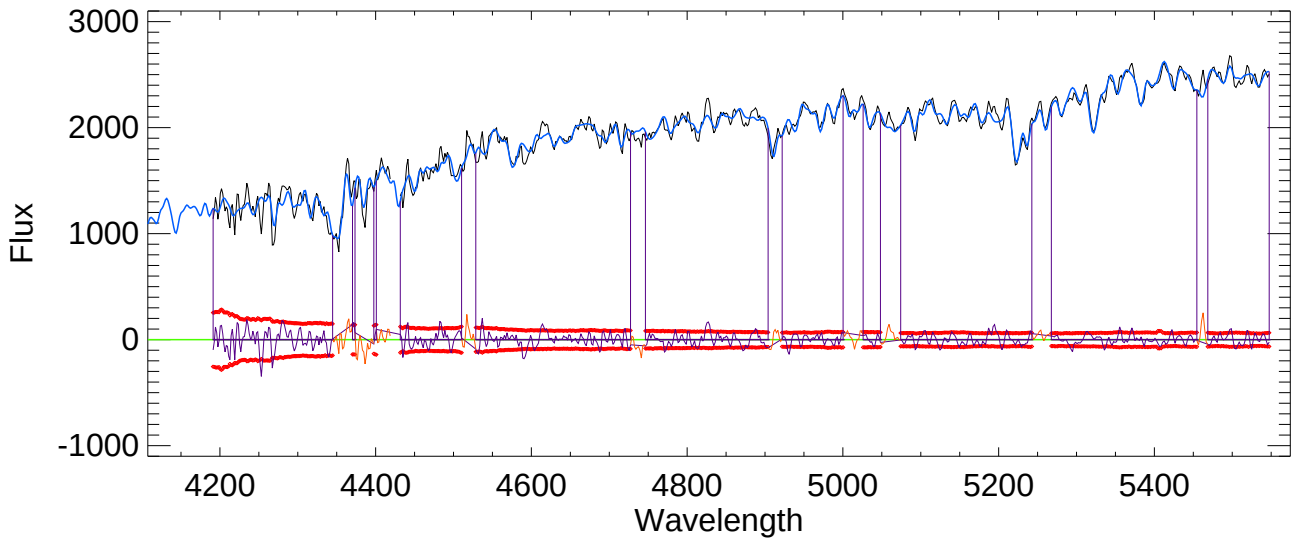

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

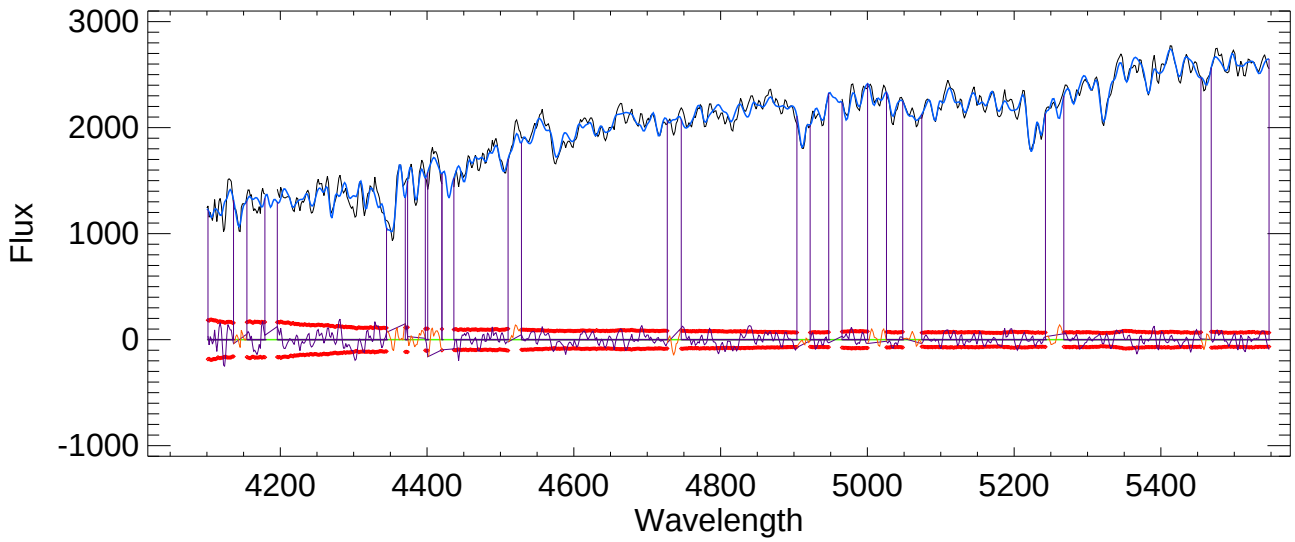

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

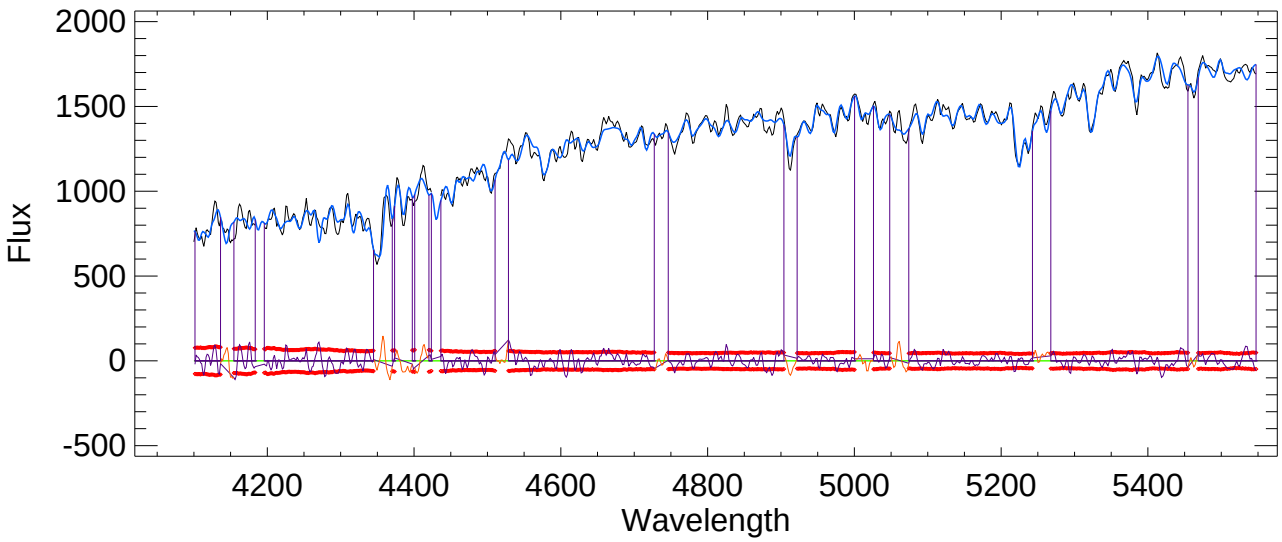

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

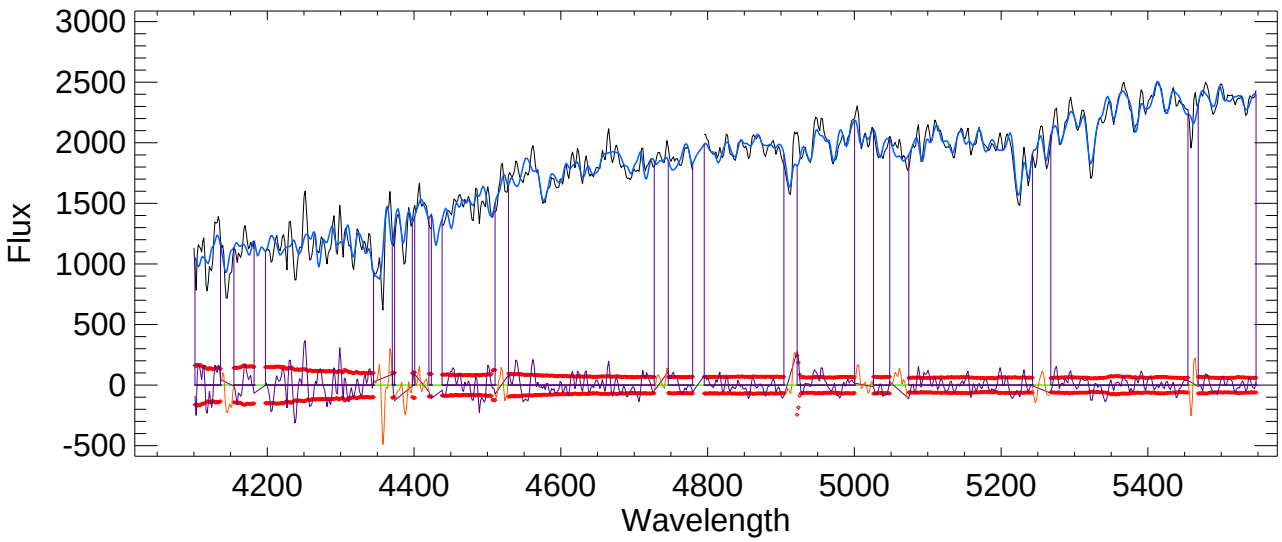

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

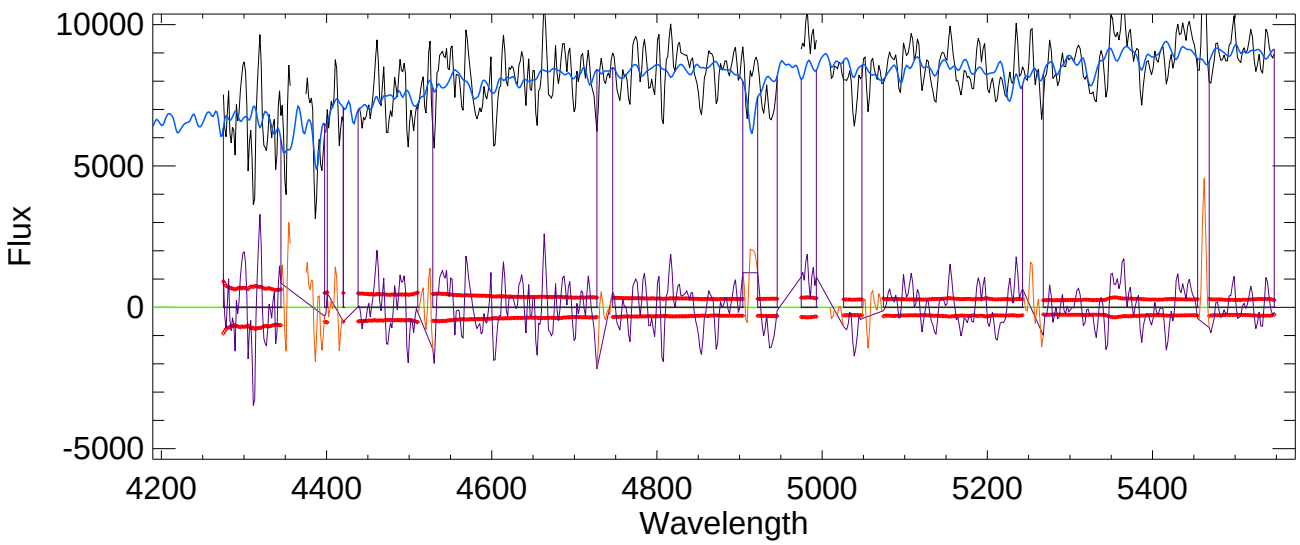

6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

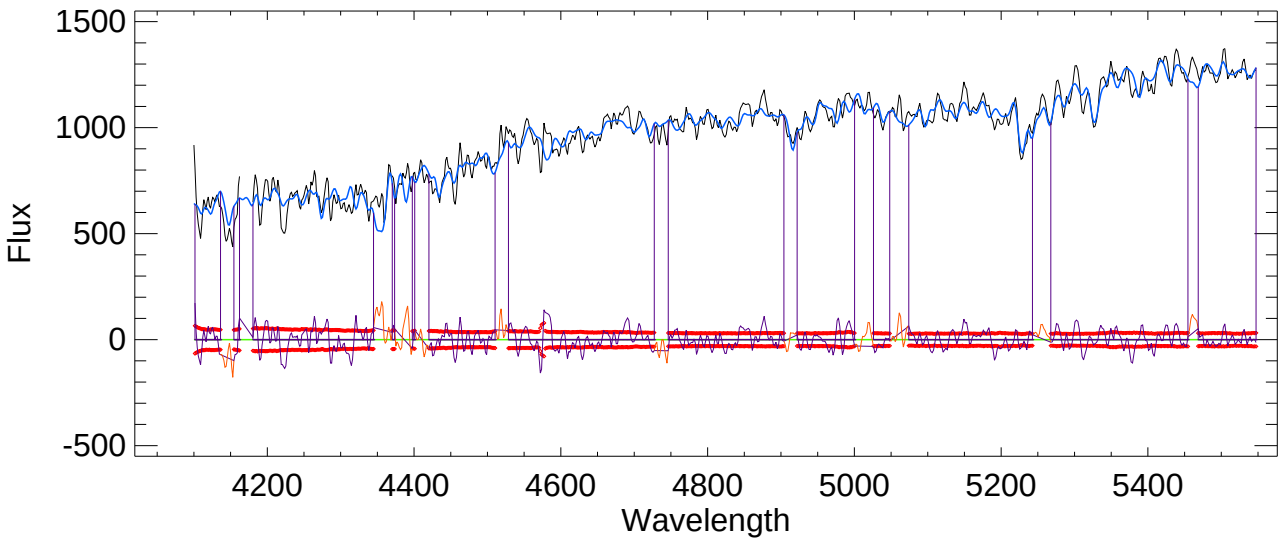

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

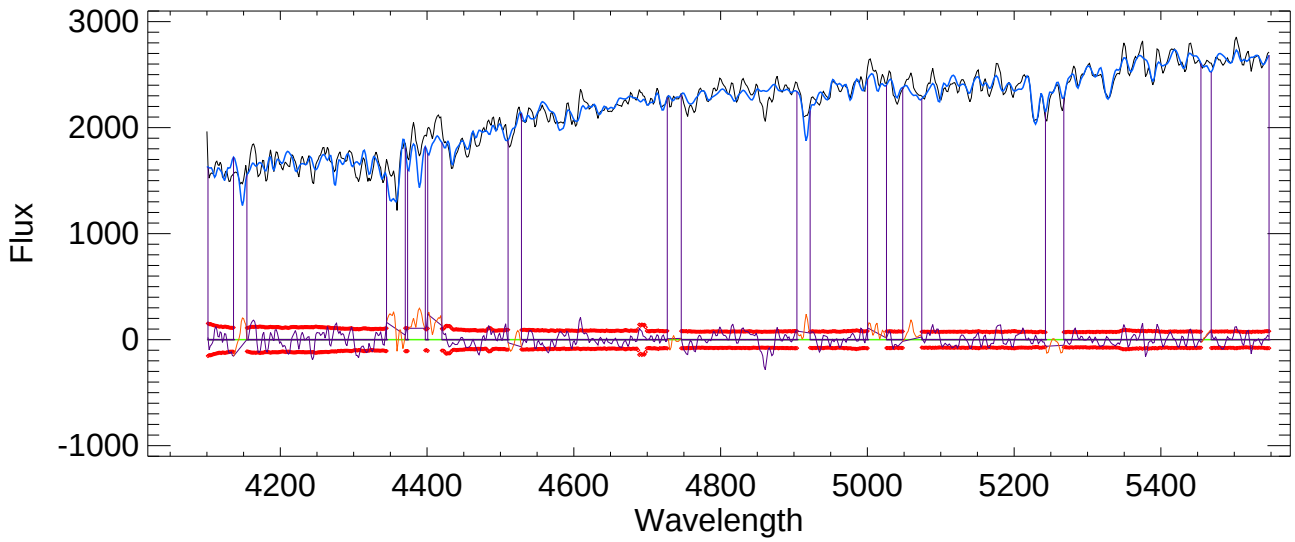

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

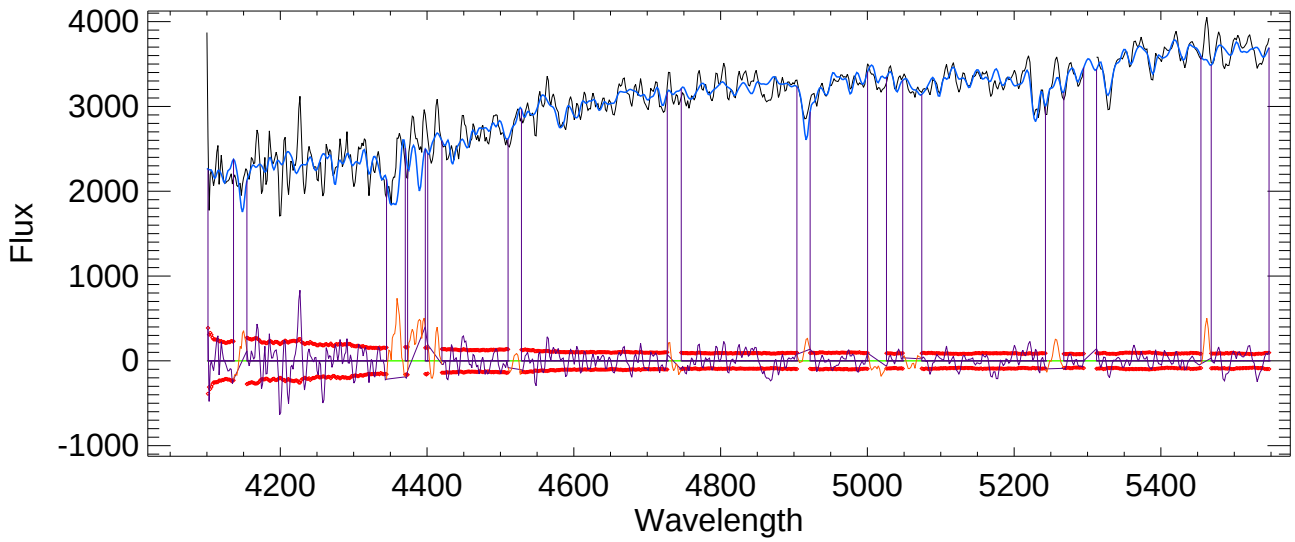

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

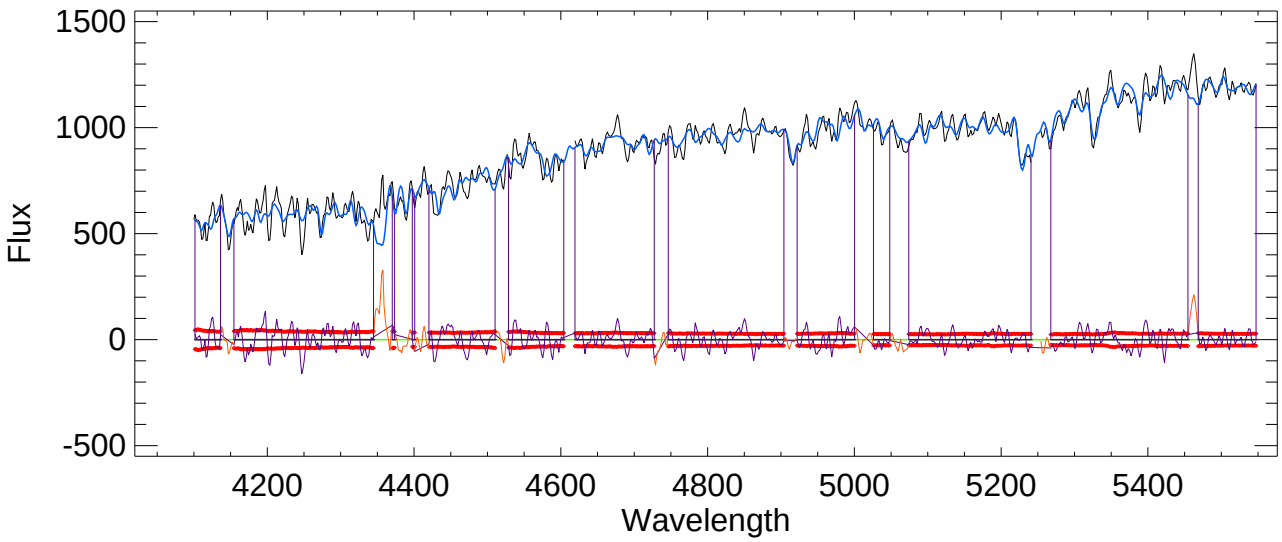

3000
2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

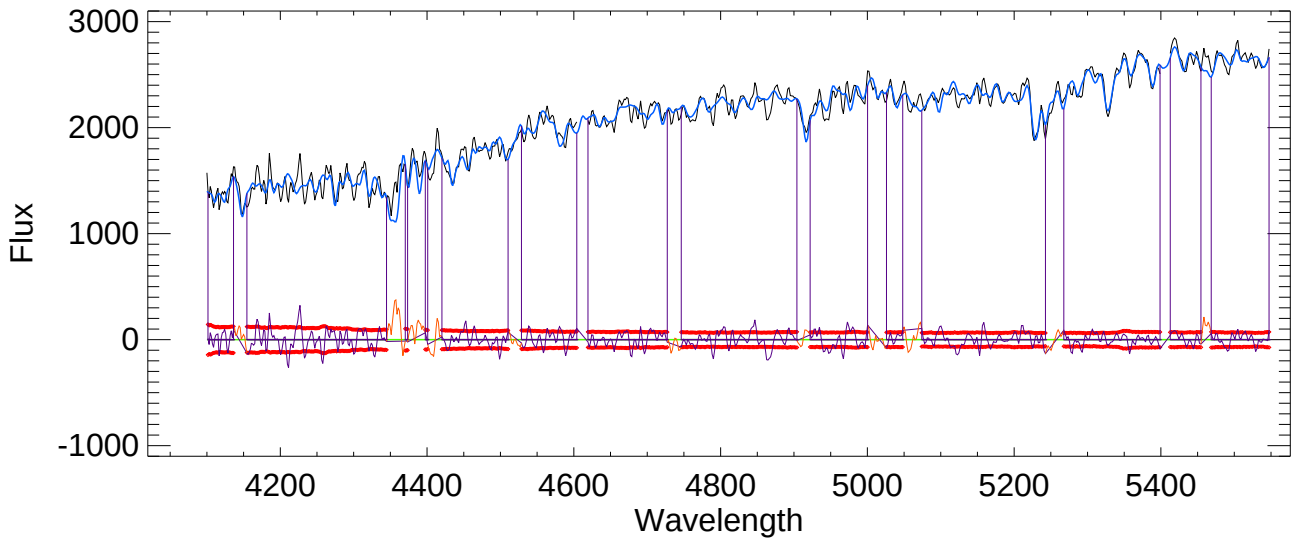

10000
5000
0
-5000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

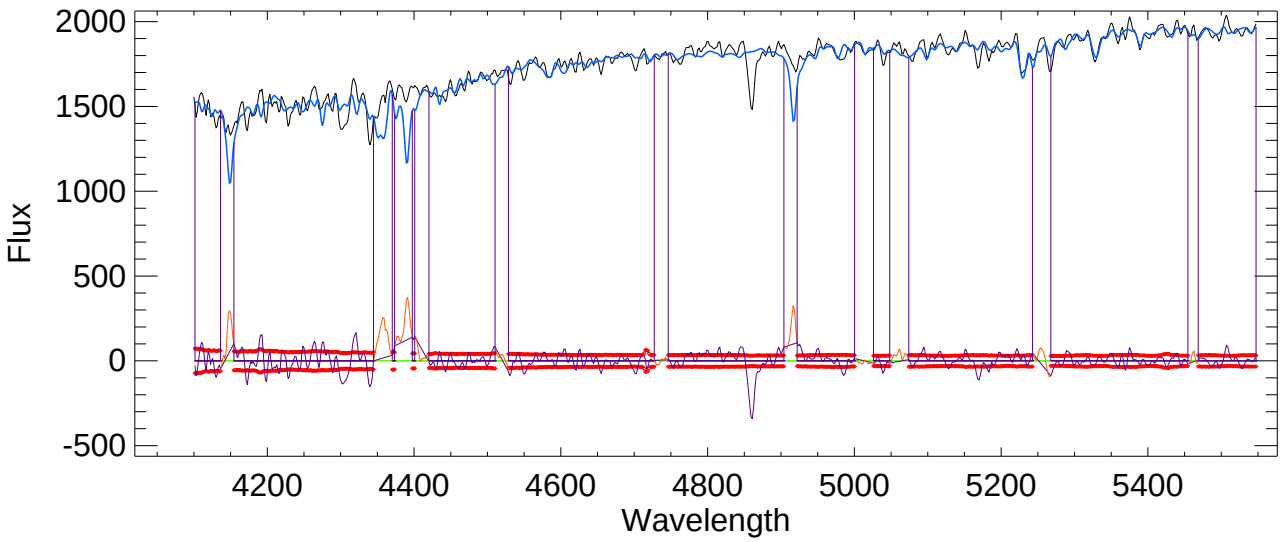

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

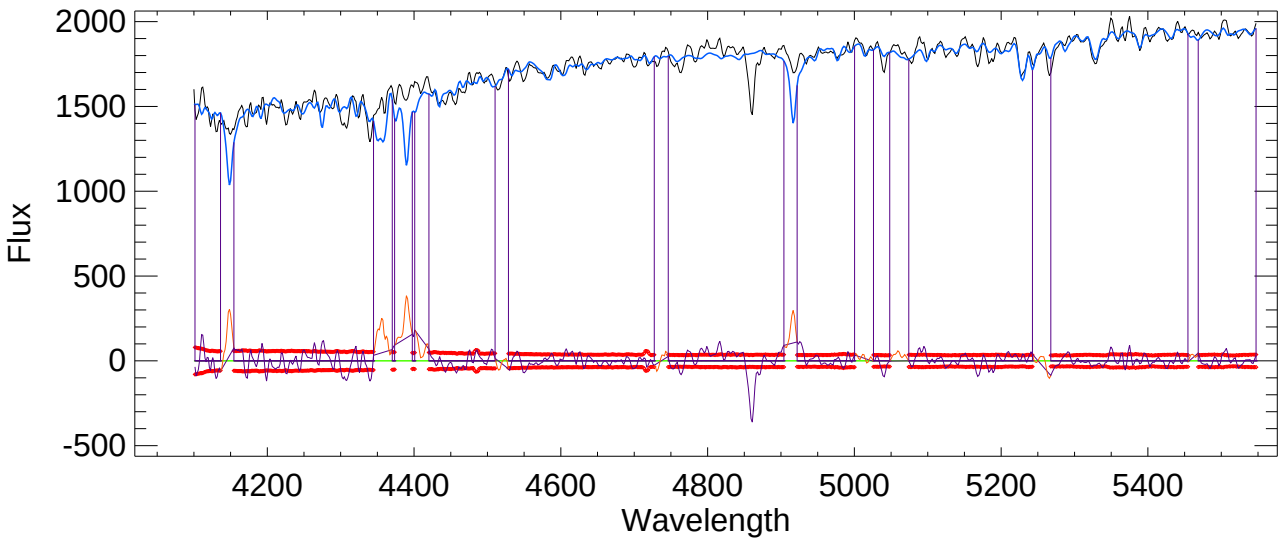

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

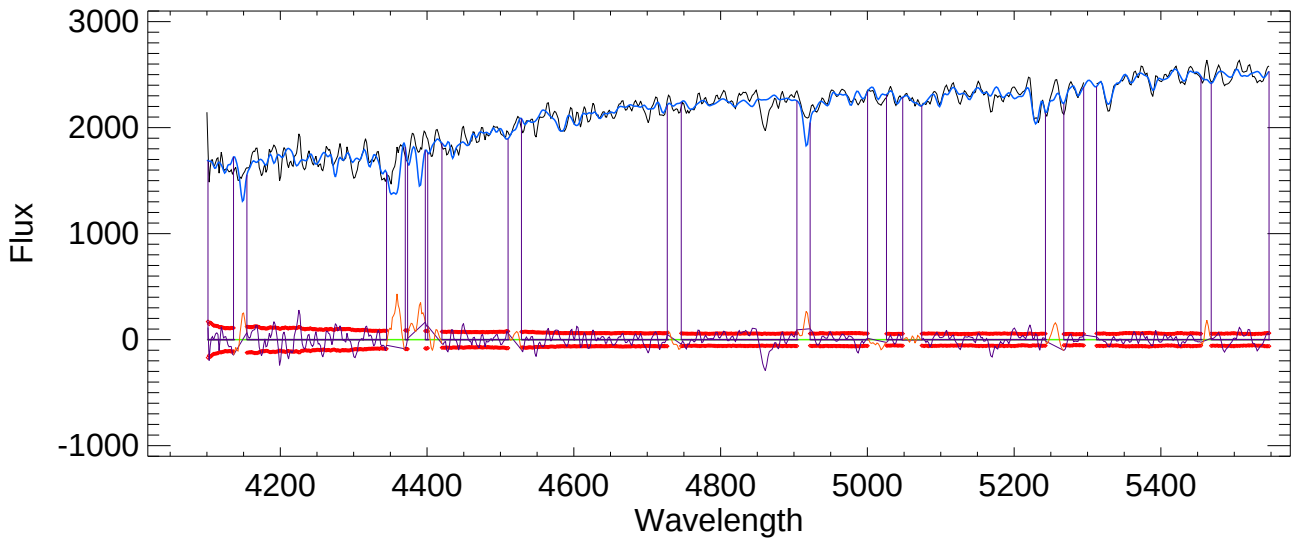

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

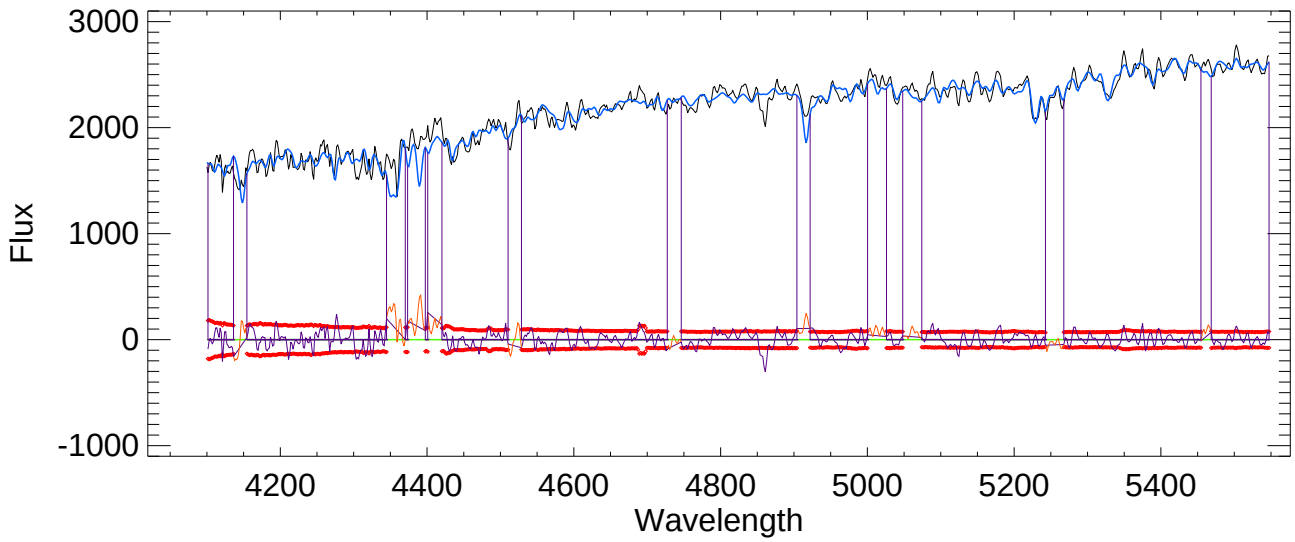

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

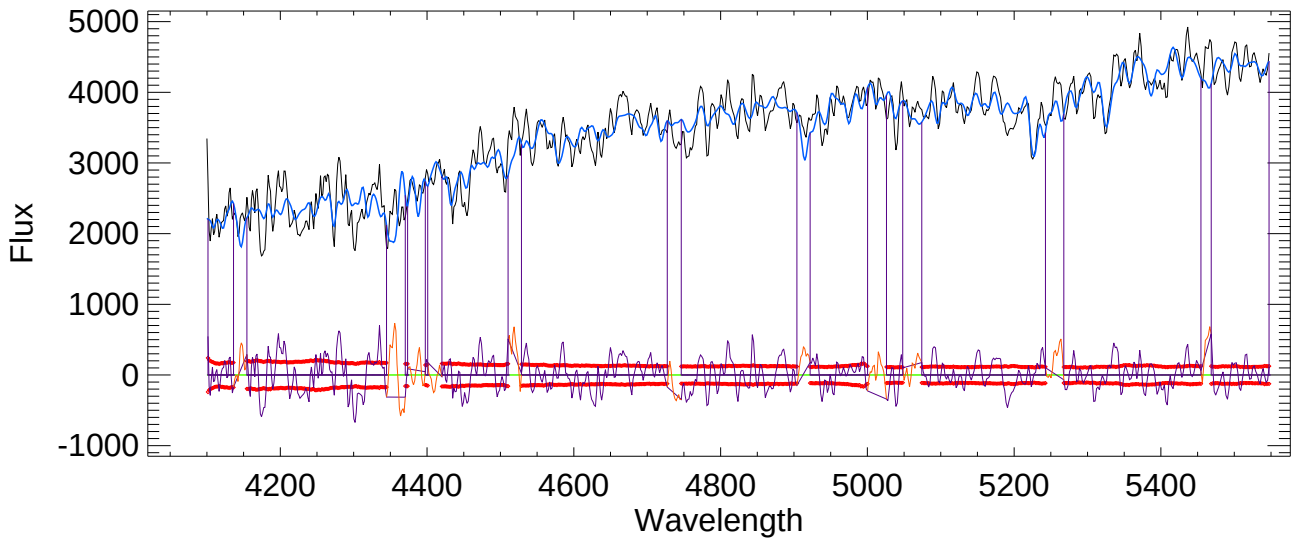

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

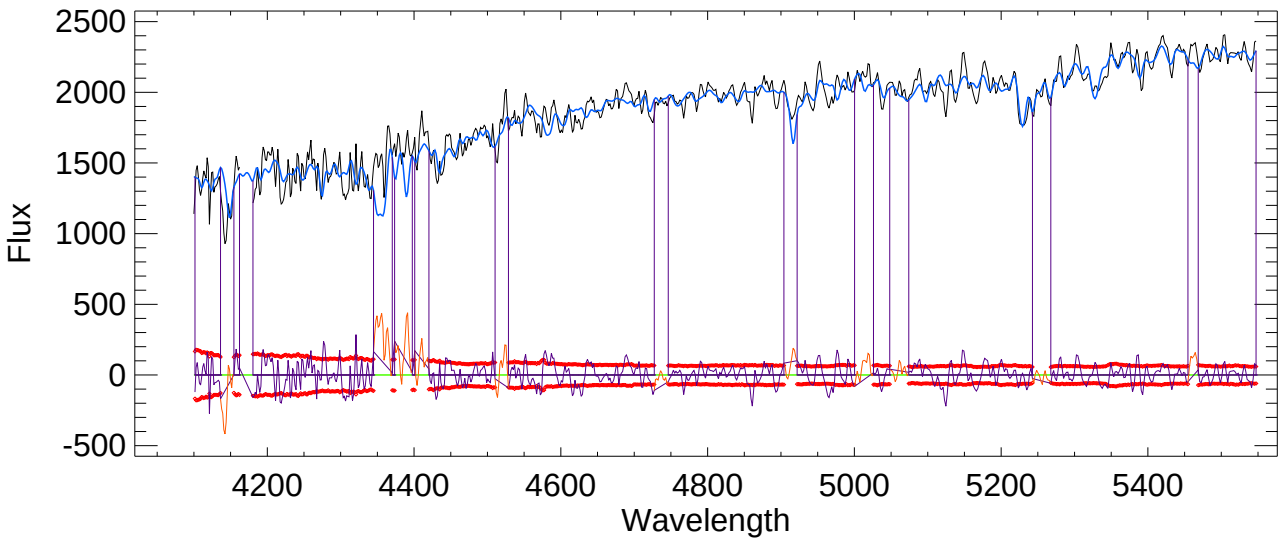

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

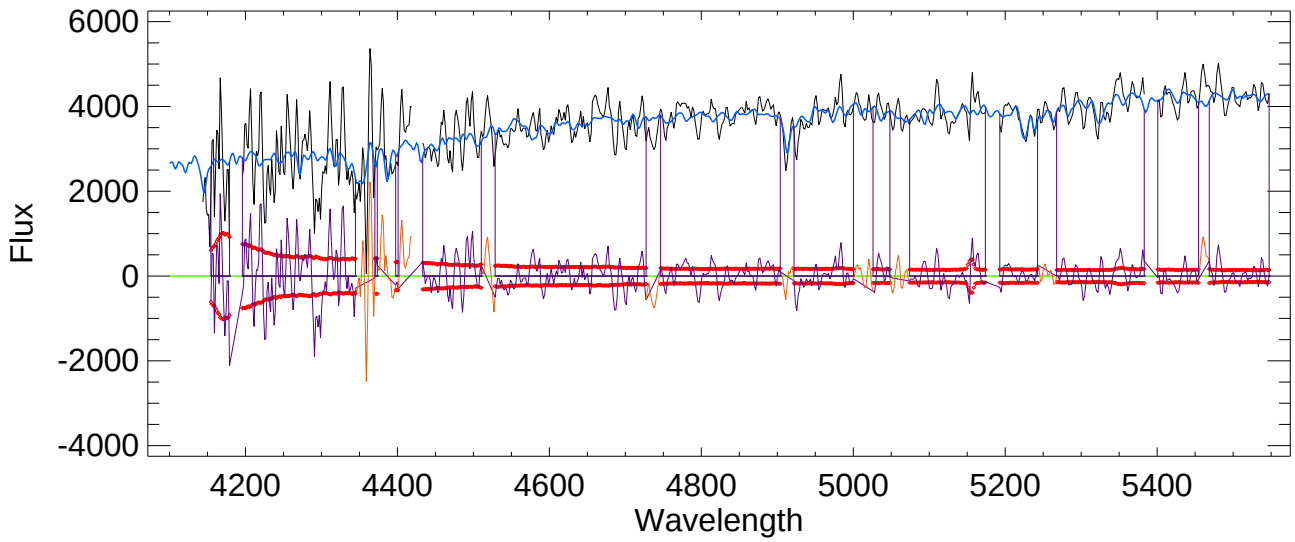

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

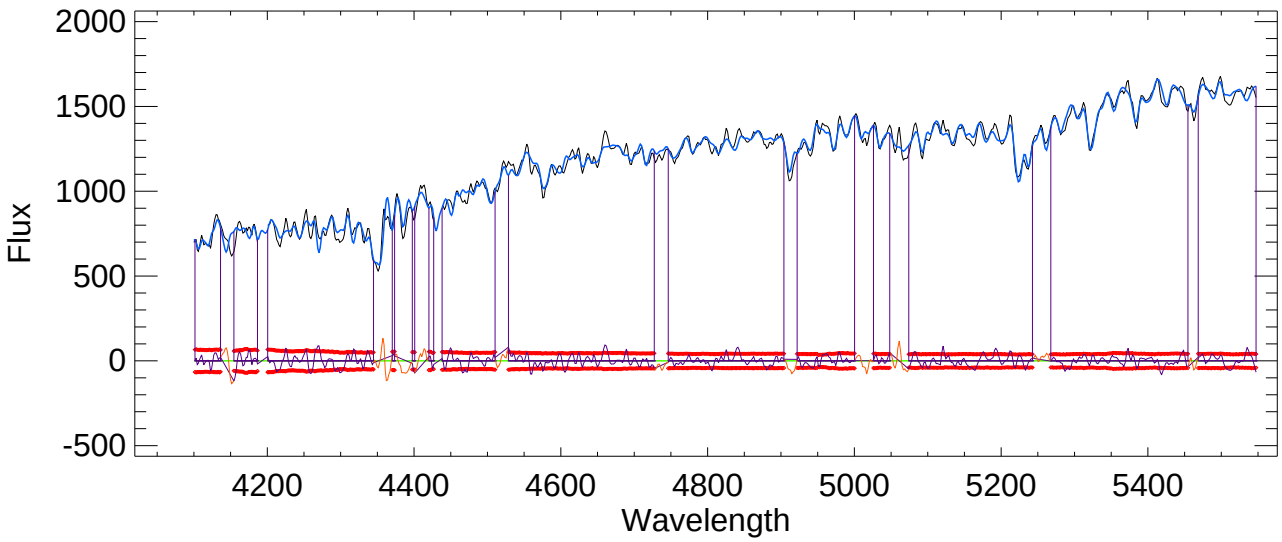

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

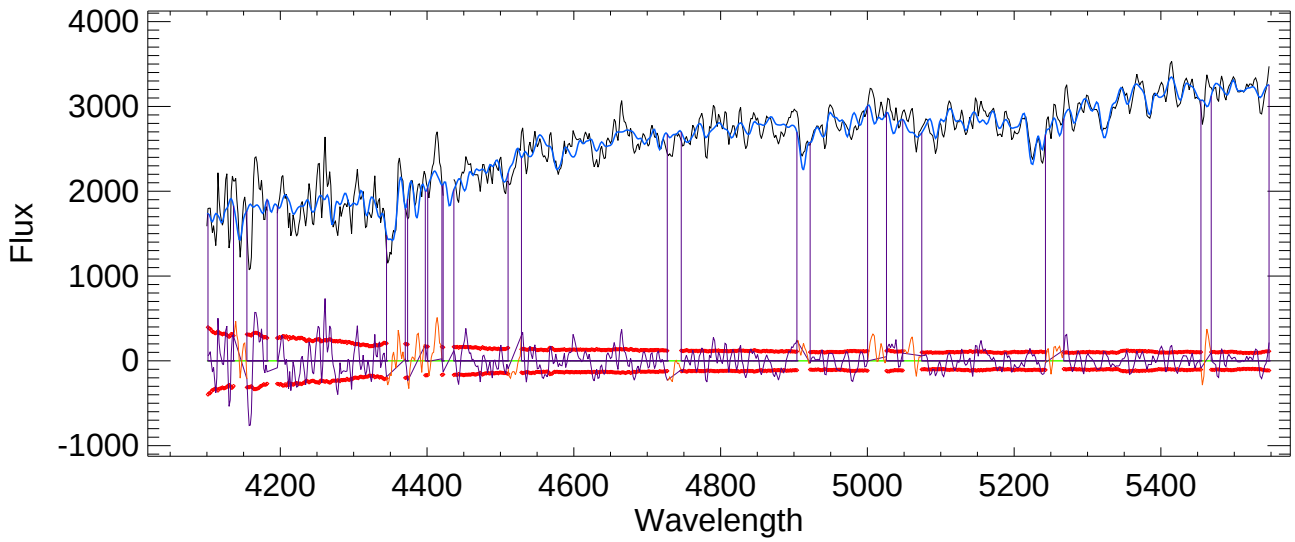

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

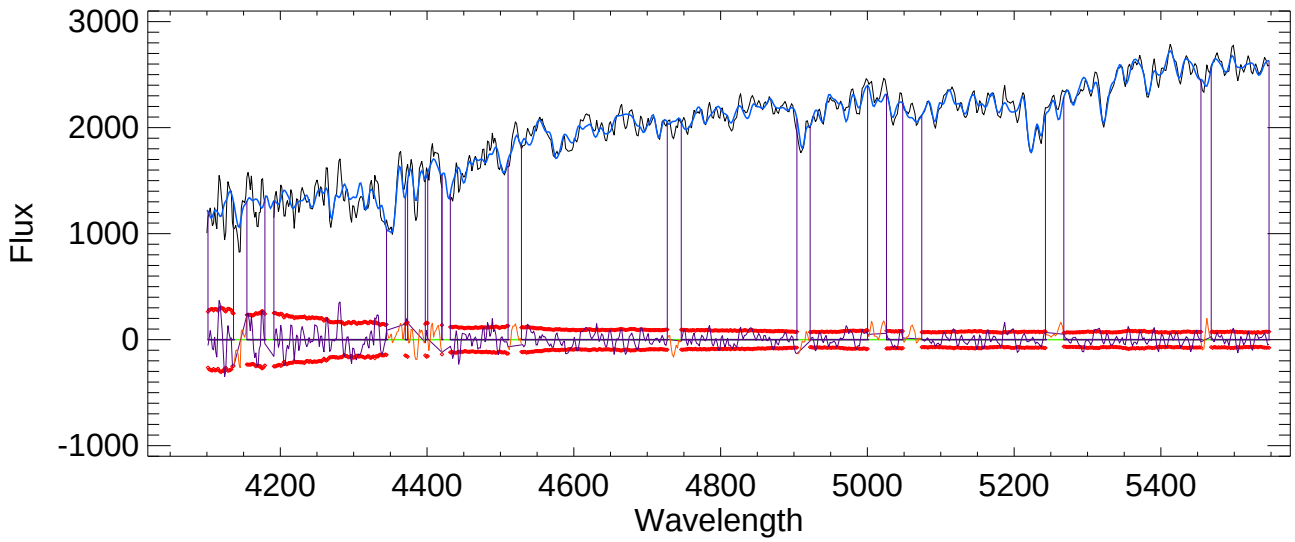

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

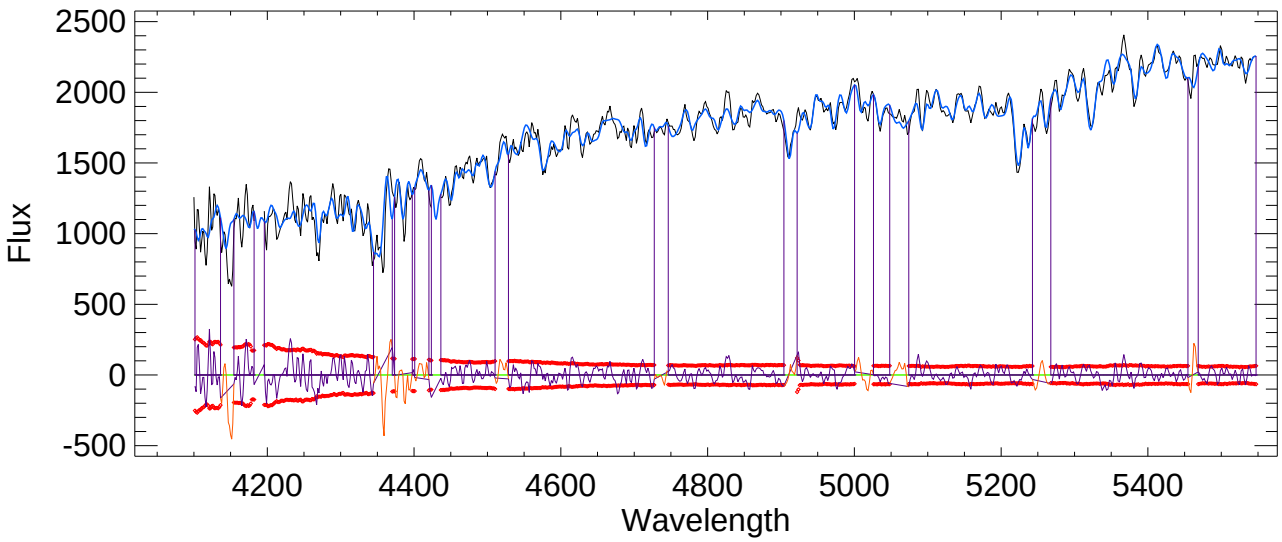

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

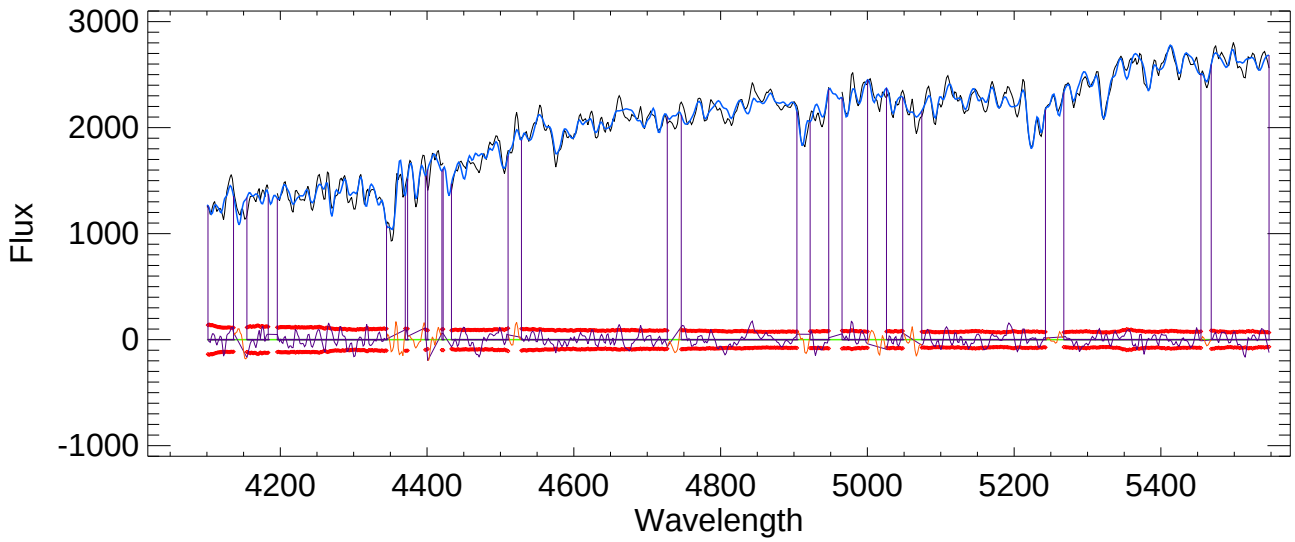

6000
4000
2000
0
-2000
-4000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

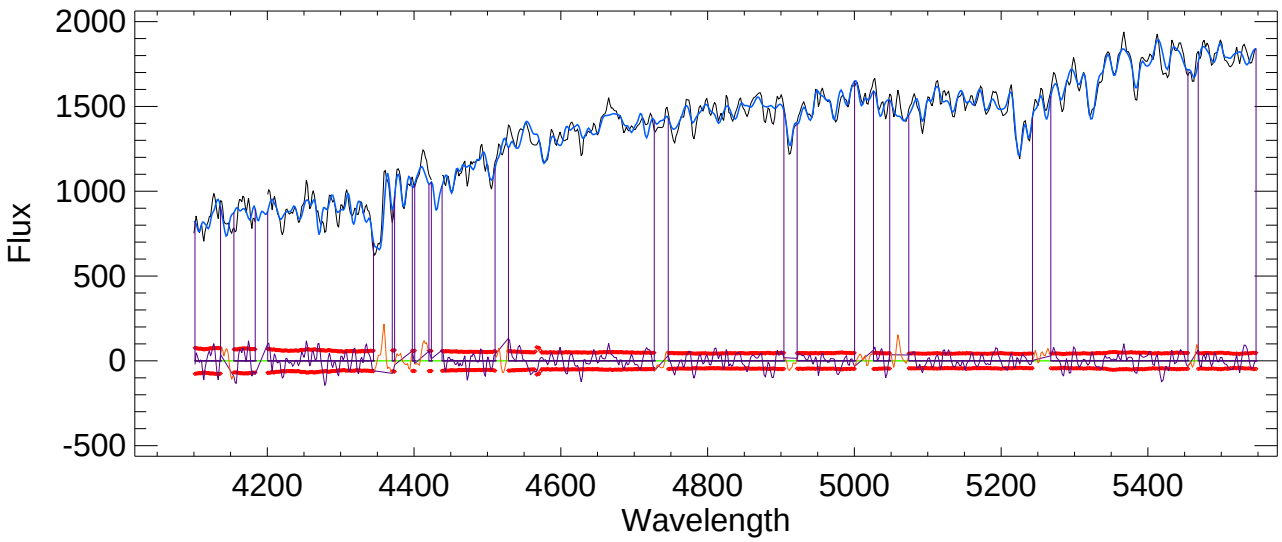

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

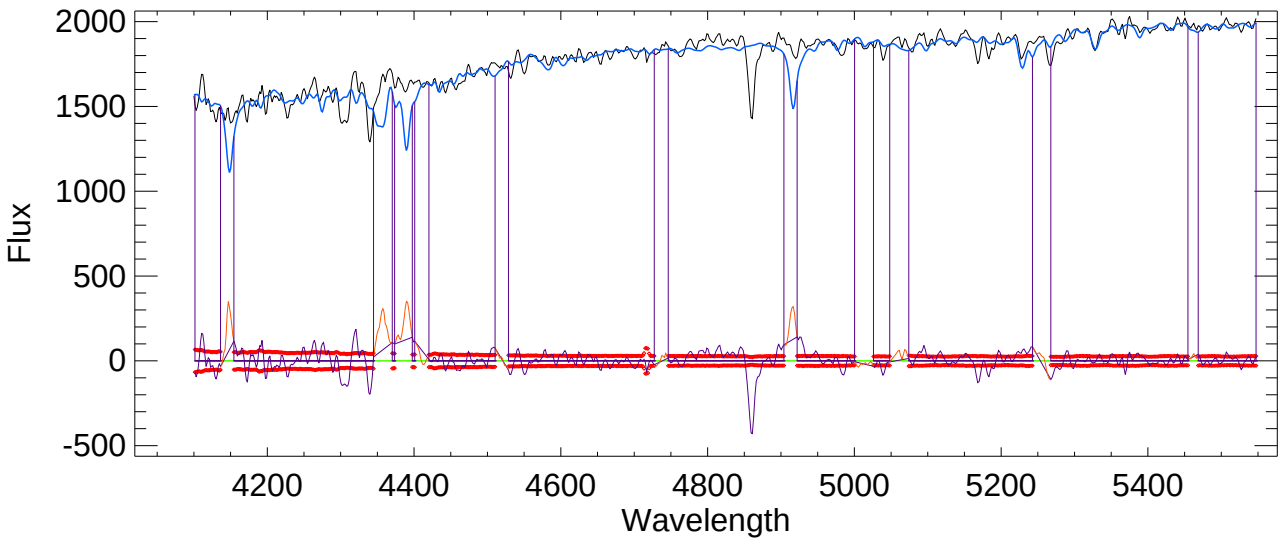

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

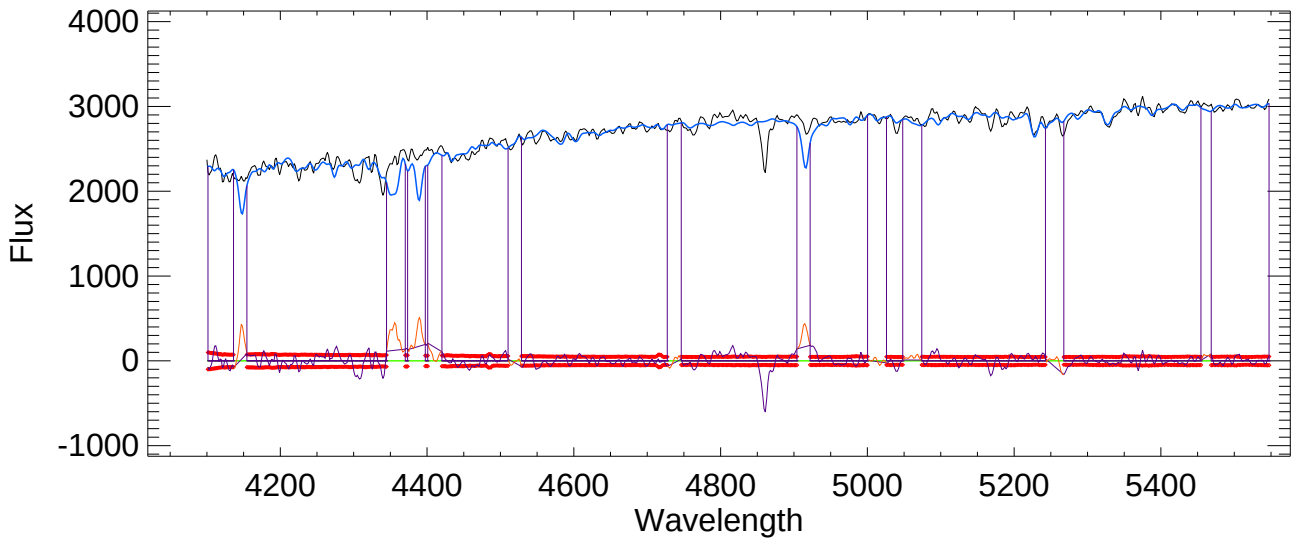

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

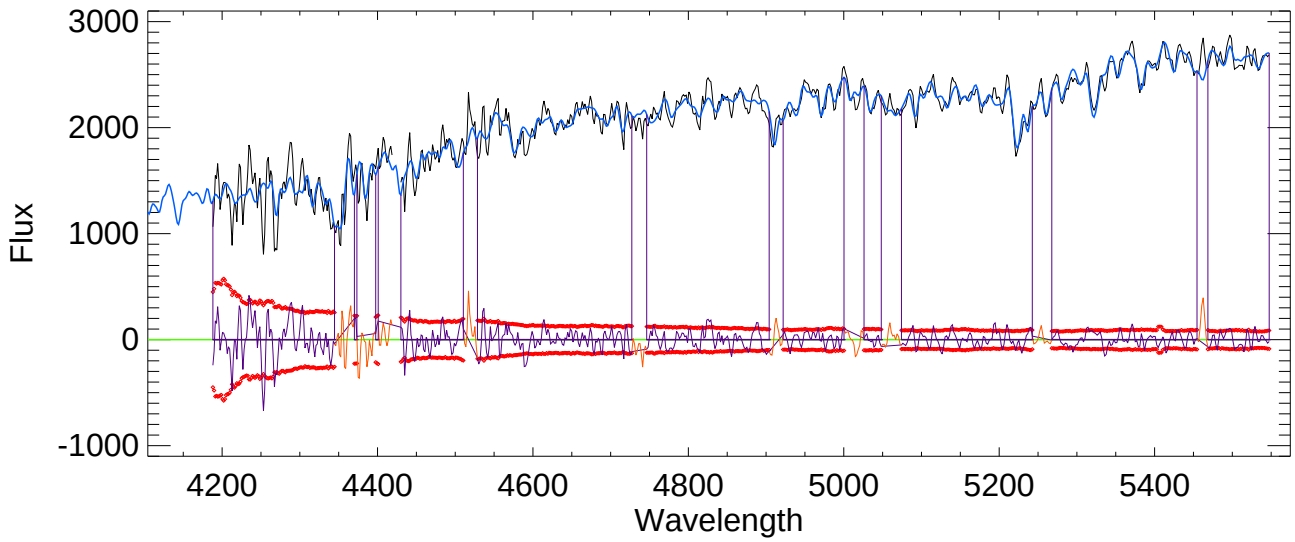

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

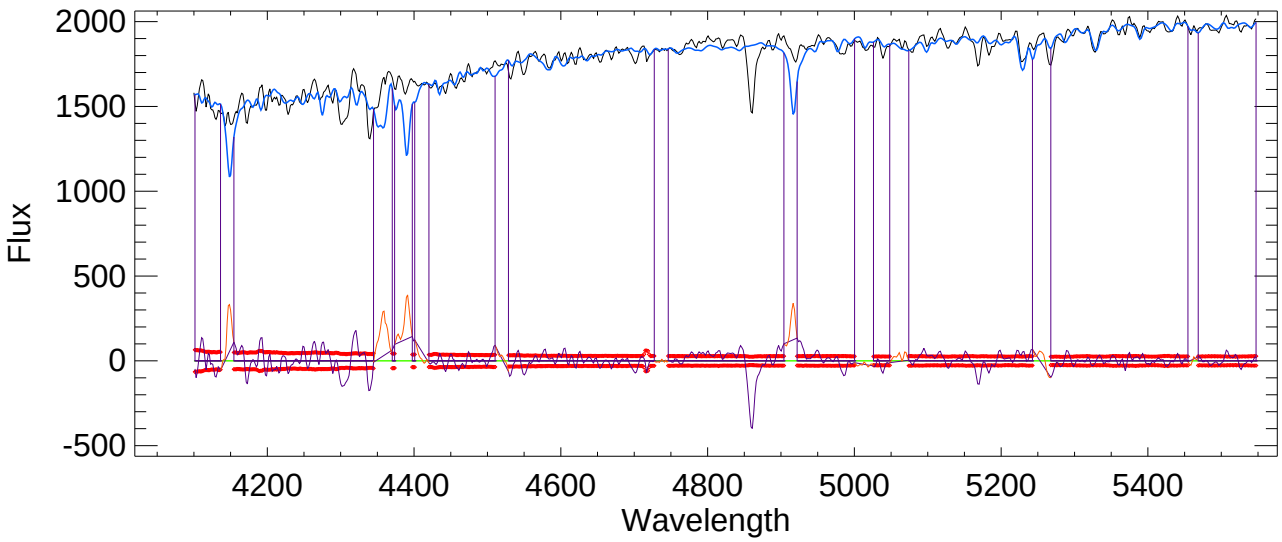

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

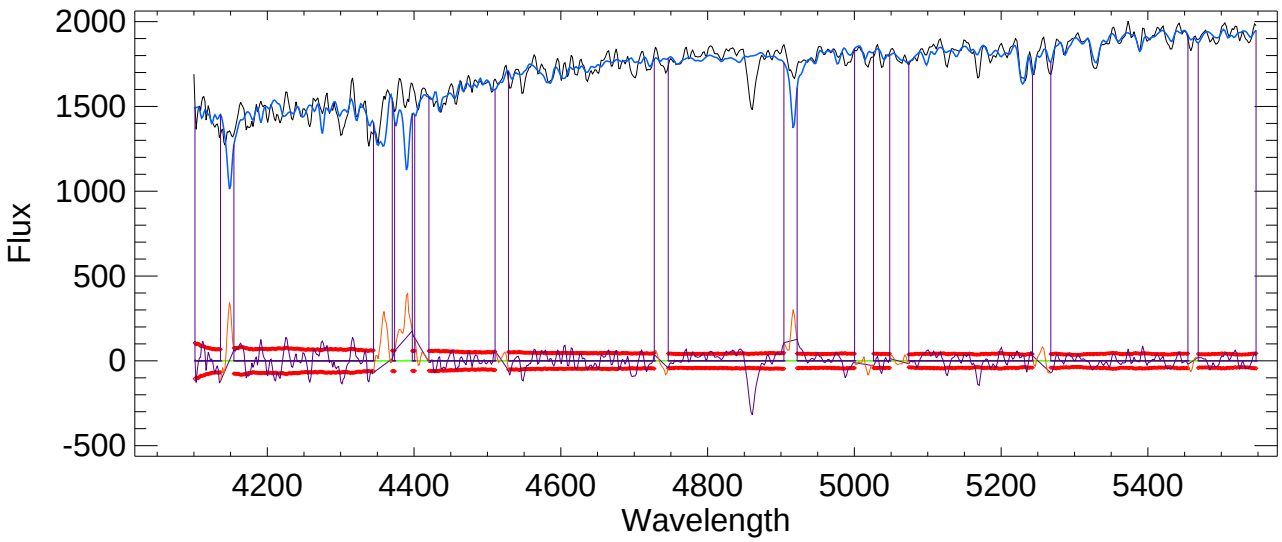

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

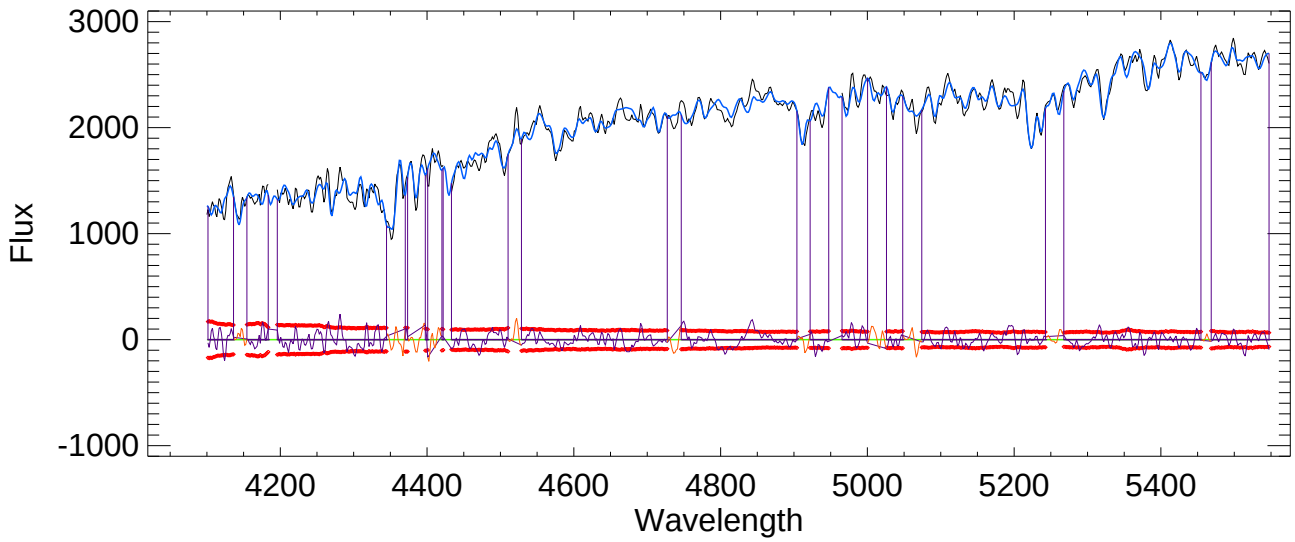

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

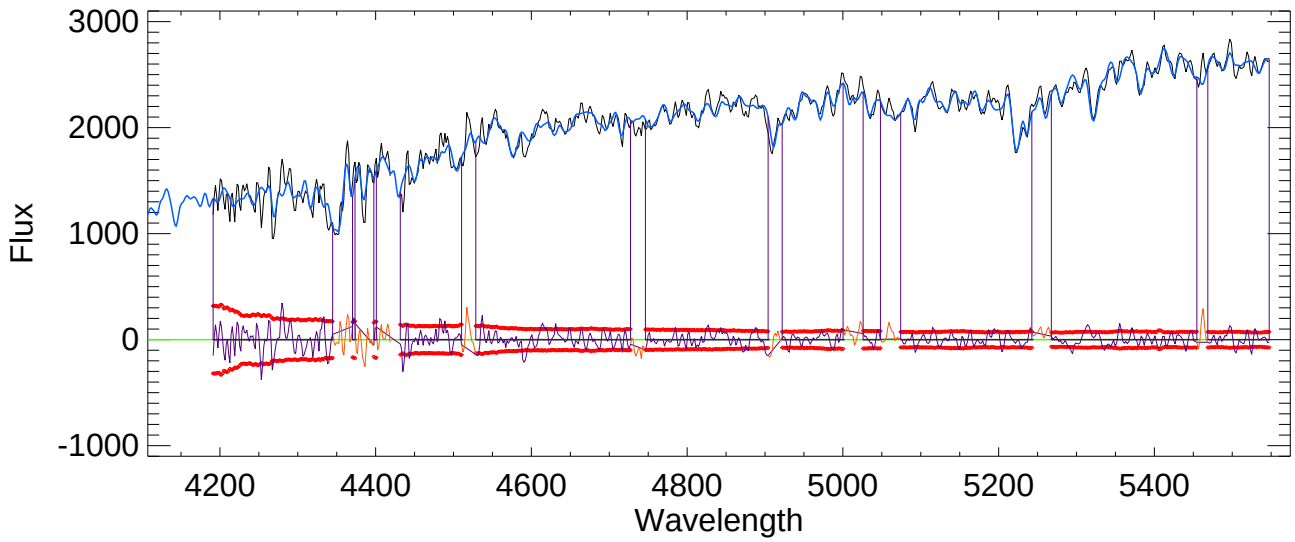

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

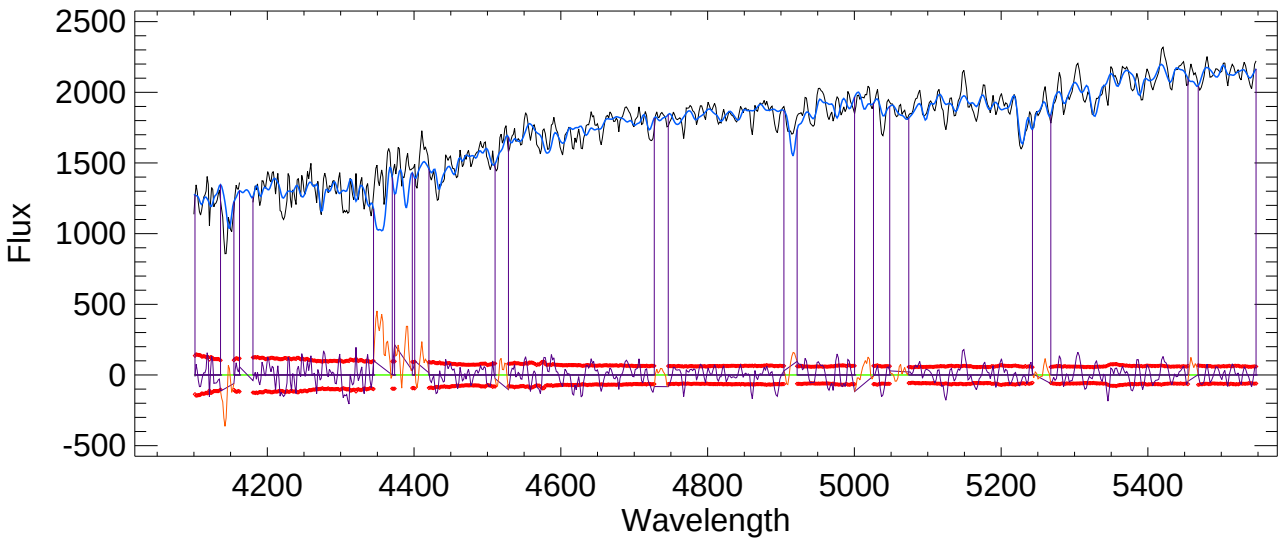

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

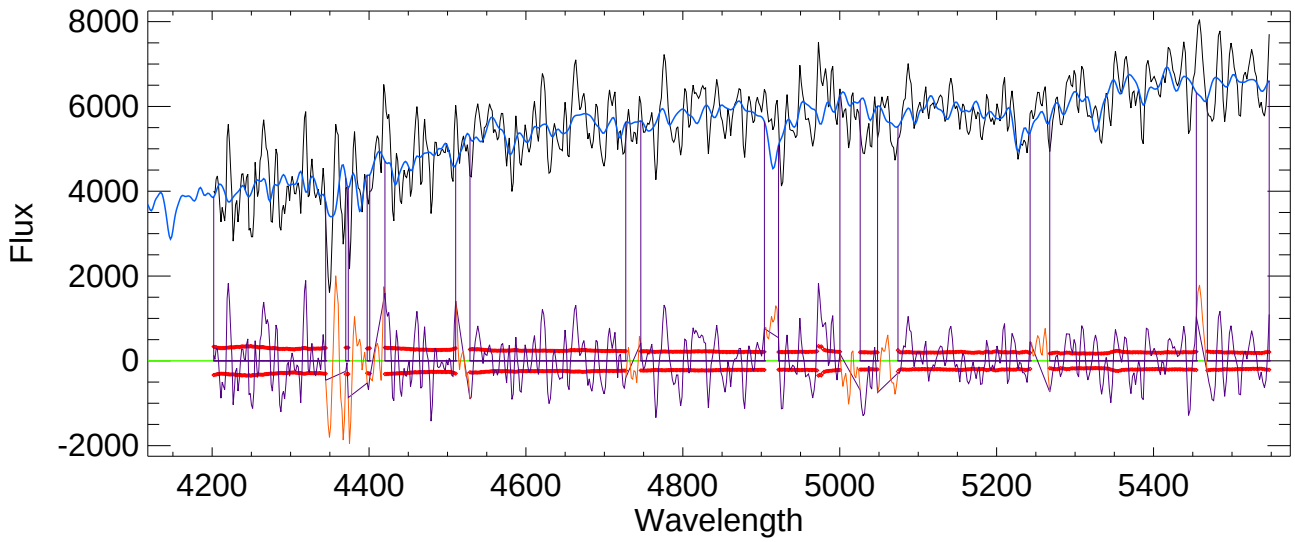

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

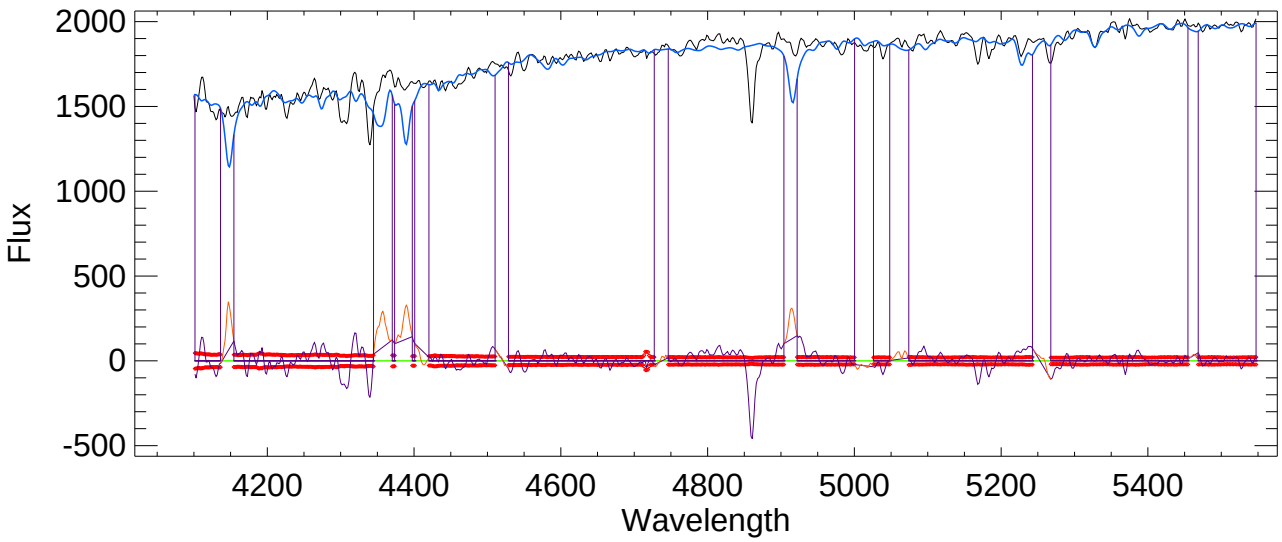

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

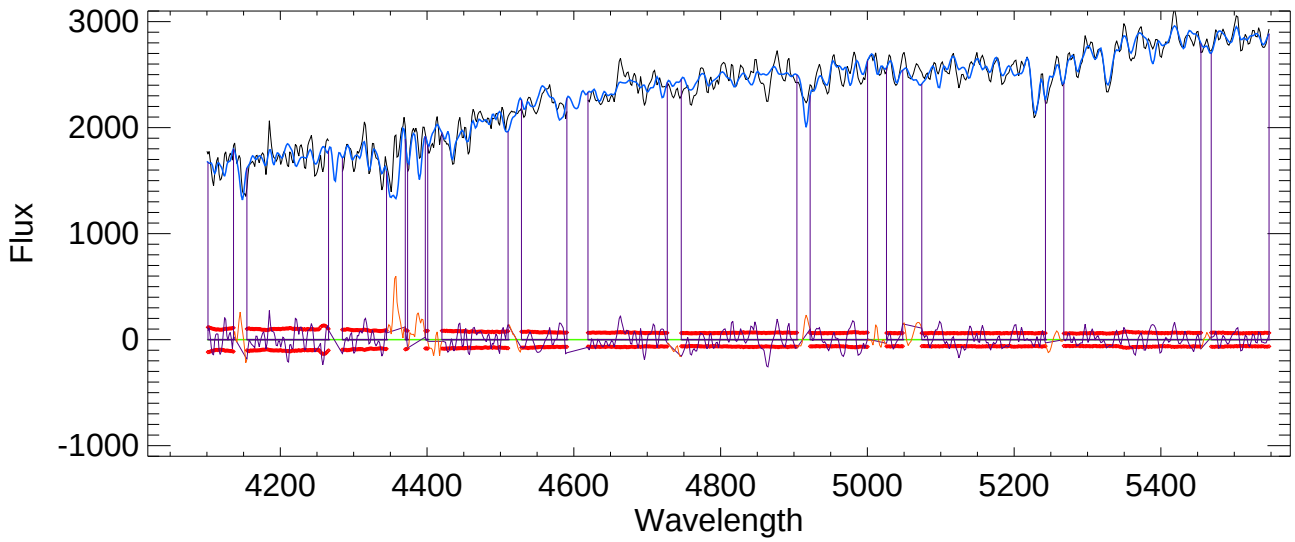

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

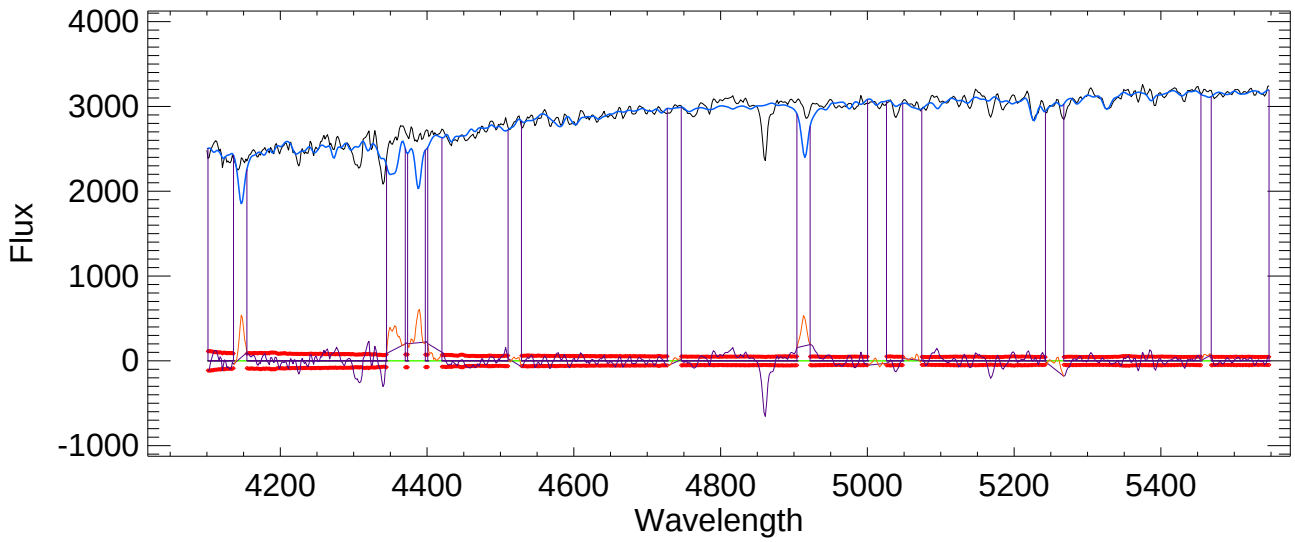

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

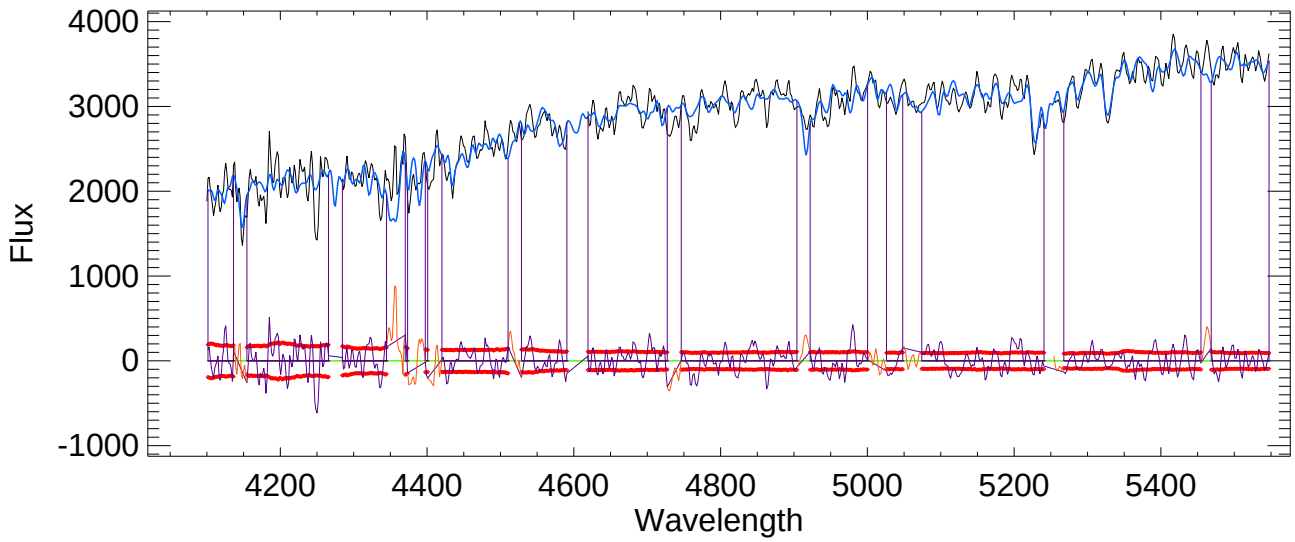

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

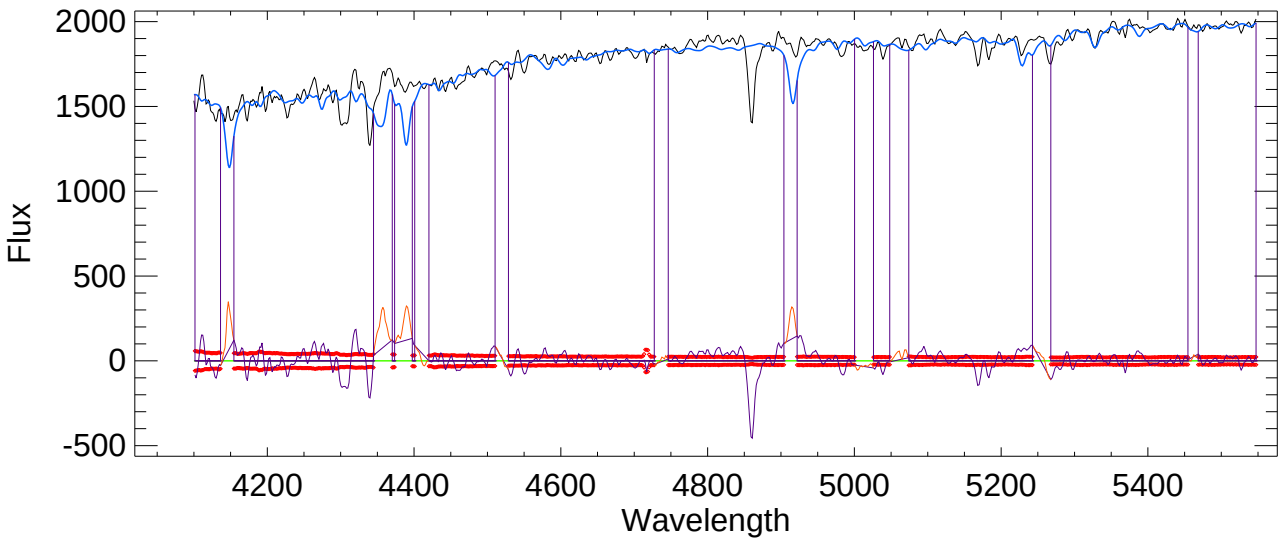

8000
6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

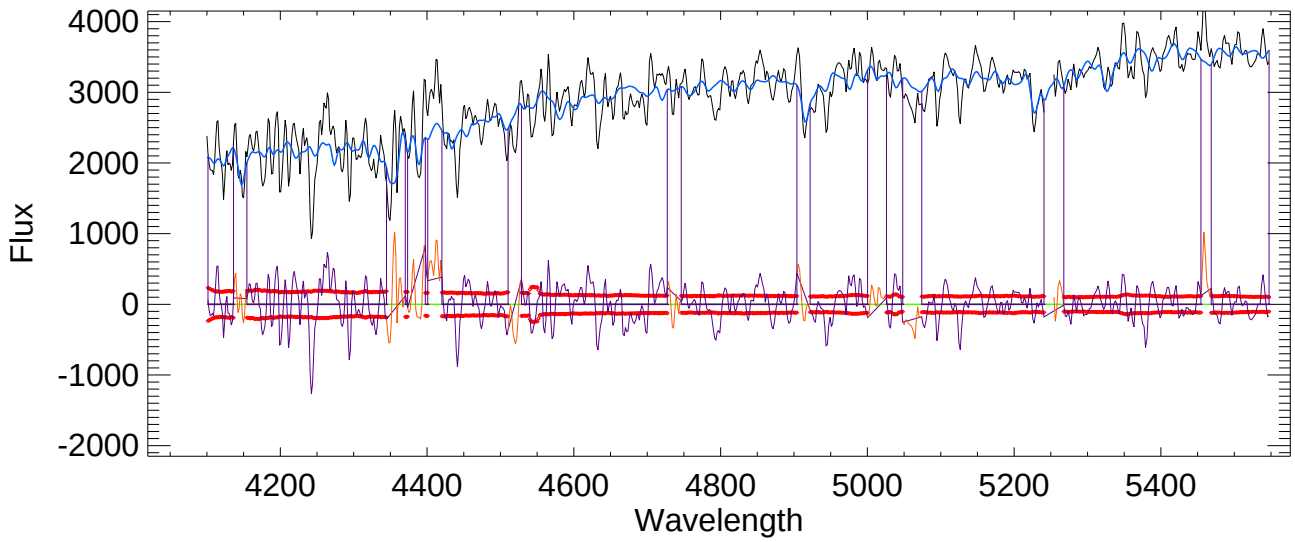

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

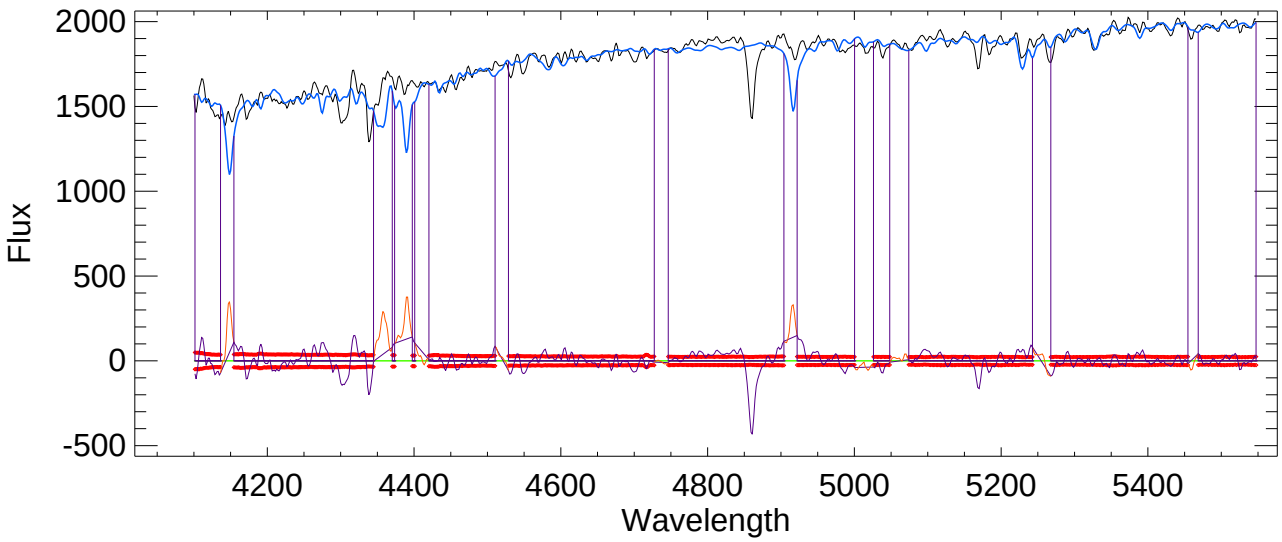

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

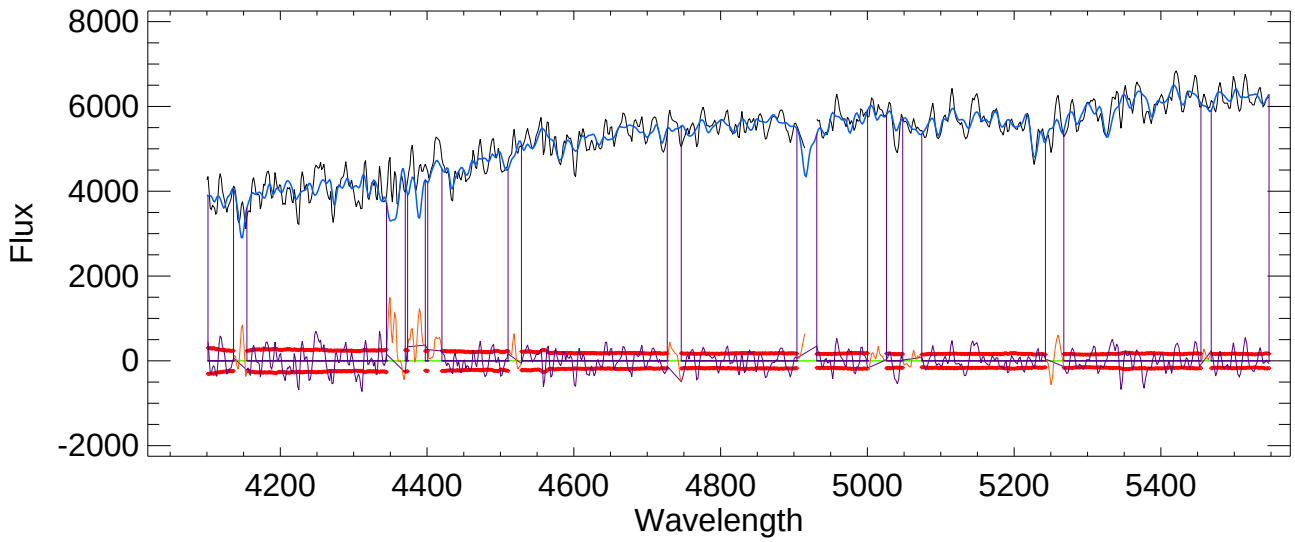

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

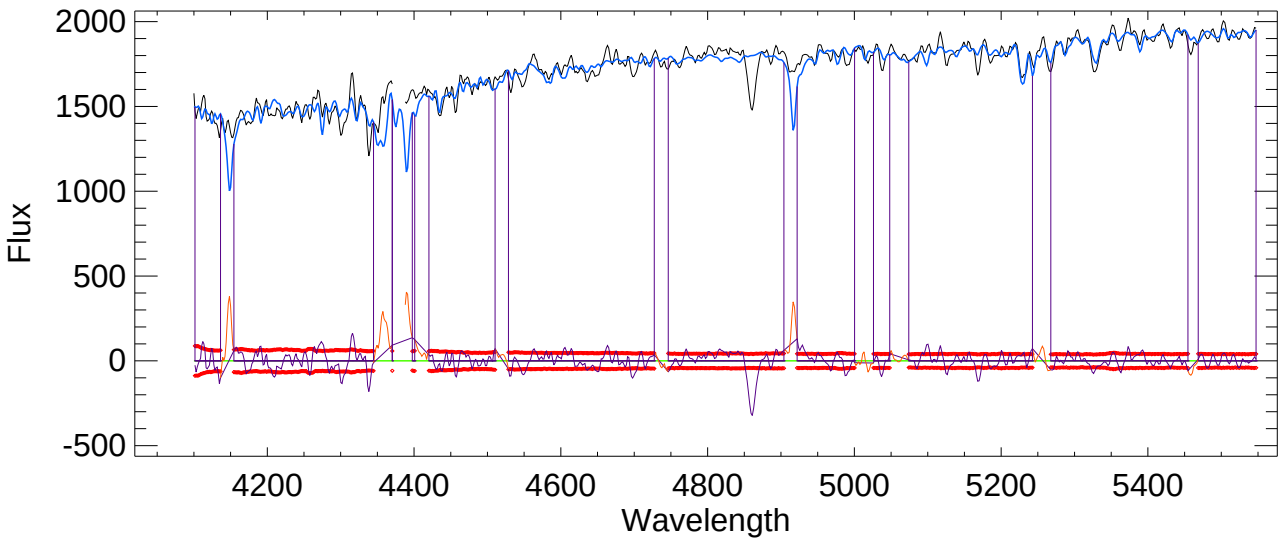

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

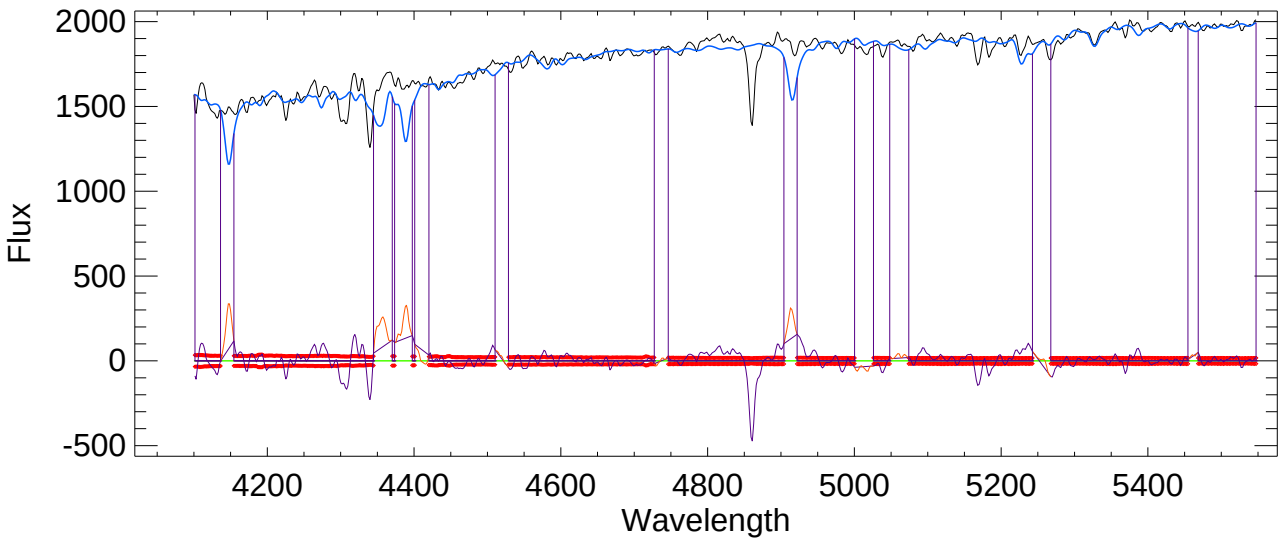

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

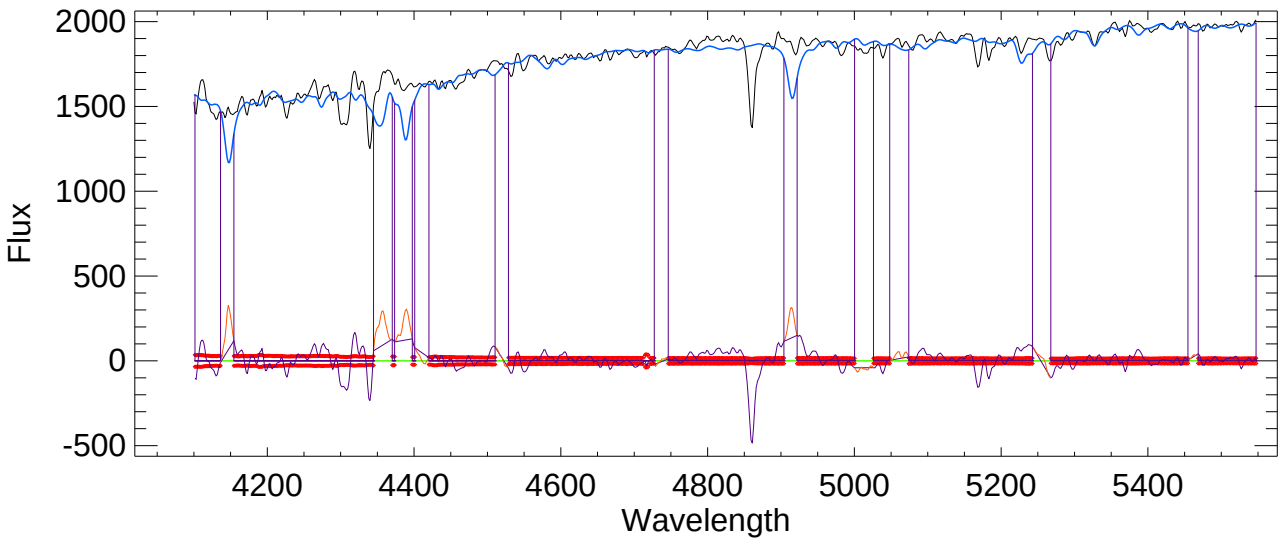

4000
3000
2000
1000
0
-1000
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

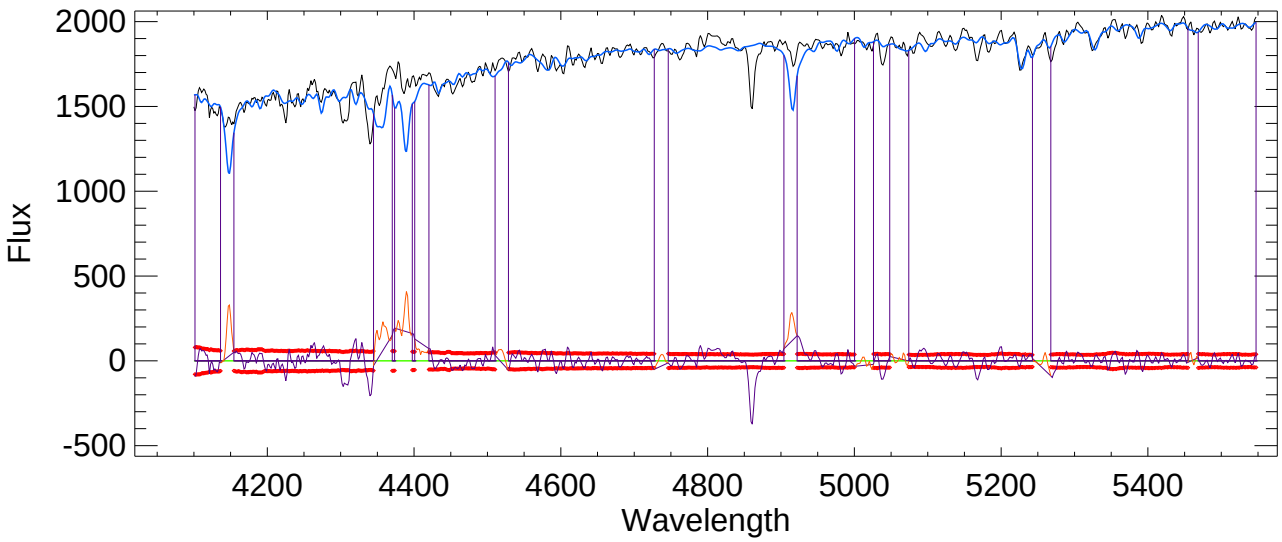

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

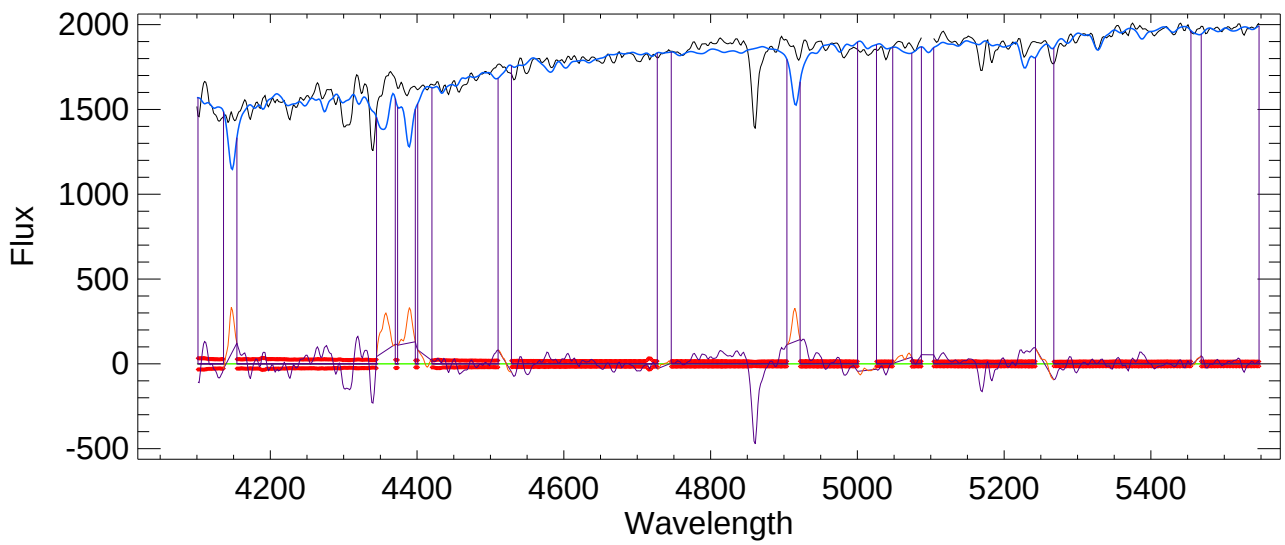

8000
6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

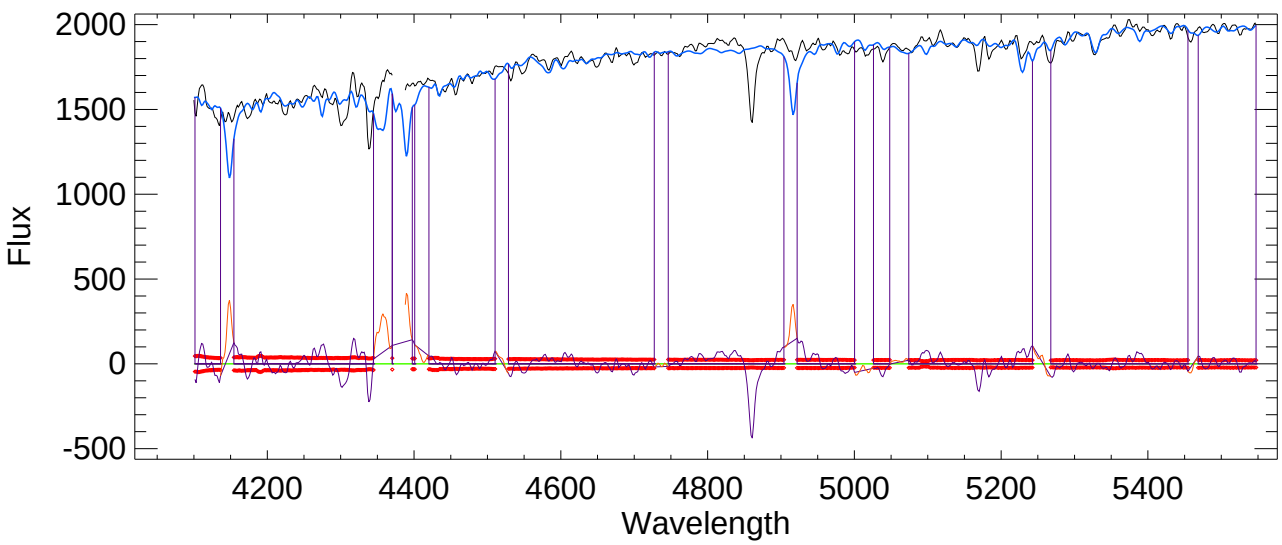

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

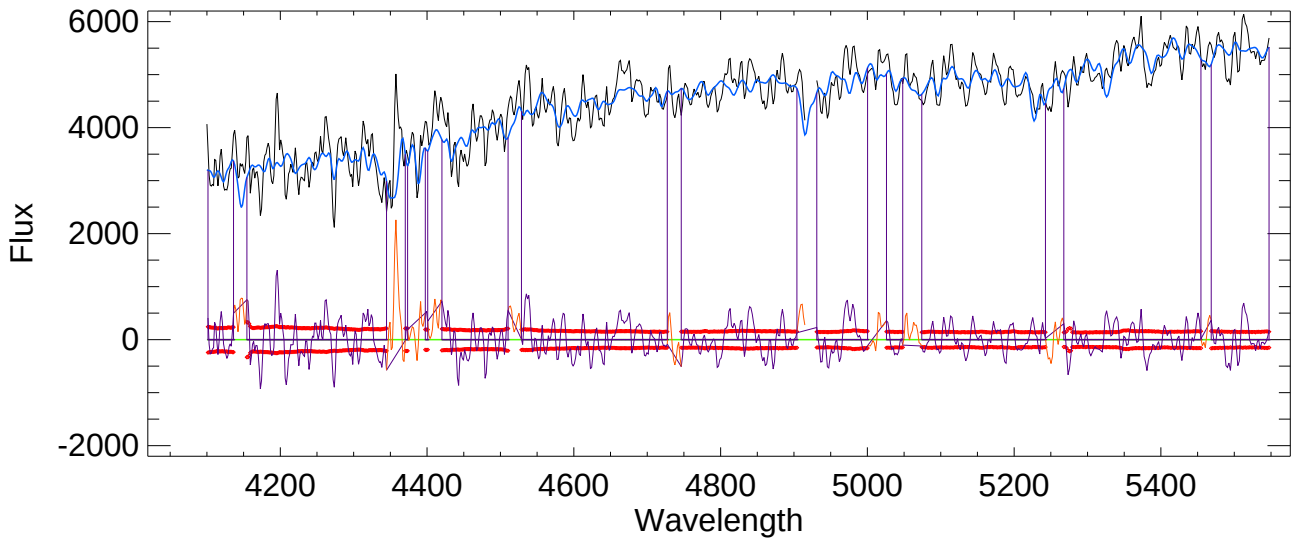

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

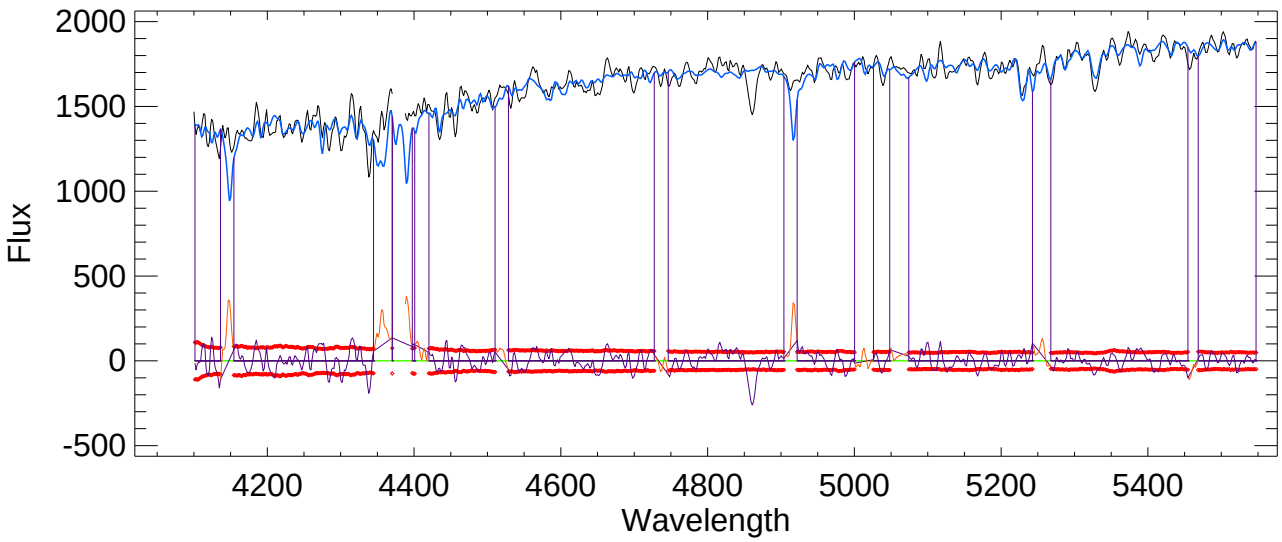

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

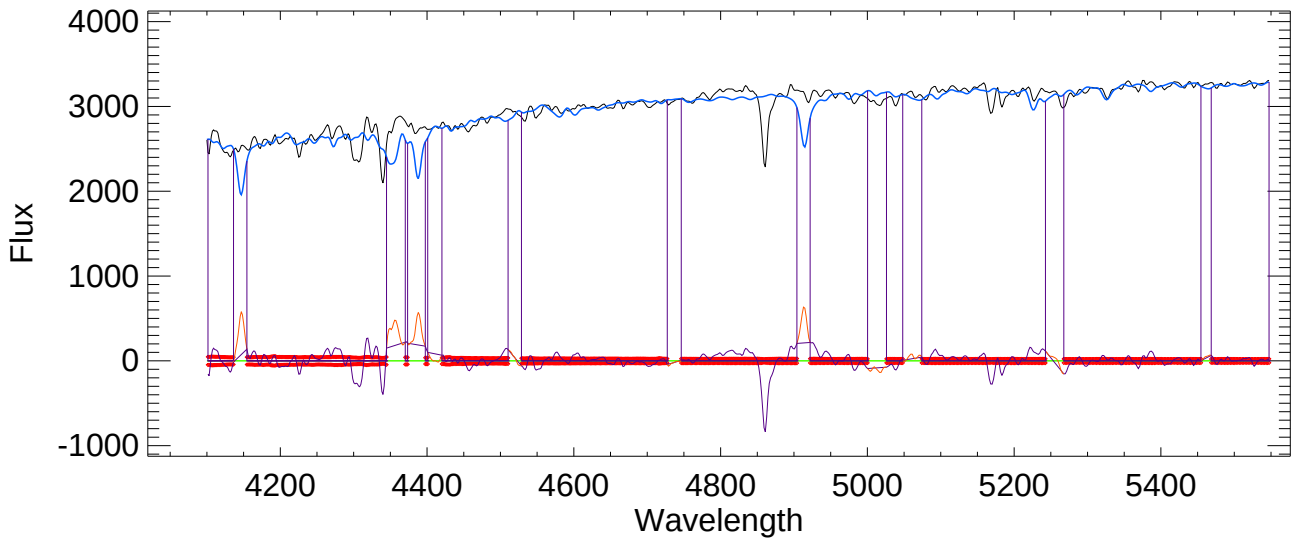

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

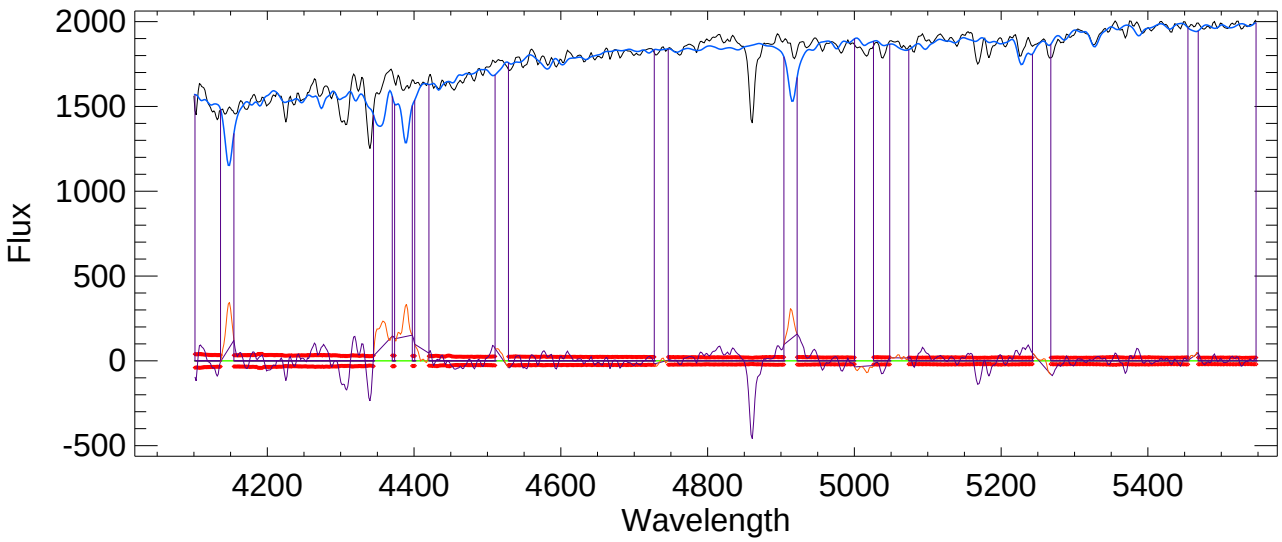

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

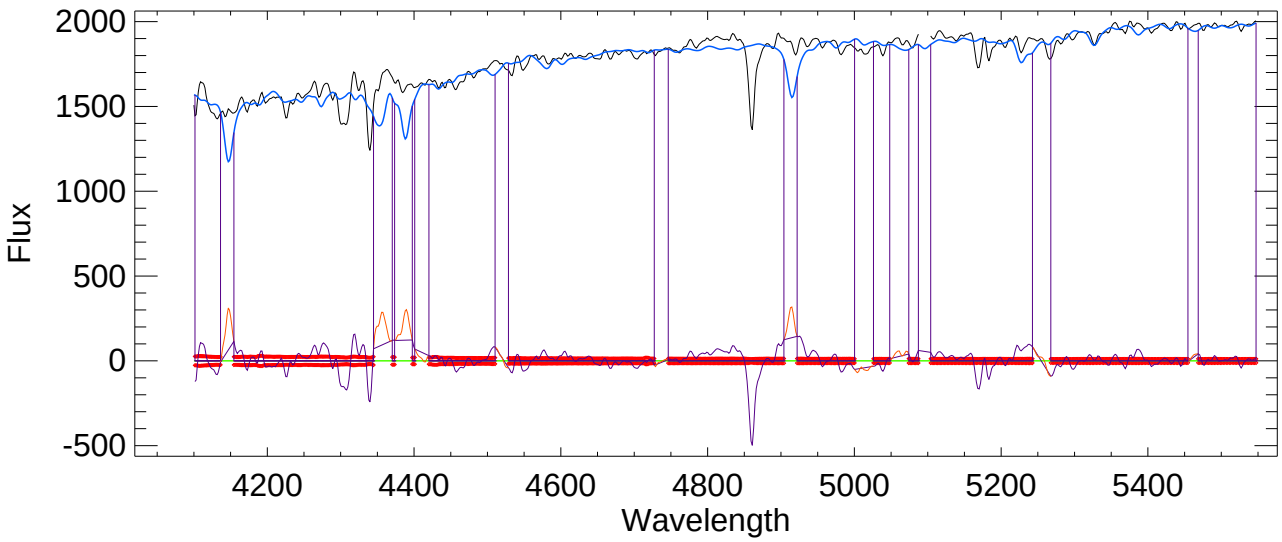

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

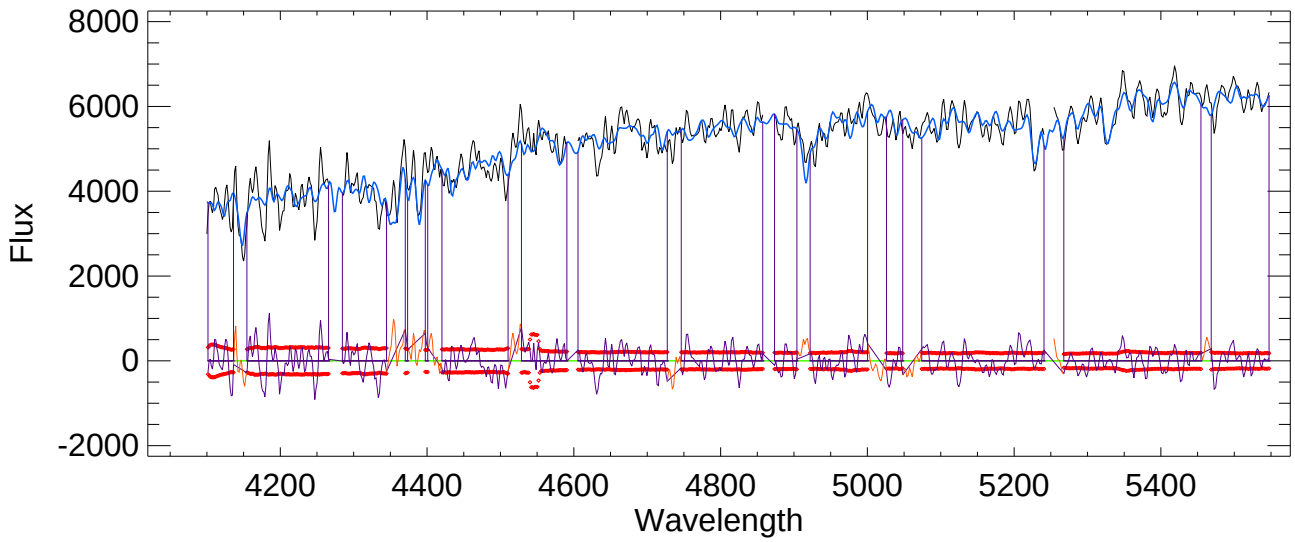

6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

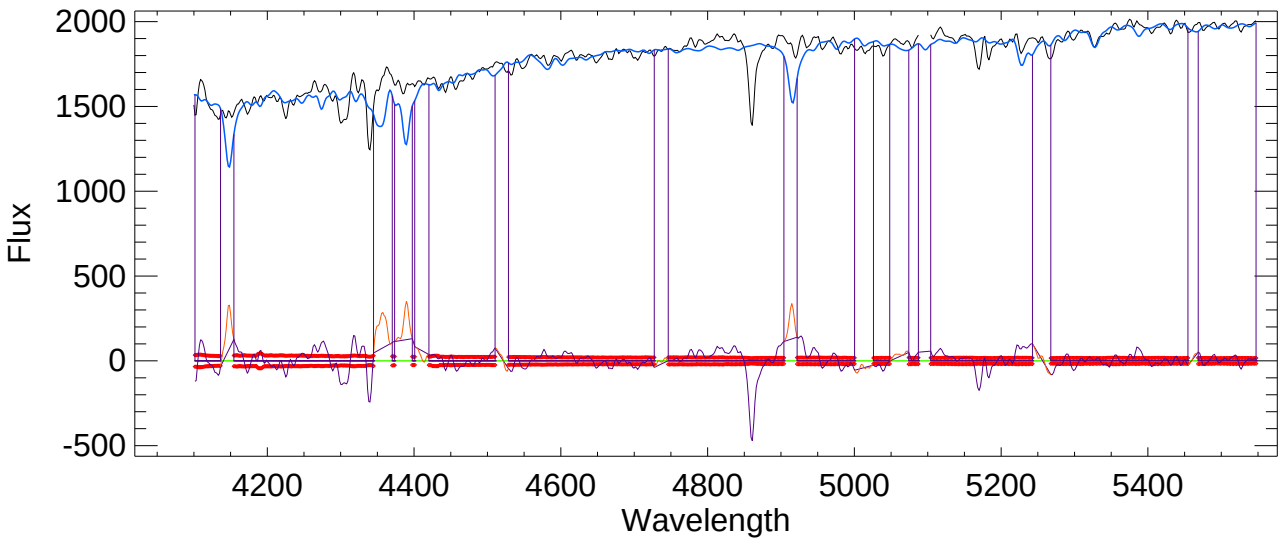

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

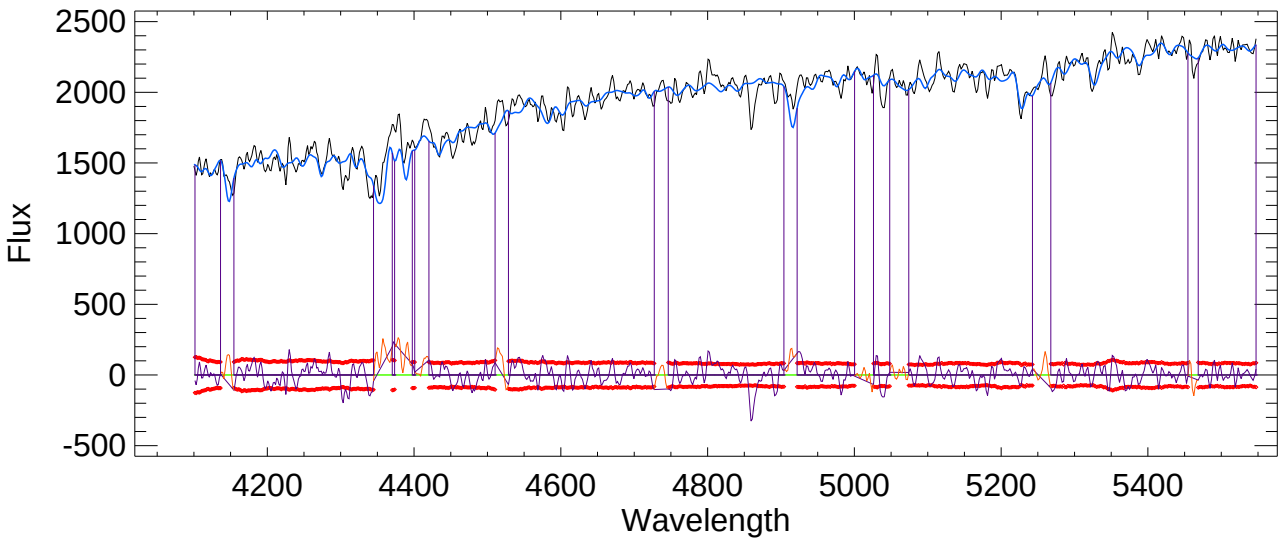

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

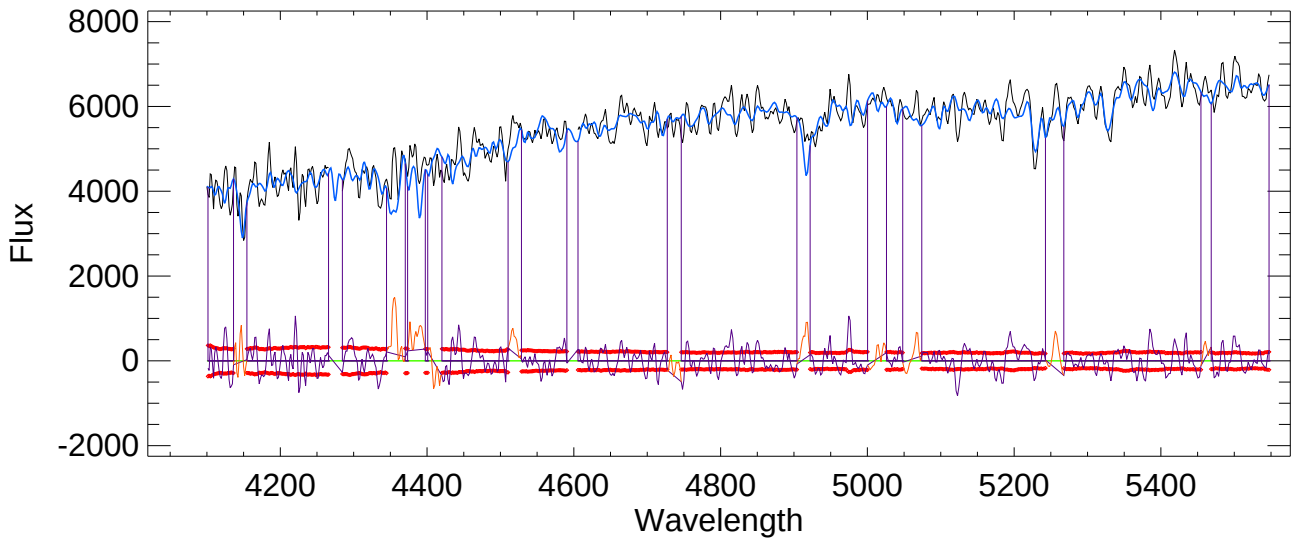

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

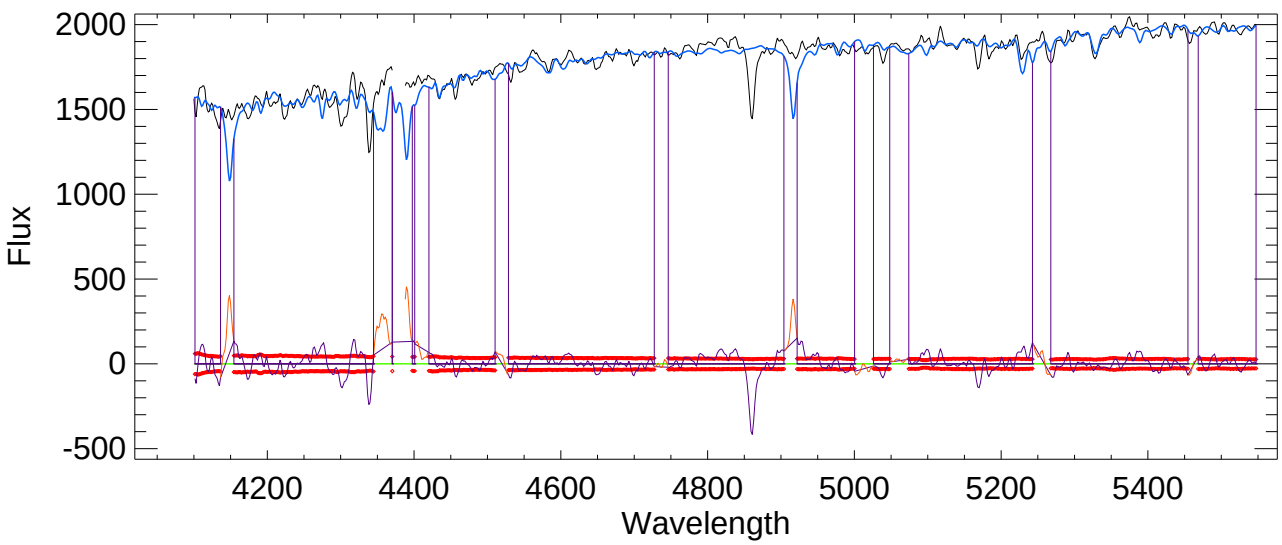

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

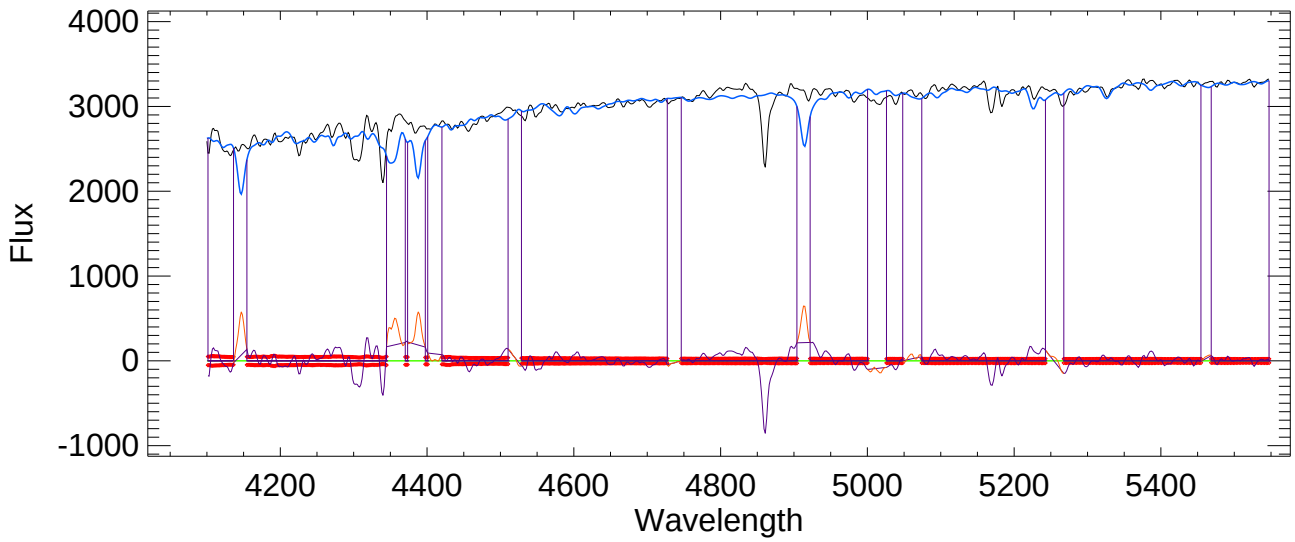

8000
6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

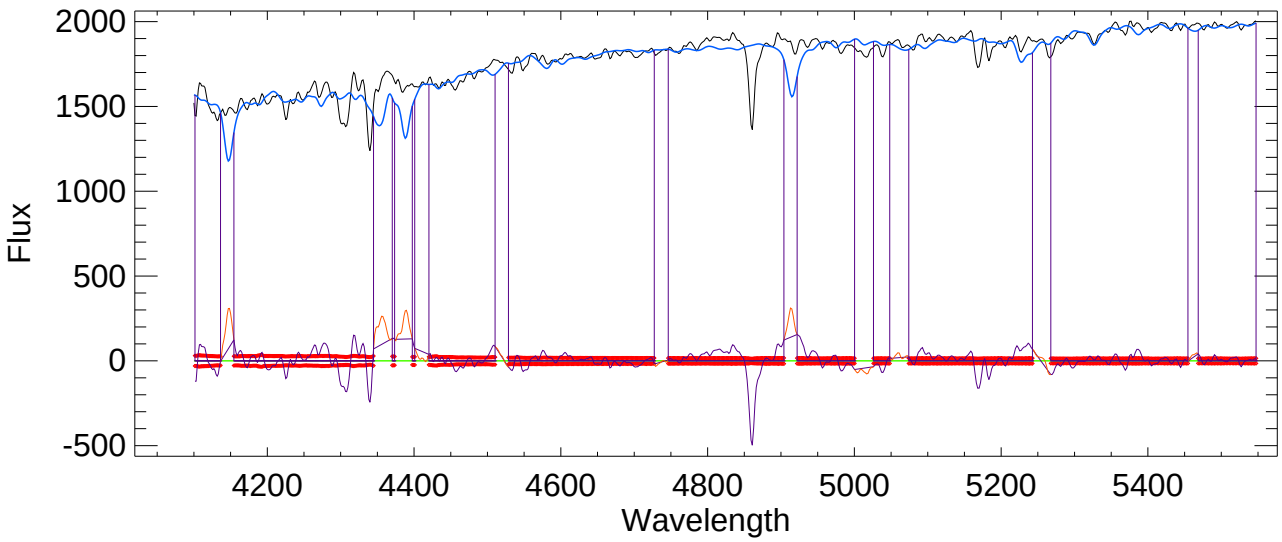

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

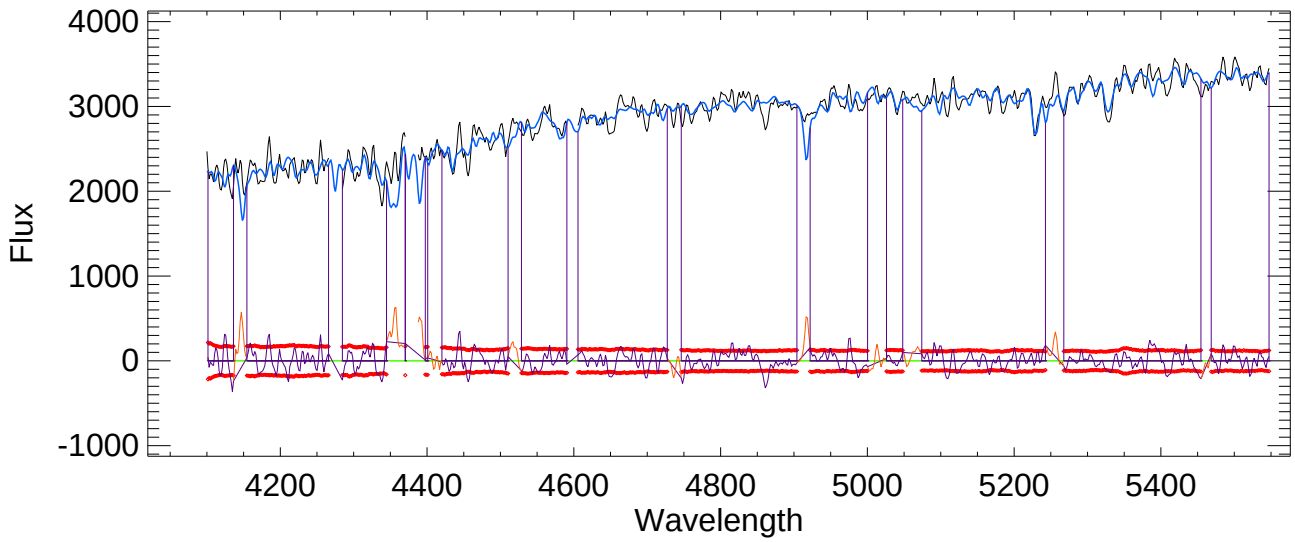

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

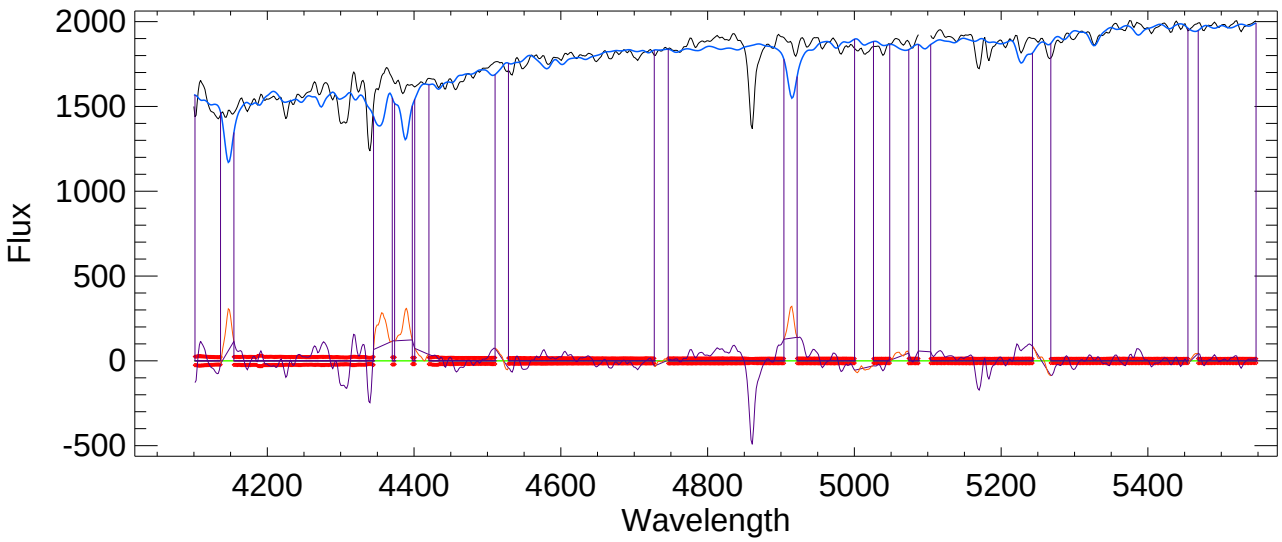

8000
6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

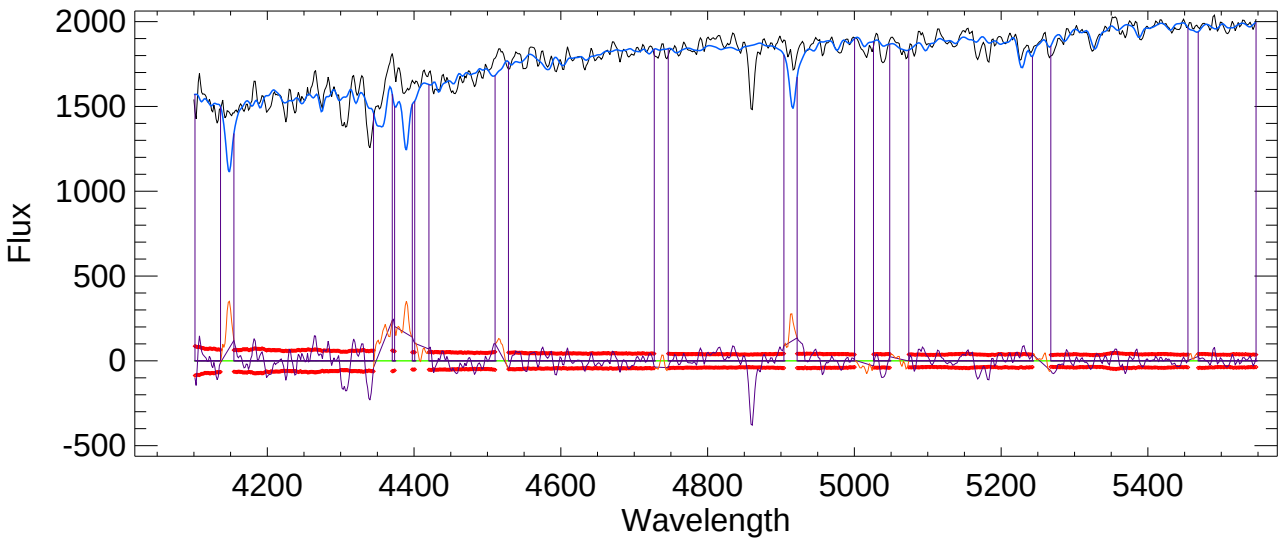

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

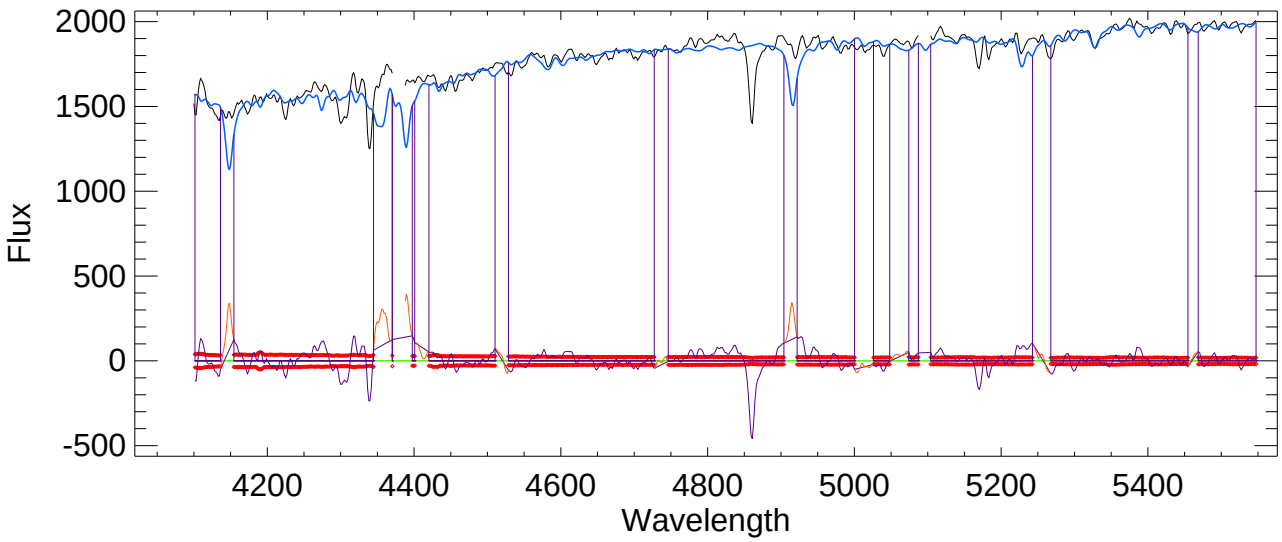

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

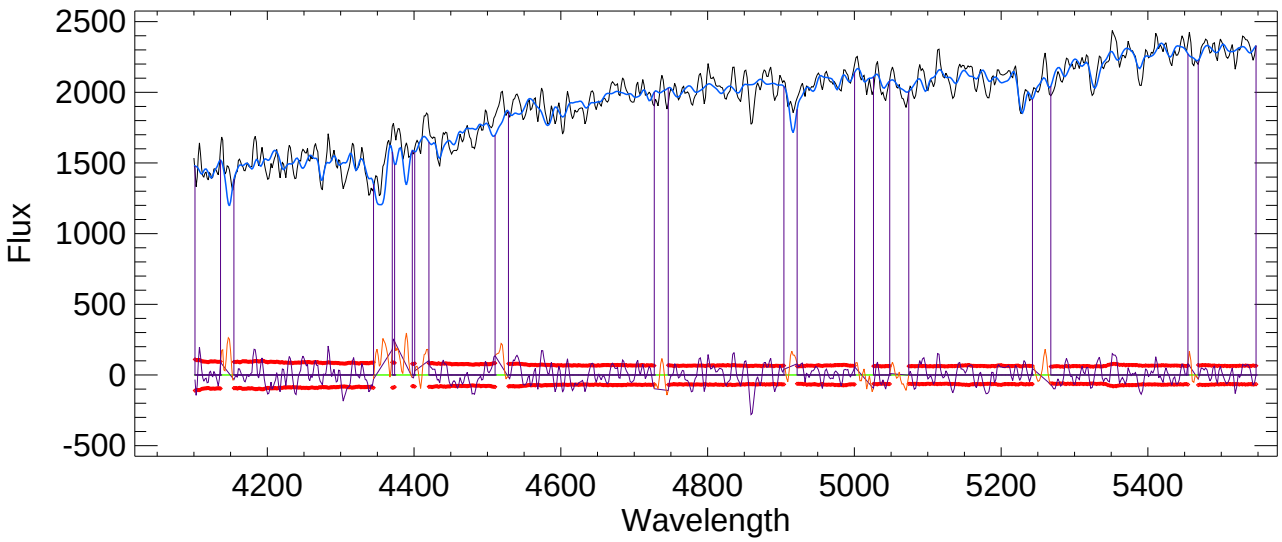

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

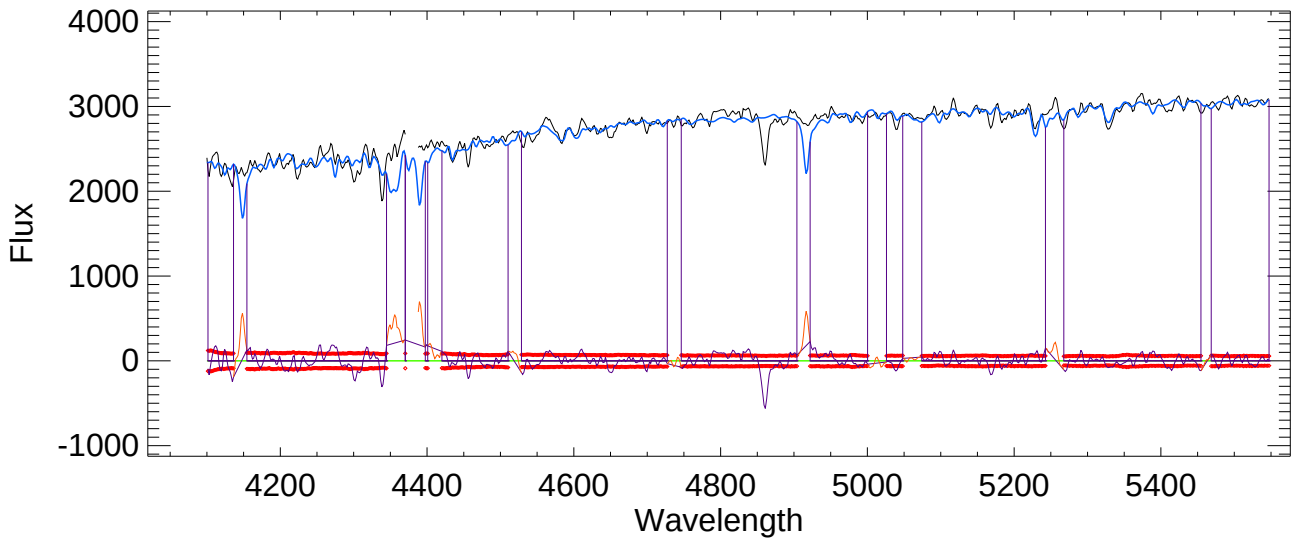

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

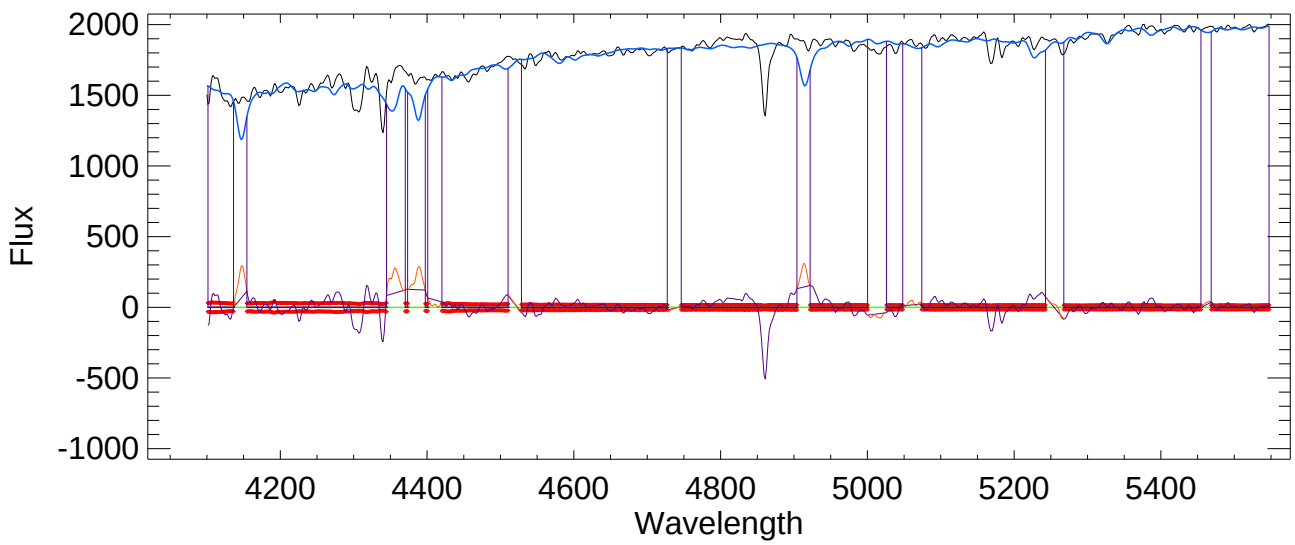

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

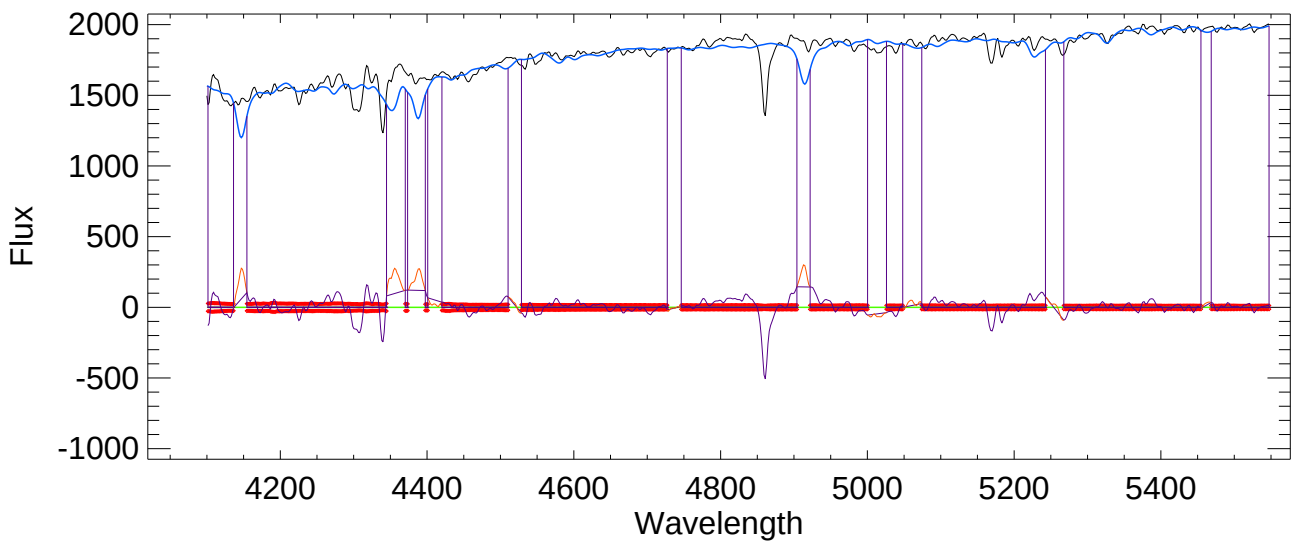

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

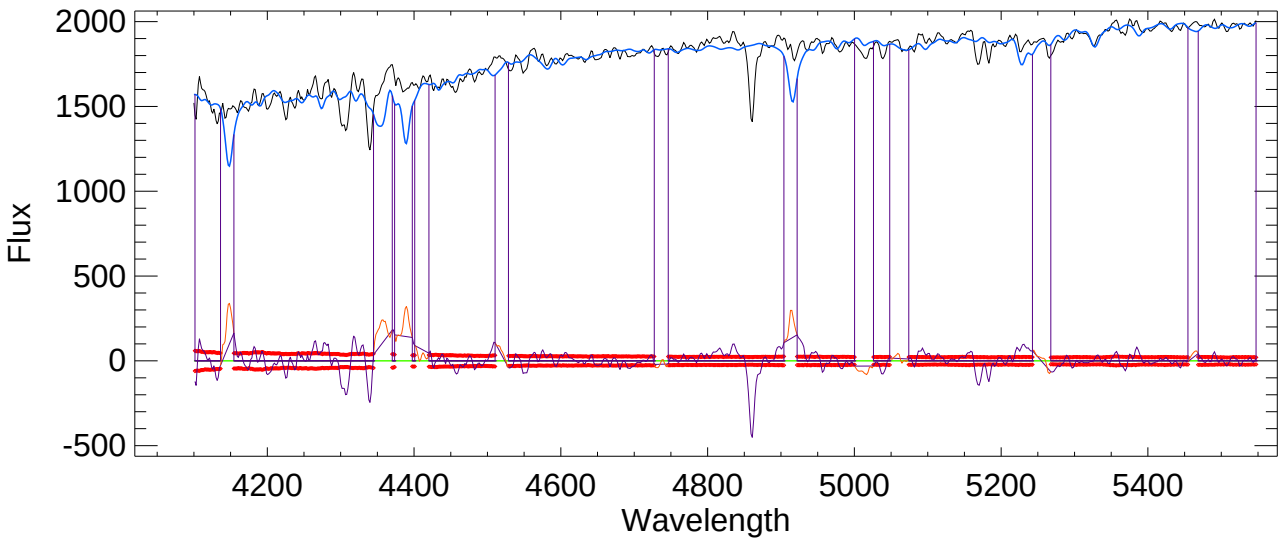

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

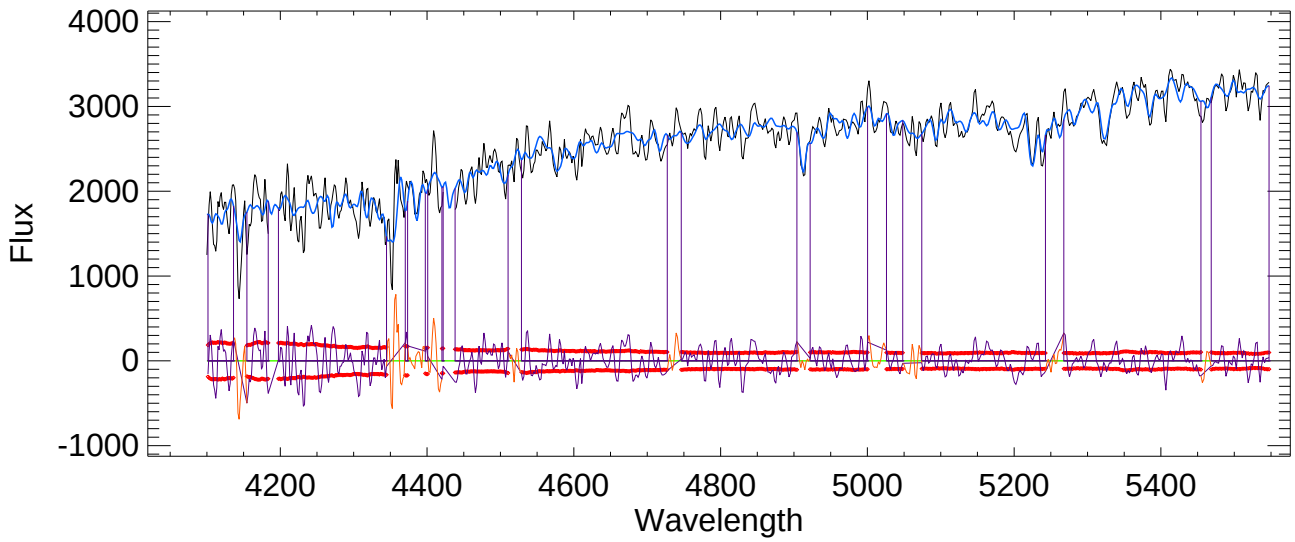

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

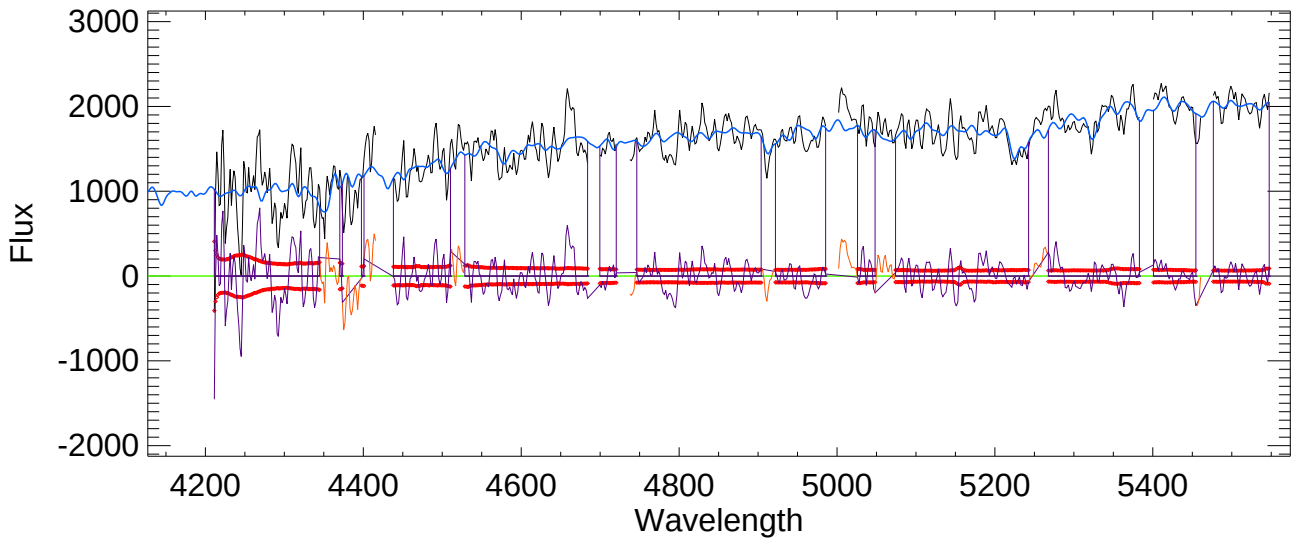

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

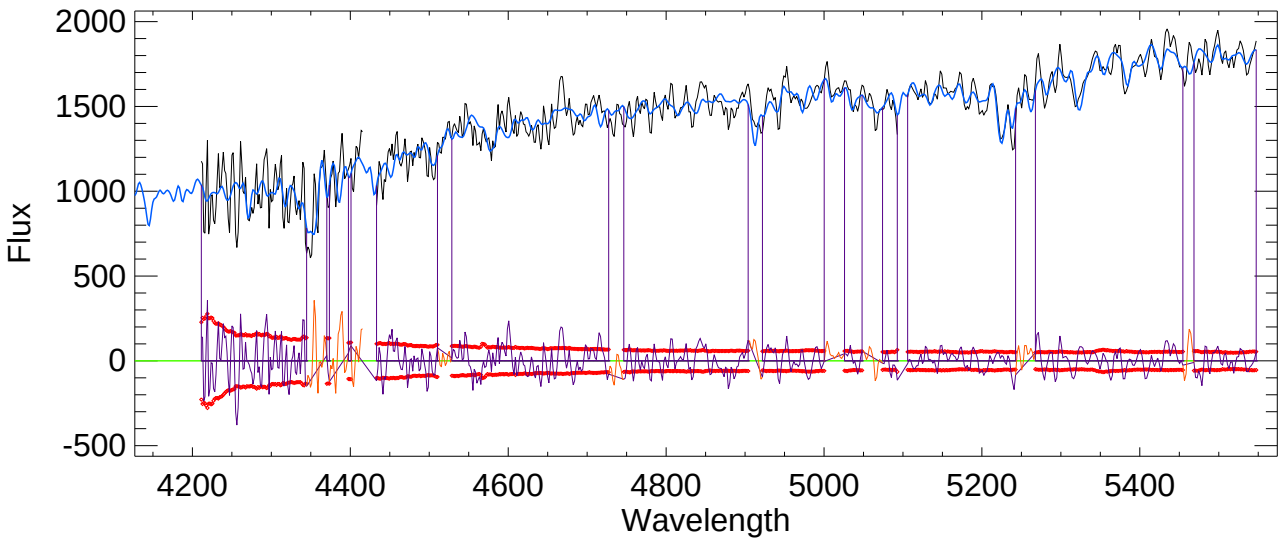

2000
1500
1000
500
0
-500
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

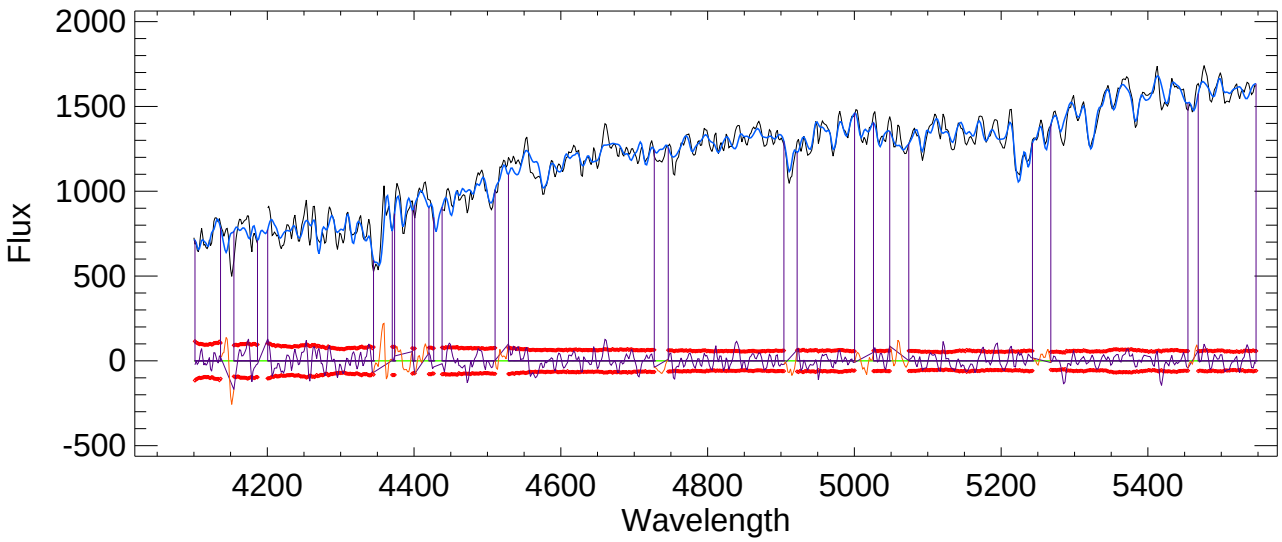

2000
1500
1000
500
0
-500
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

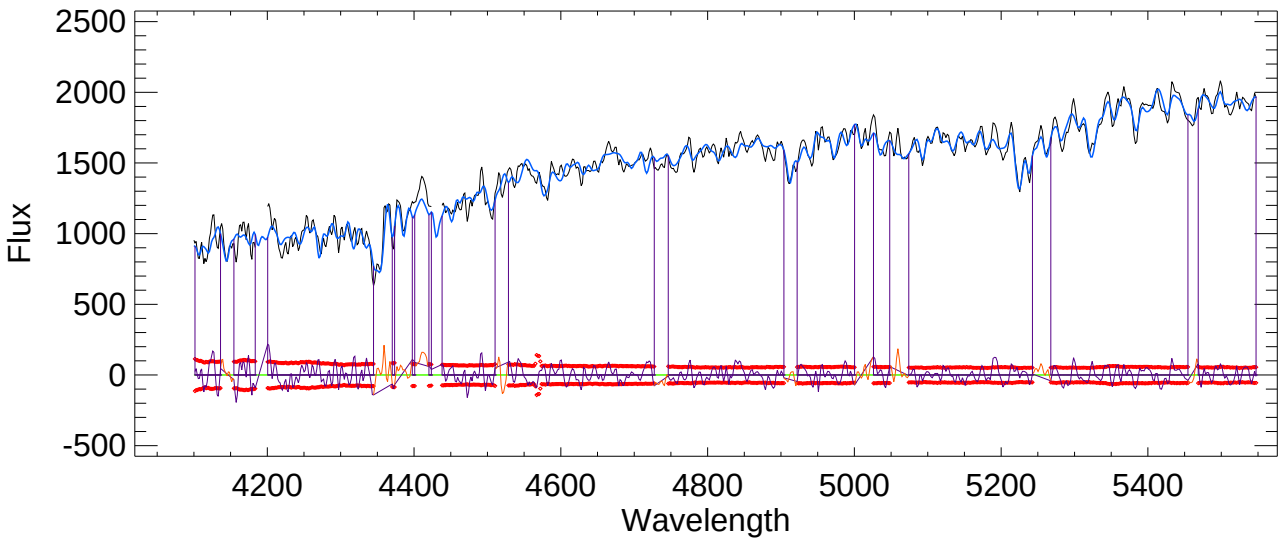

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

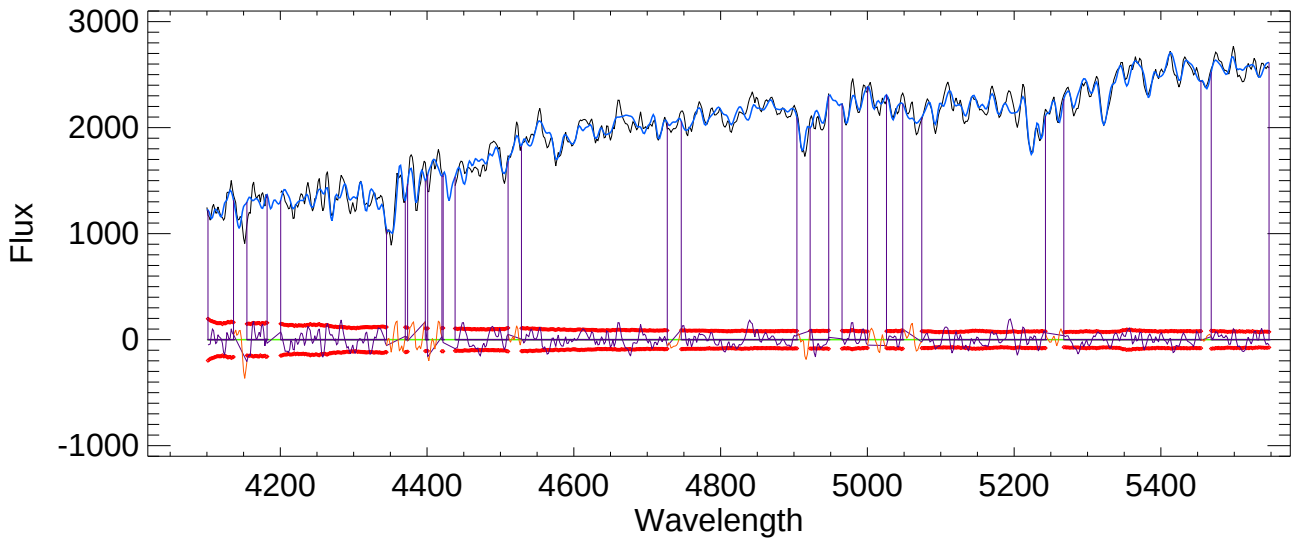

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

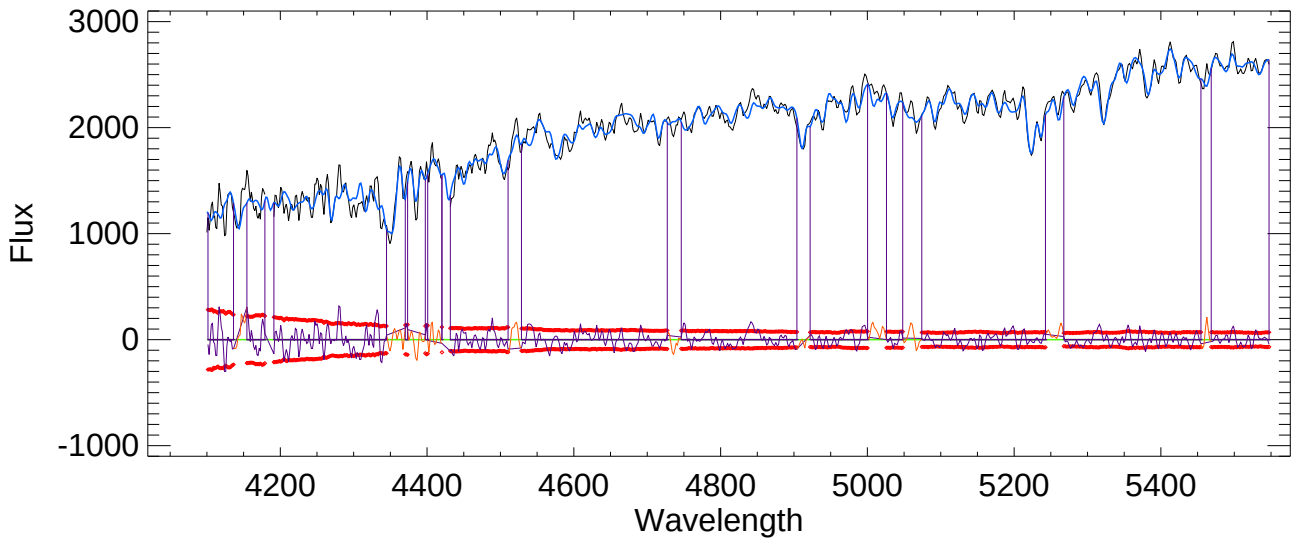

3000
2000
1000
0
-1000
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

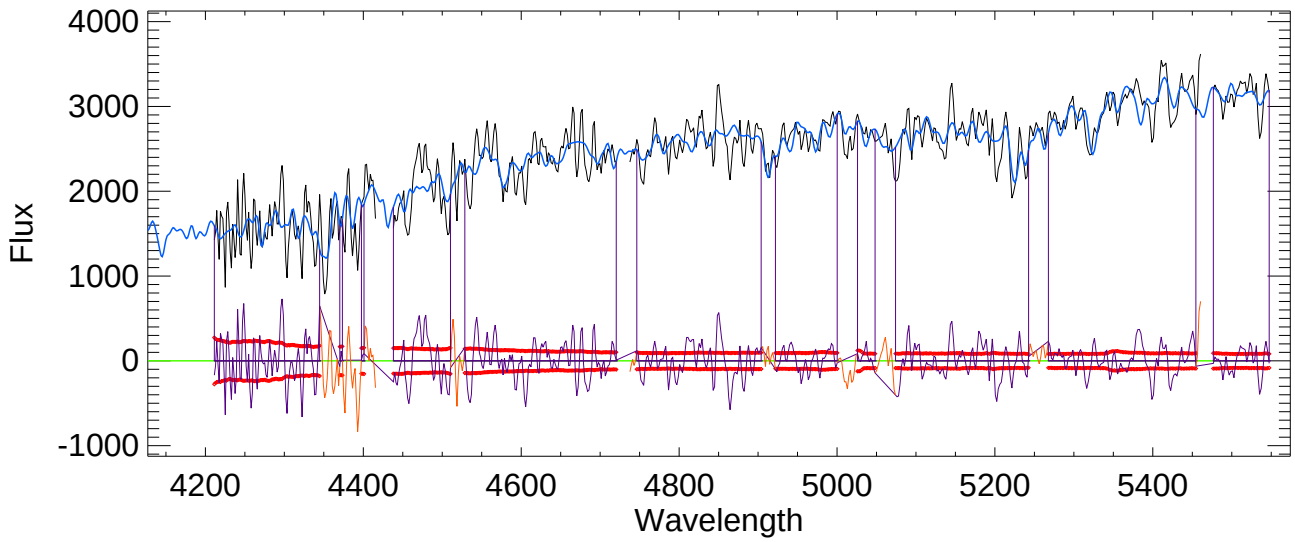

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

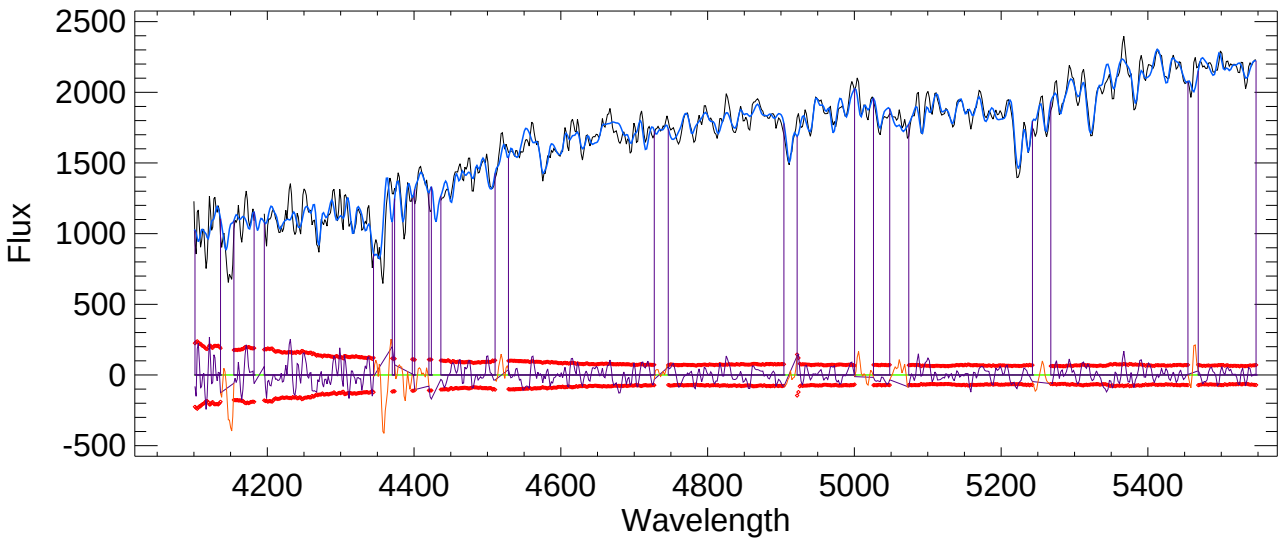

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

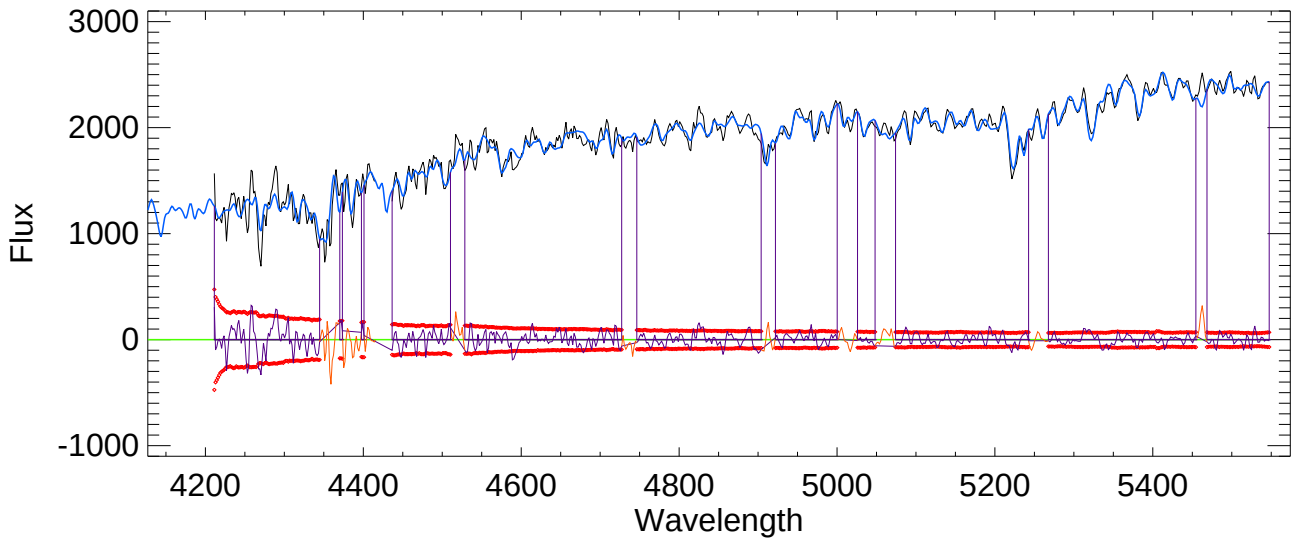

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

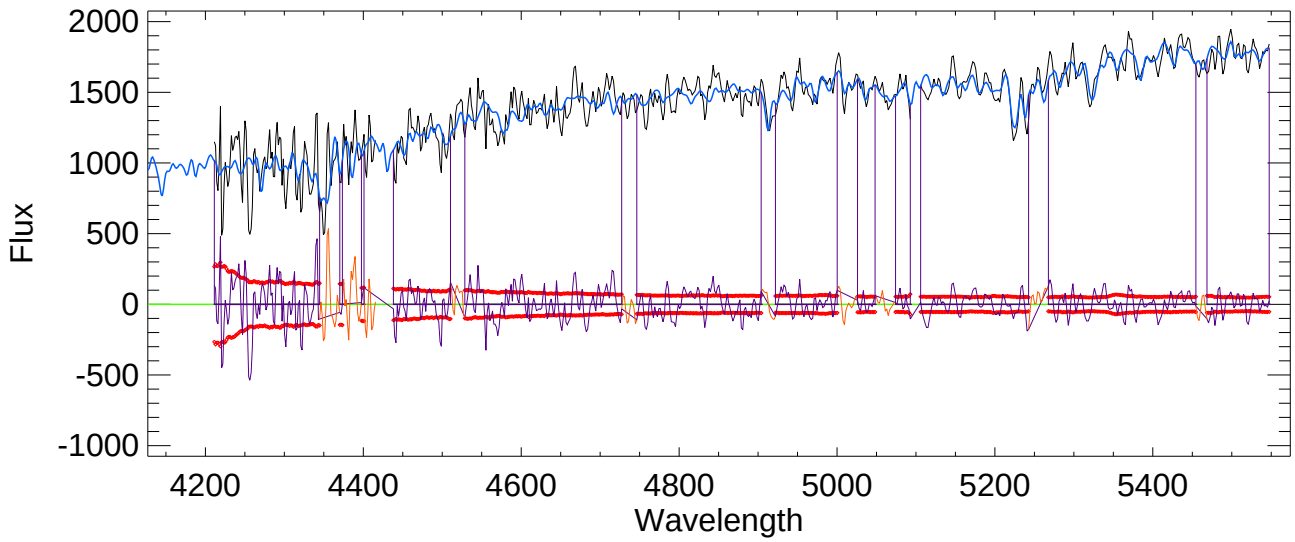

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

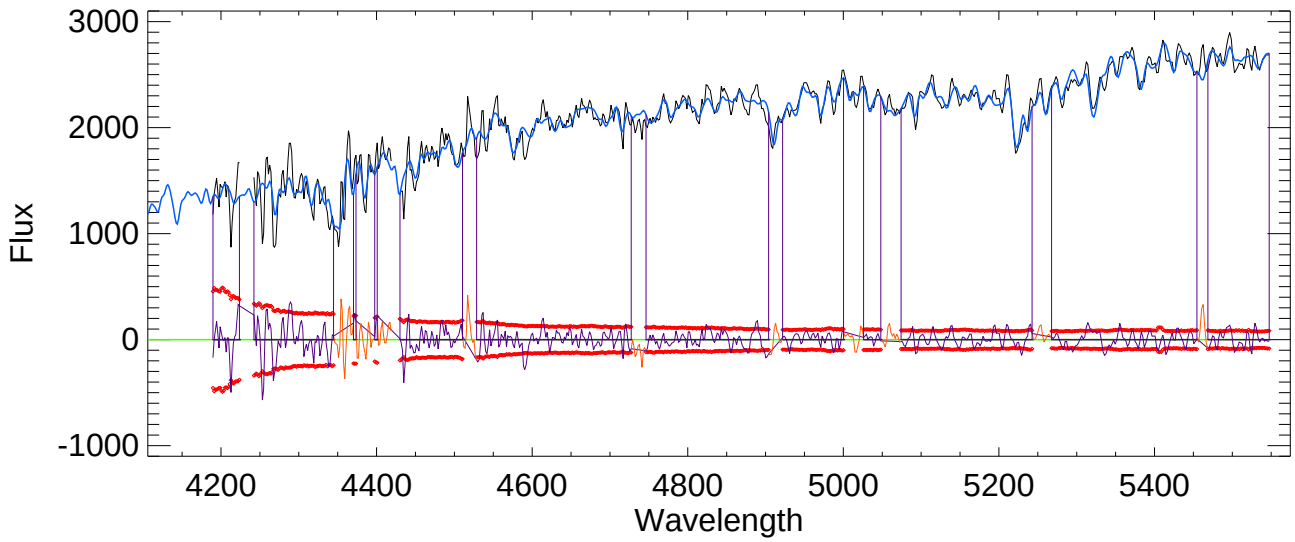

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

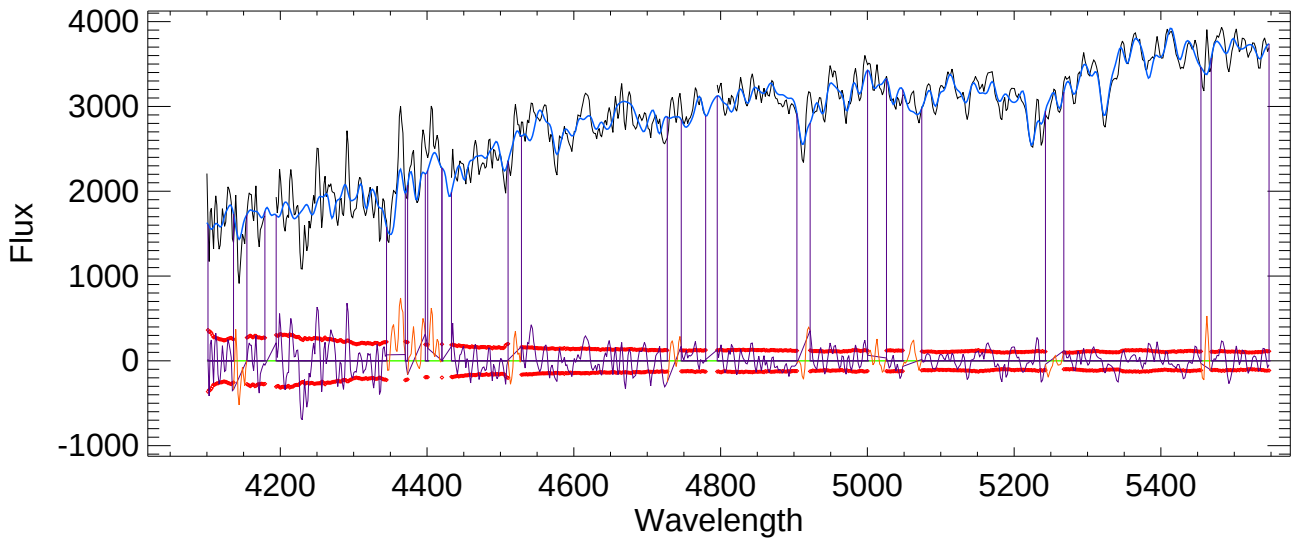

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

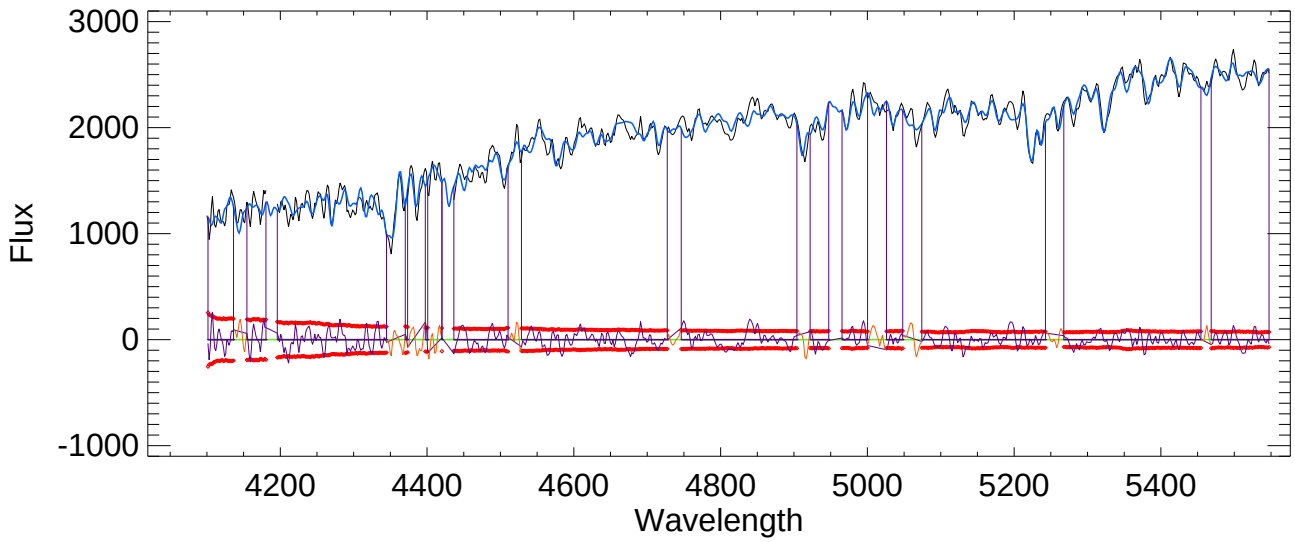

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

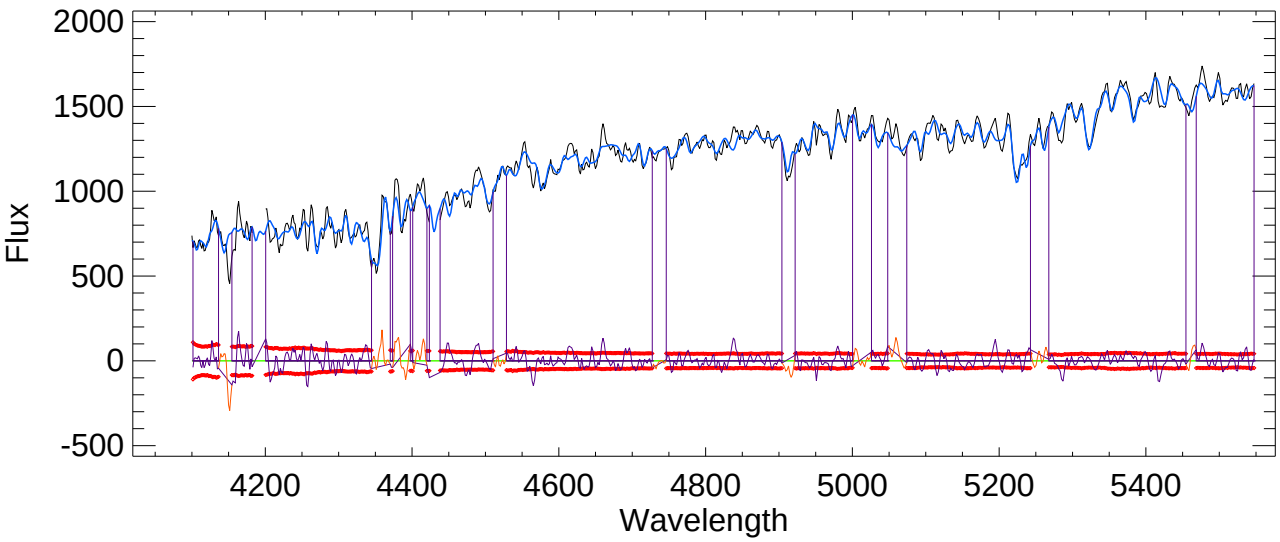

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

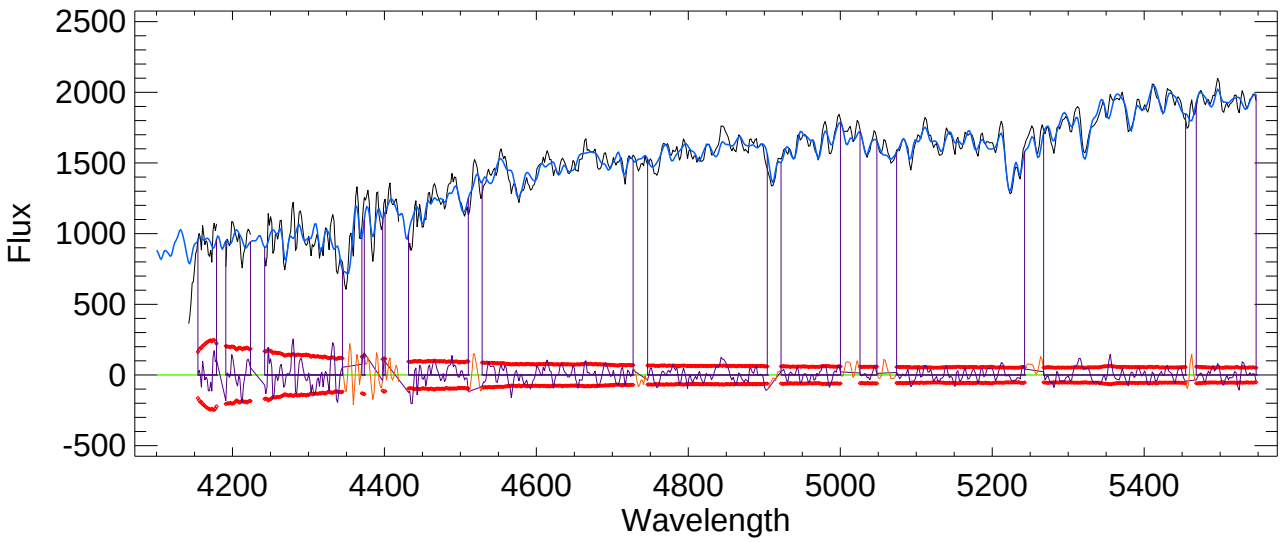

2000
1500
1000
500
0
-500
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

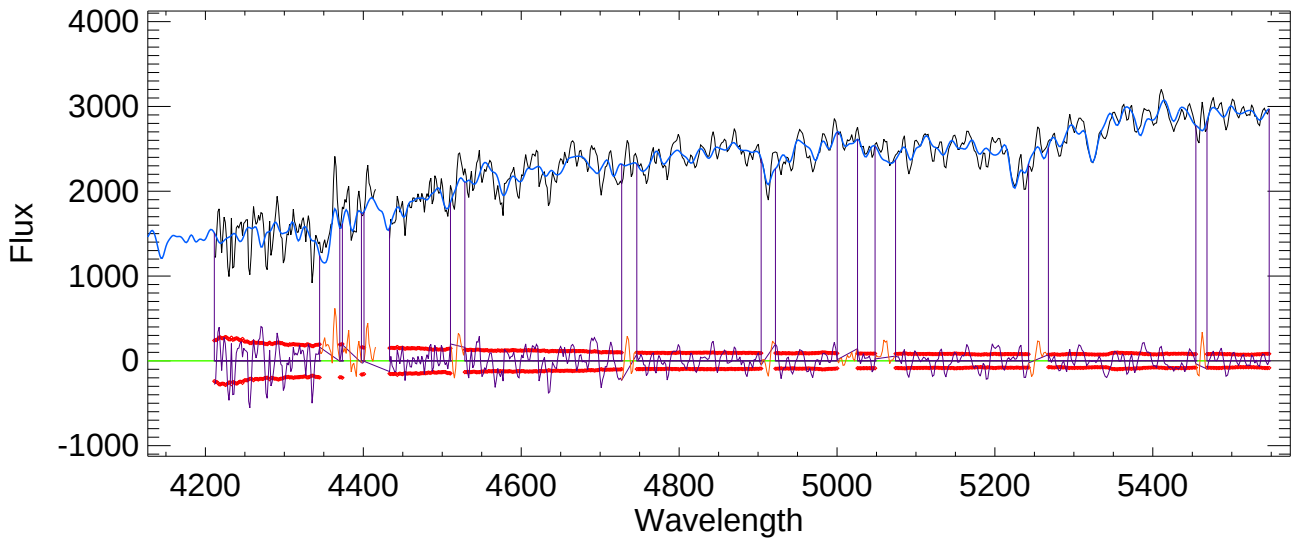

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

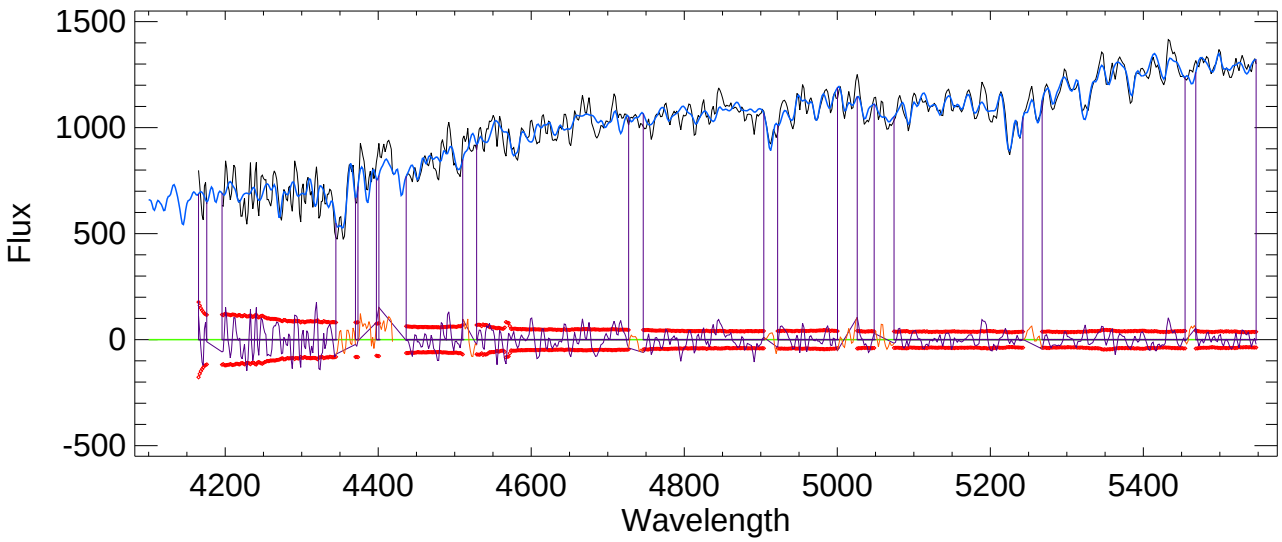

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

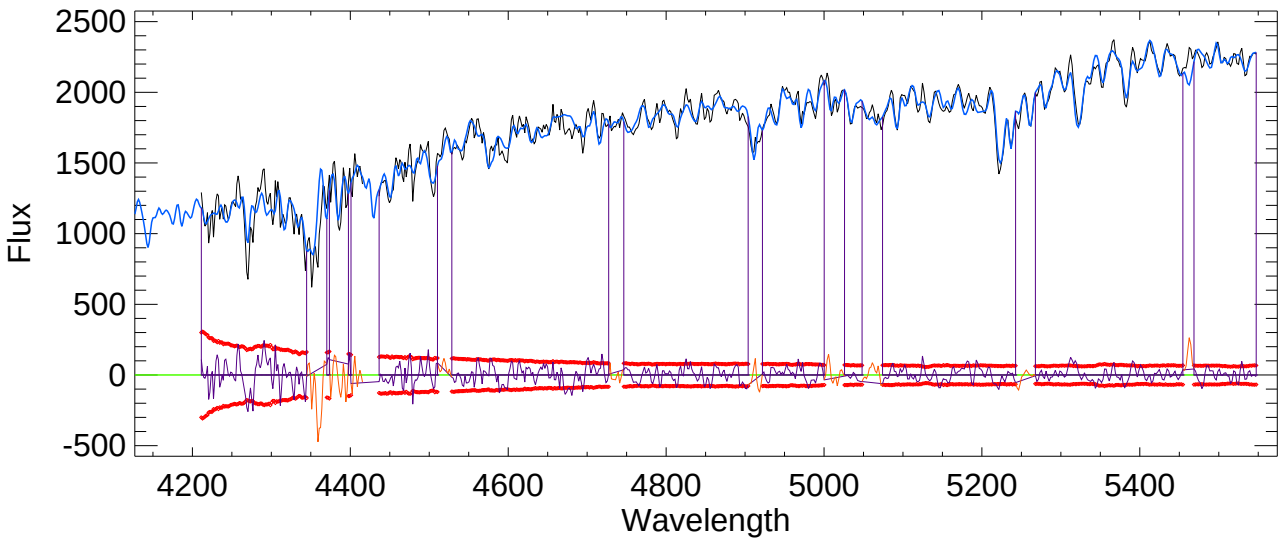

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

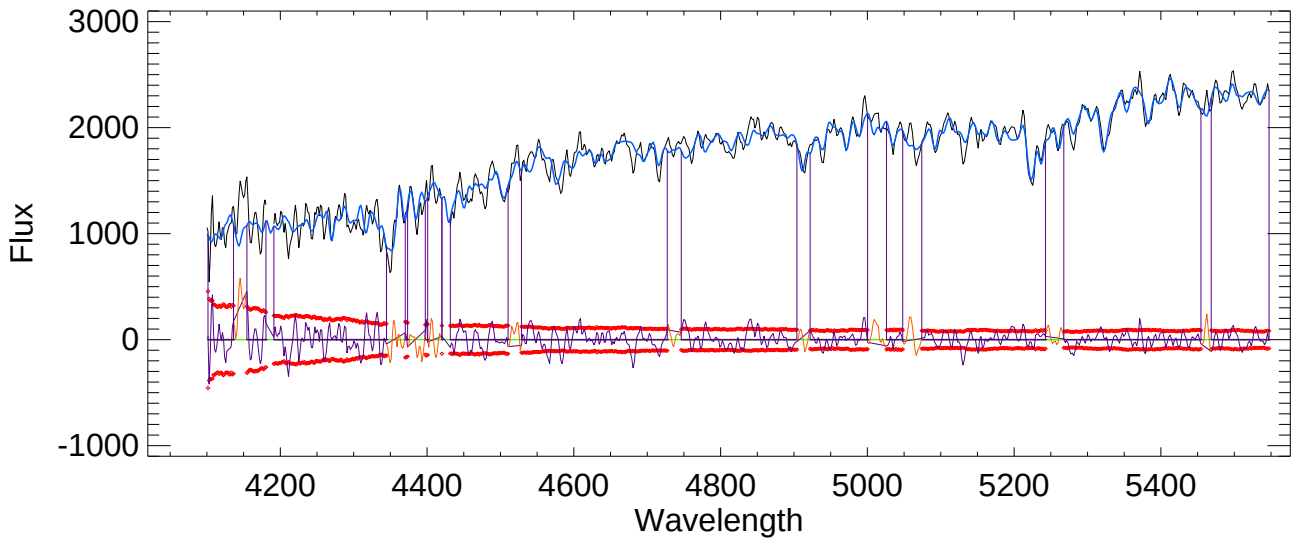

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

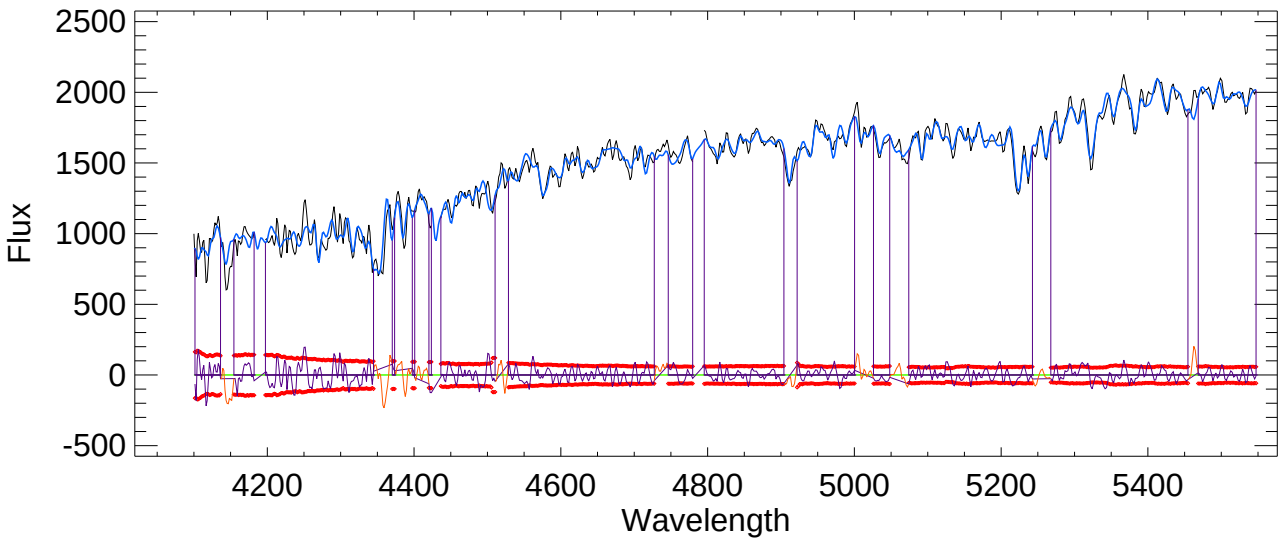

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

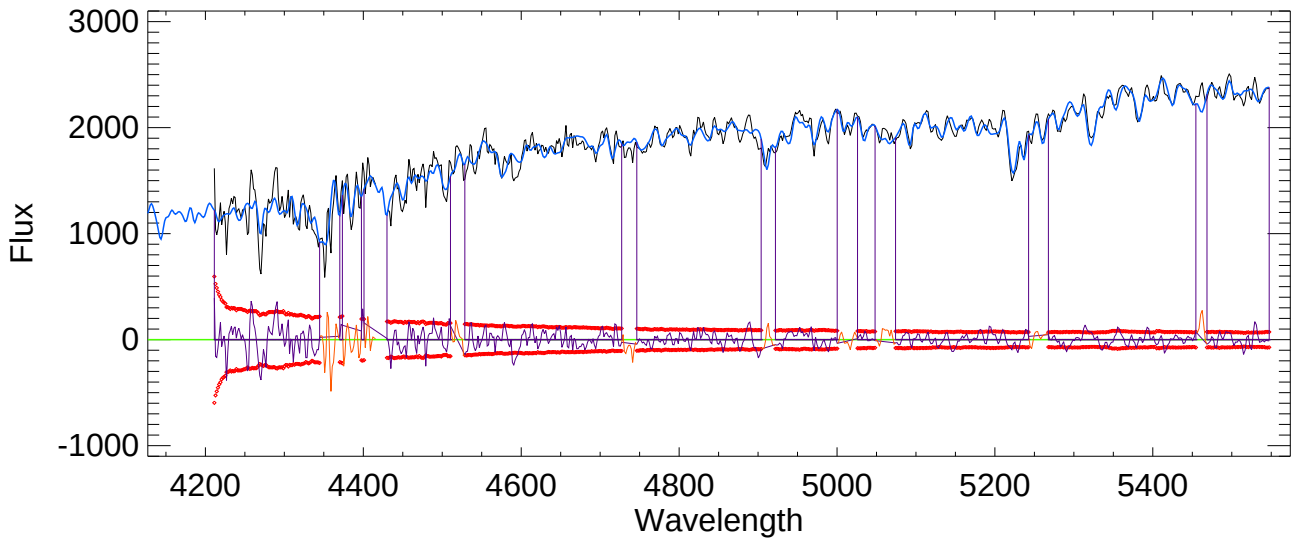

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

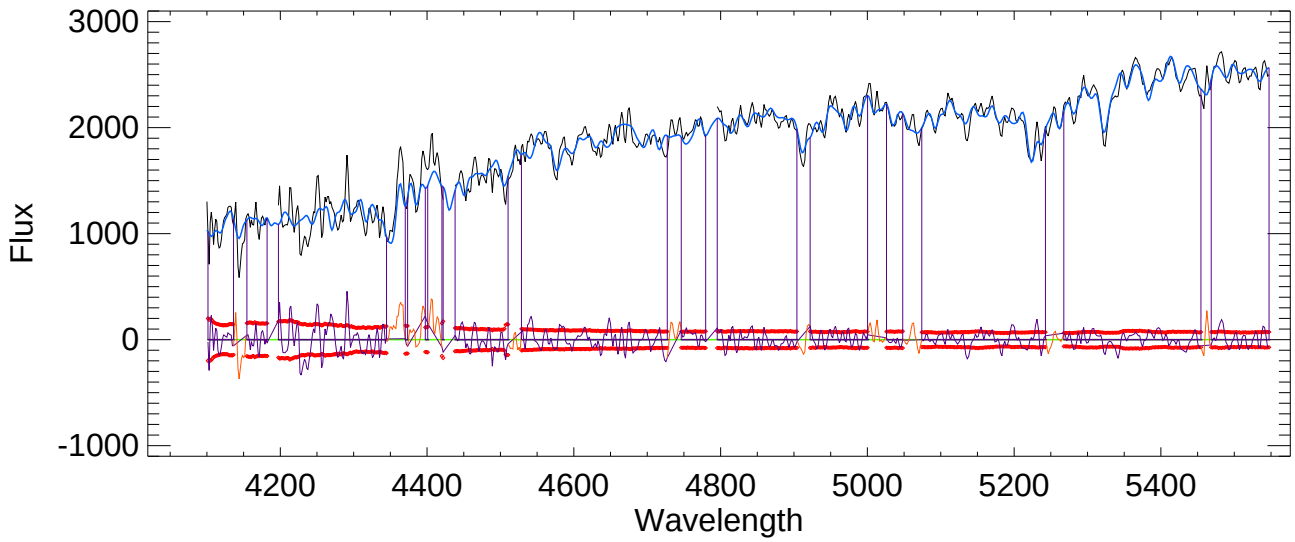

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

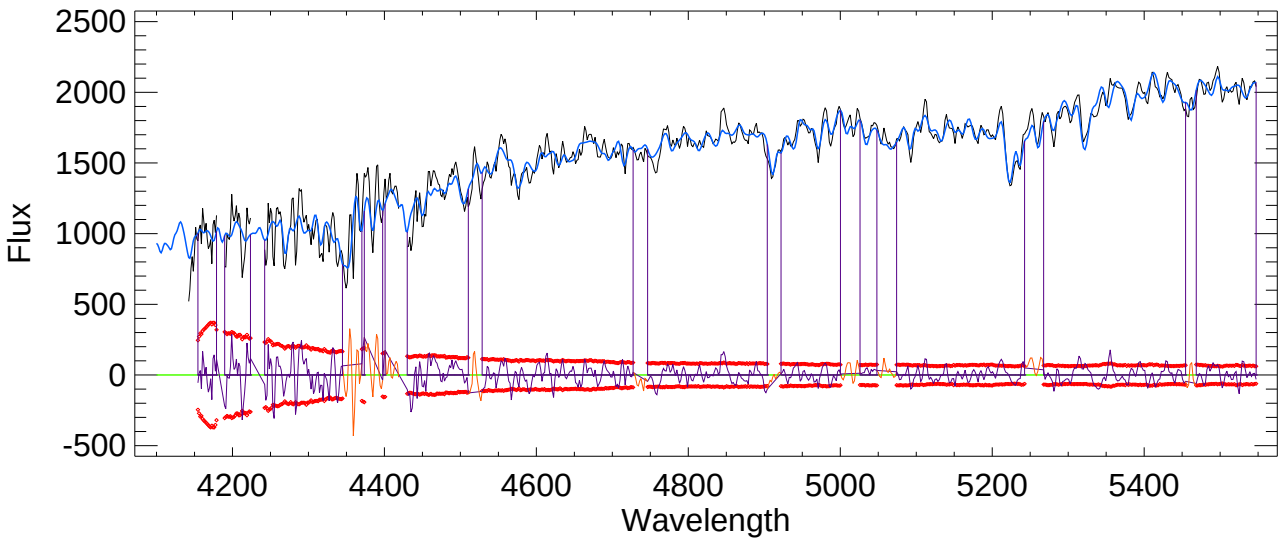

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

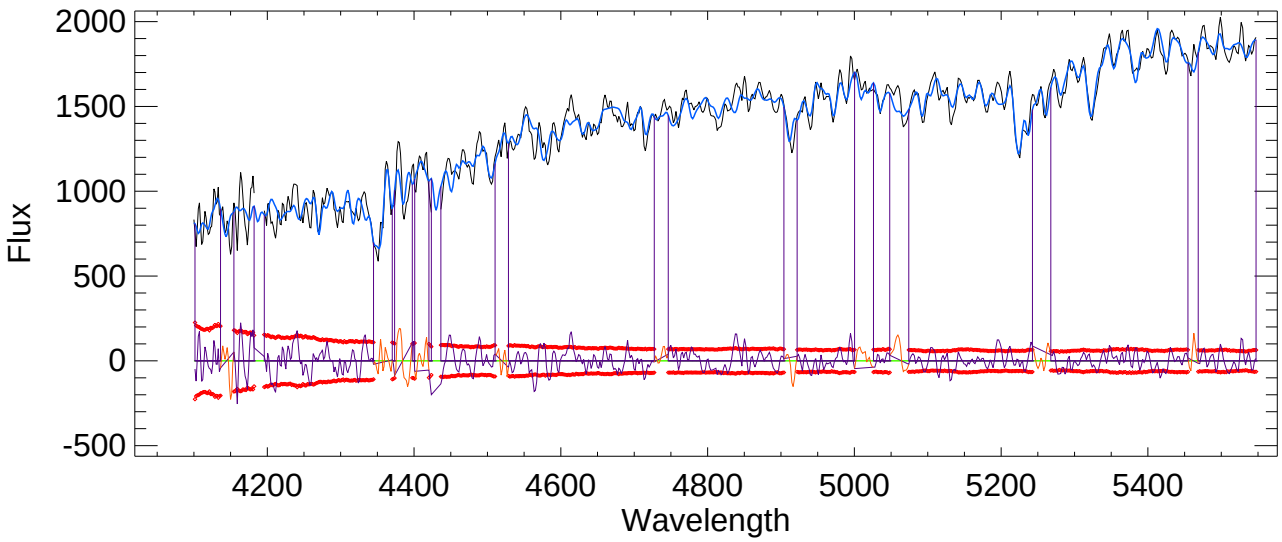

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

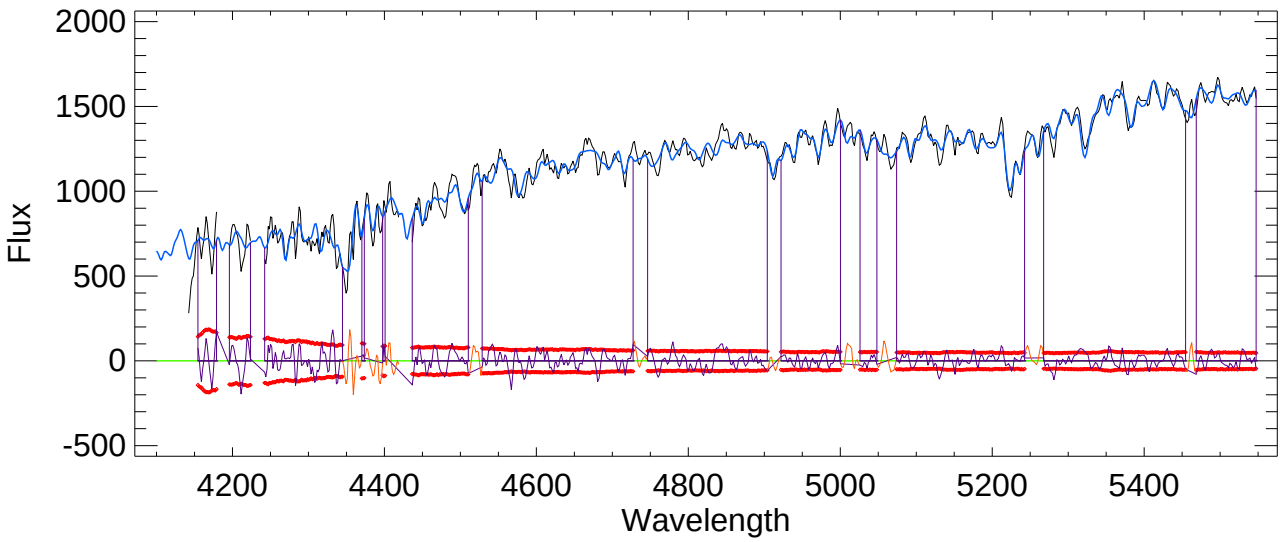

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

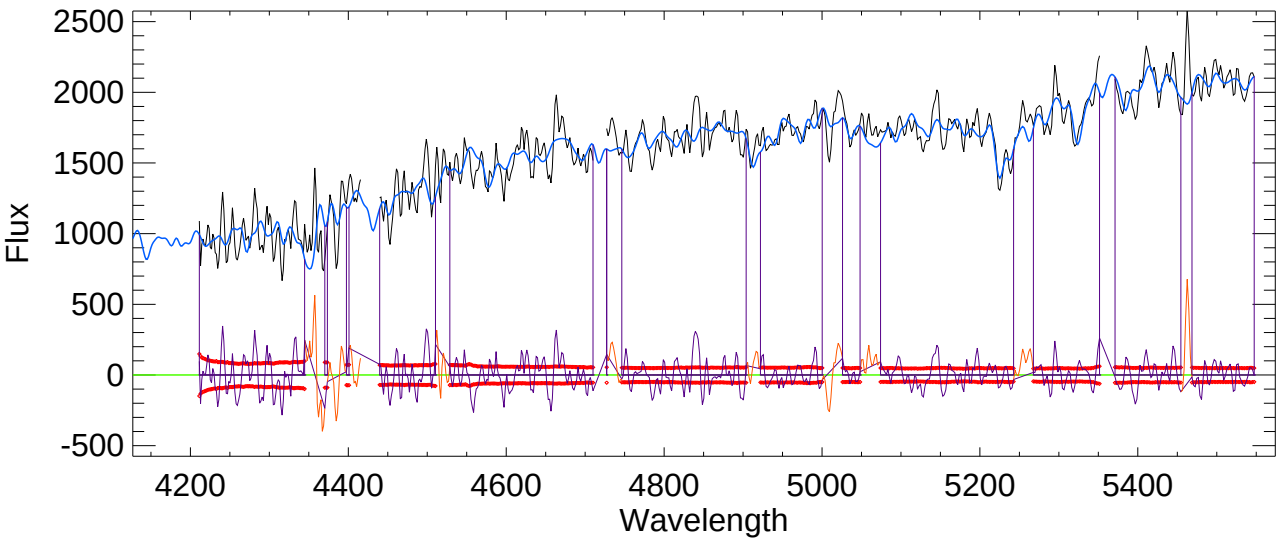

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

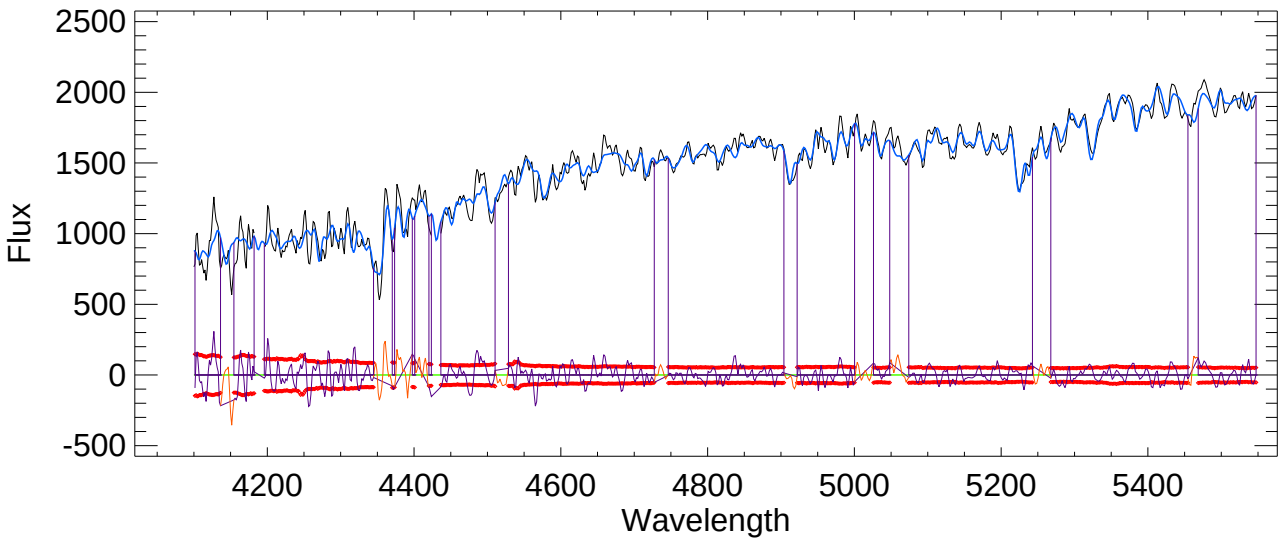

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

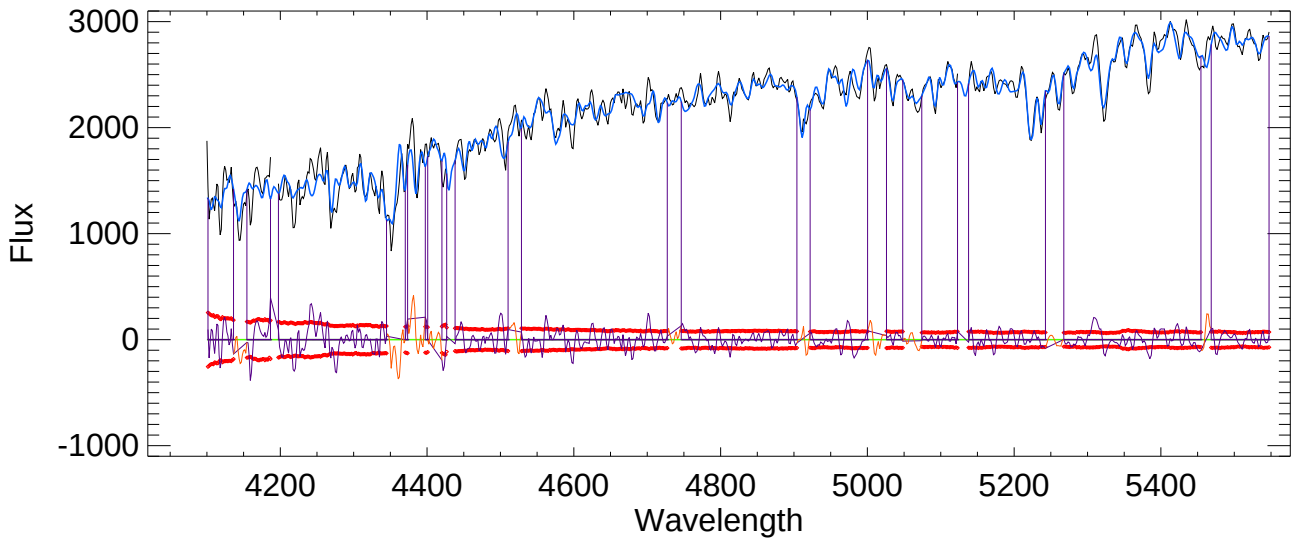

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

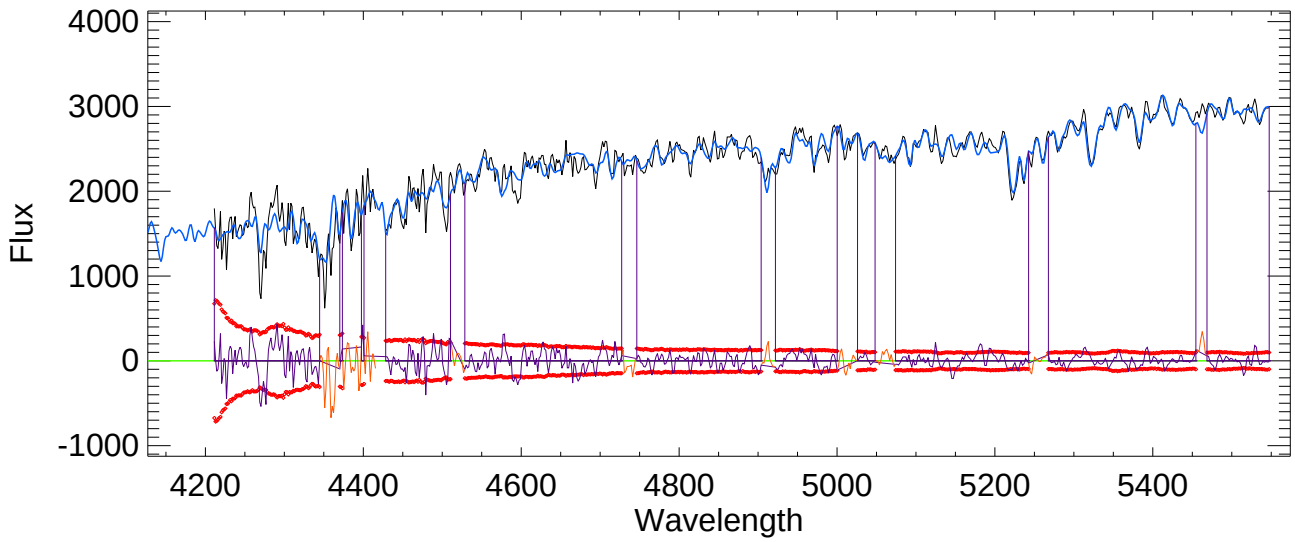

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

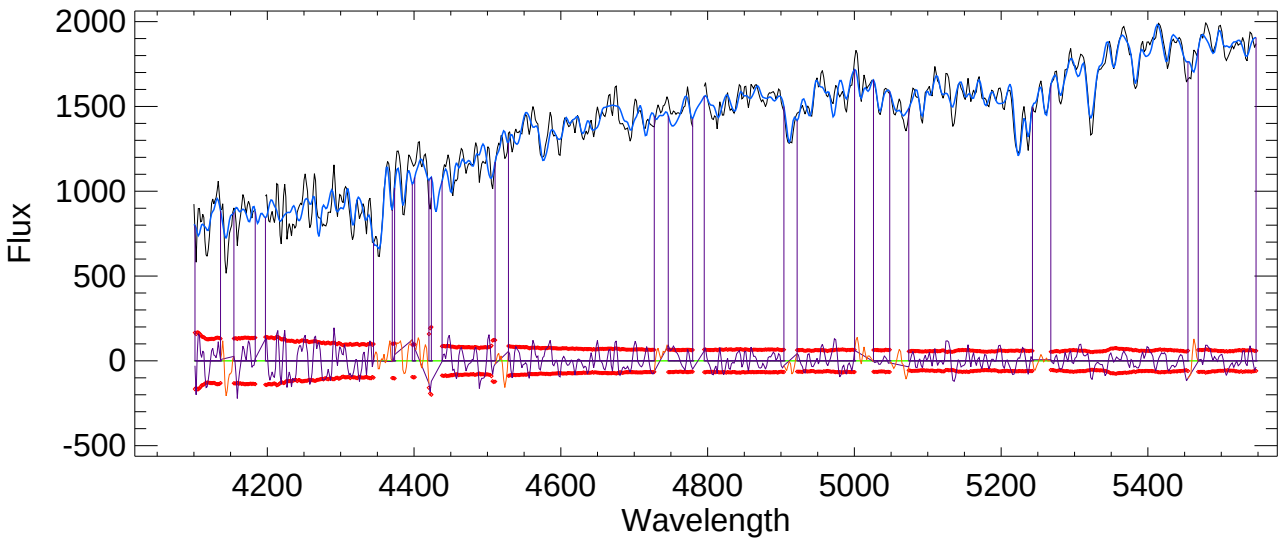

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

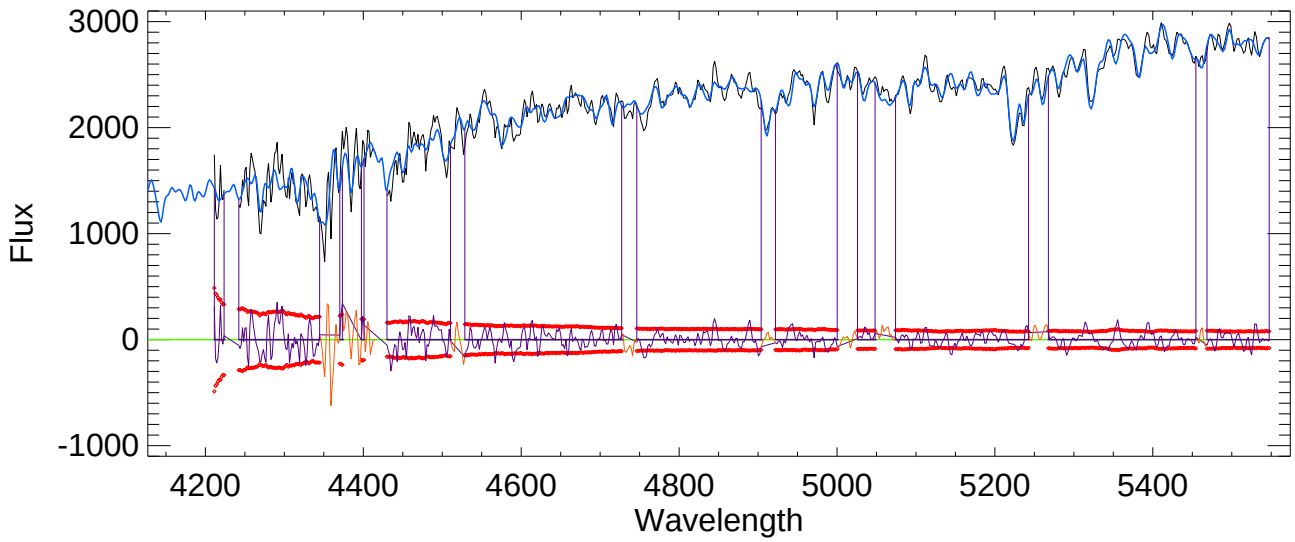

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

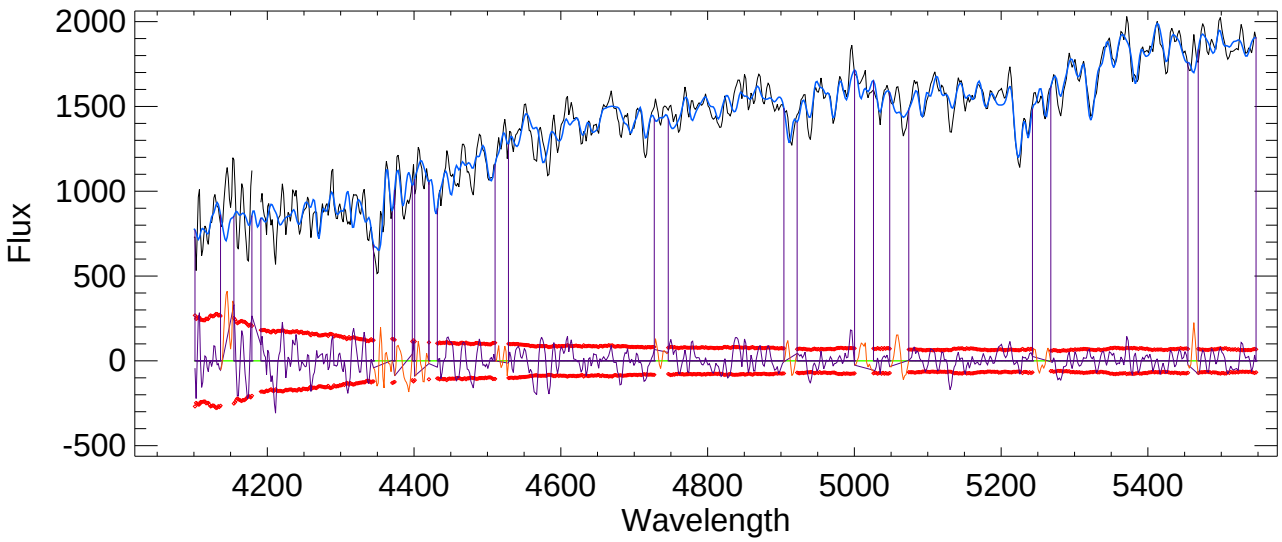

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

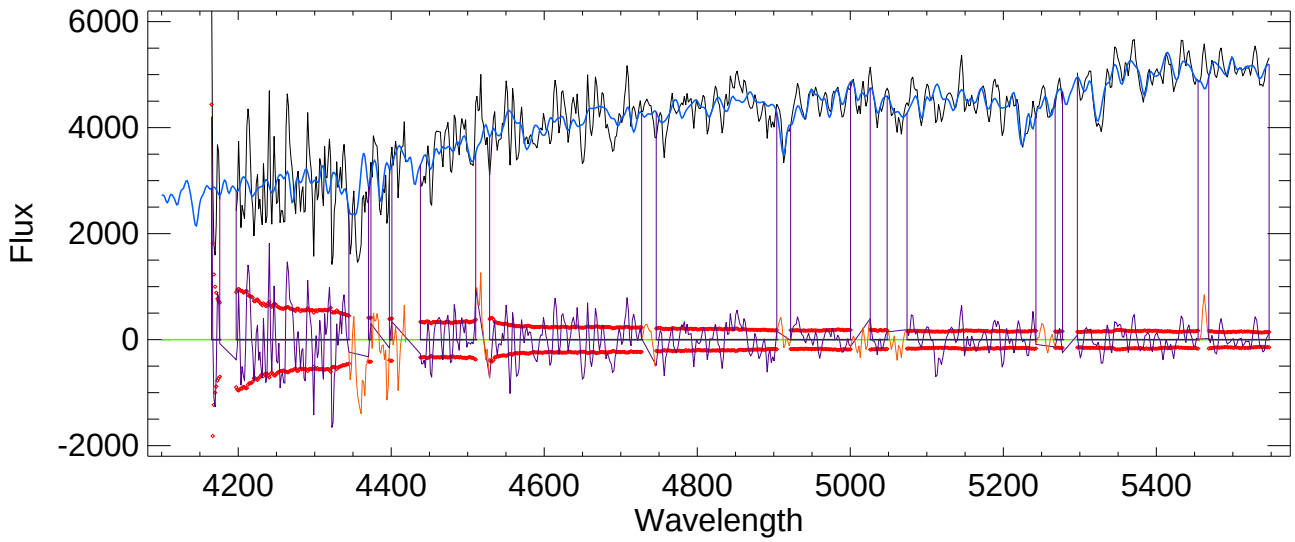

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

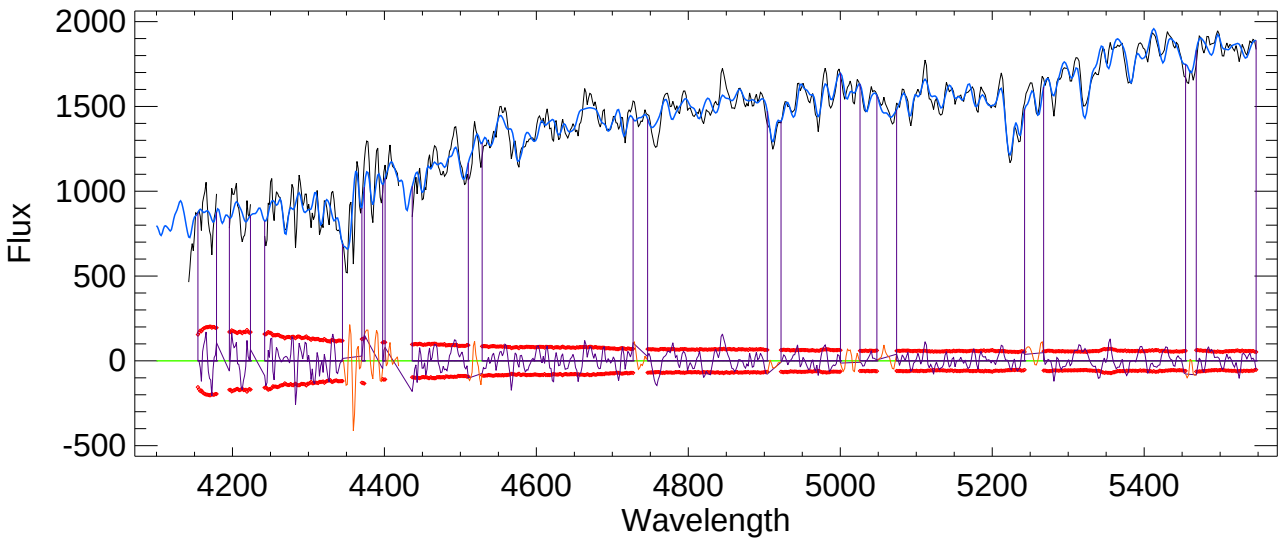

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

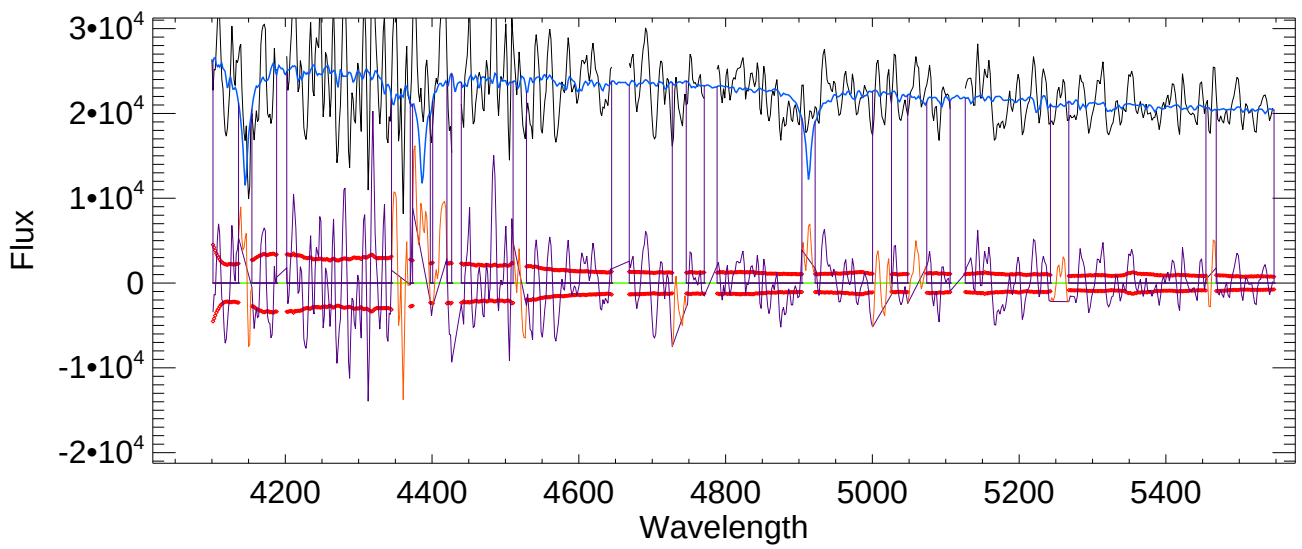

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

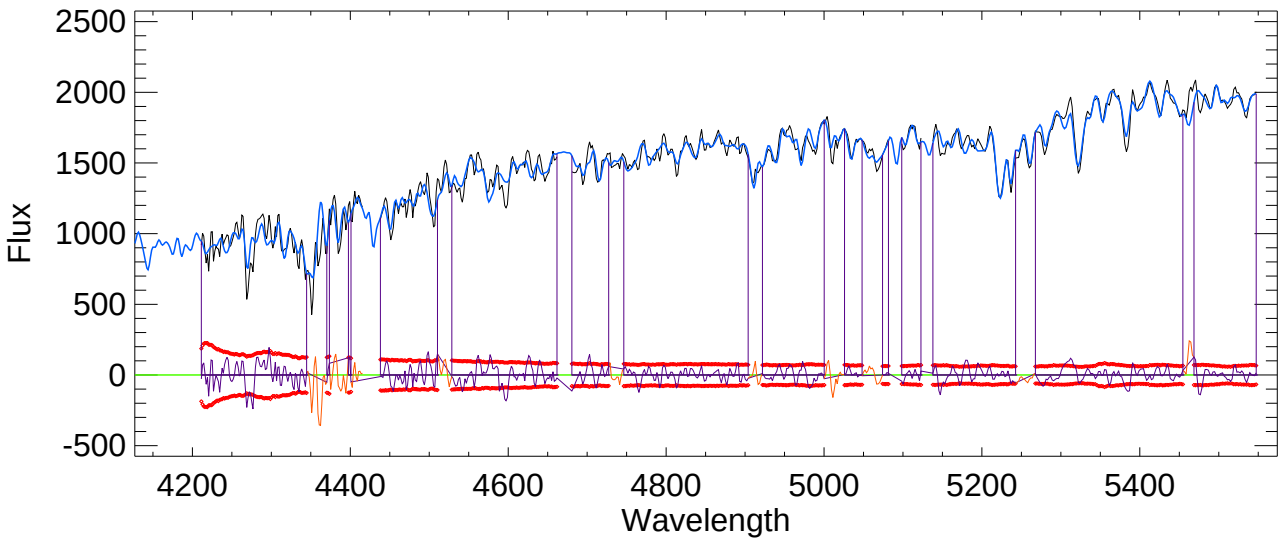

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

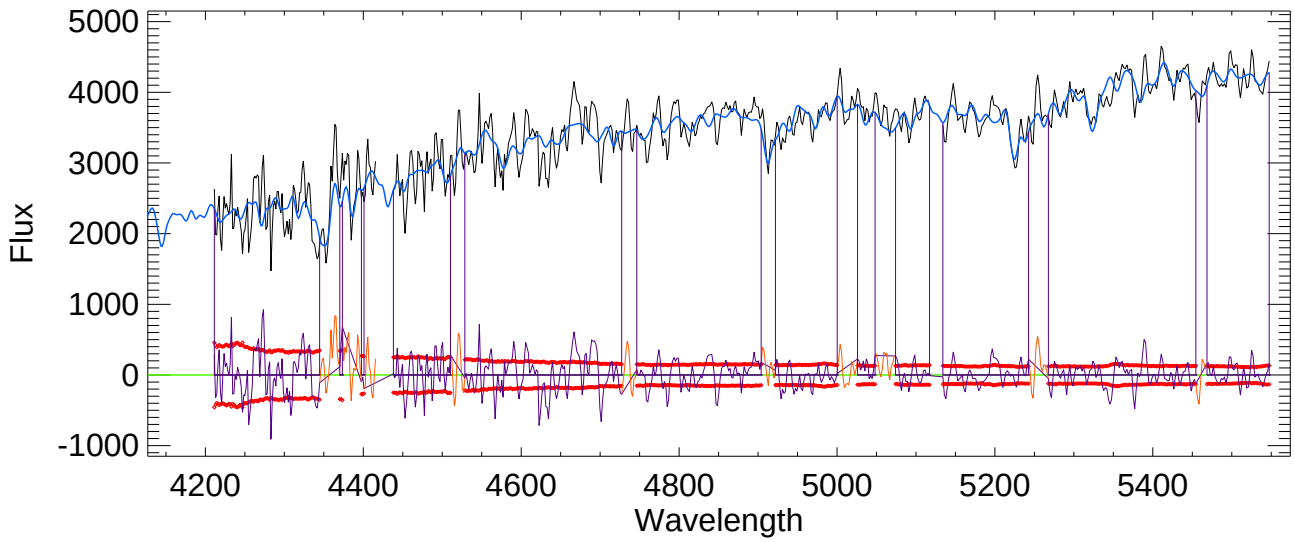

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

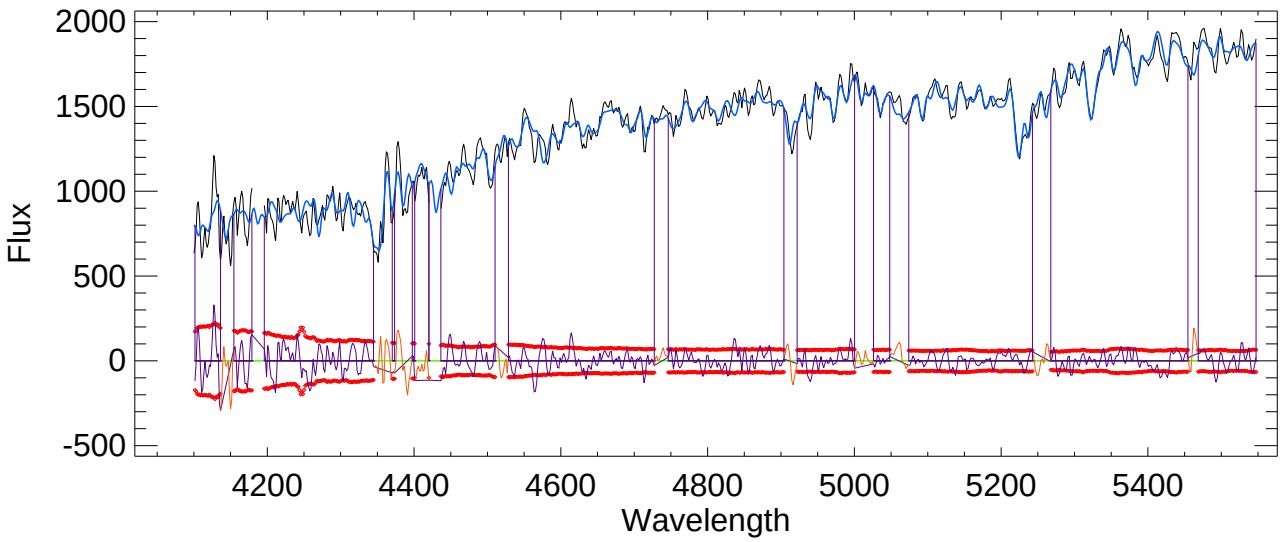

6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

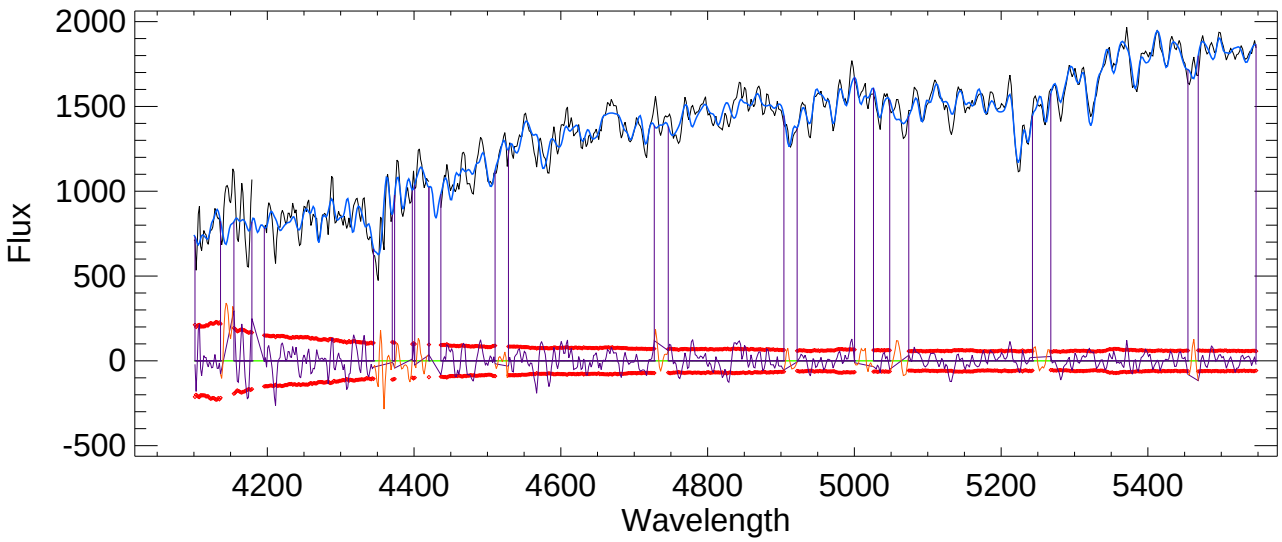

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

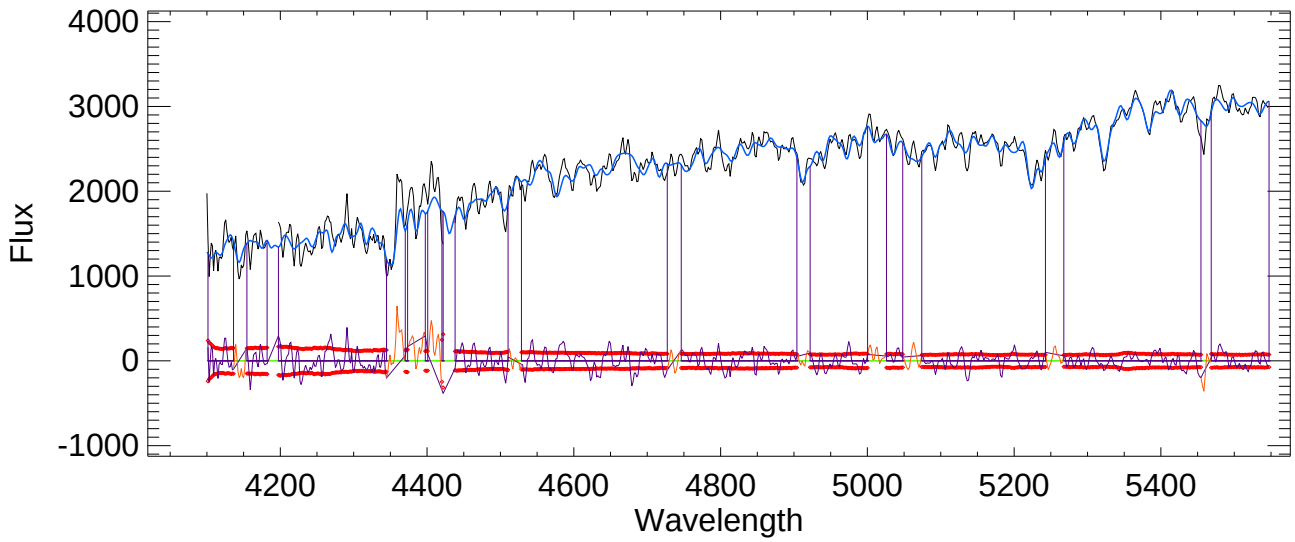

3•10^4
2•10^4
1•10^4
0
-1•10^4
-2•10^4
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

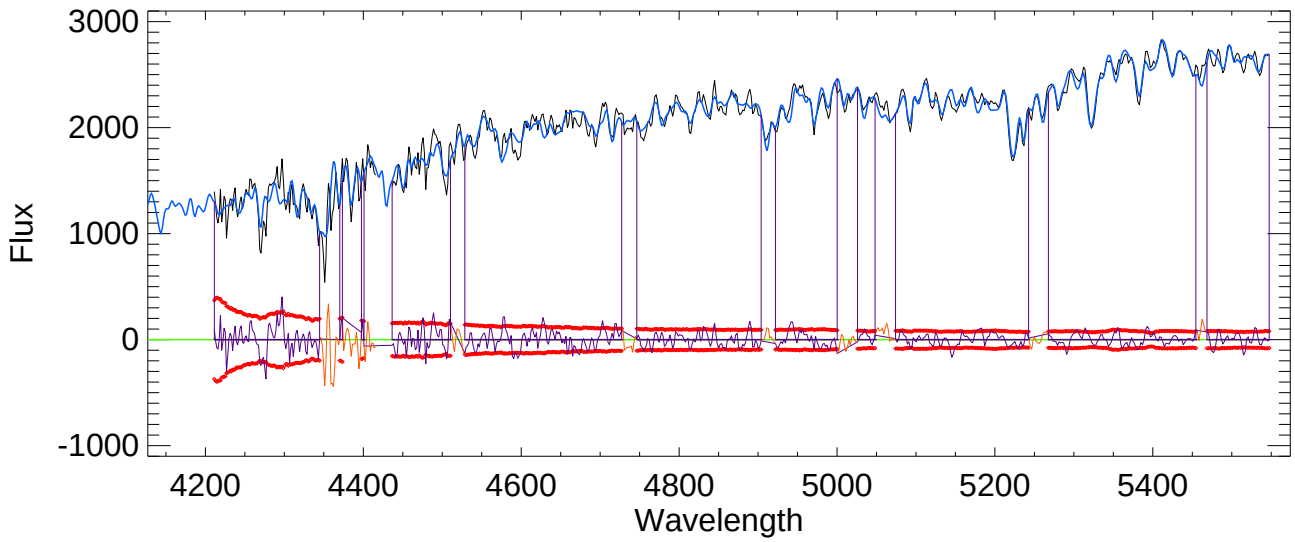

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

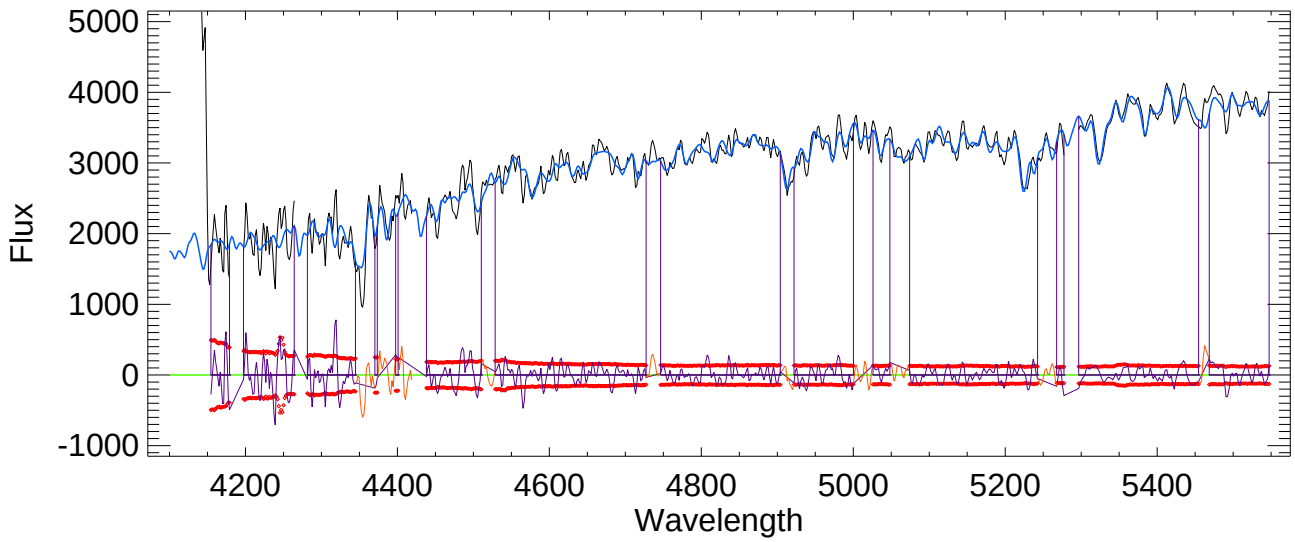

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

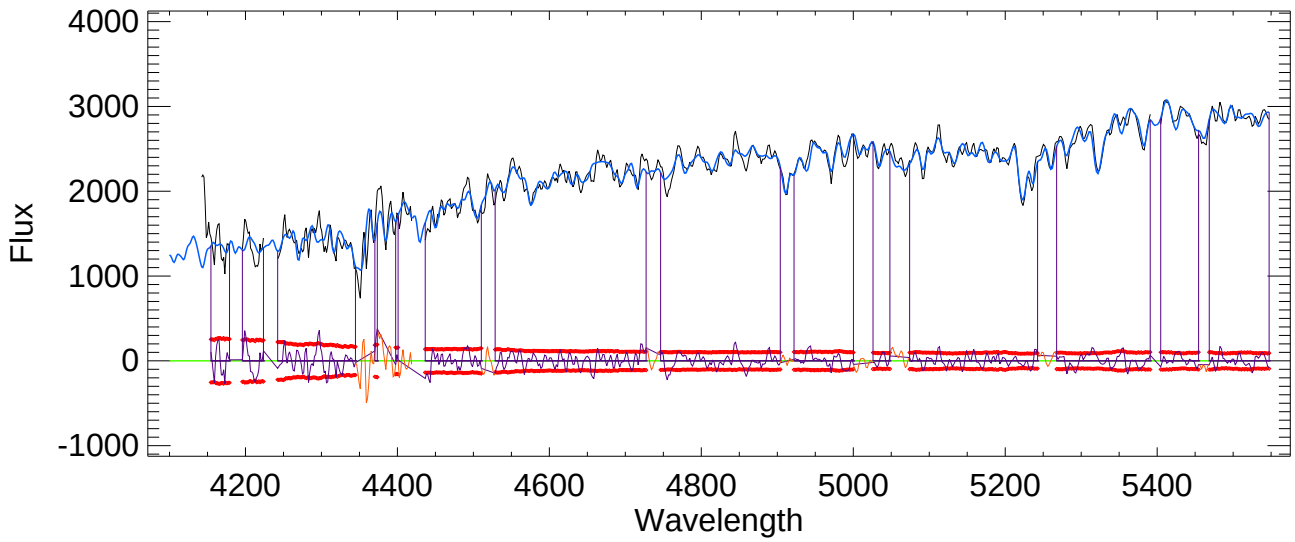

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

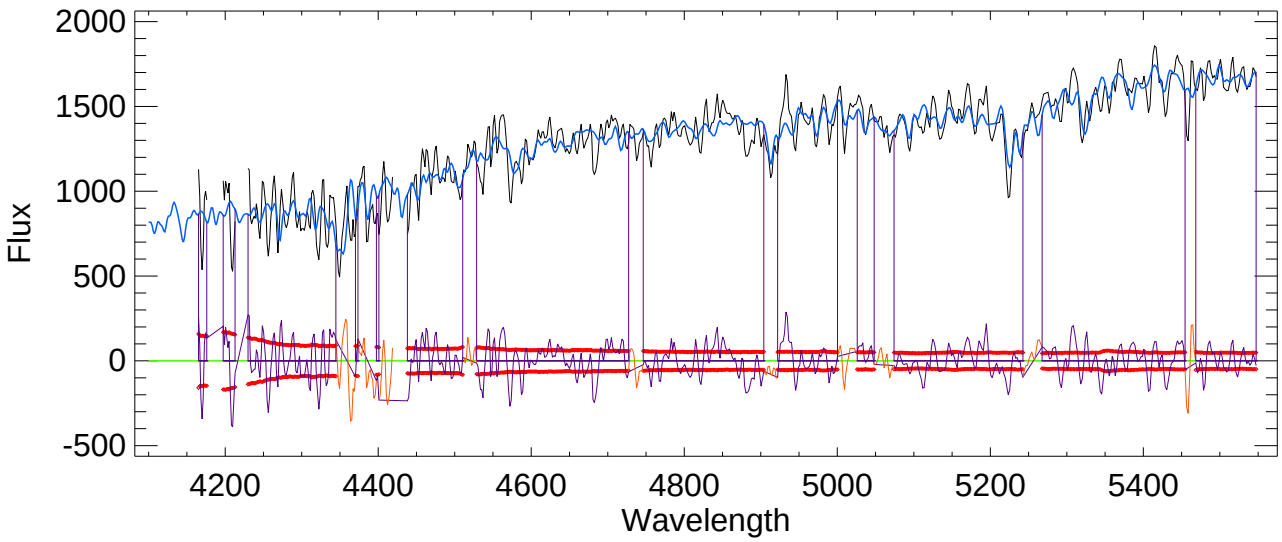

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

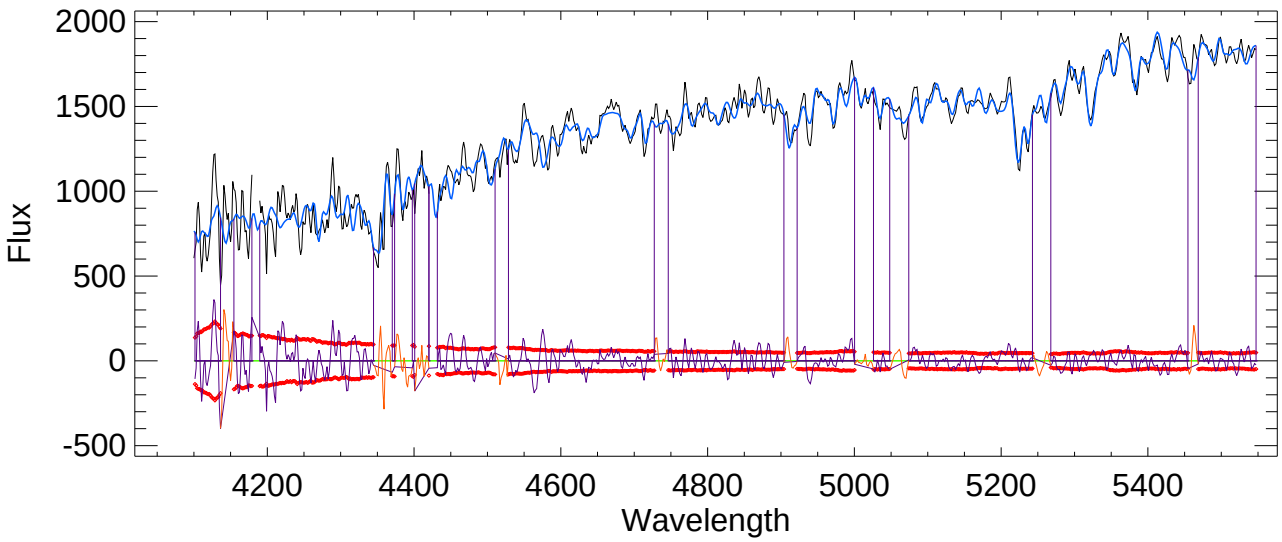

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

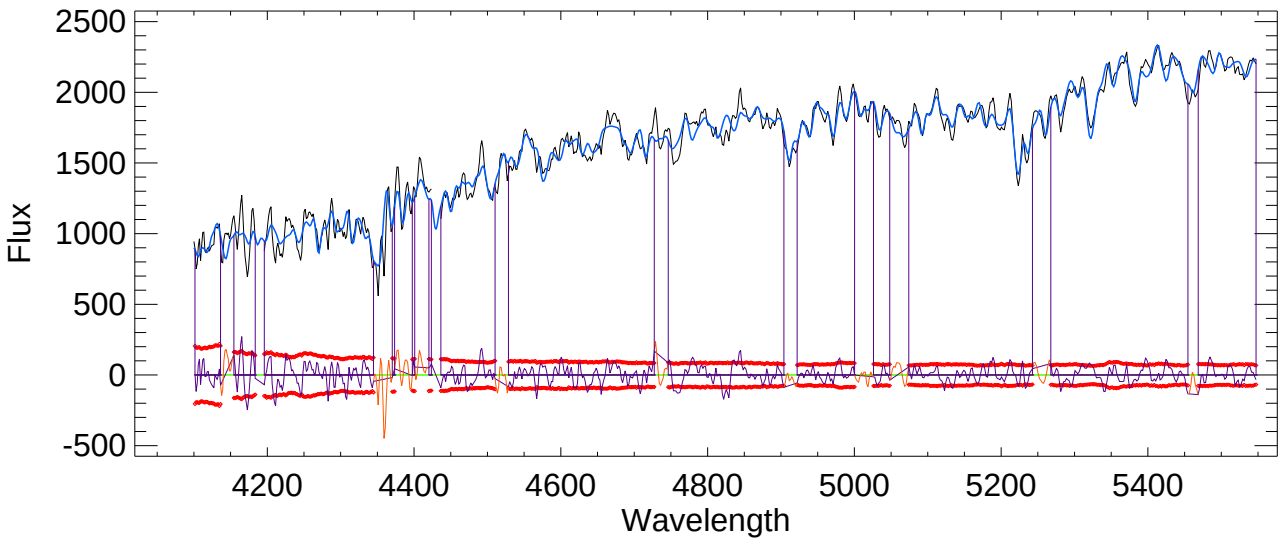

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

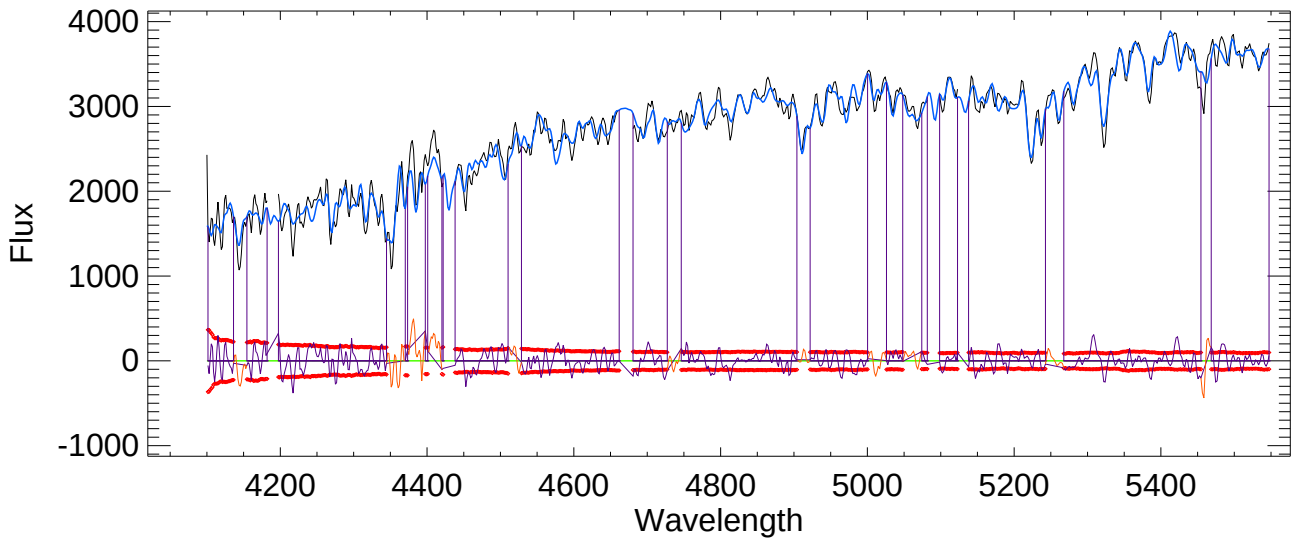

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

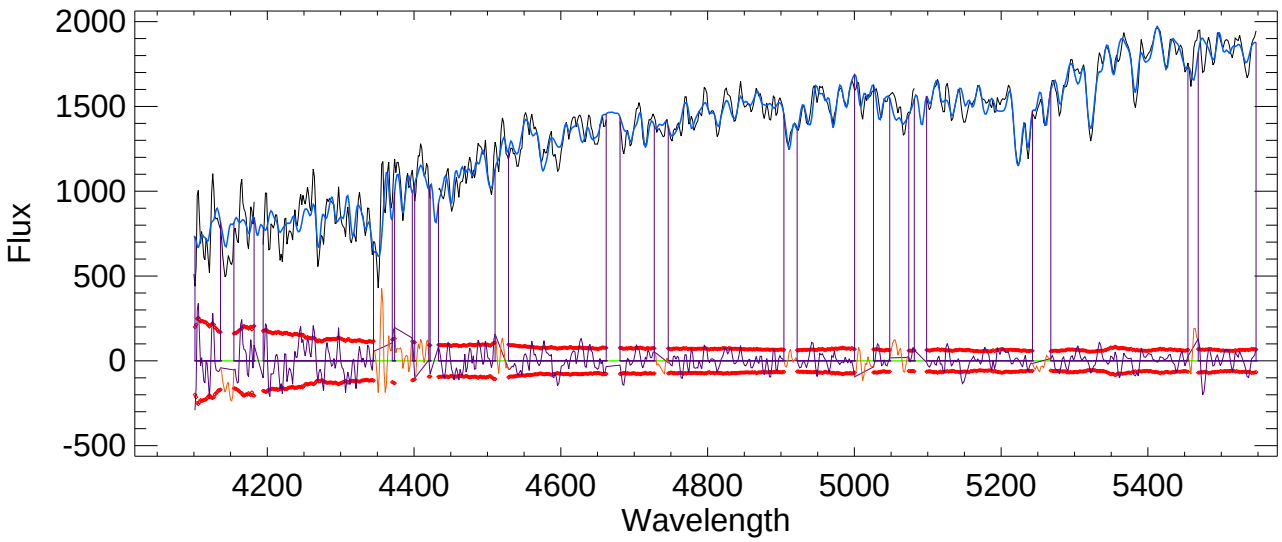

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

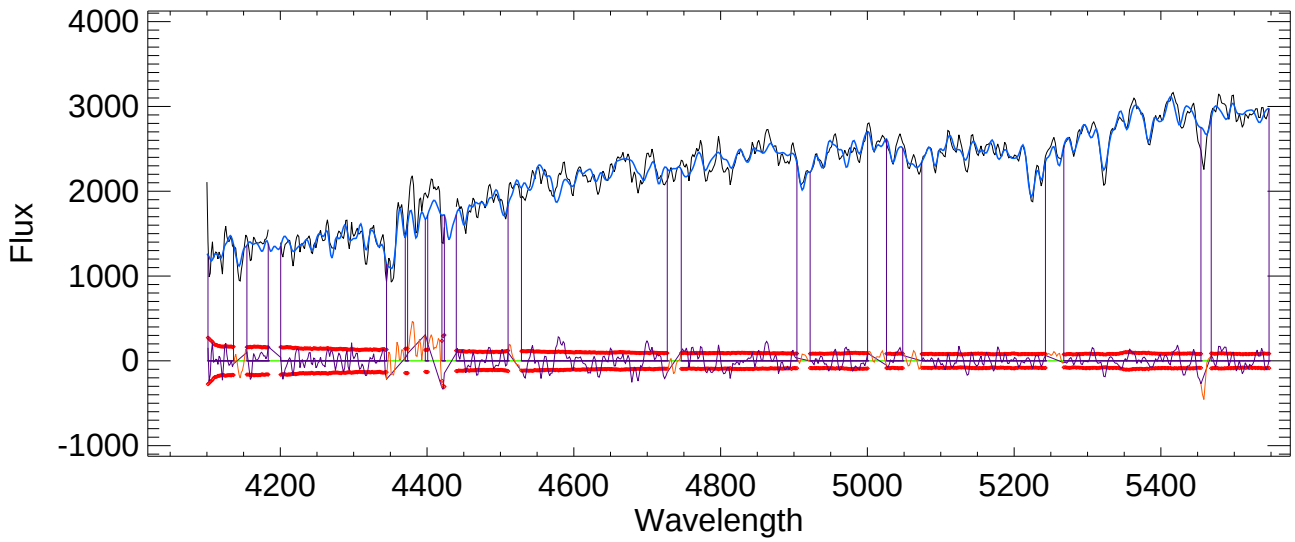

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

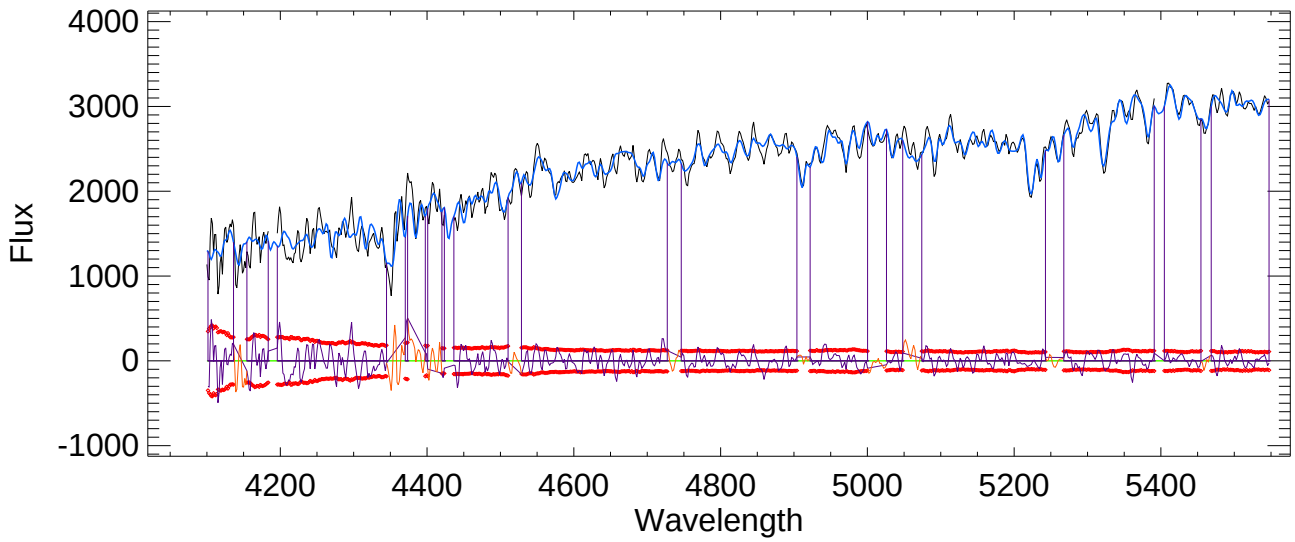

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

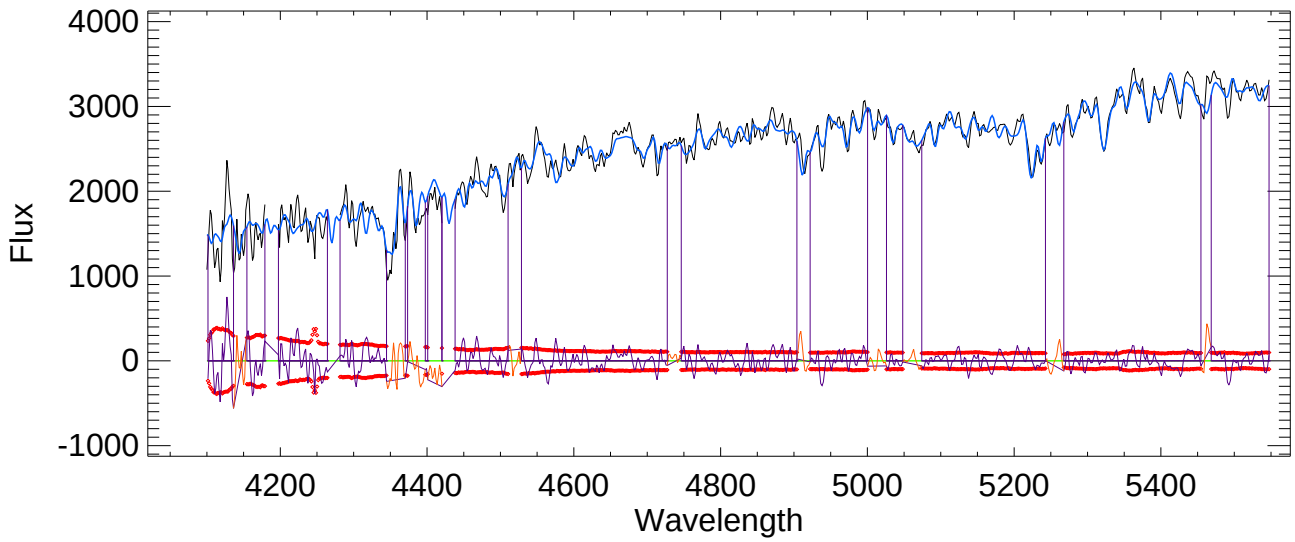

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

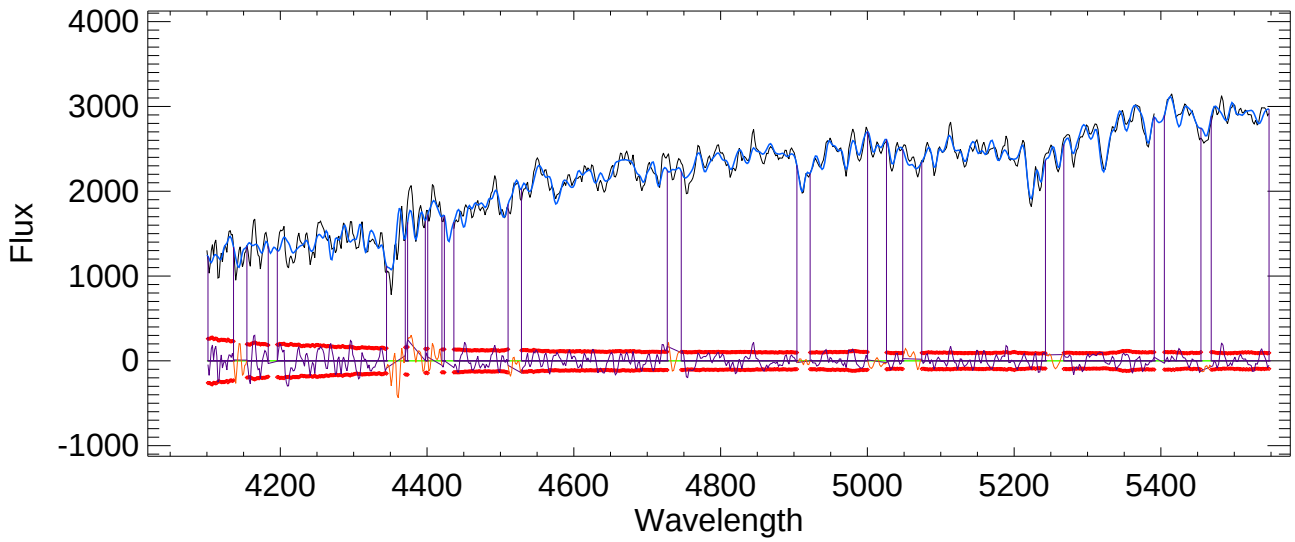

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

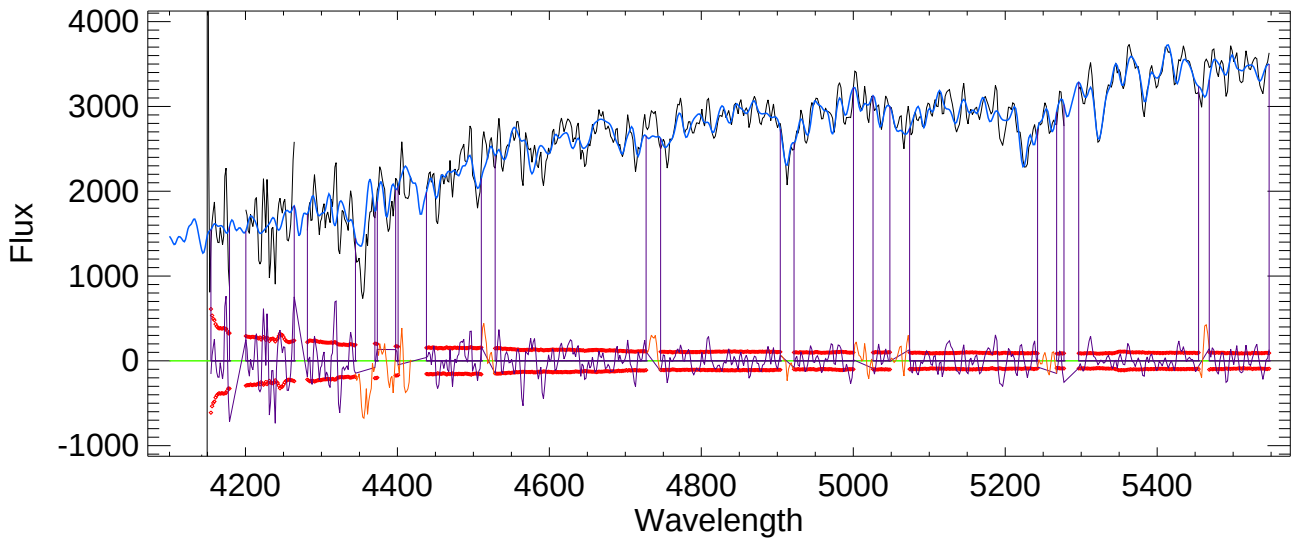

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

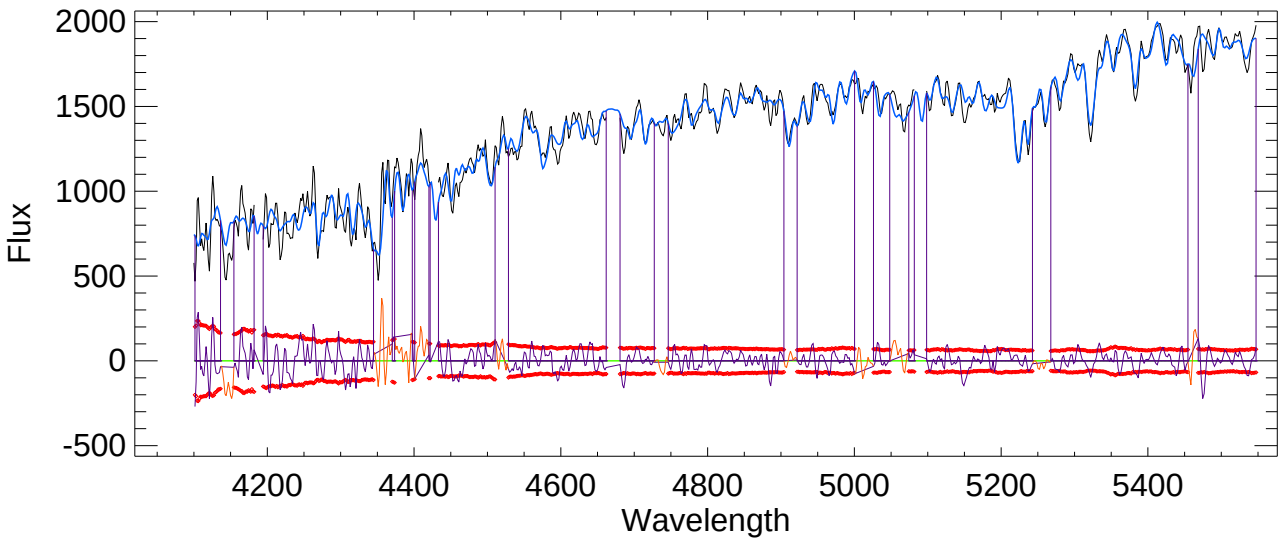

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

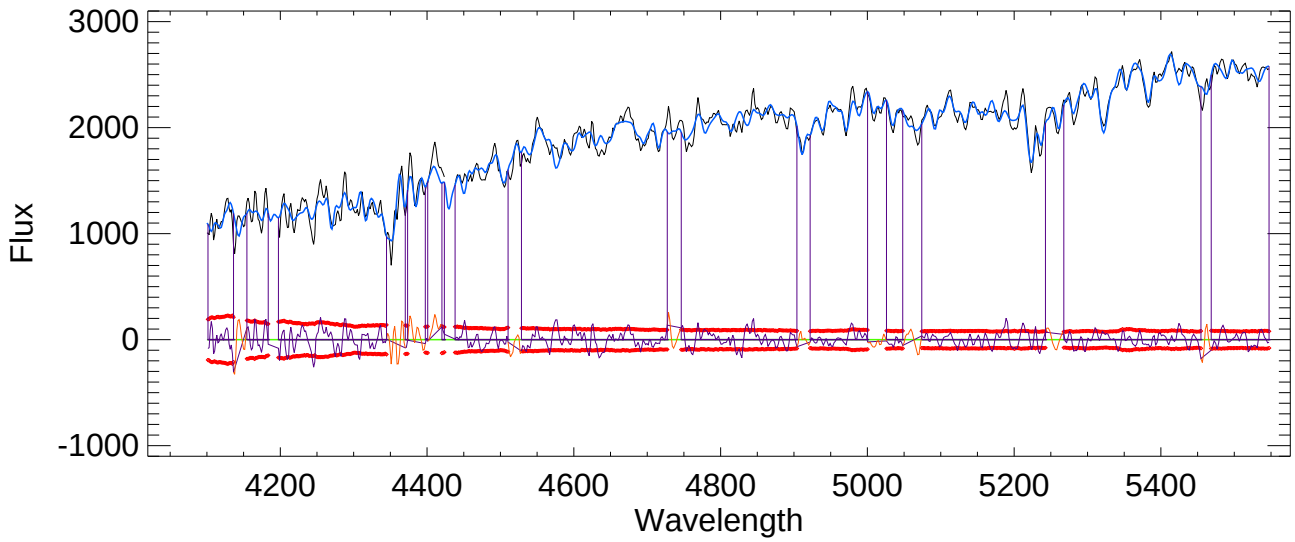

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

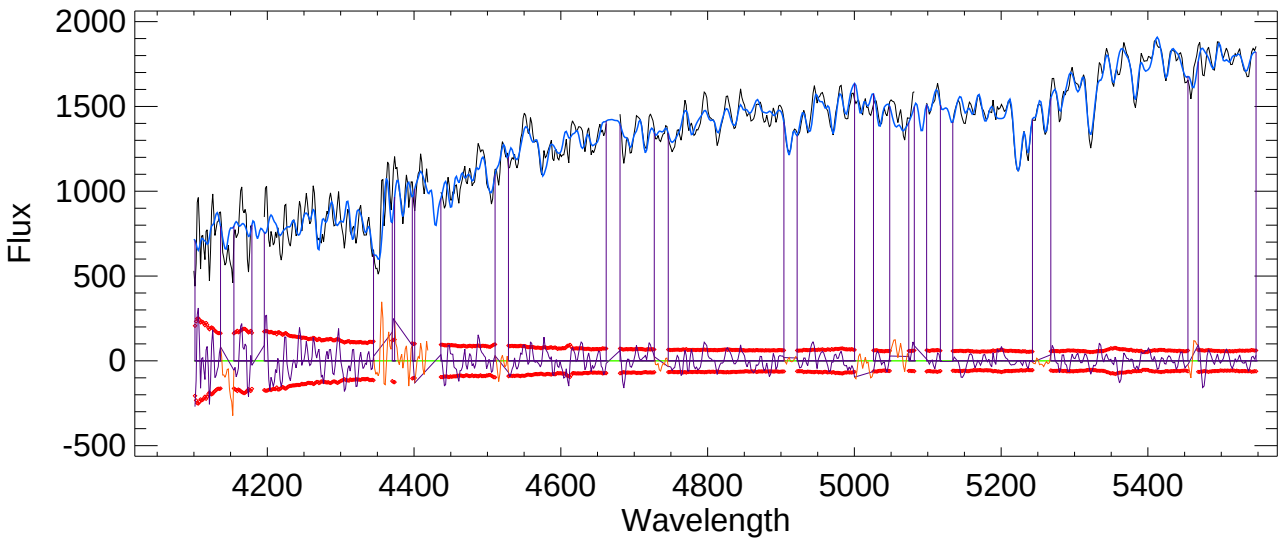

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

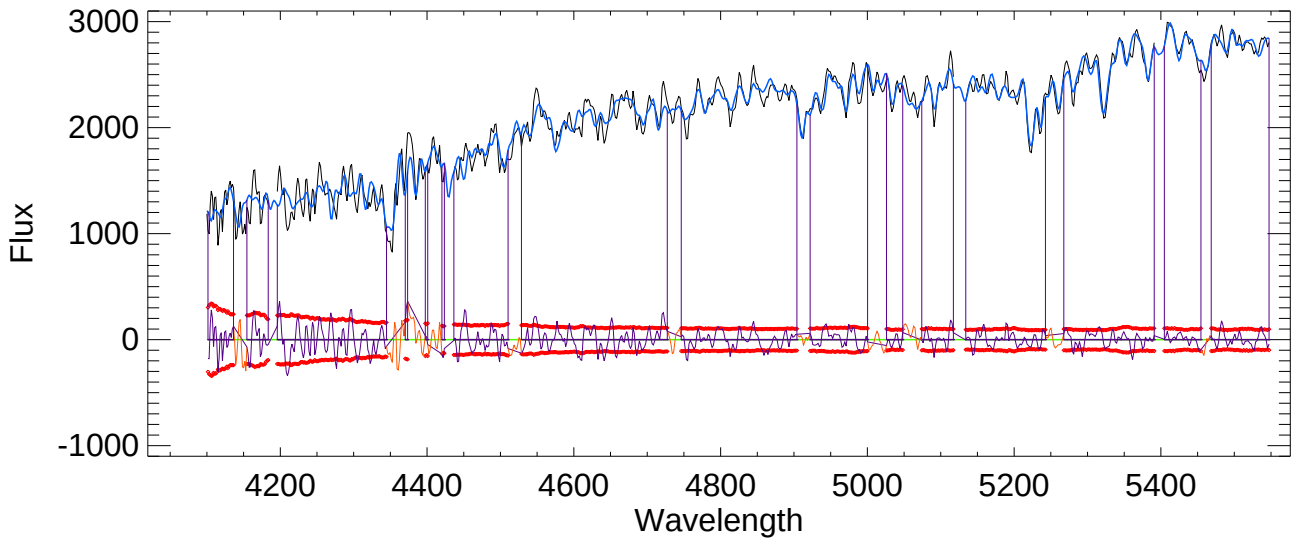

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

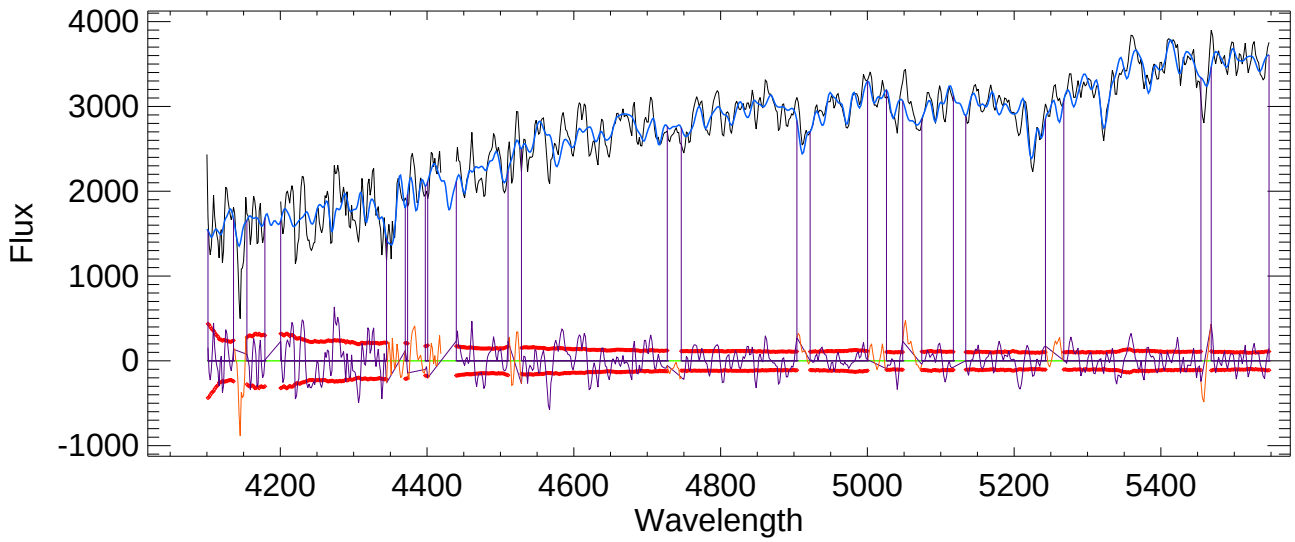

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

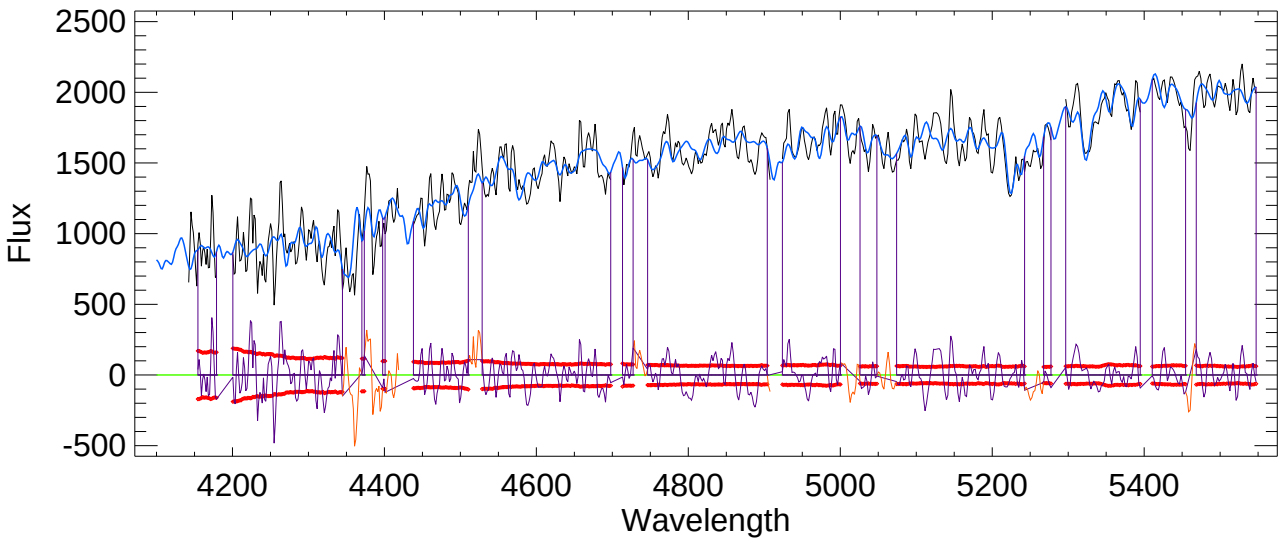

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

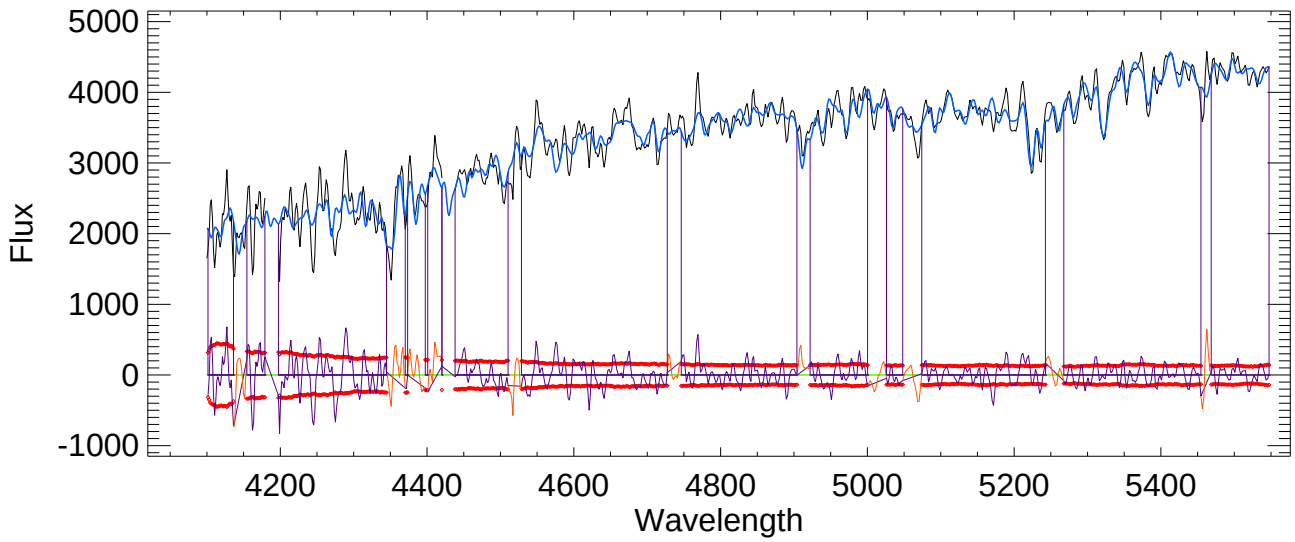

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

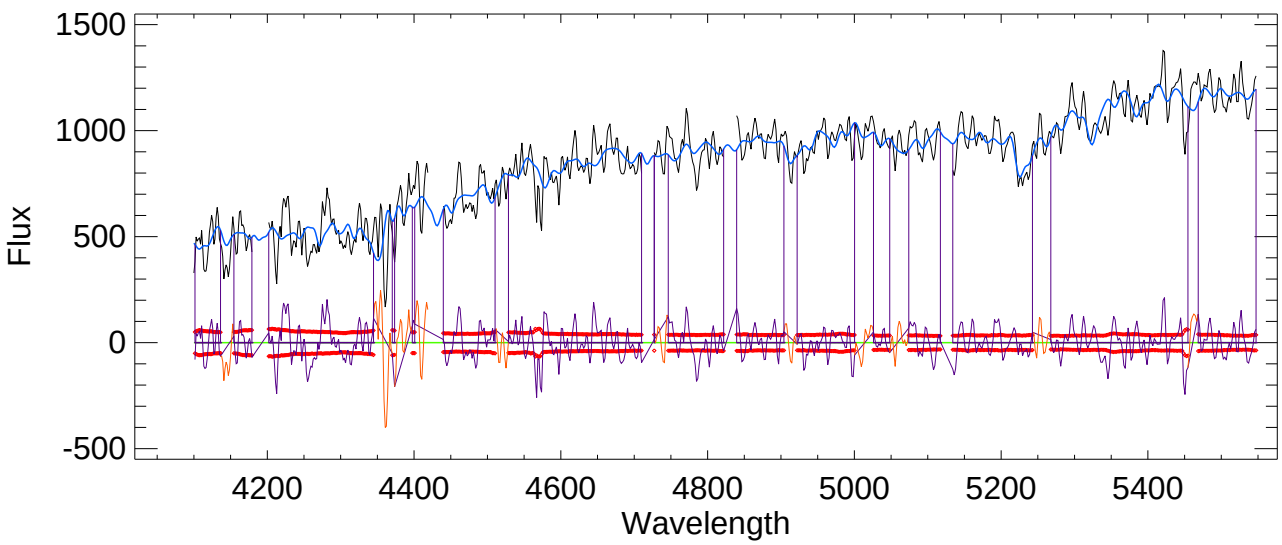

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

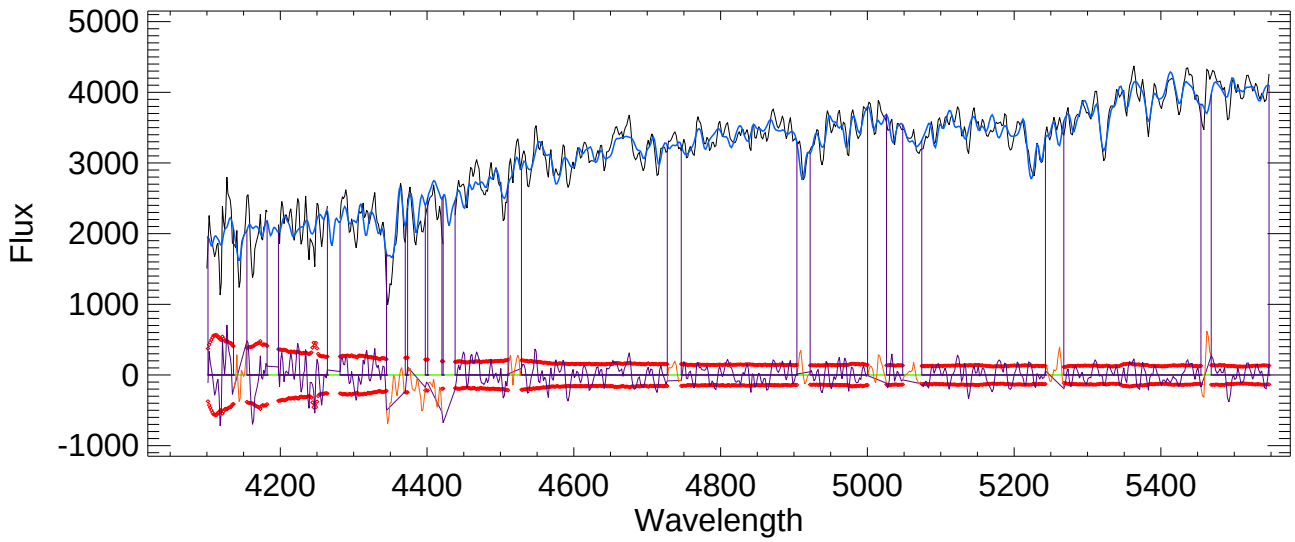

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

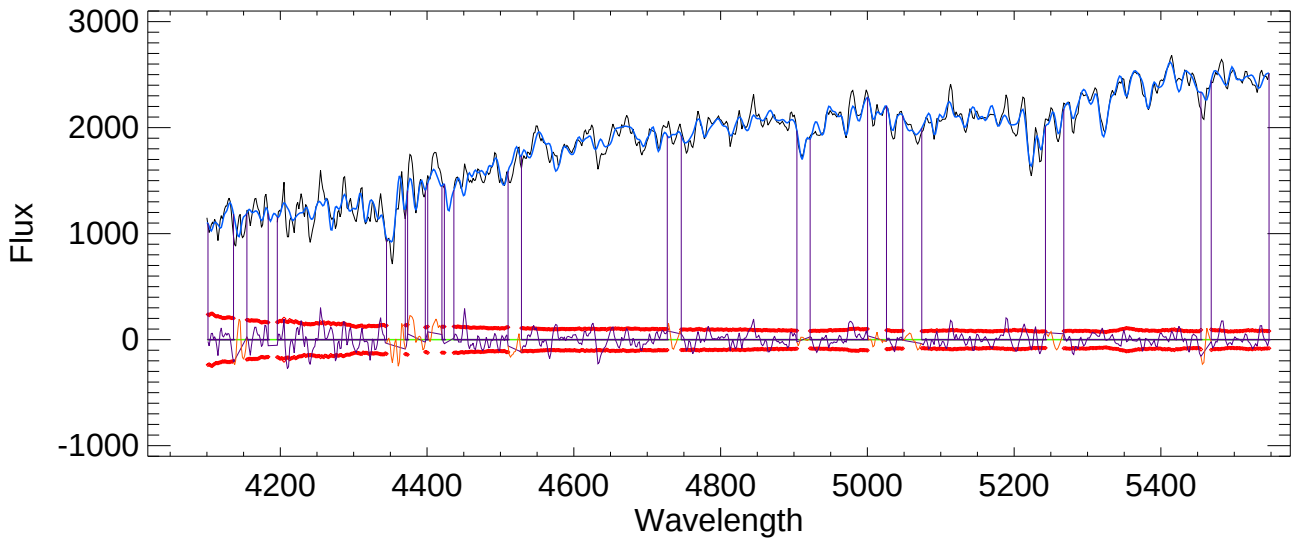

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

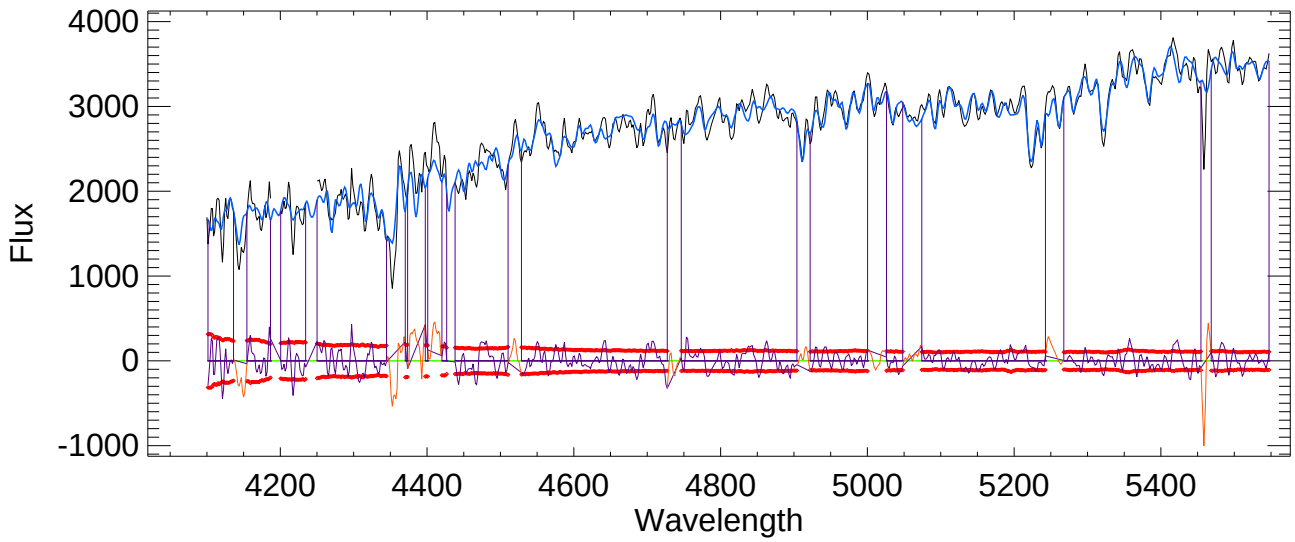

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

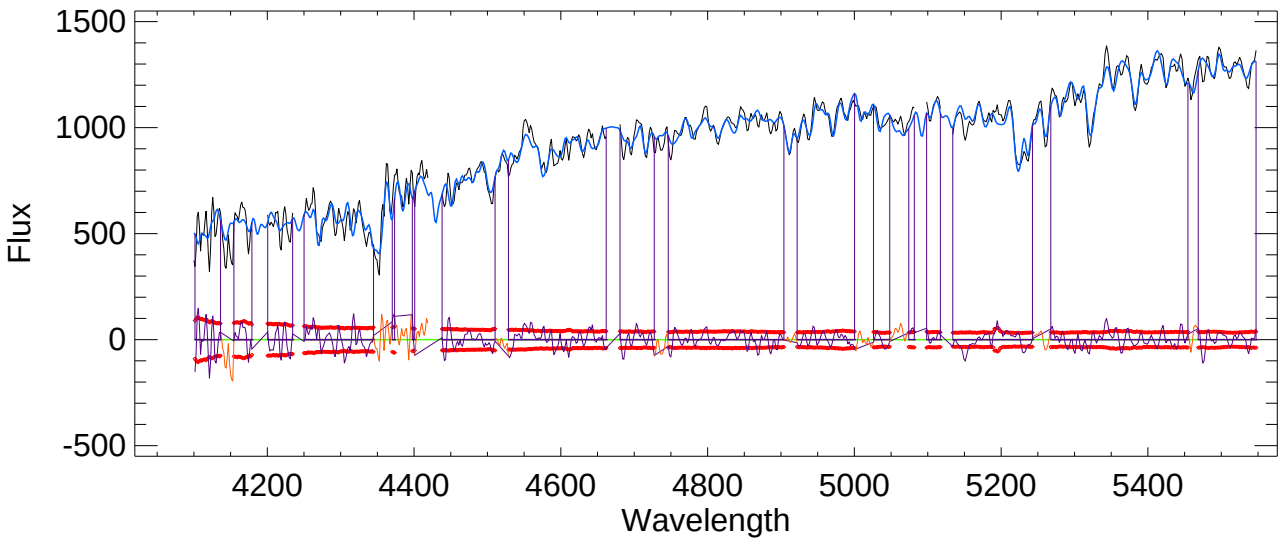

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

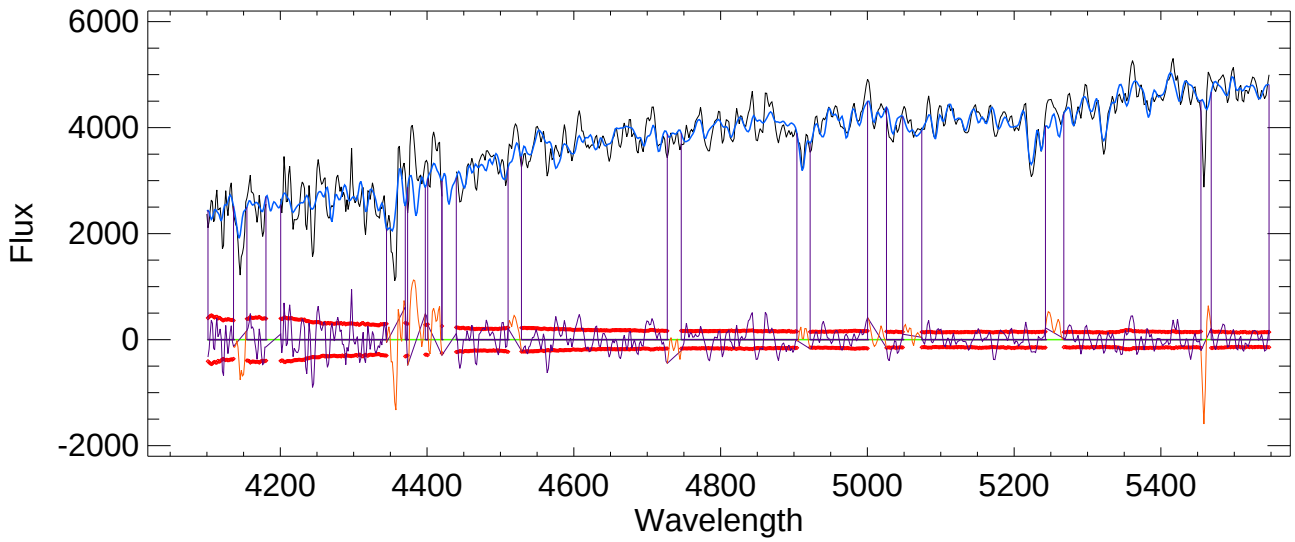

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

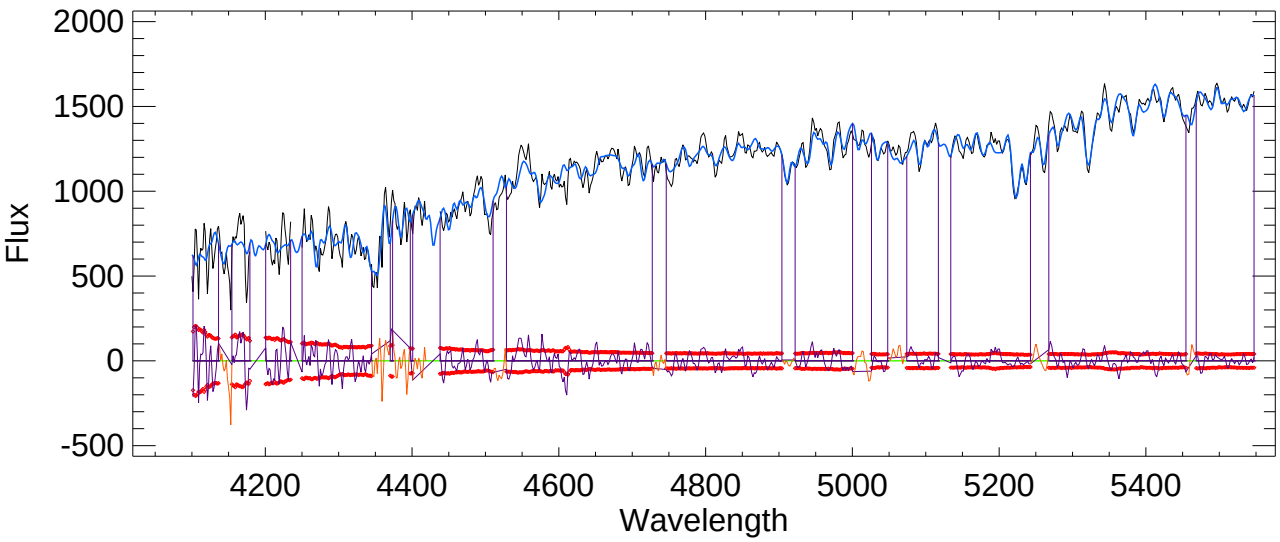

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

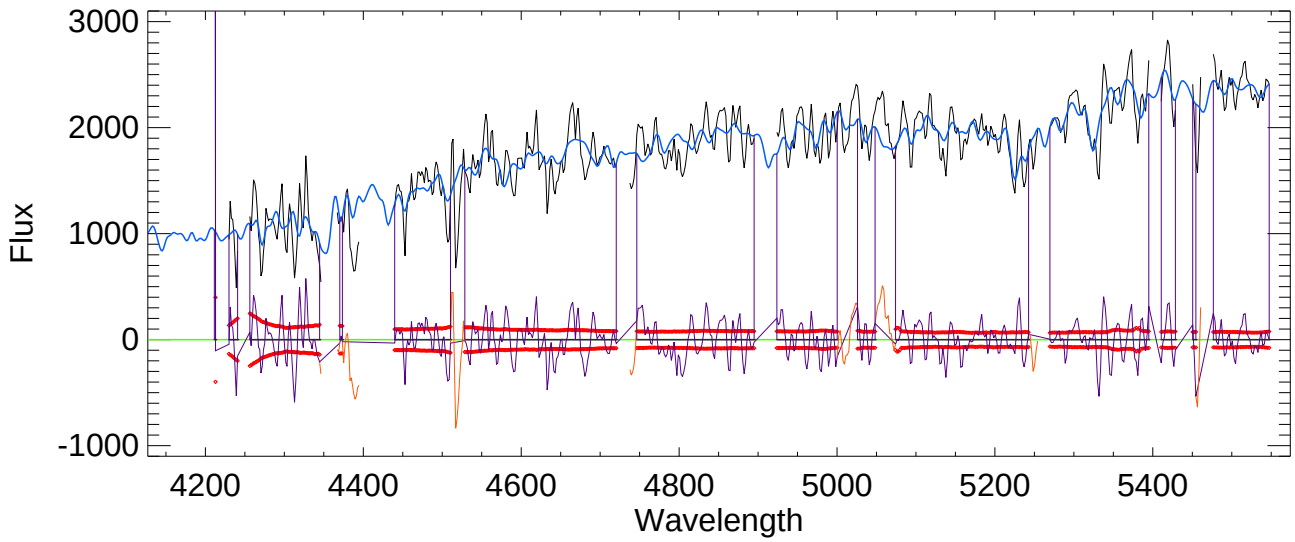

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

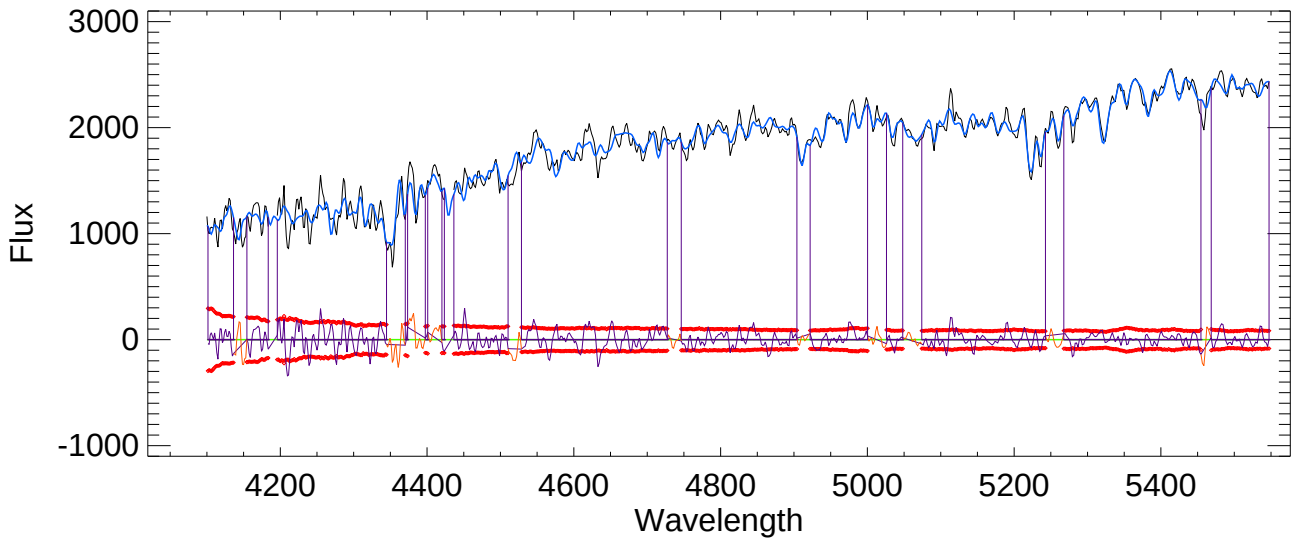

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

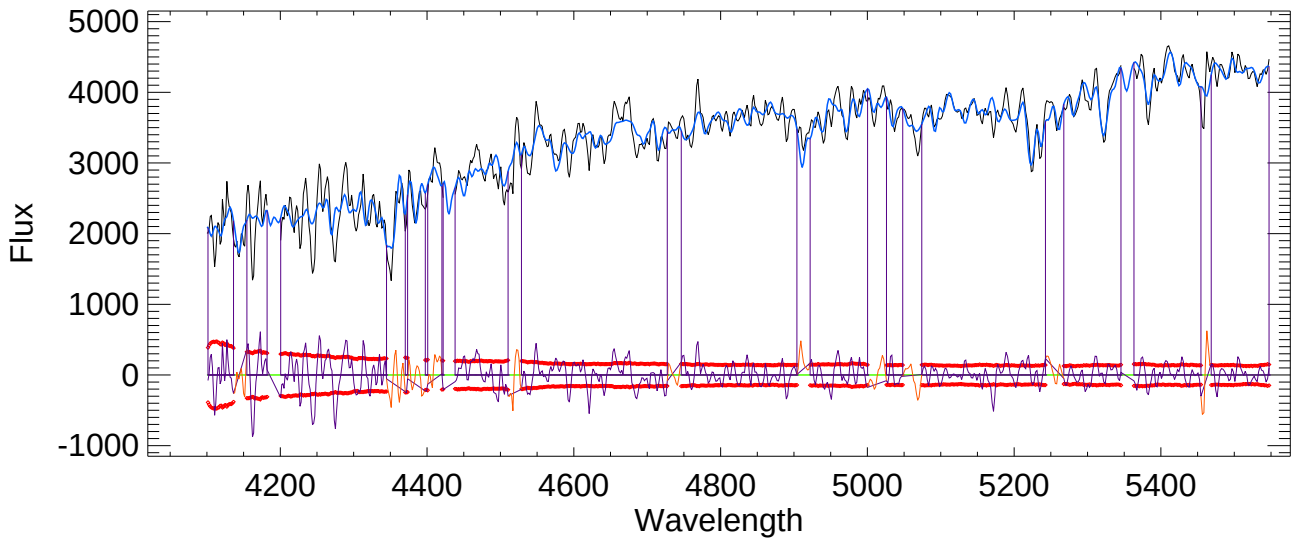

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

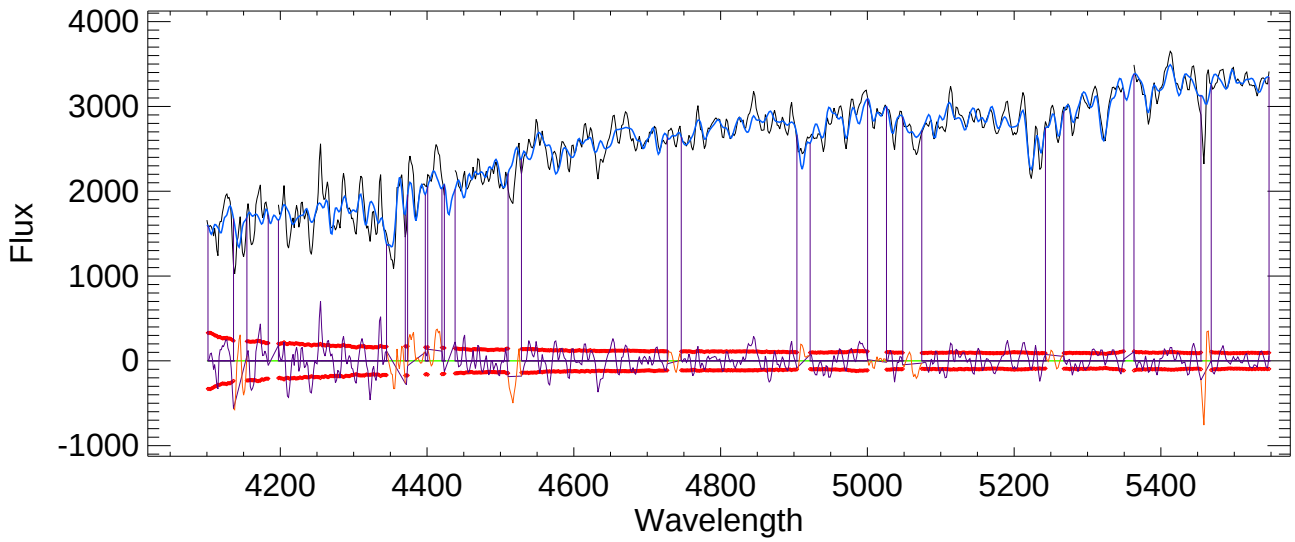

6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

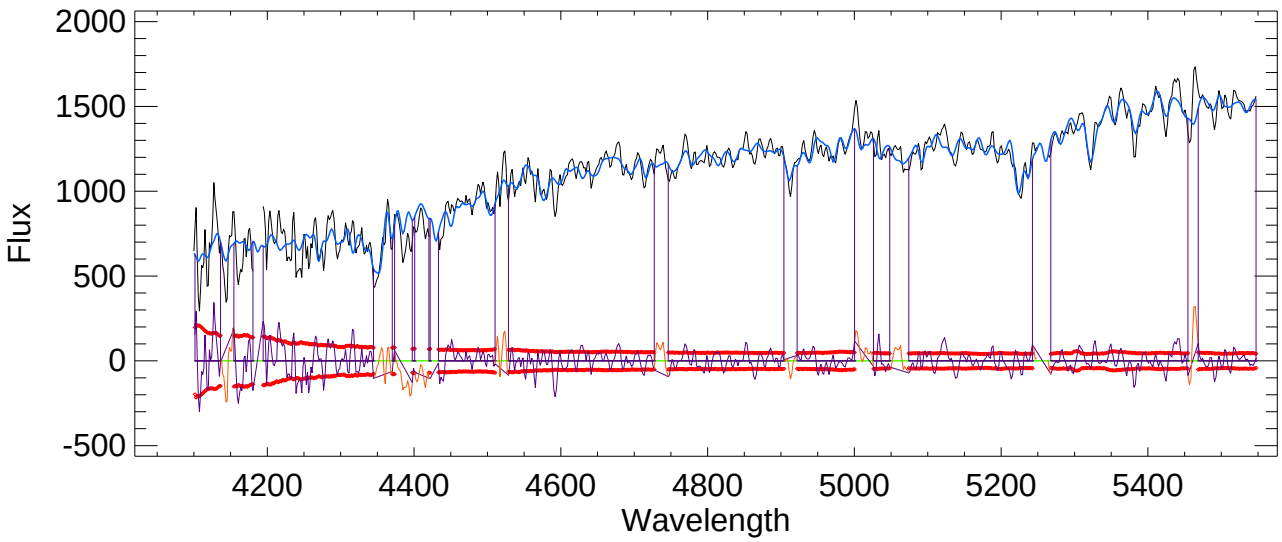

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

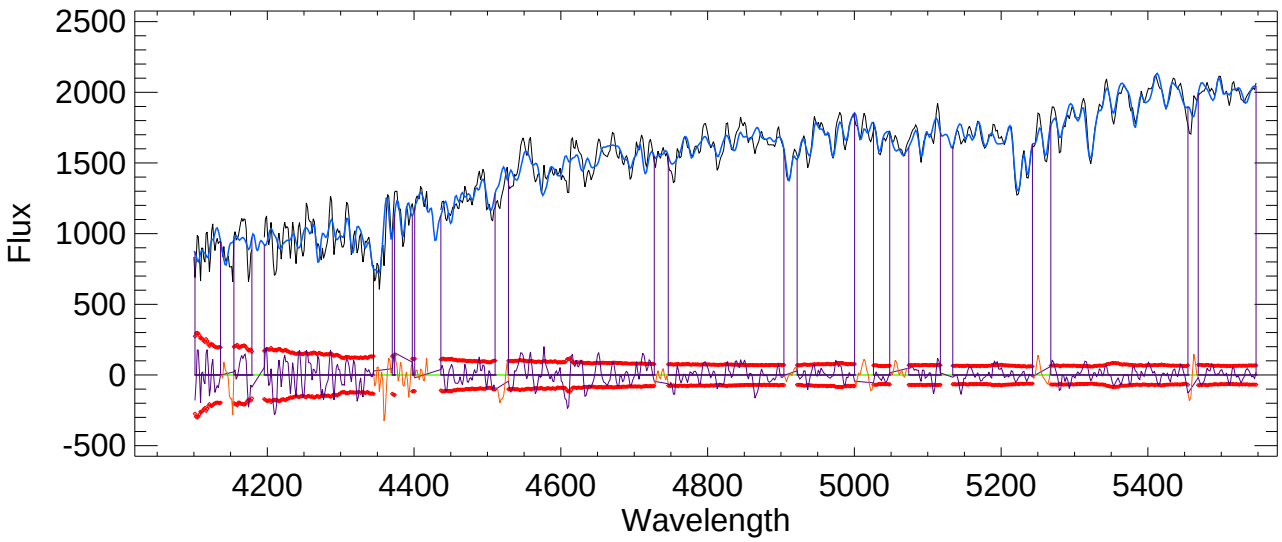

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

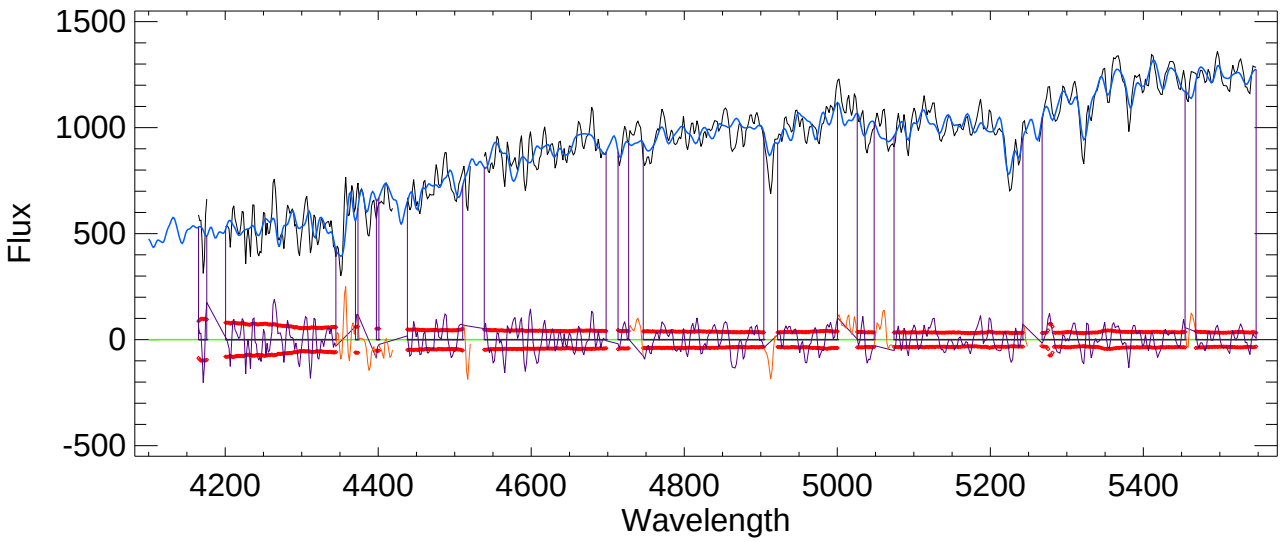

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

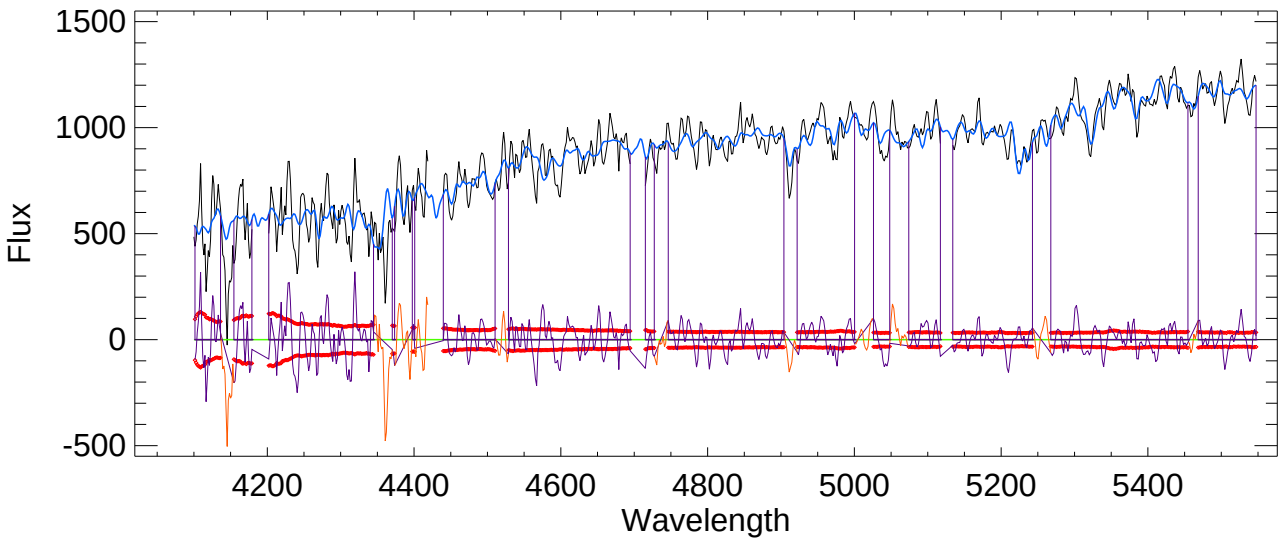

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

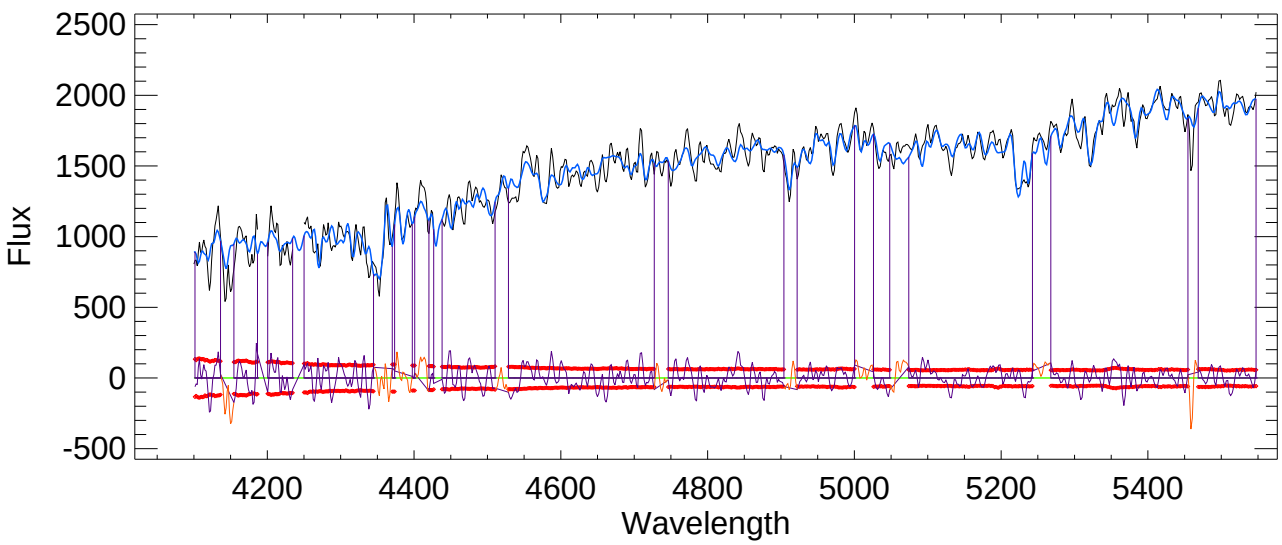

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

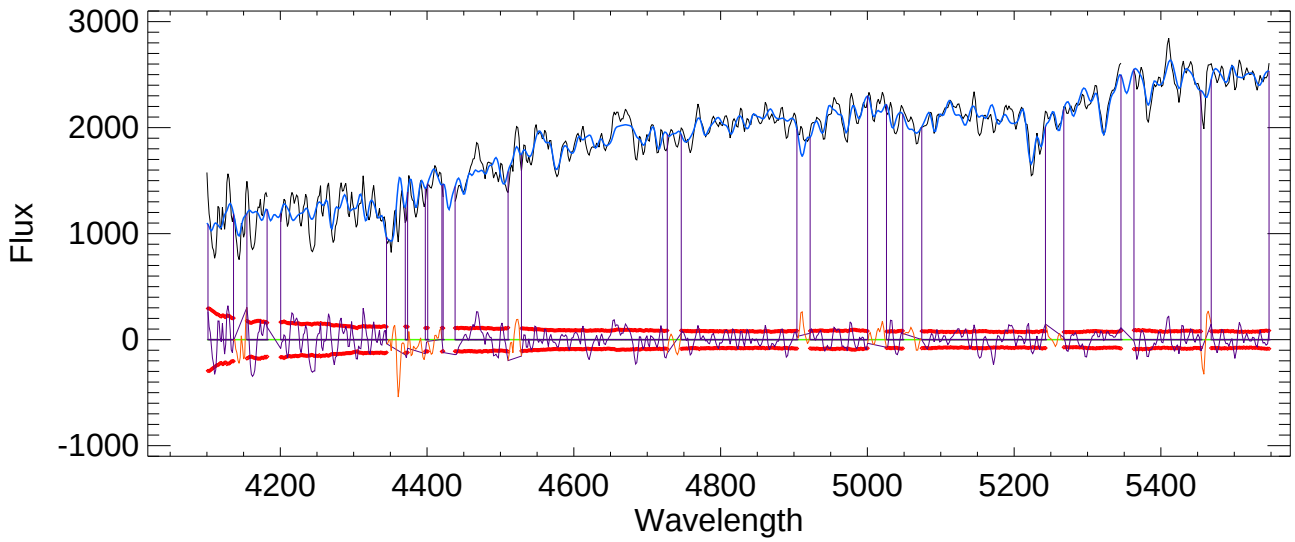

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

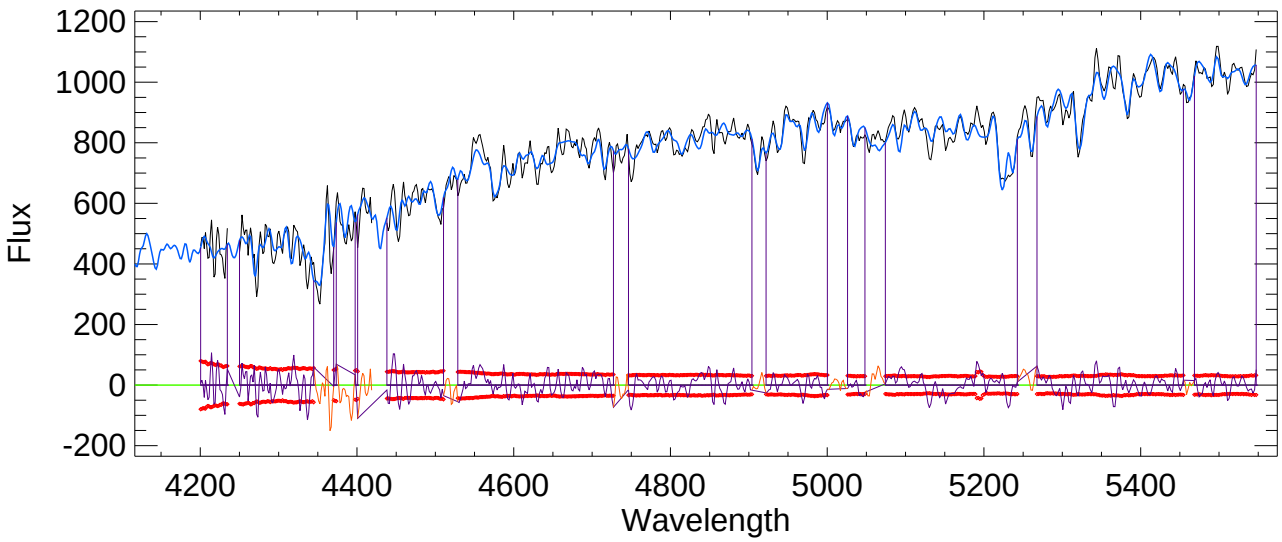

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

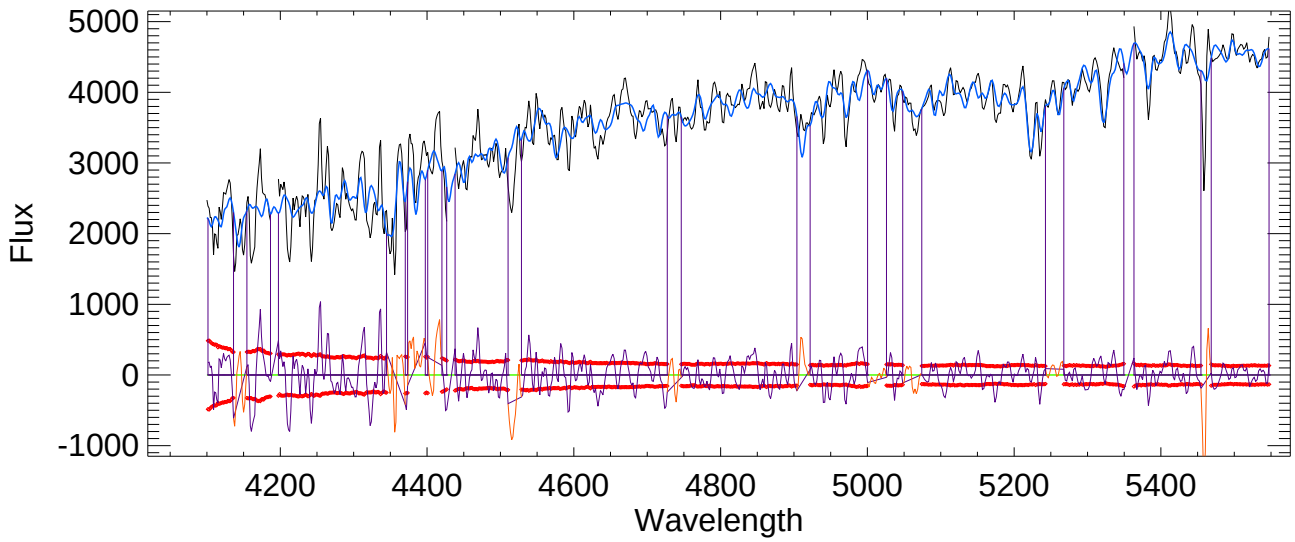

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

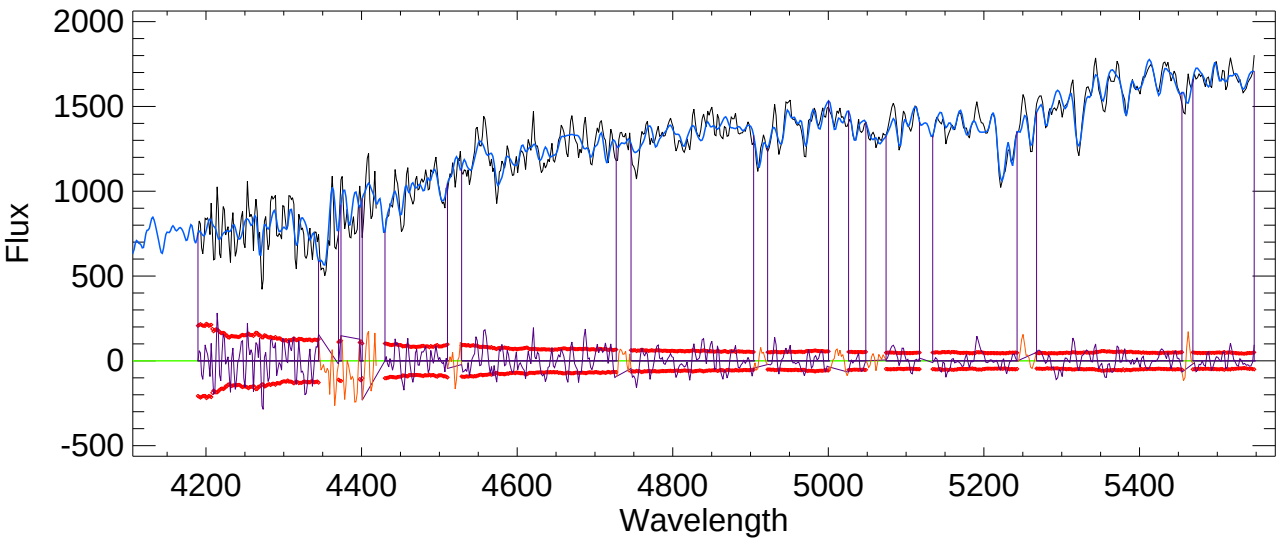

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

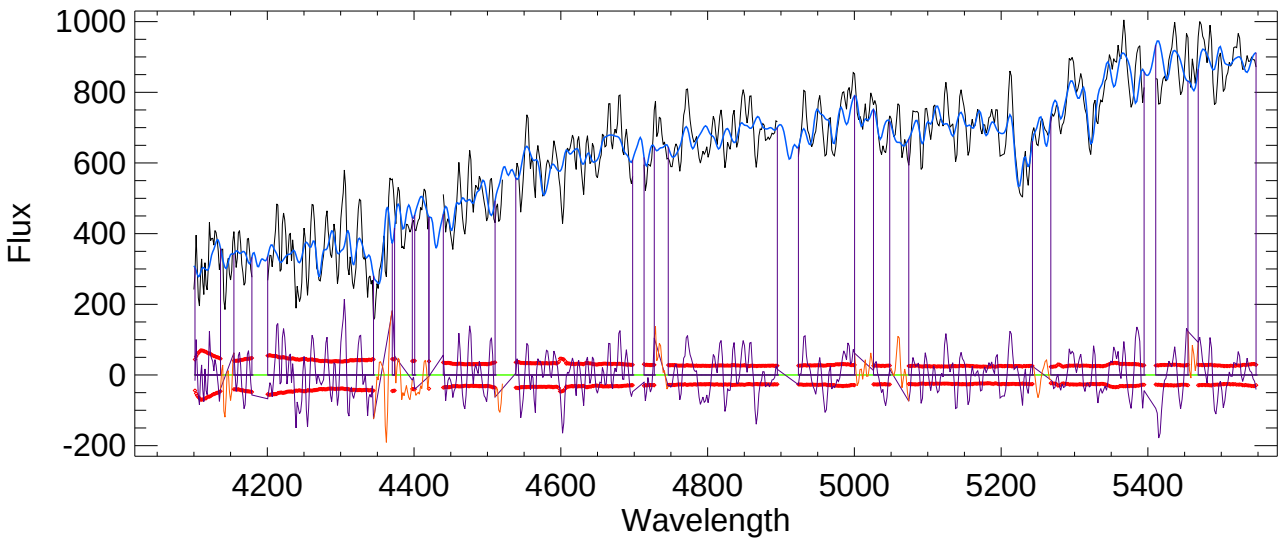

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

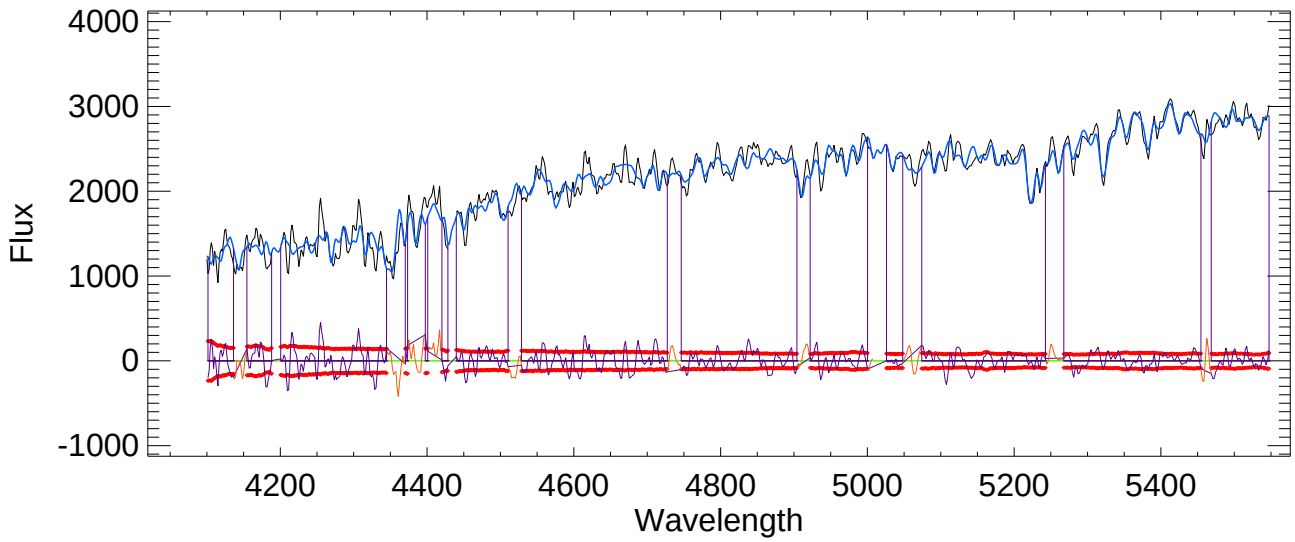

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

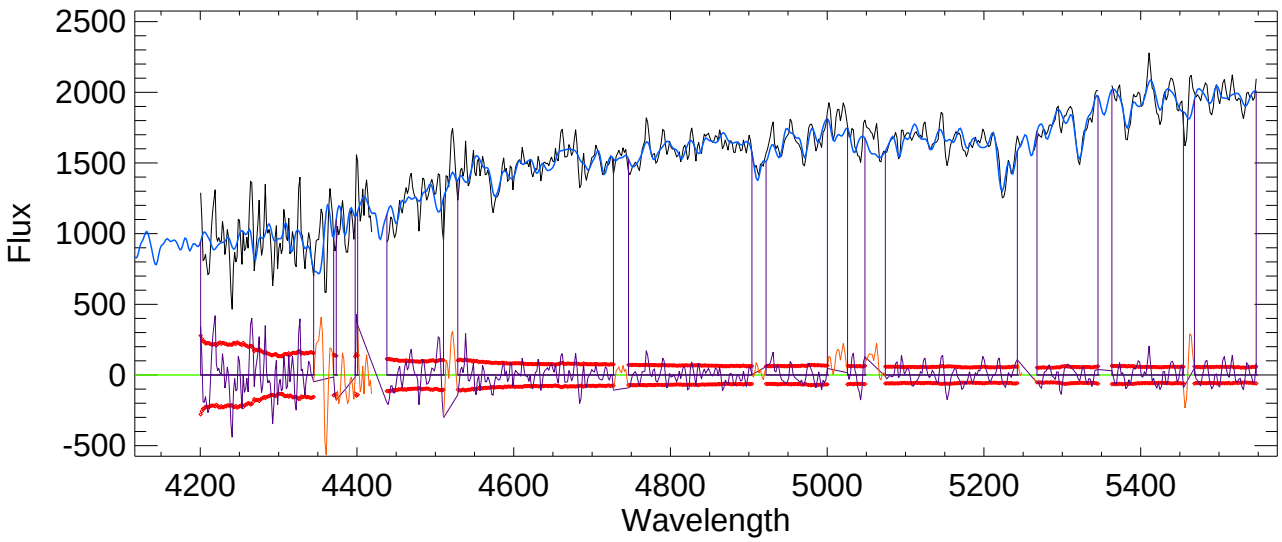

1200
1000
800
600
400
200
0
-200
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

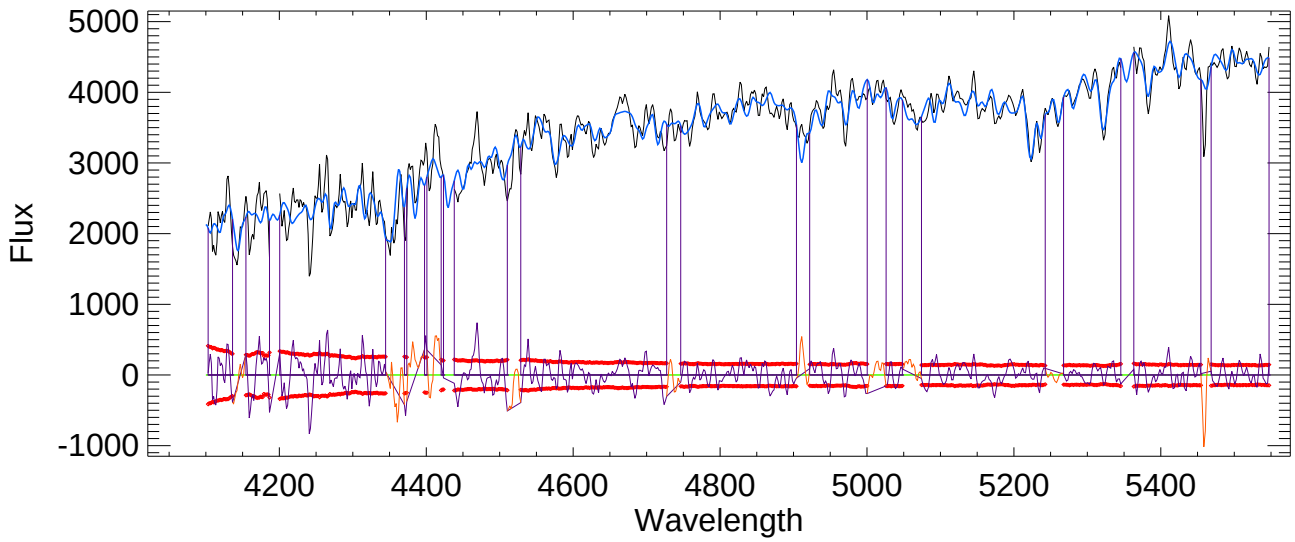

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

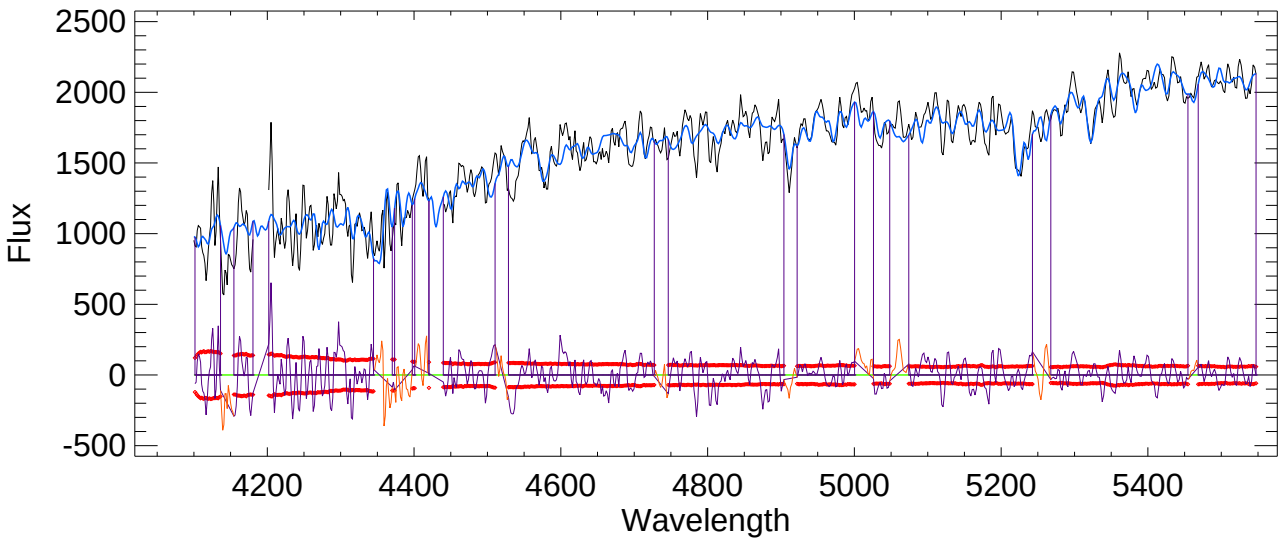

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

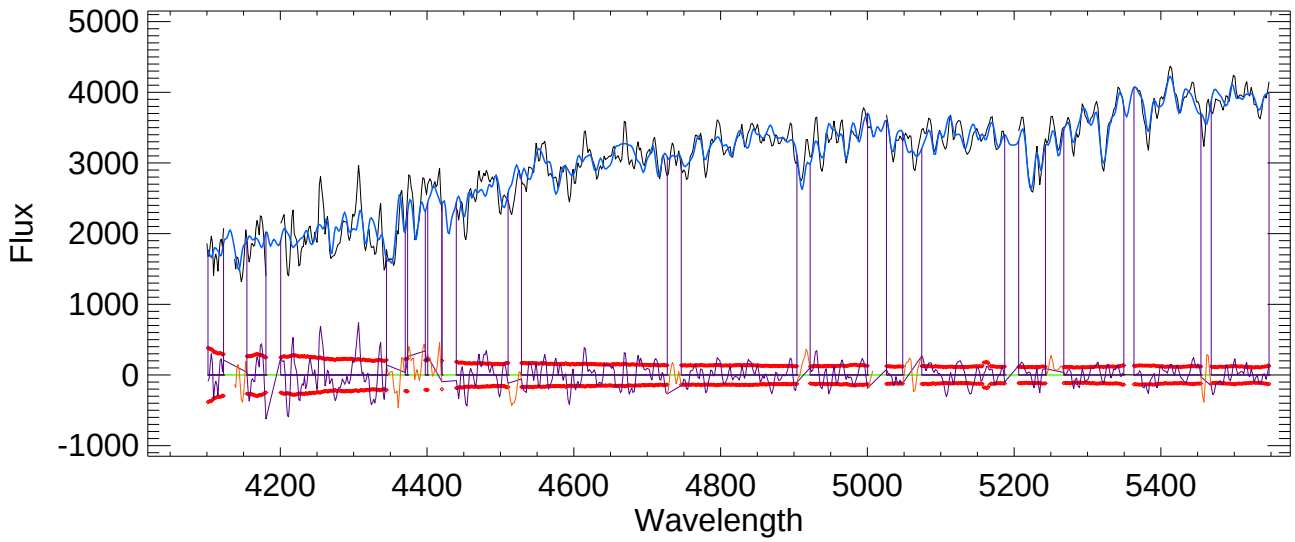

1000
800
600
400
200
0
-200
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

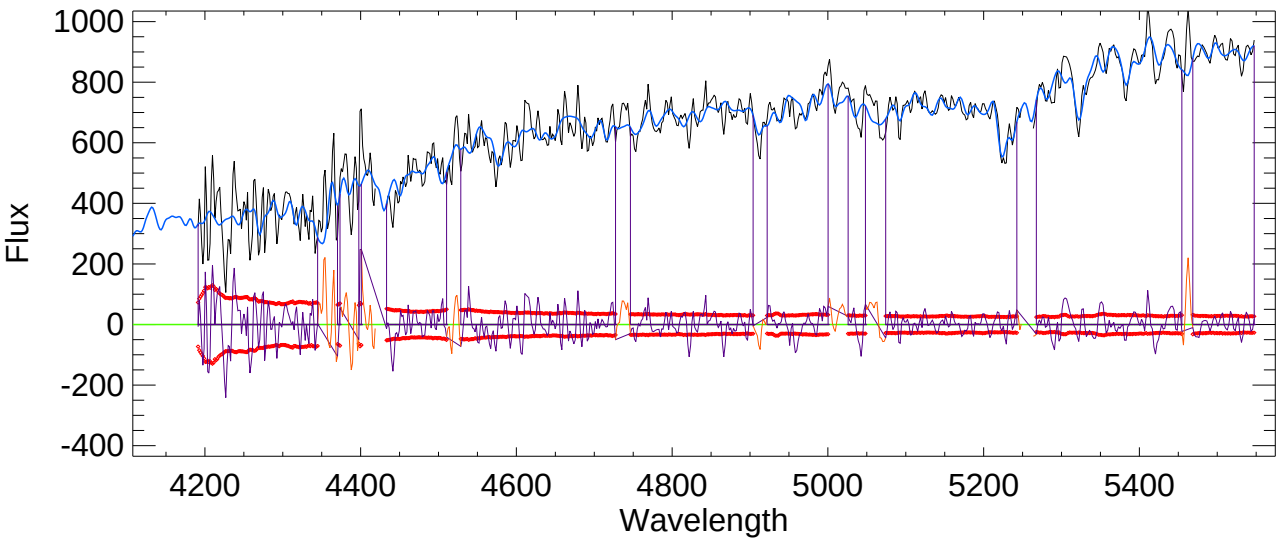

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

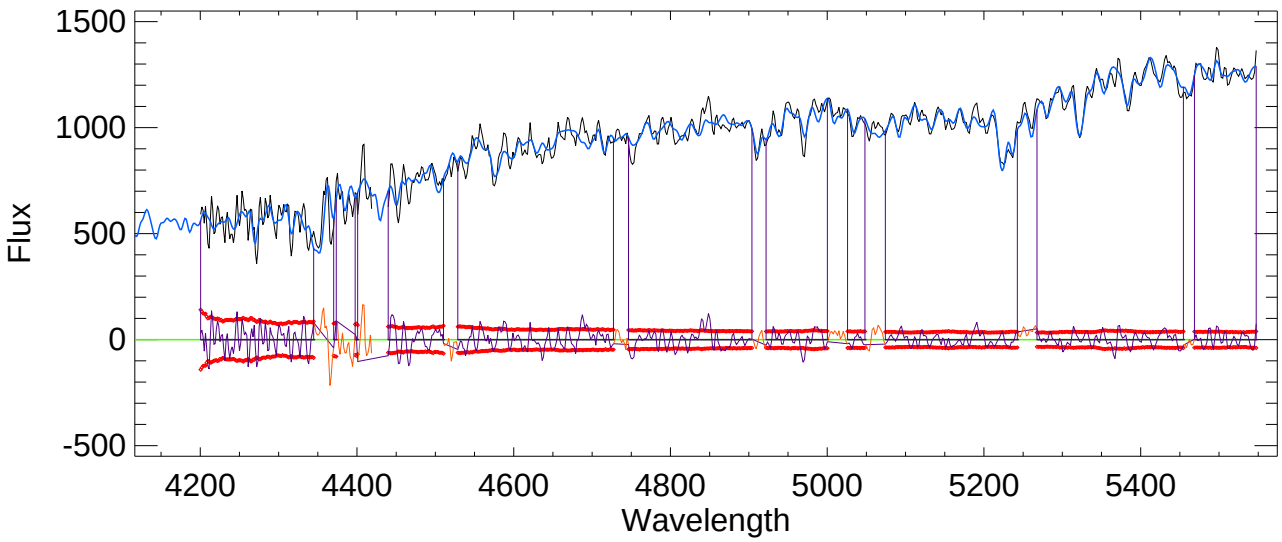

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

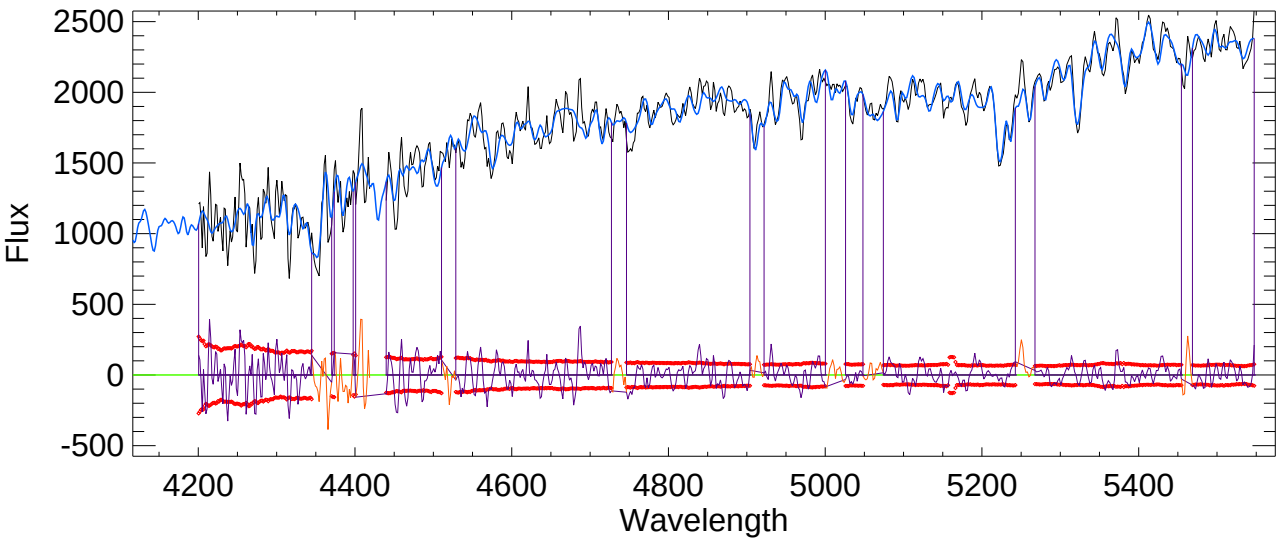

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

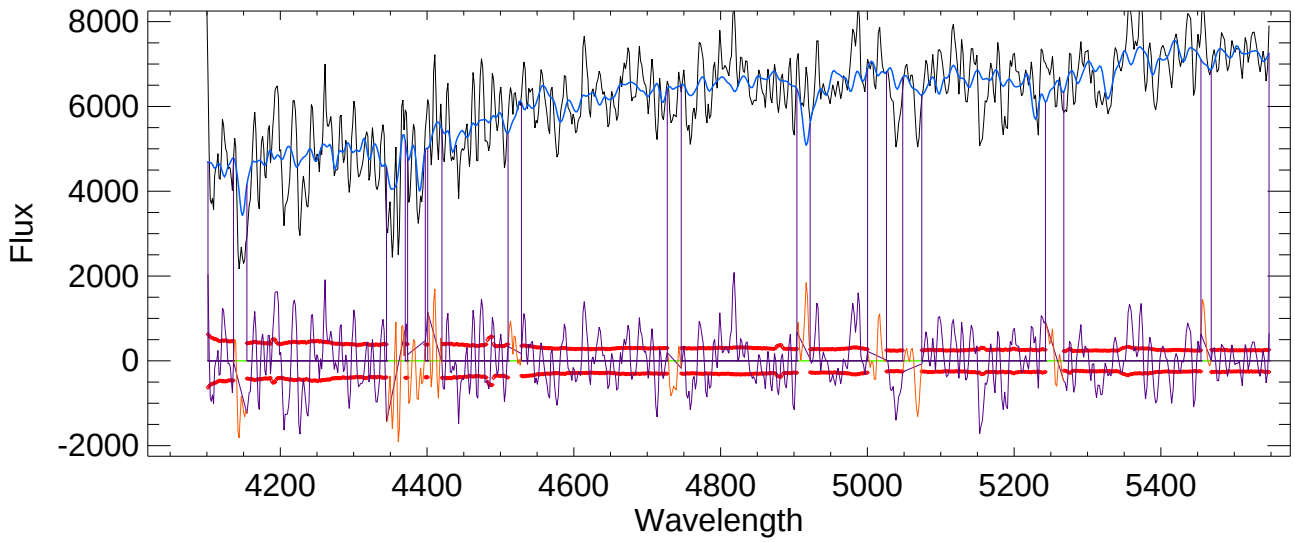

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

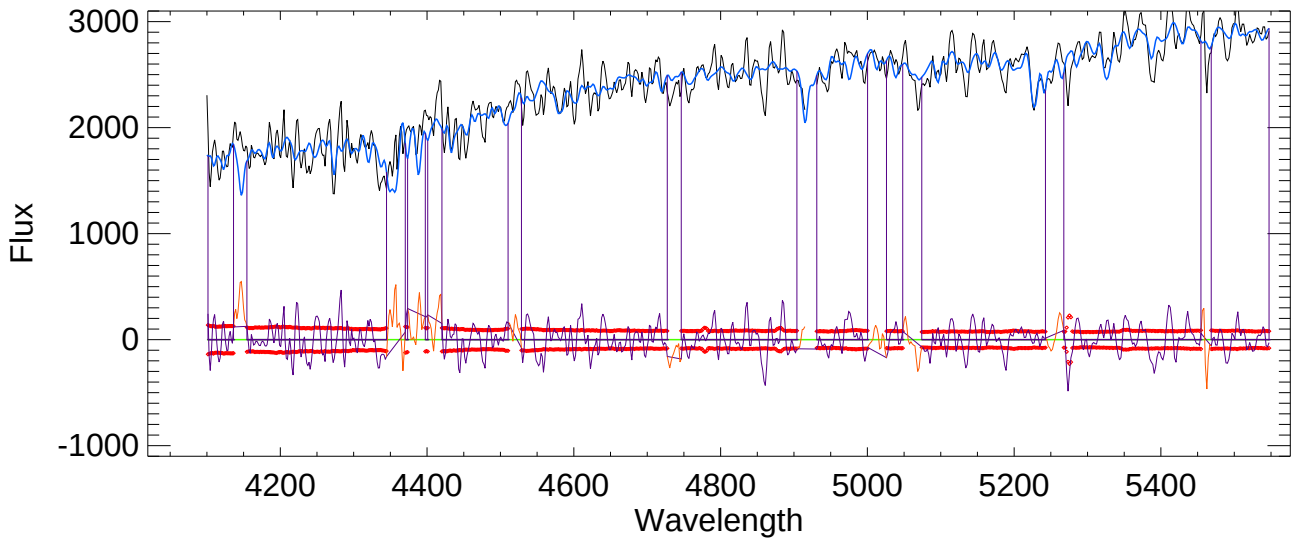

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

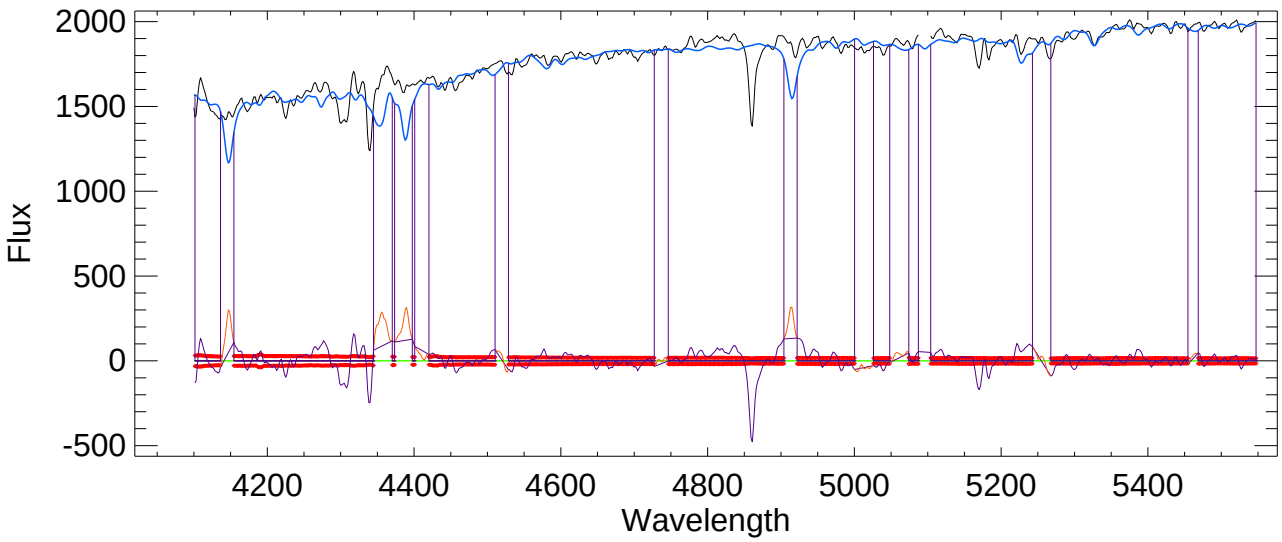

1000
800
600
400
200
0
-200
-400
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

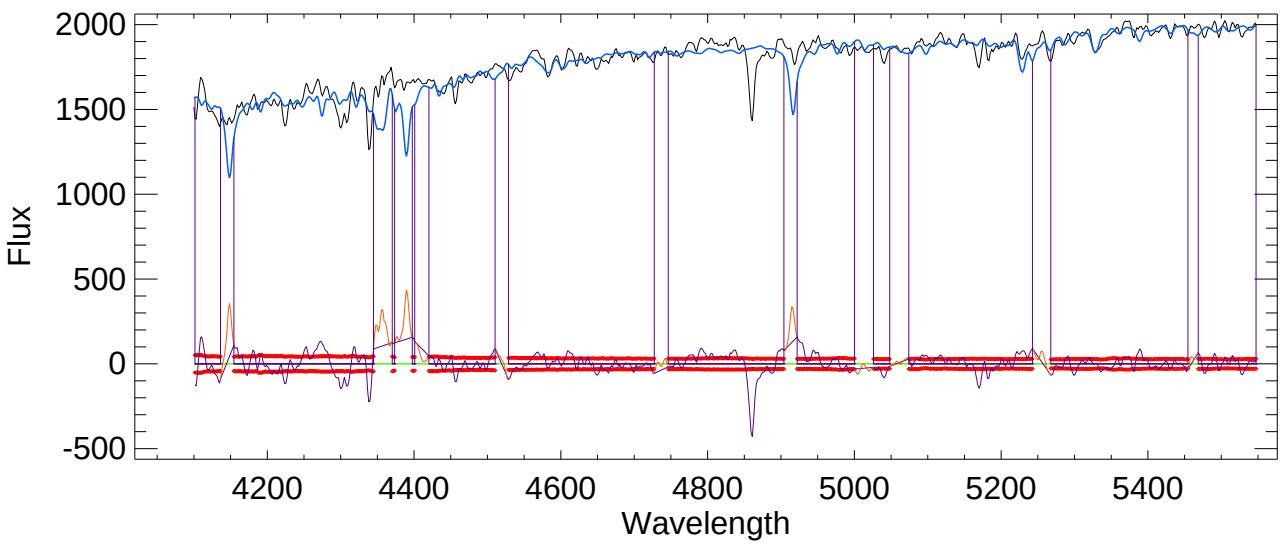

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

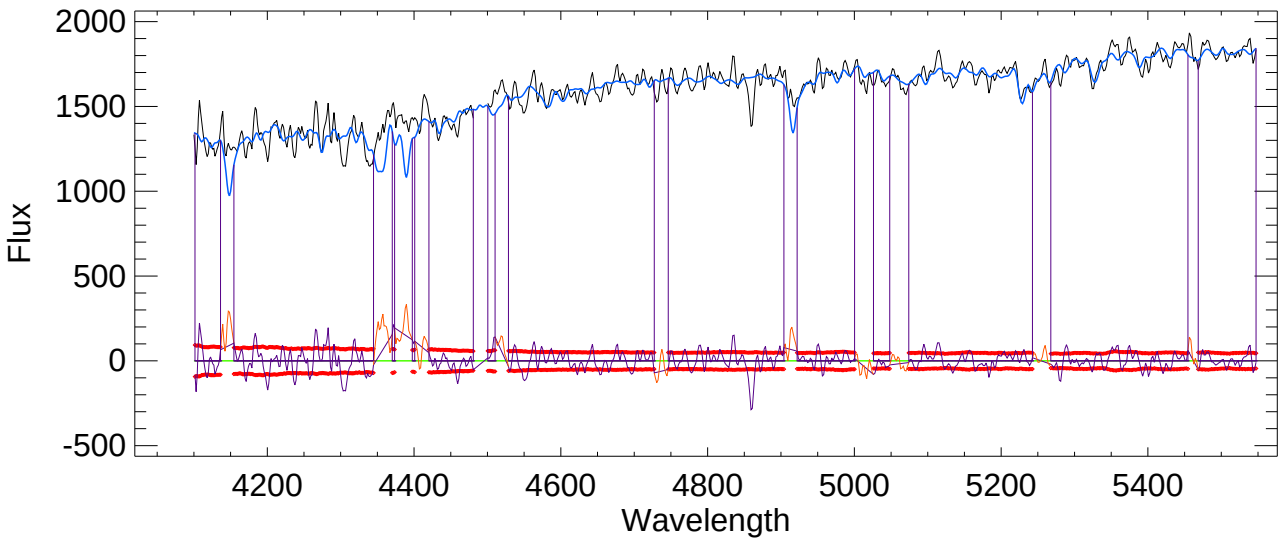

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

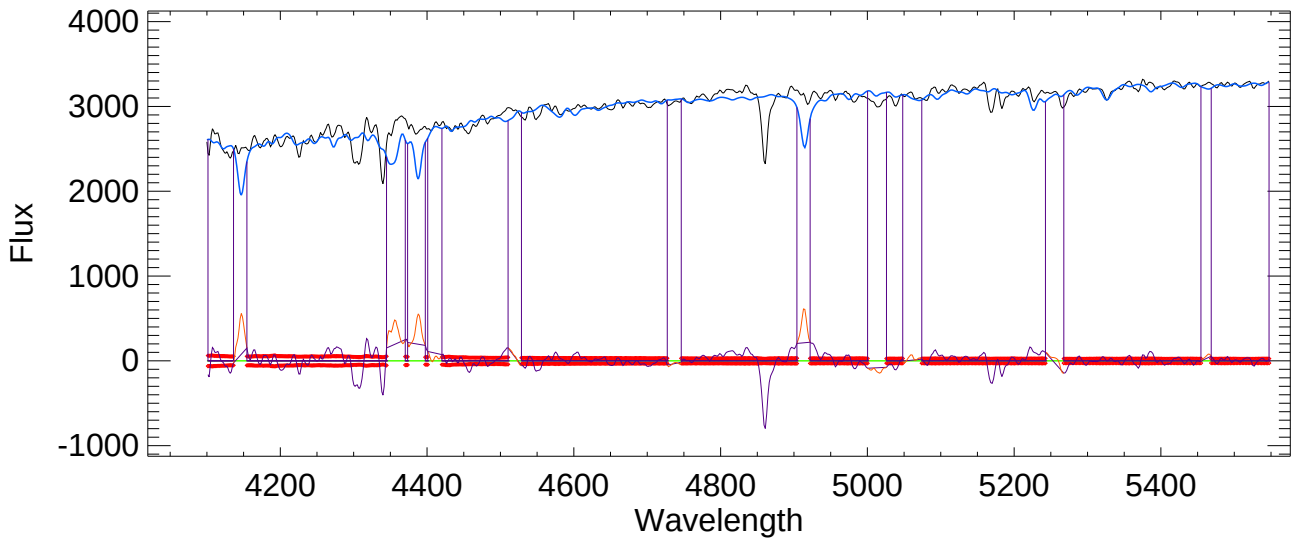

8000
6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

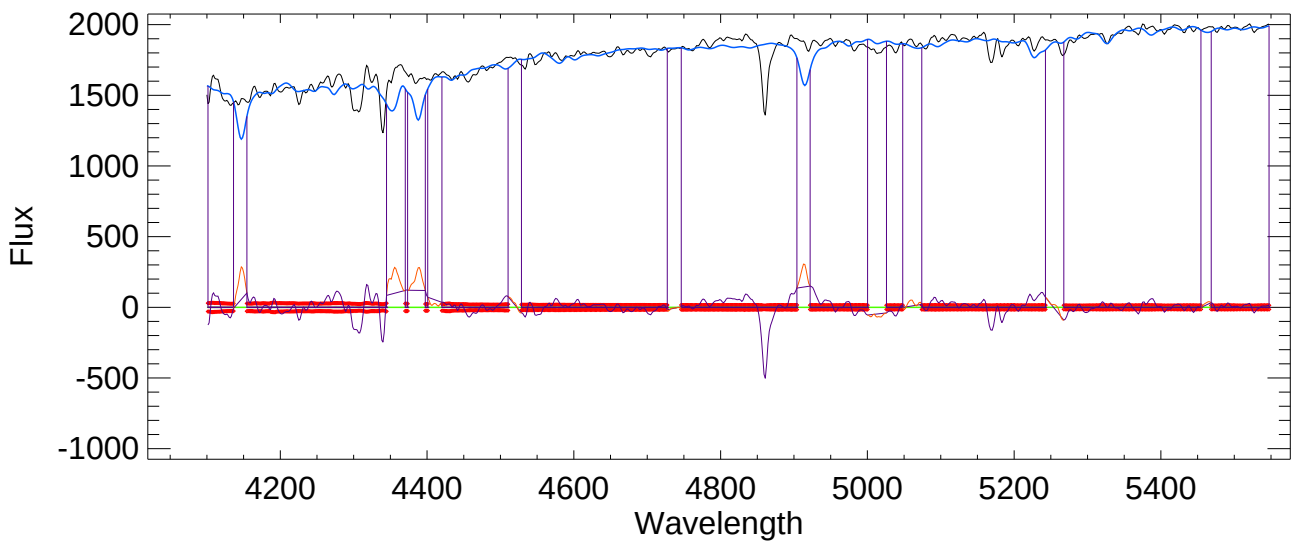

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

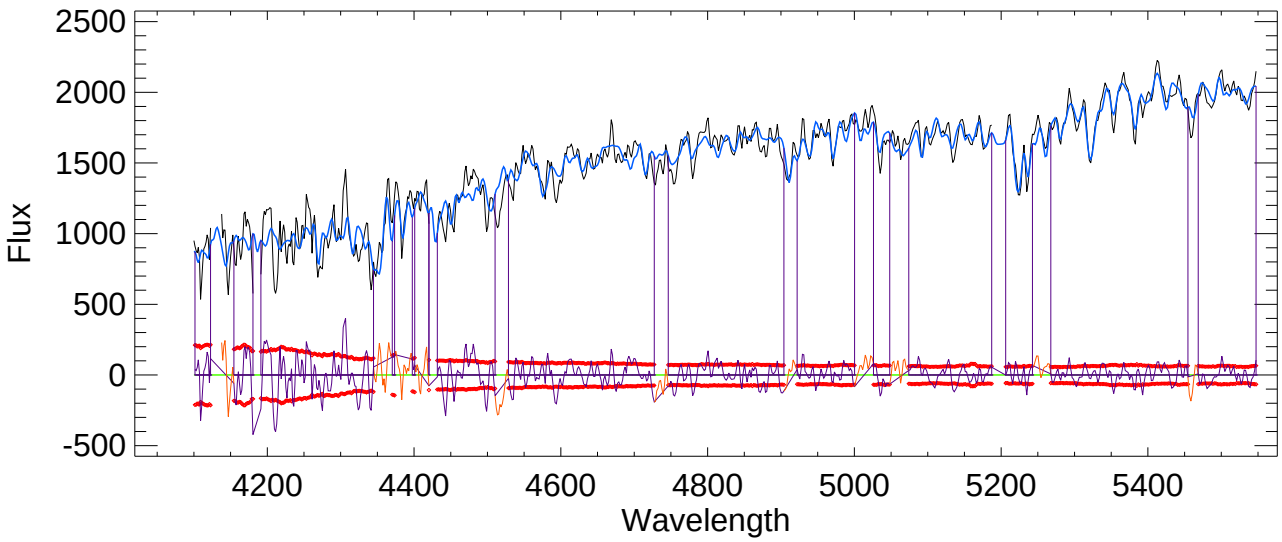

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

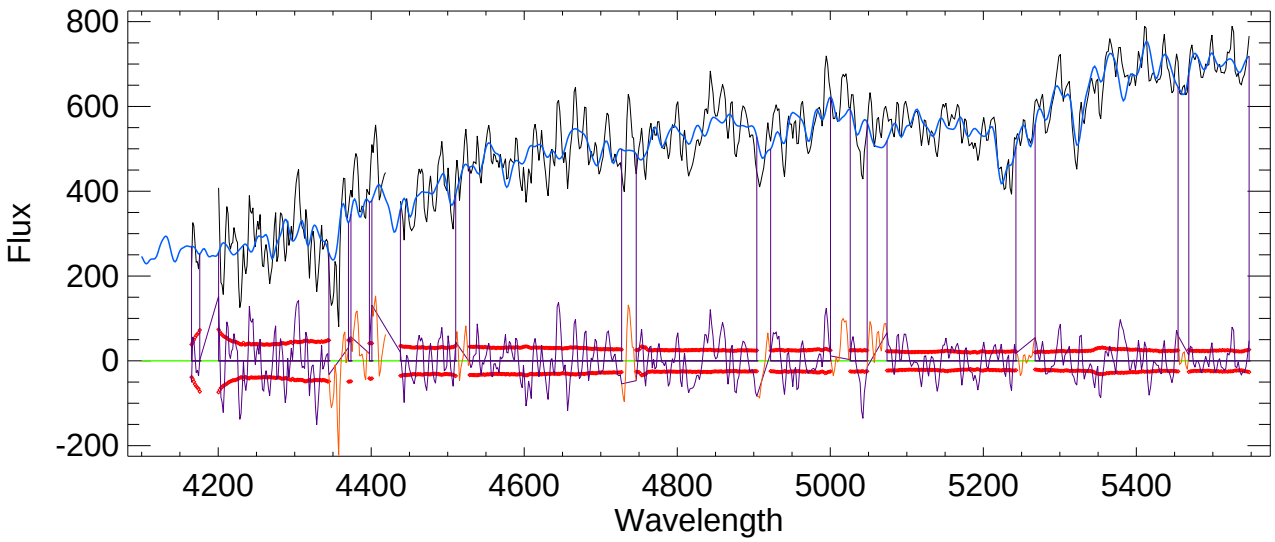

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

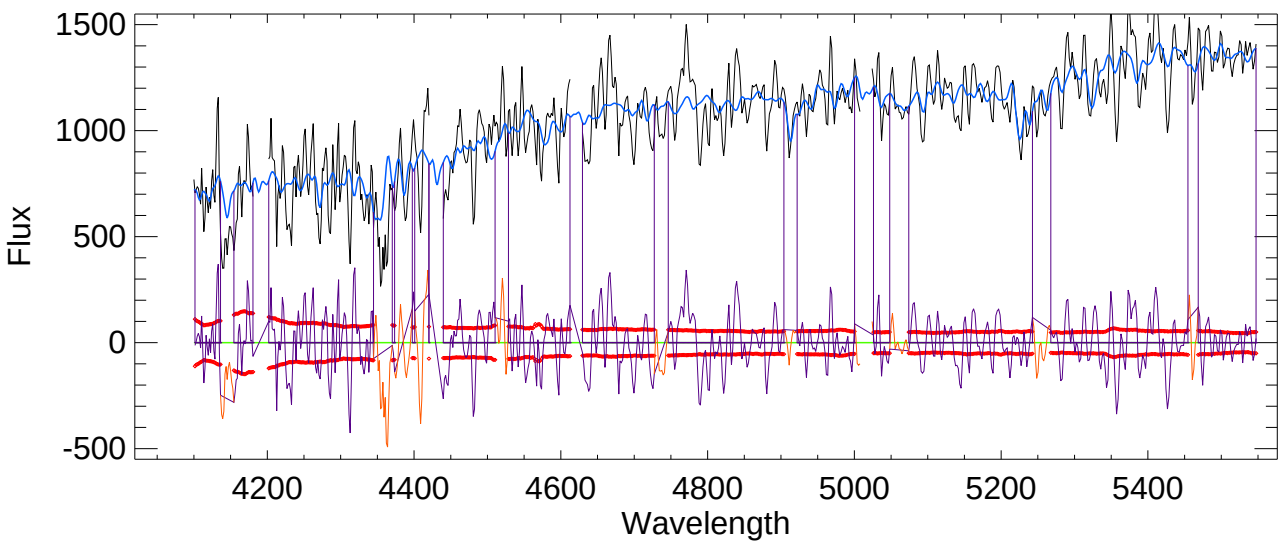

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

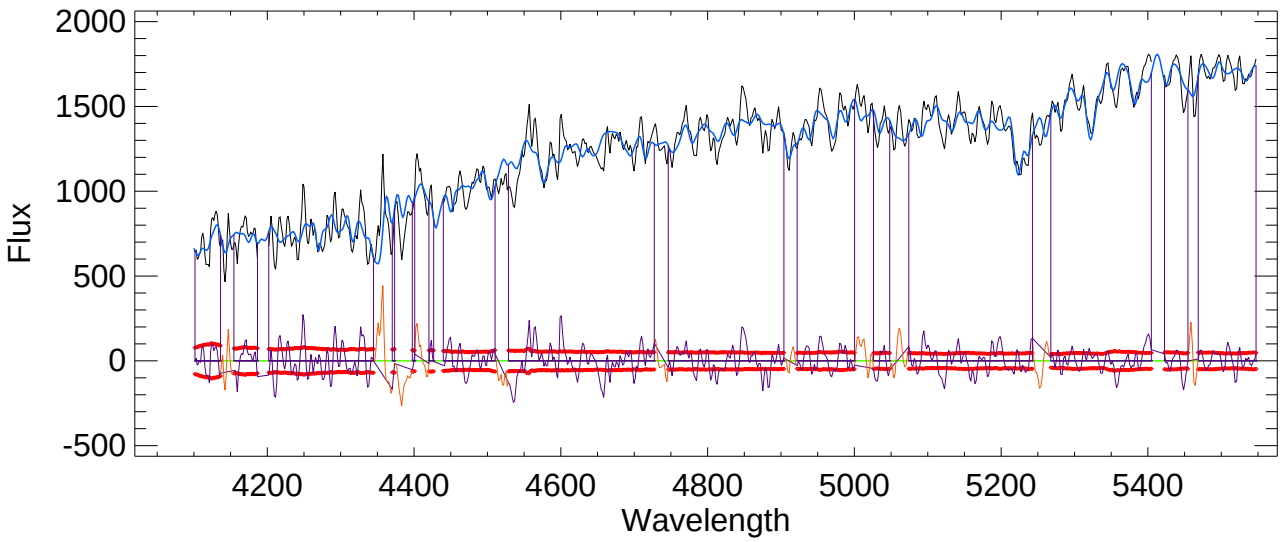

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

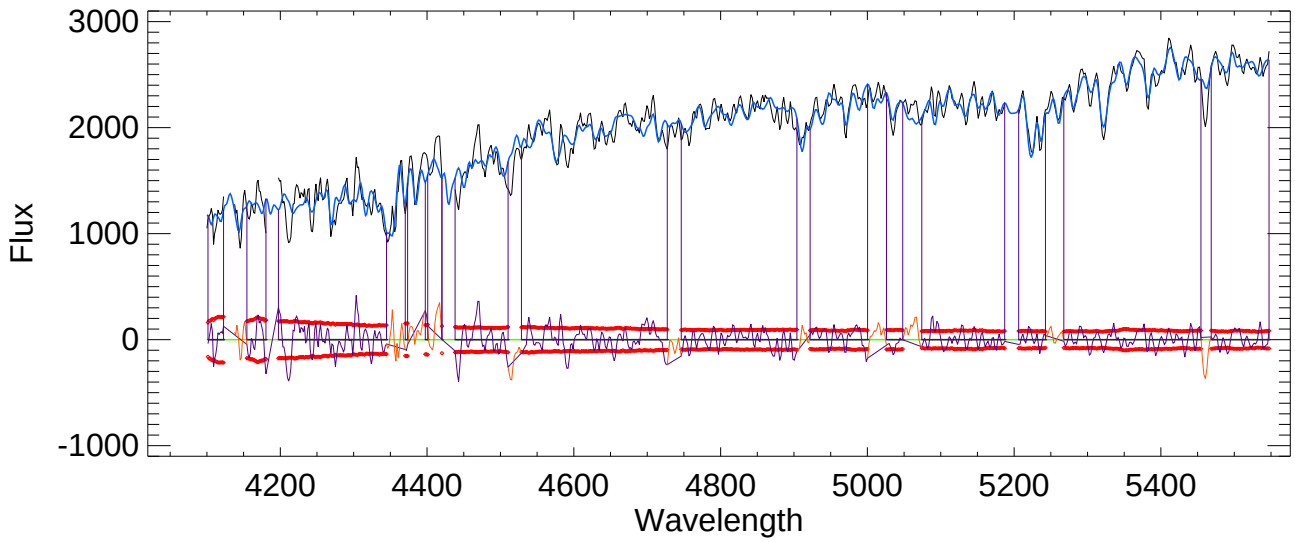

2000
1500
1000
500
0
-500
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

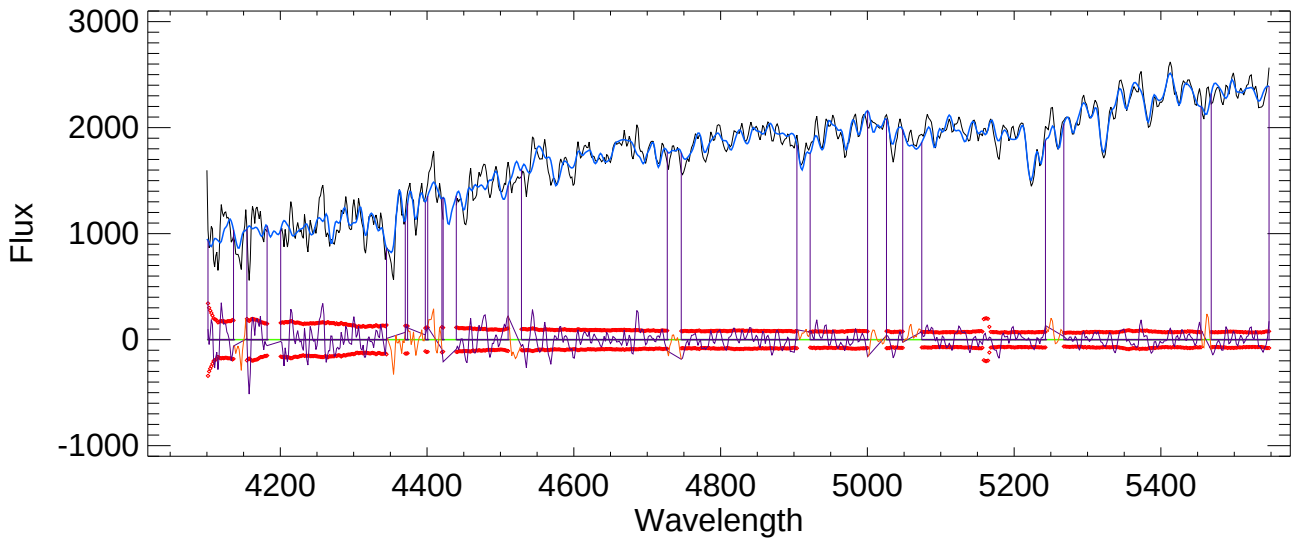

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

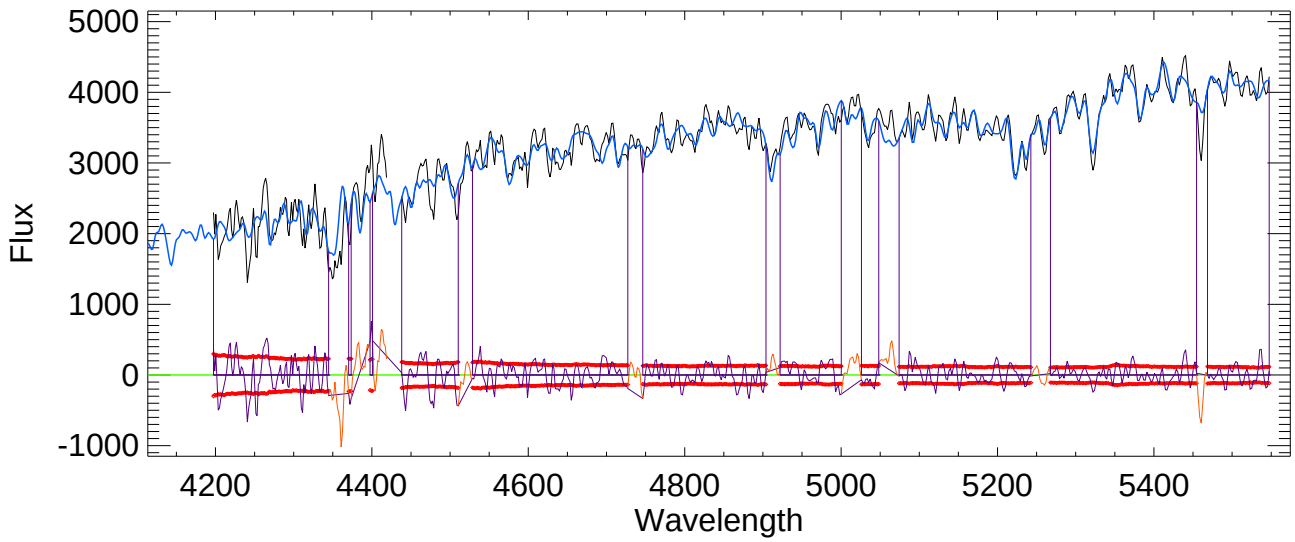

800
600
400
200
0
-200
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

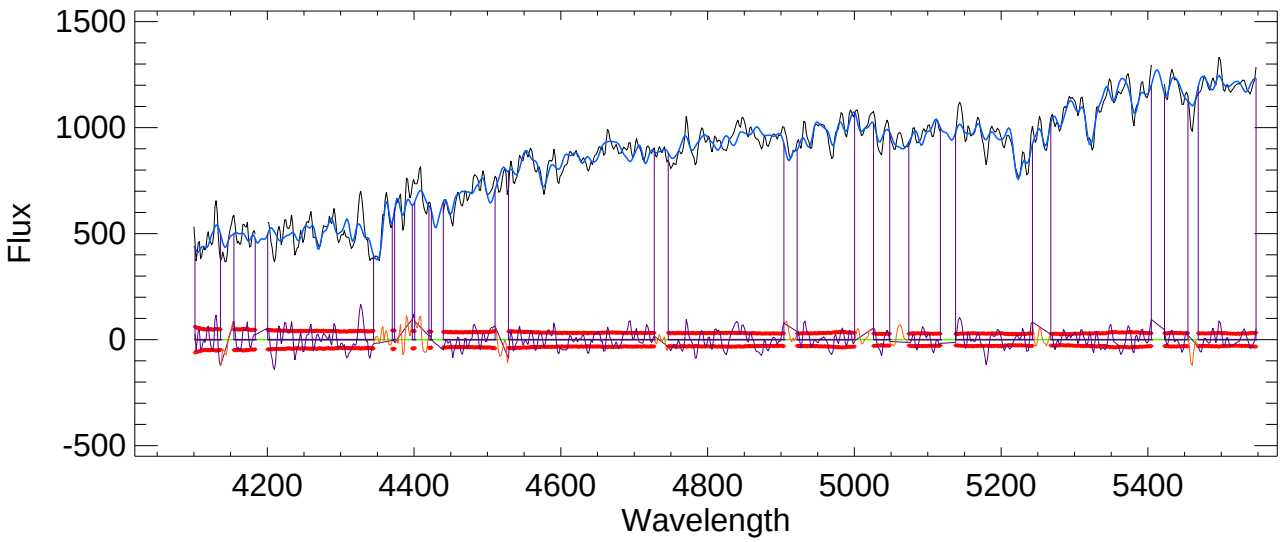

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

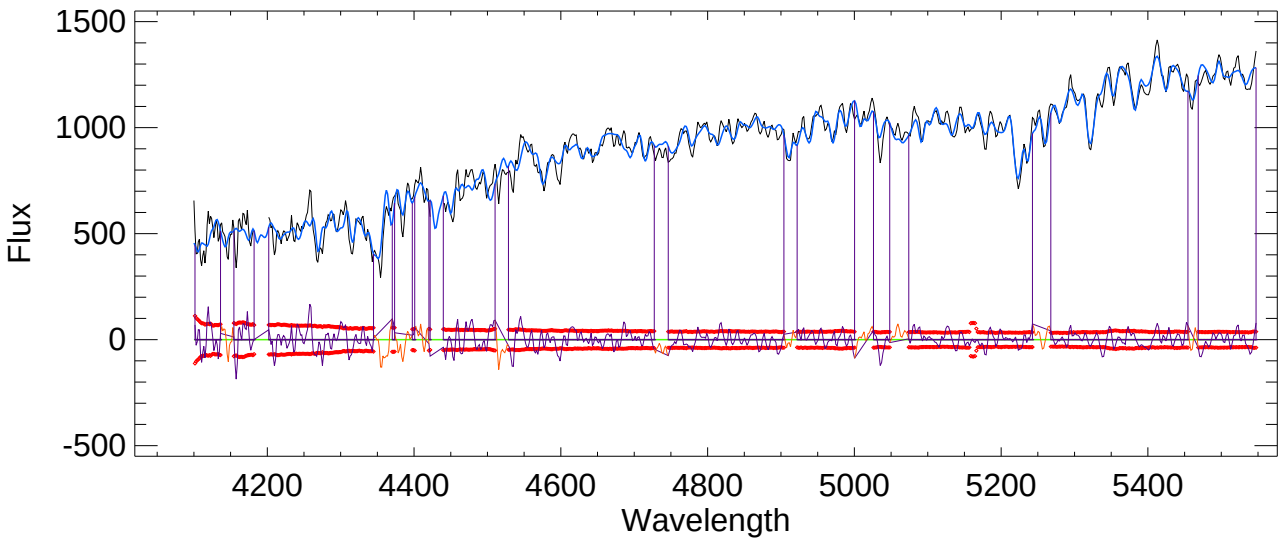

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

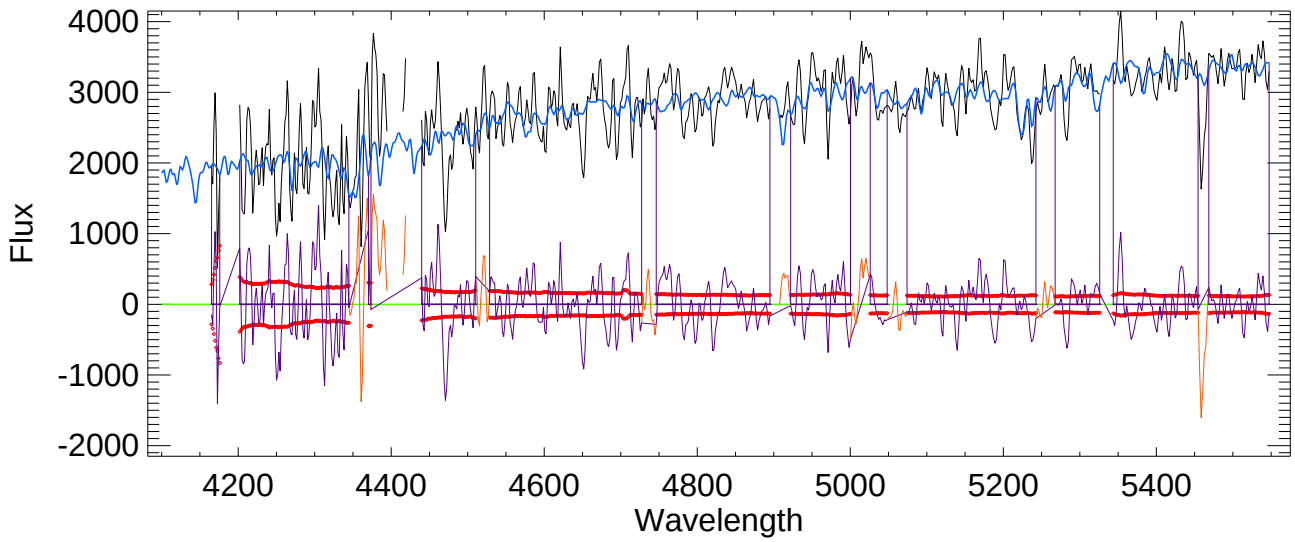

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

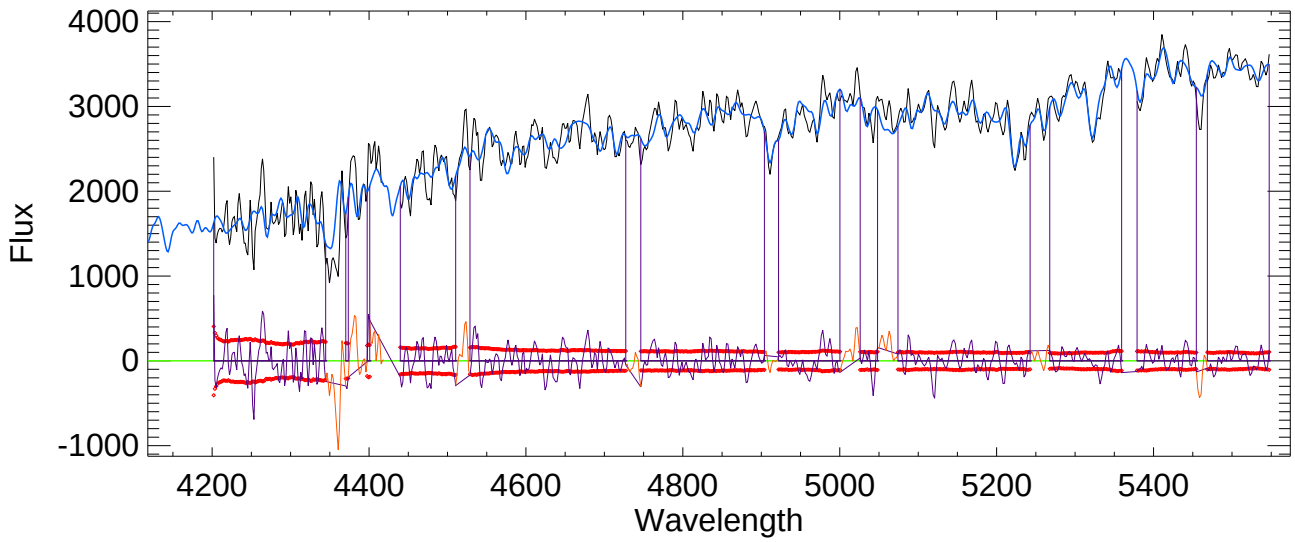

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

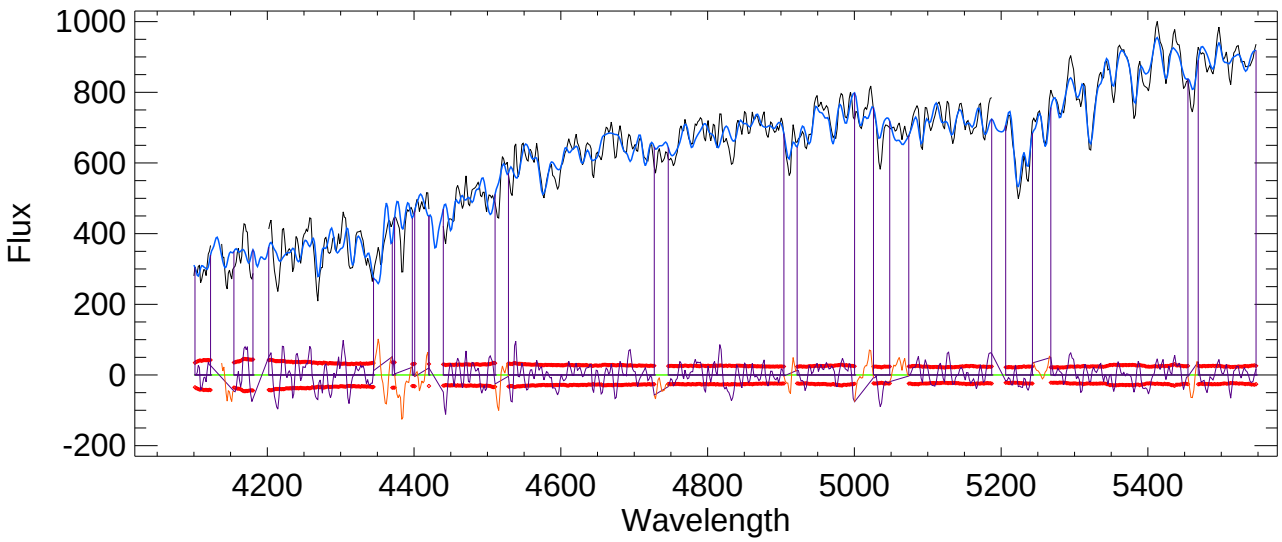

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

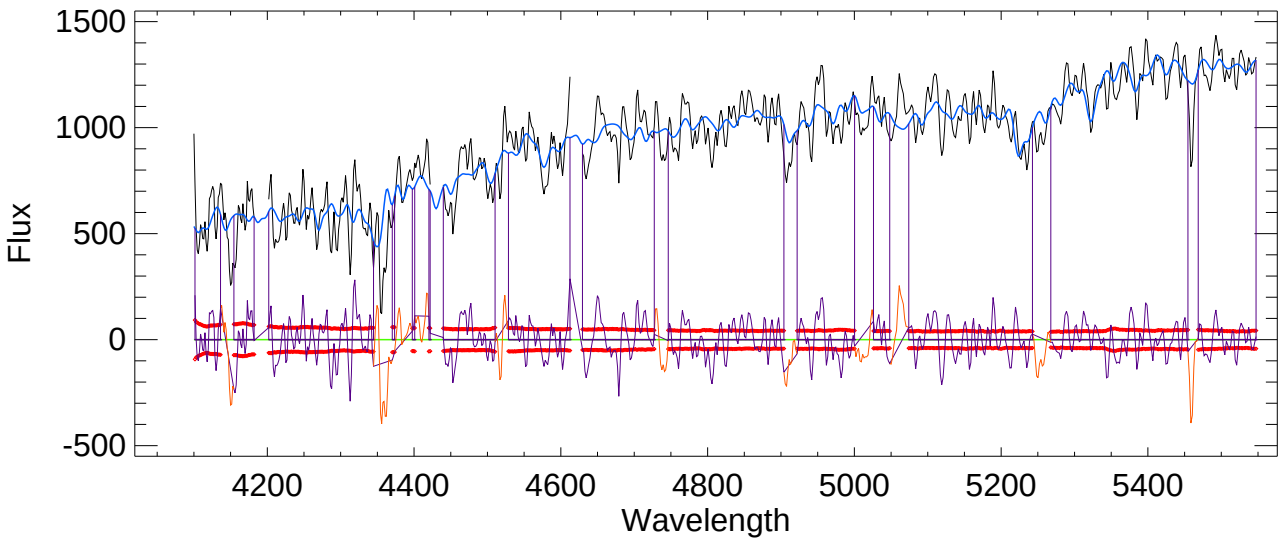

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

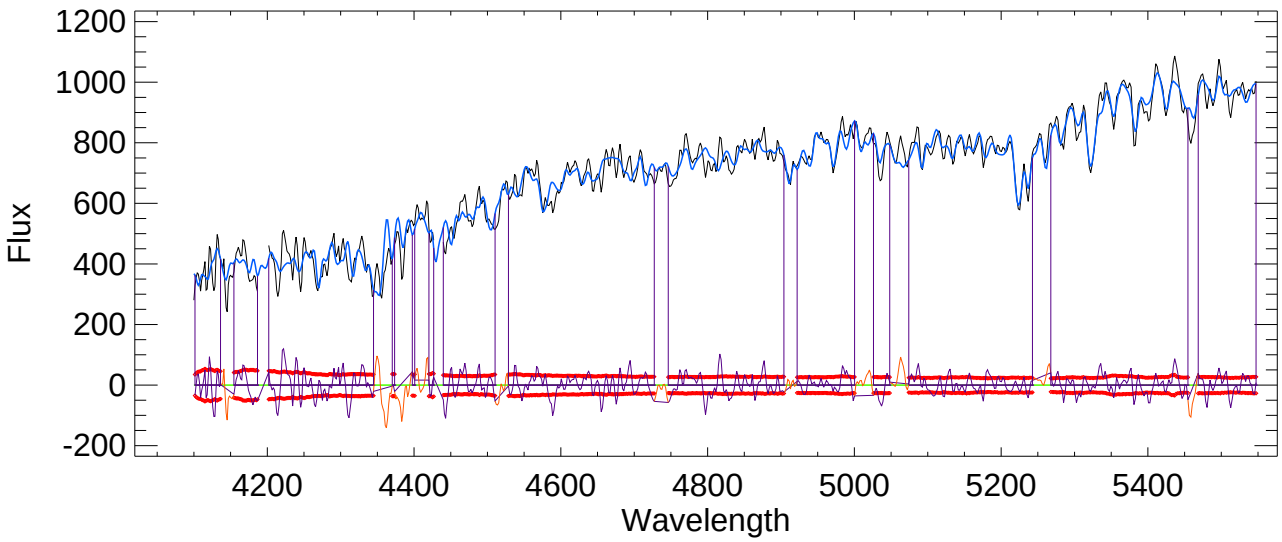

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

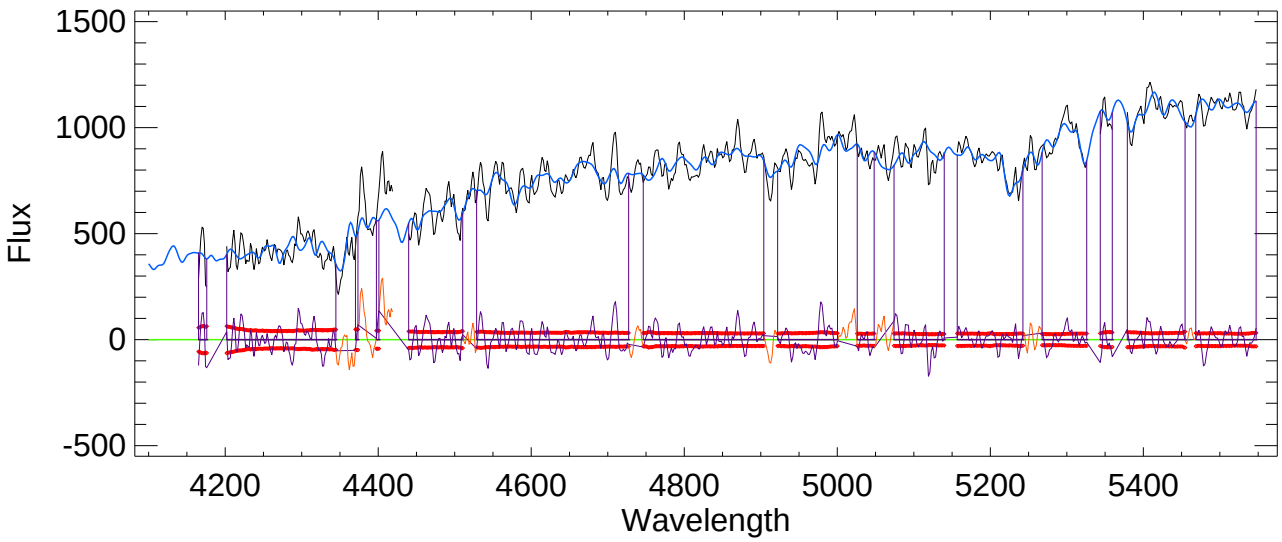

4000
3000
2000
1000
0
-1000
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

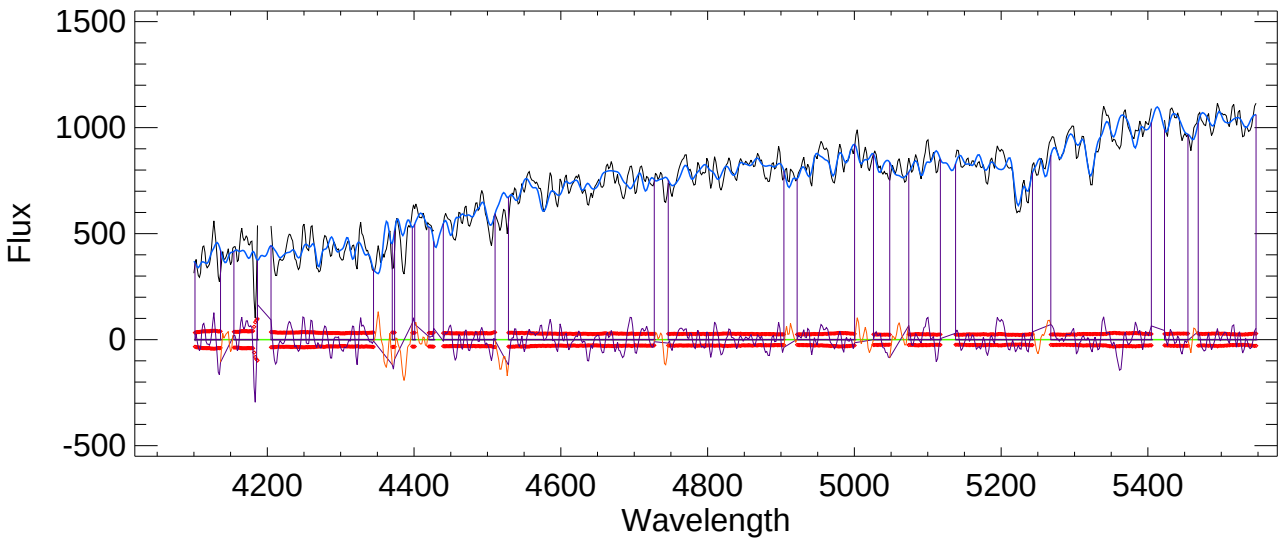

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

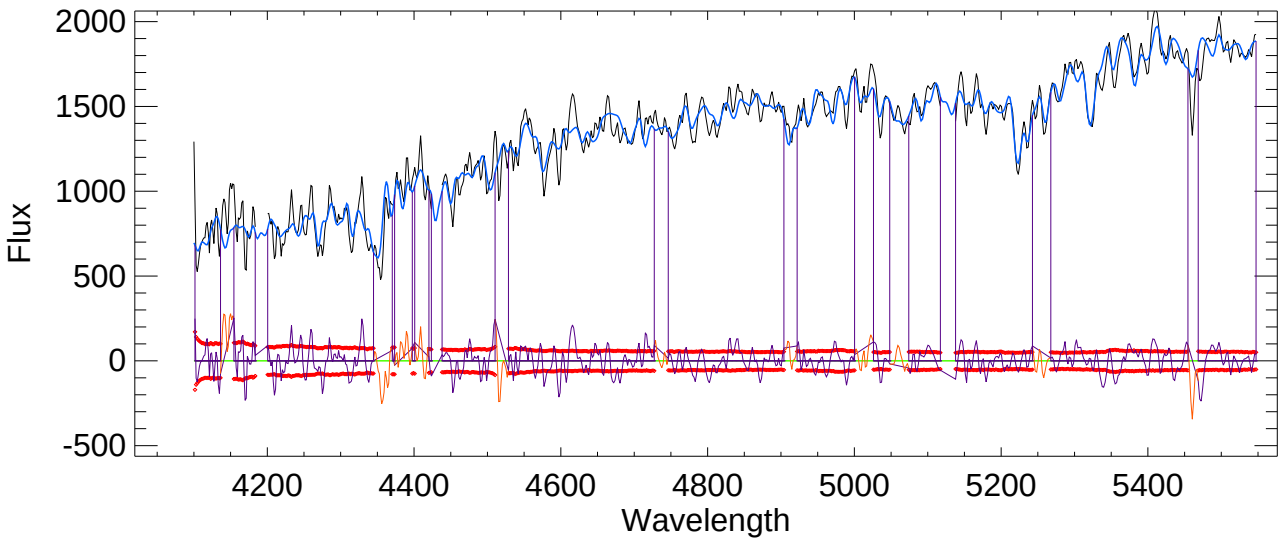

1000
800
600
400
200
0
-200
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

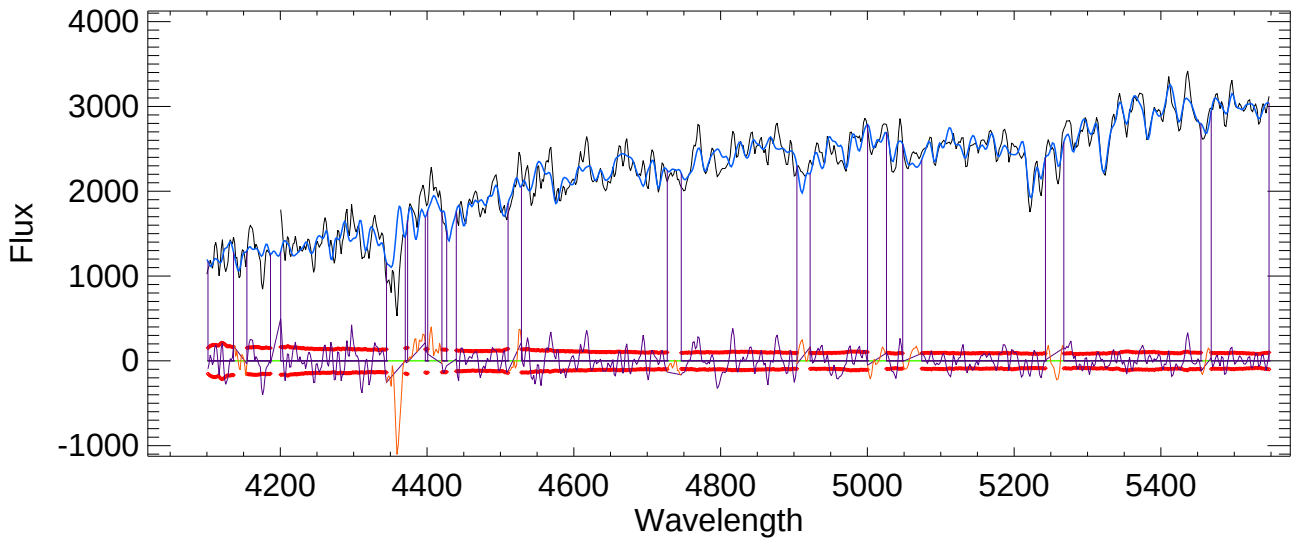

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

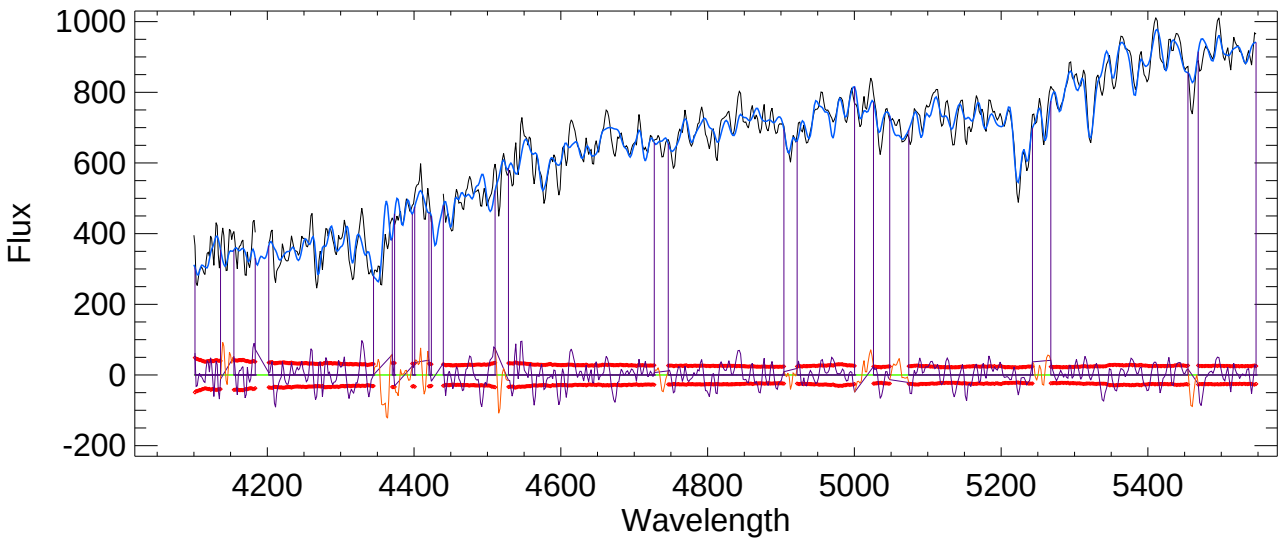

1200
1000
800
600
400
200
0
-200
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

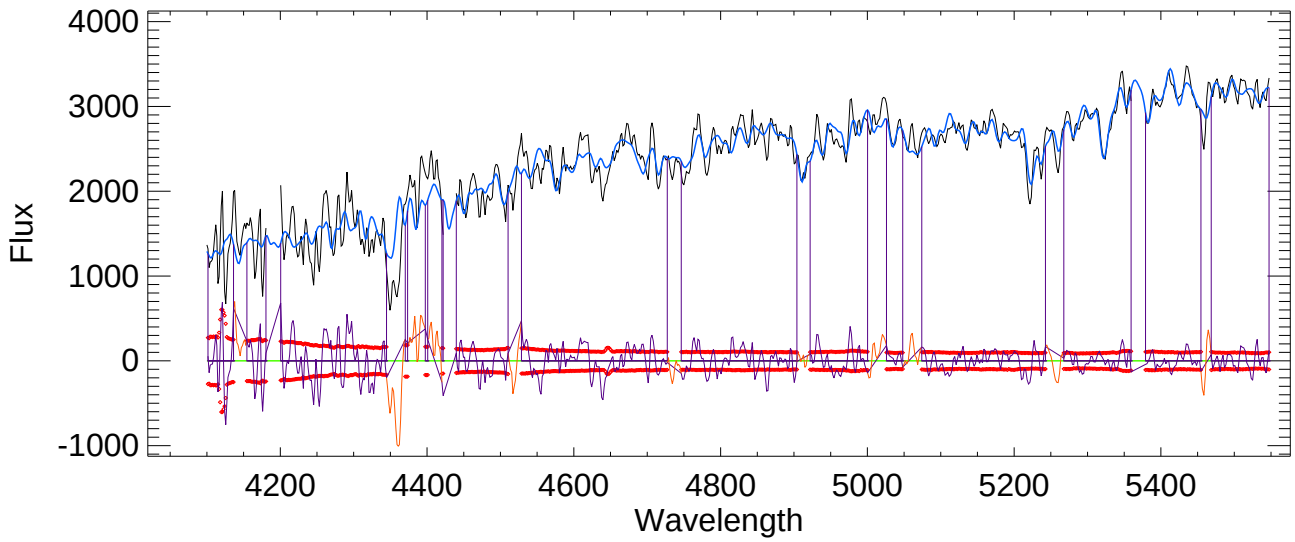

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

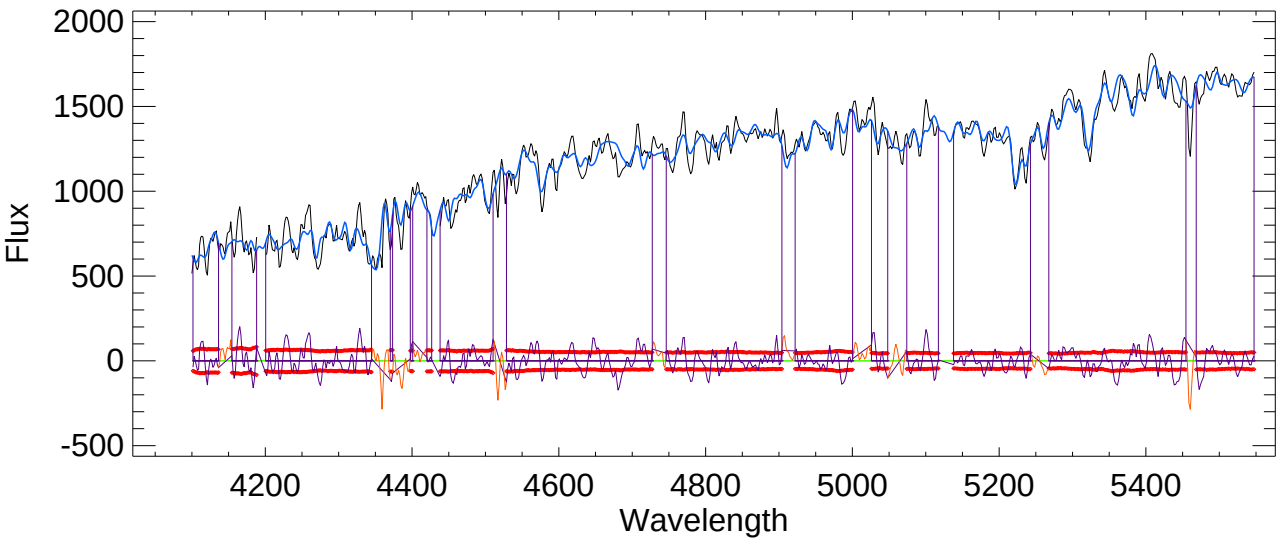

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

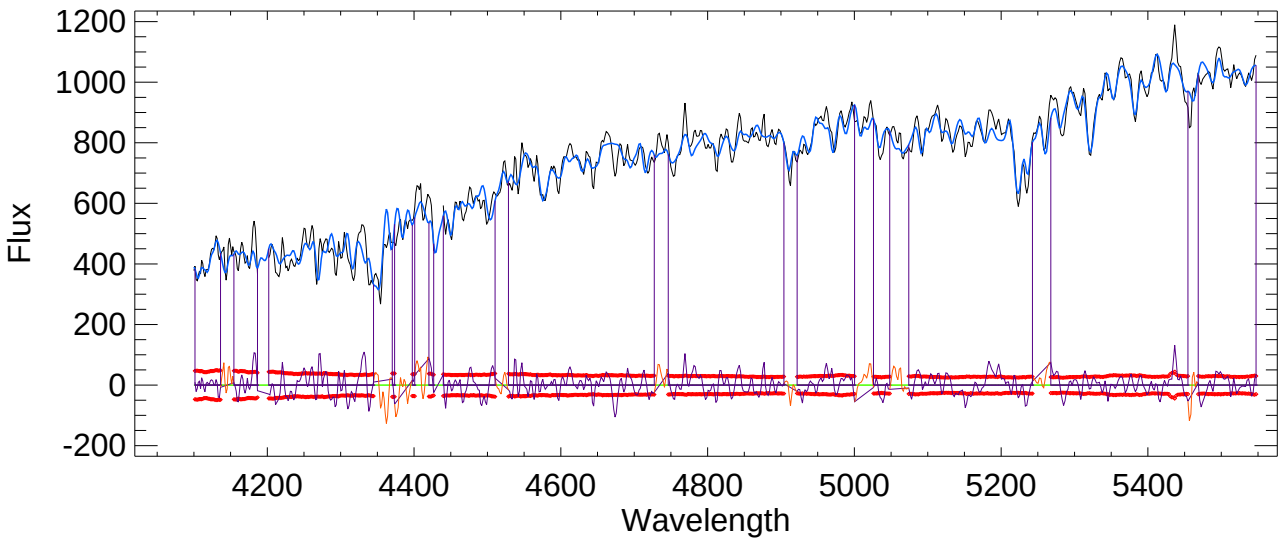

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

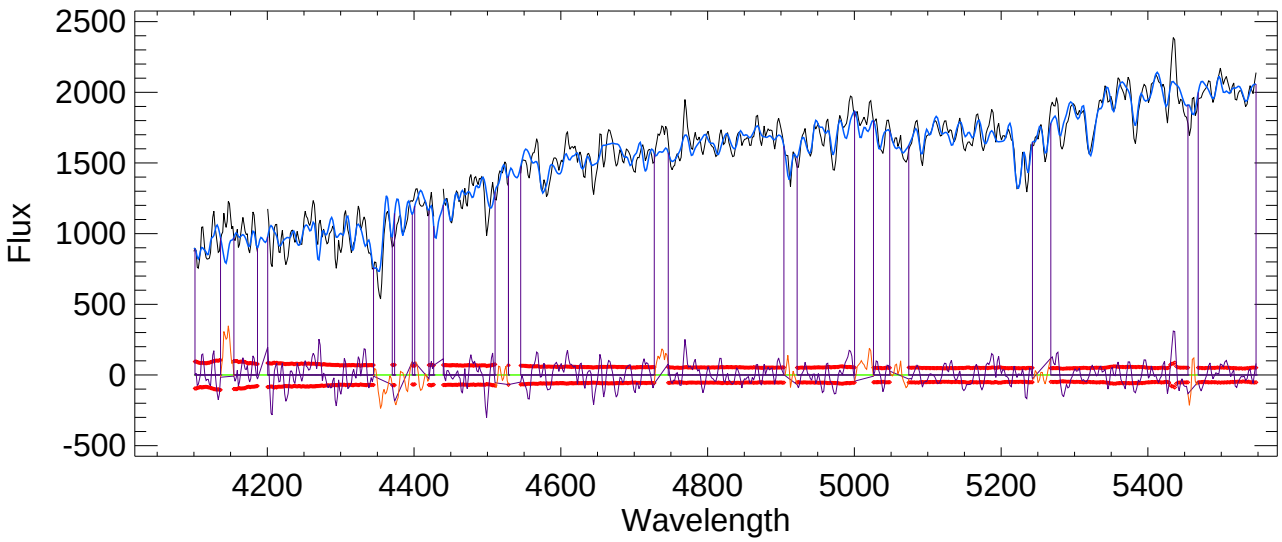

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

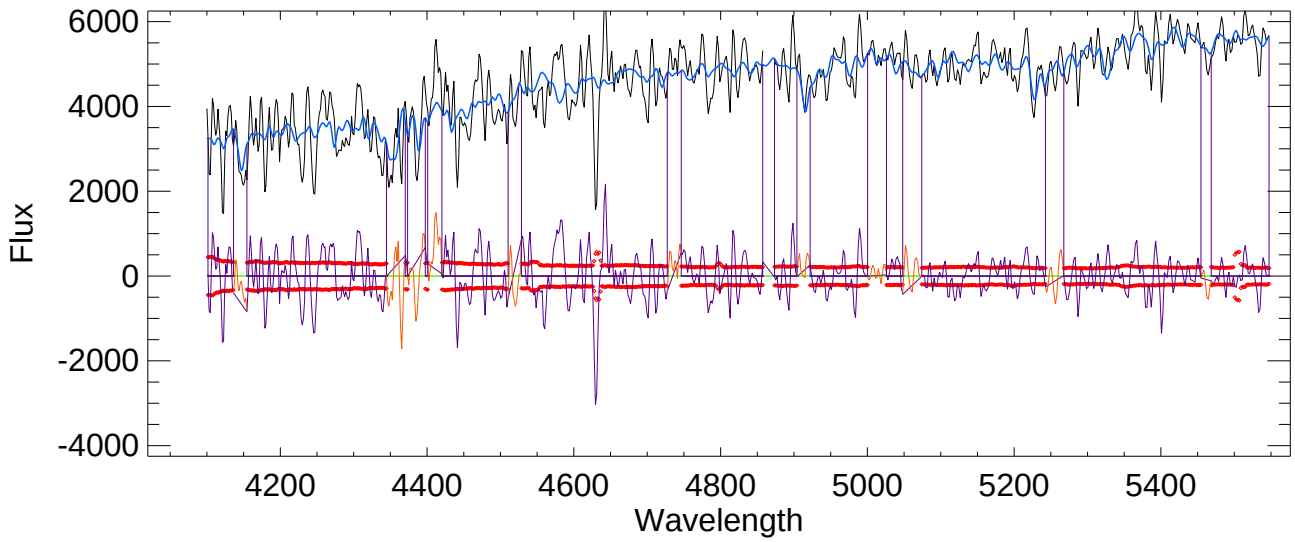

1000
800
600
400
200
0
-200
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

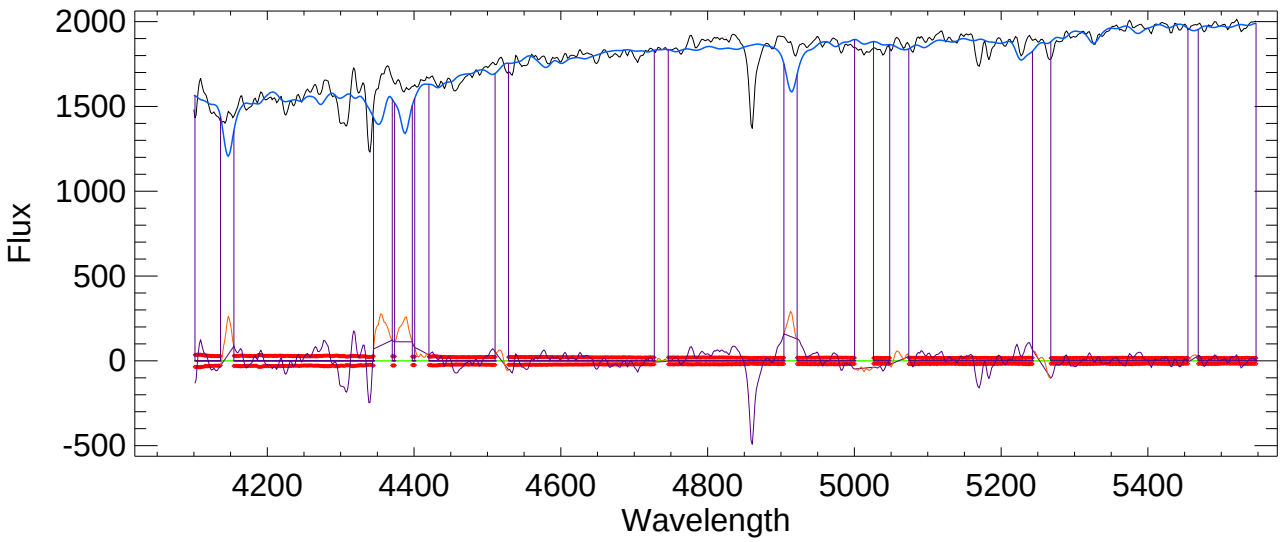

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

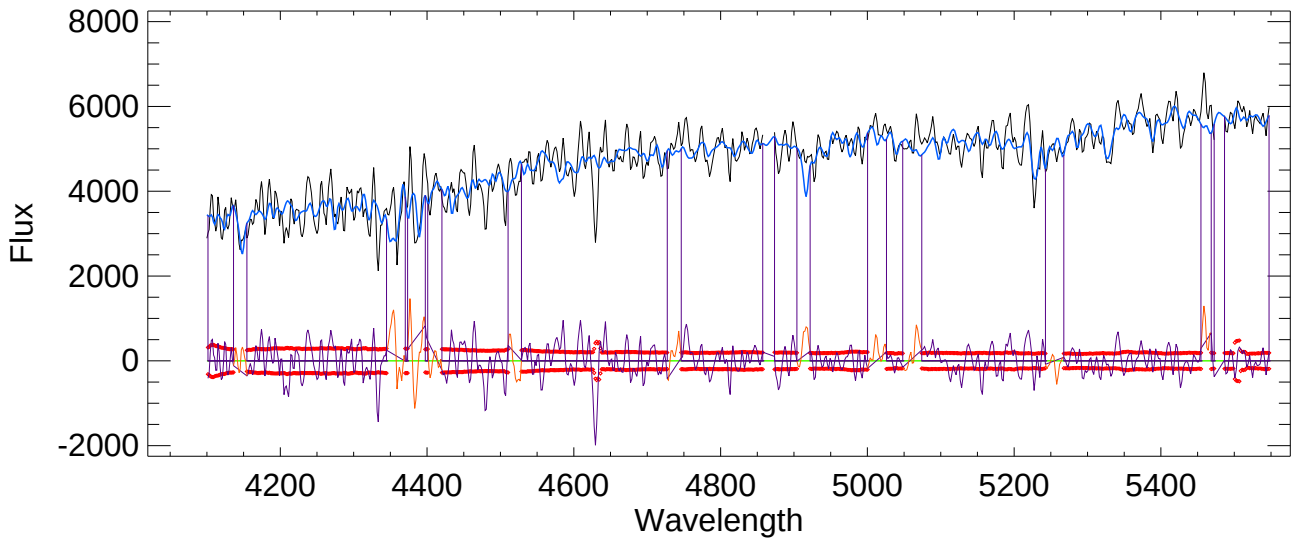

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

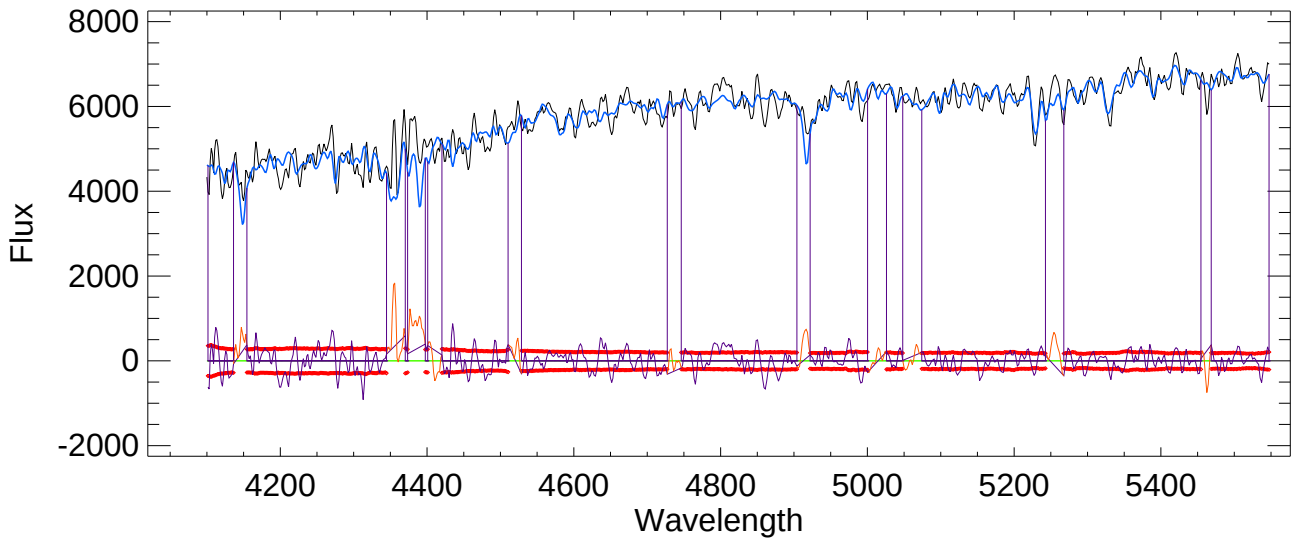

1200
1000
800
600
400
200
0
-200
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

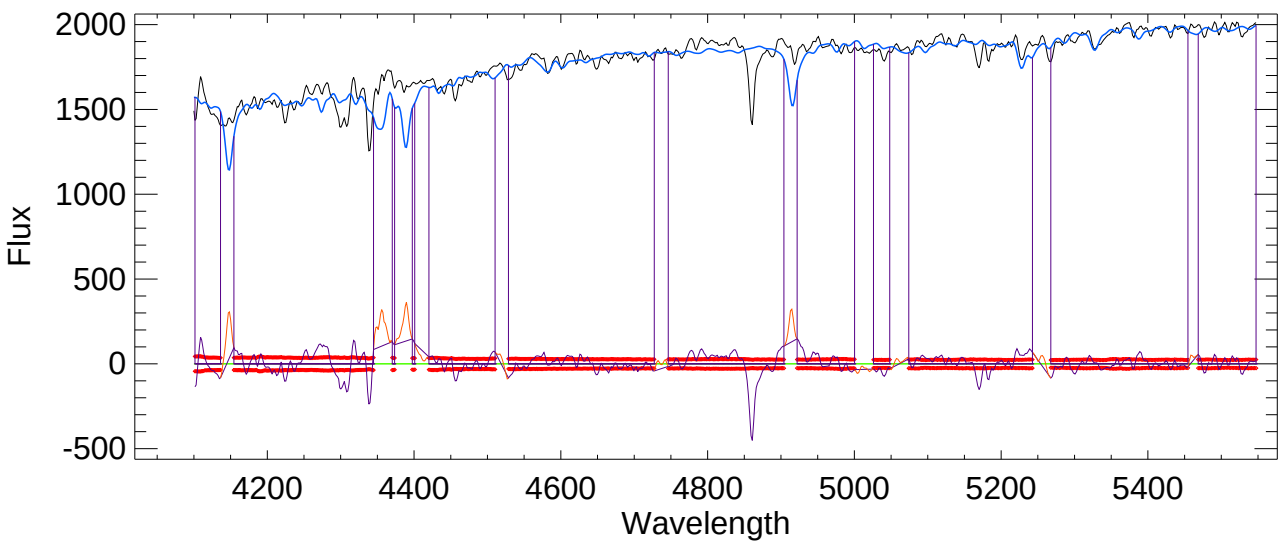

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

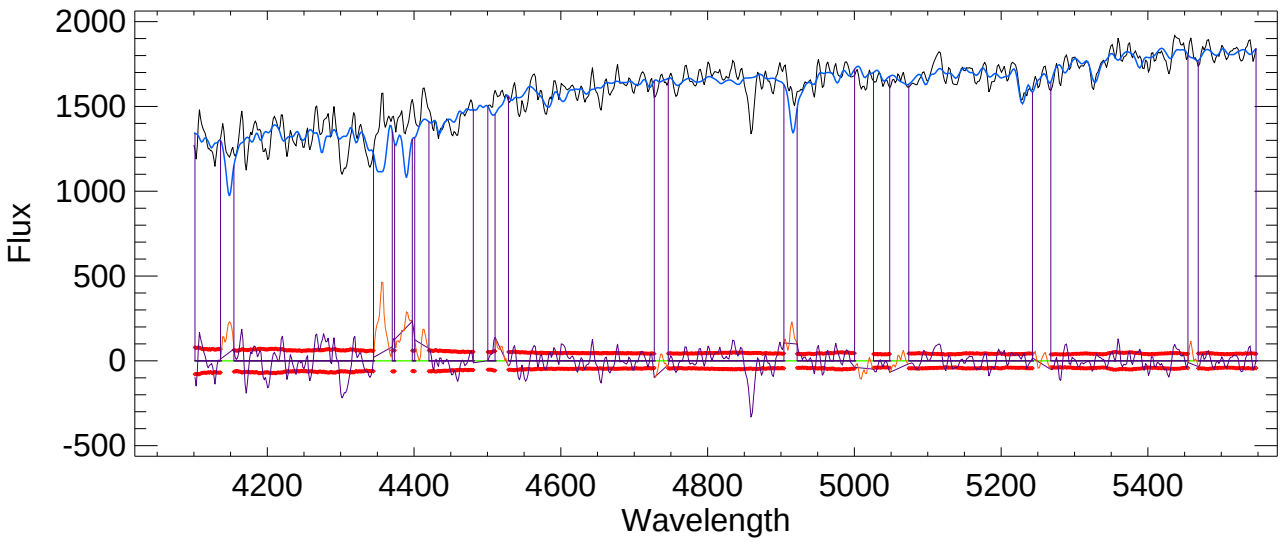

6000
4000
2000
0
-2000
-4000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

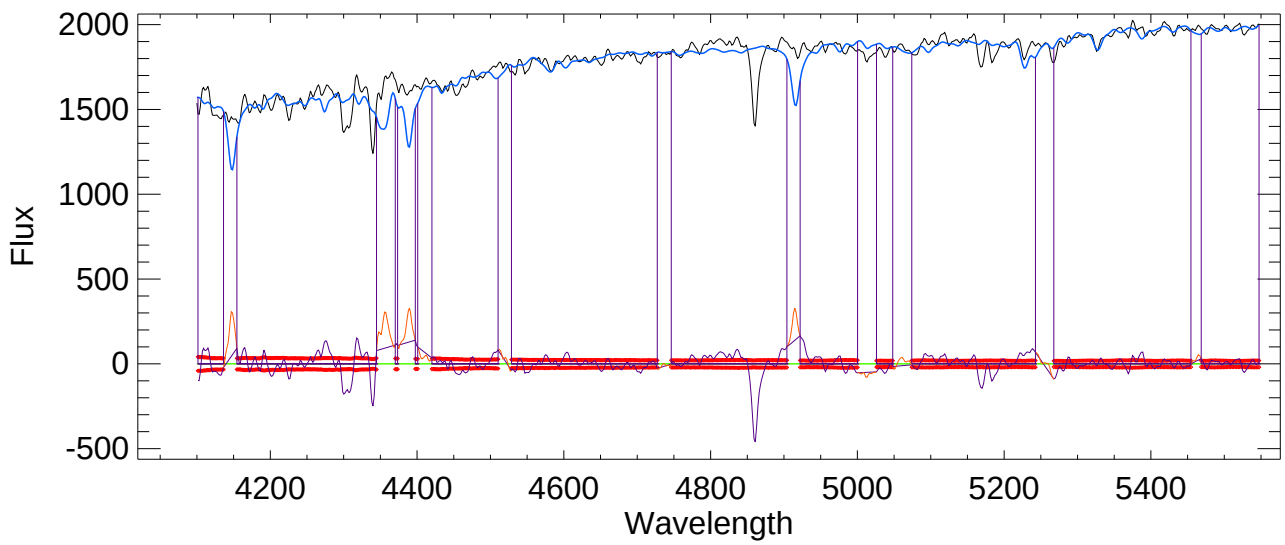

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

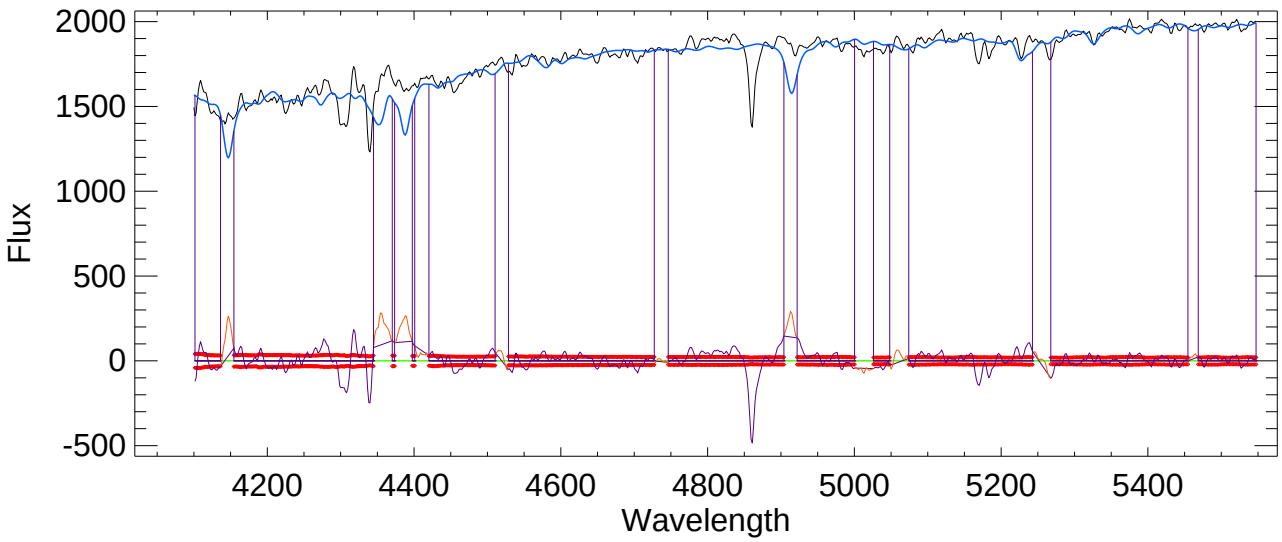

8000
6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

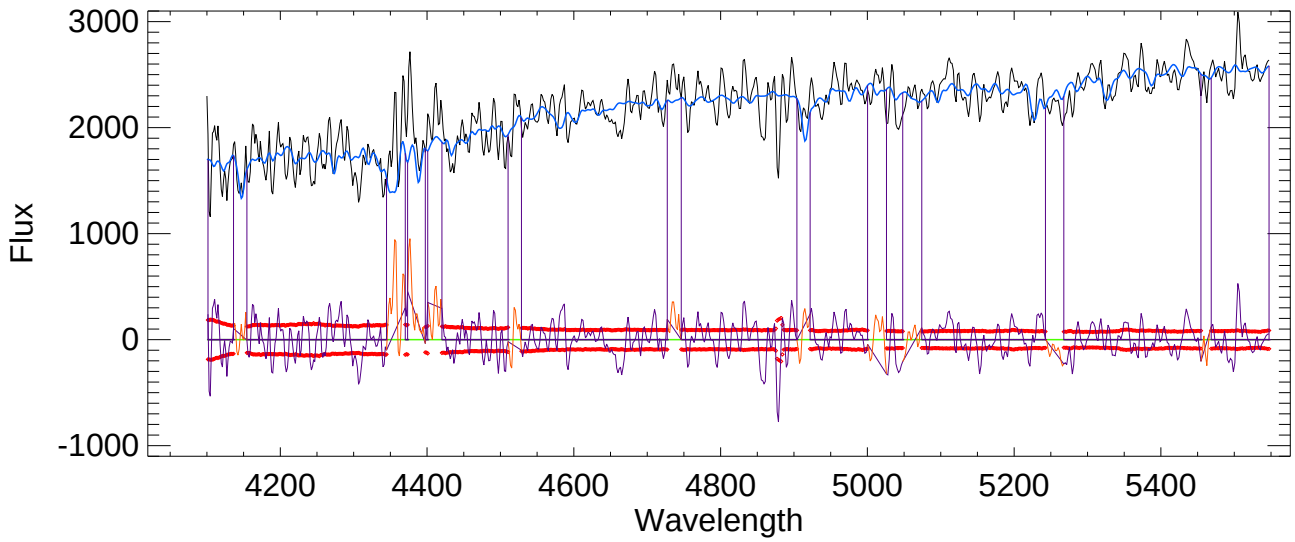

8000
6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

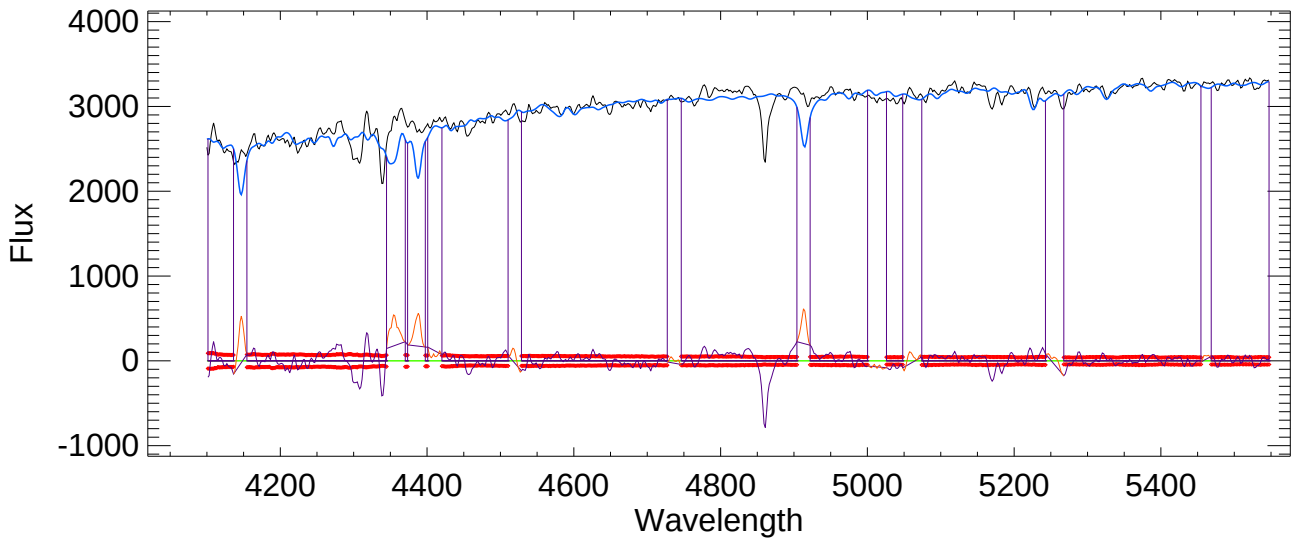

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

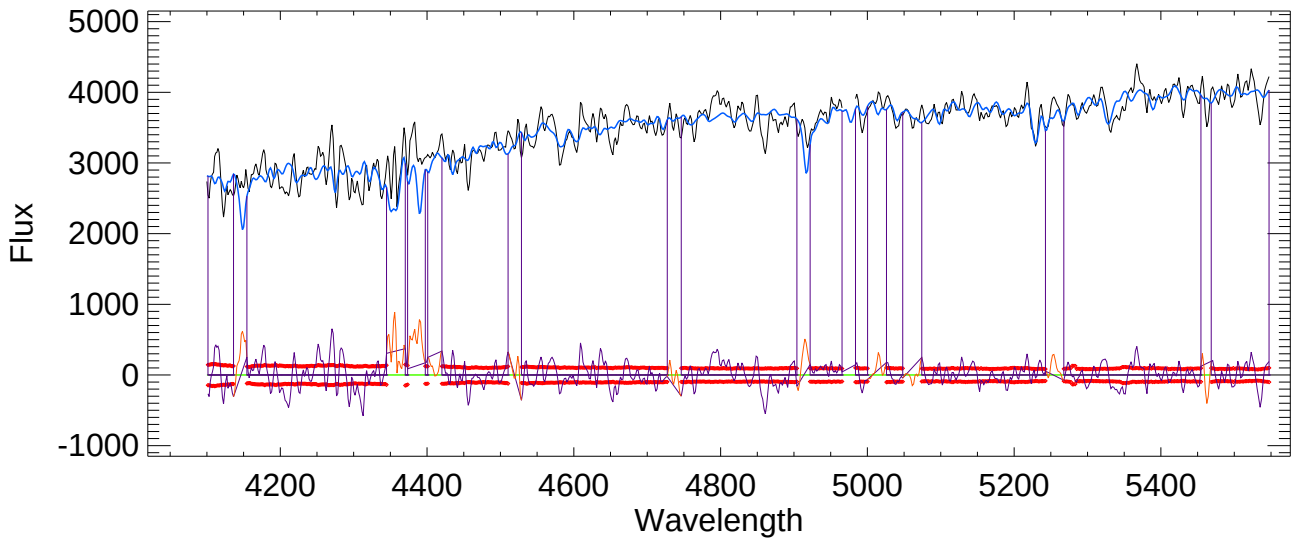

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

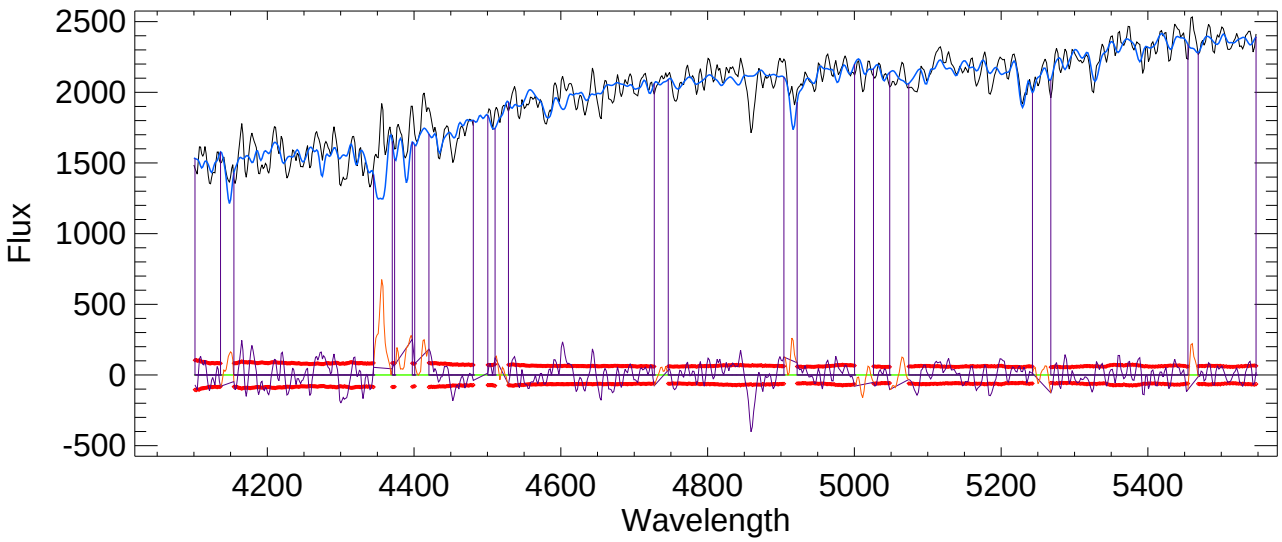

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

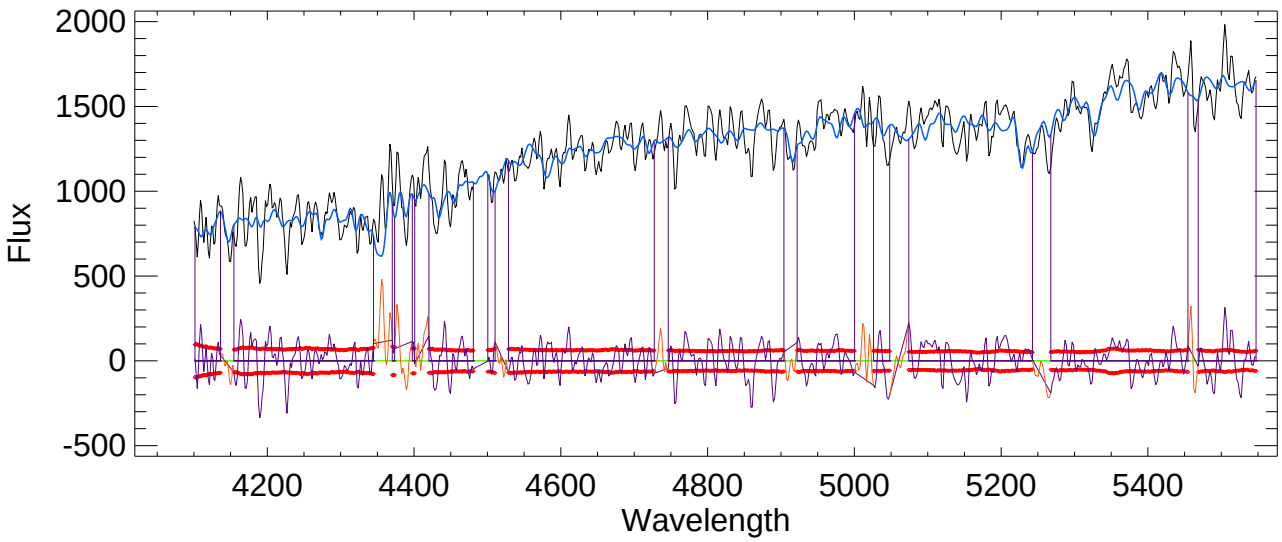

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

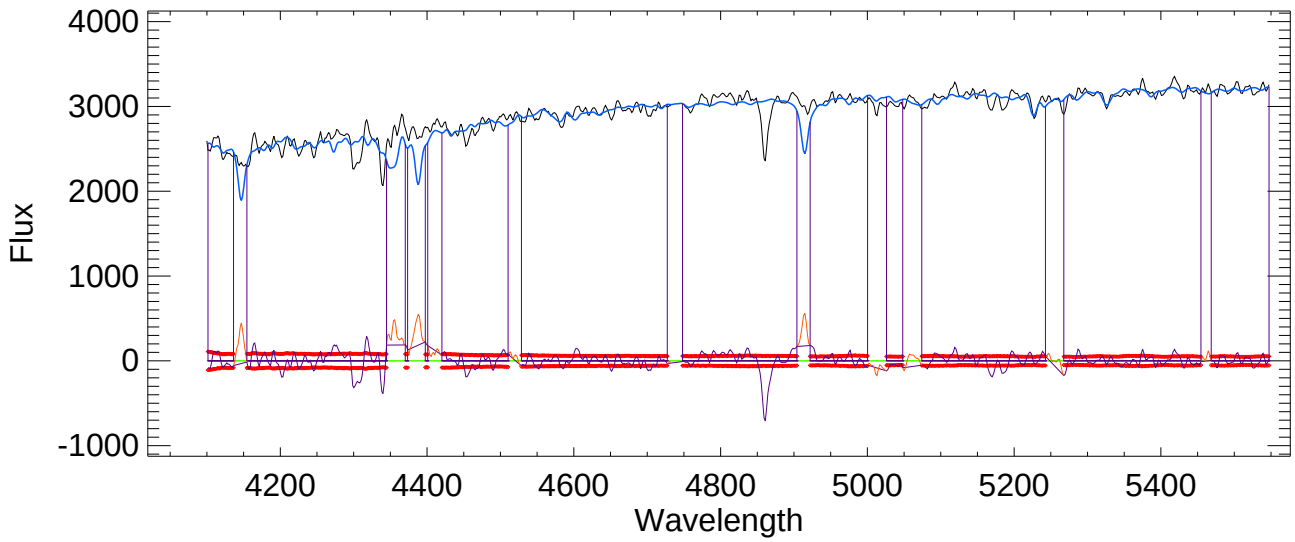

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

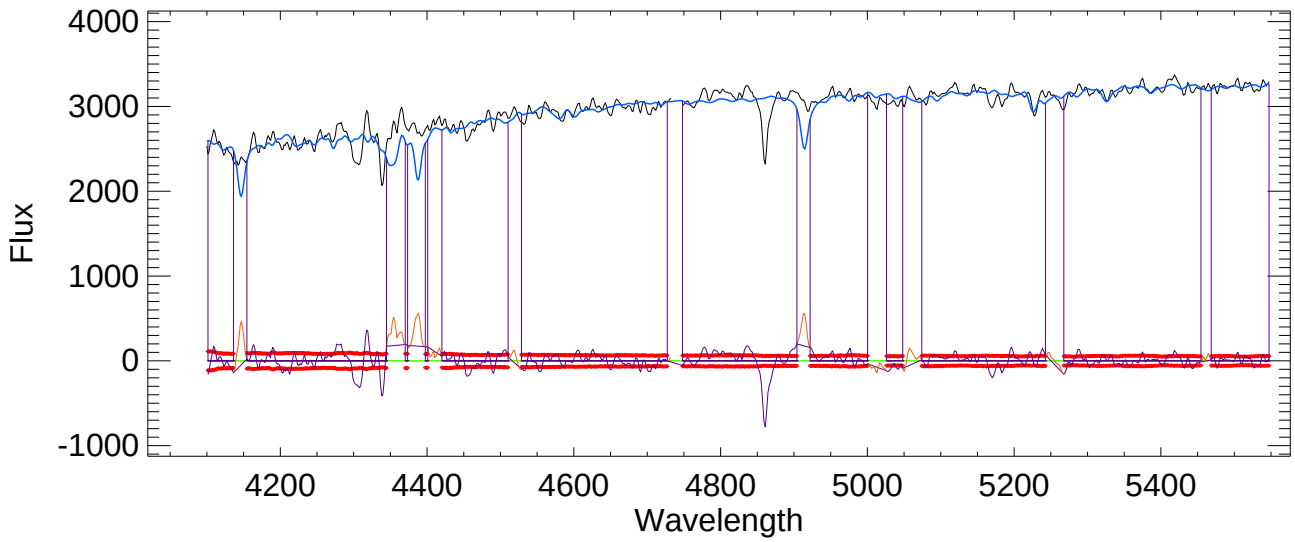

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

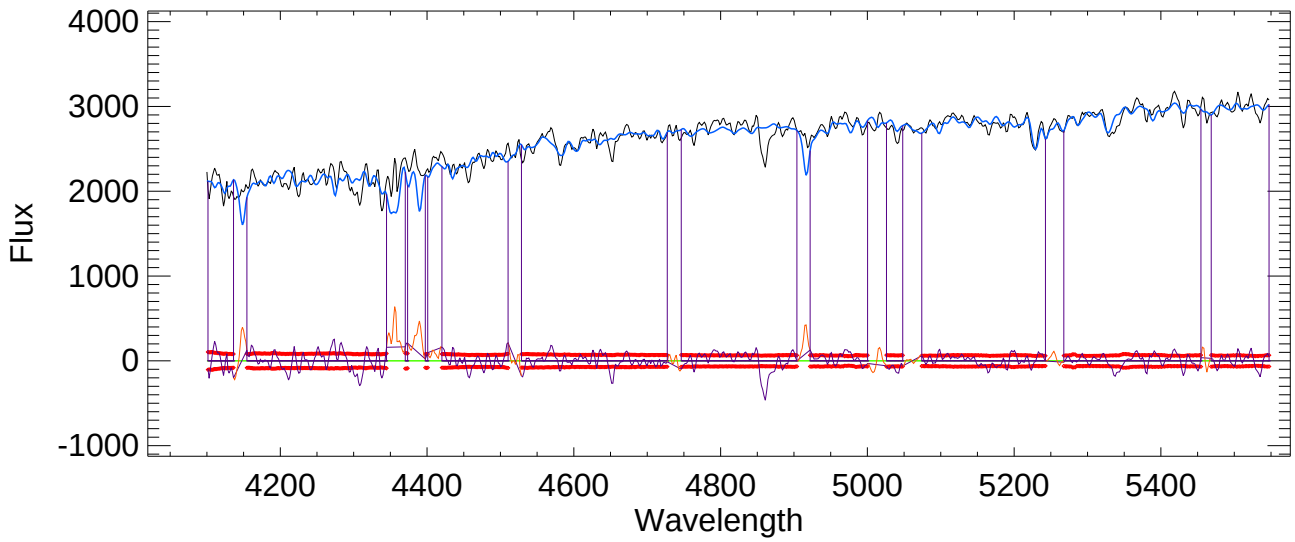

5000
4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

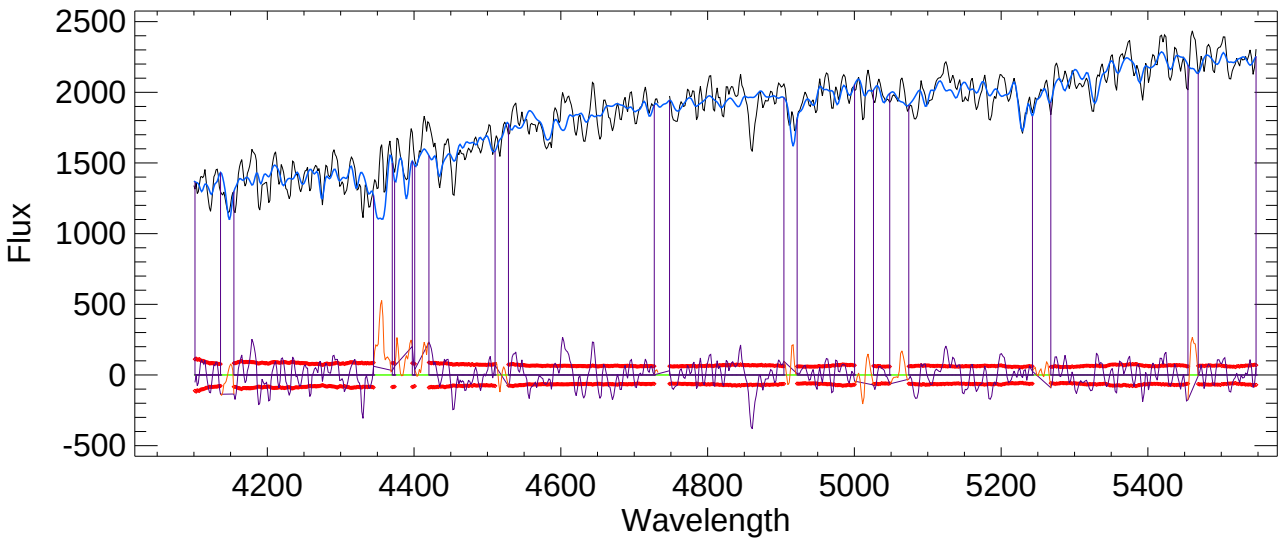

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

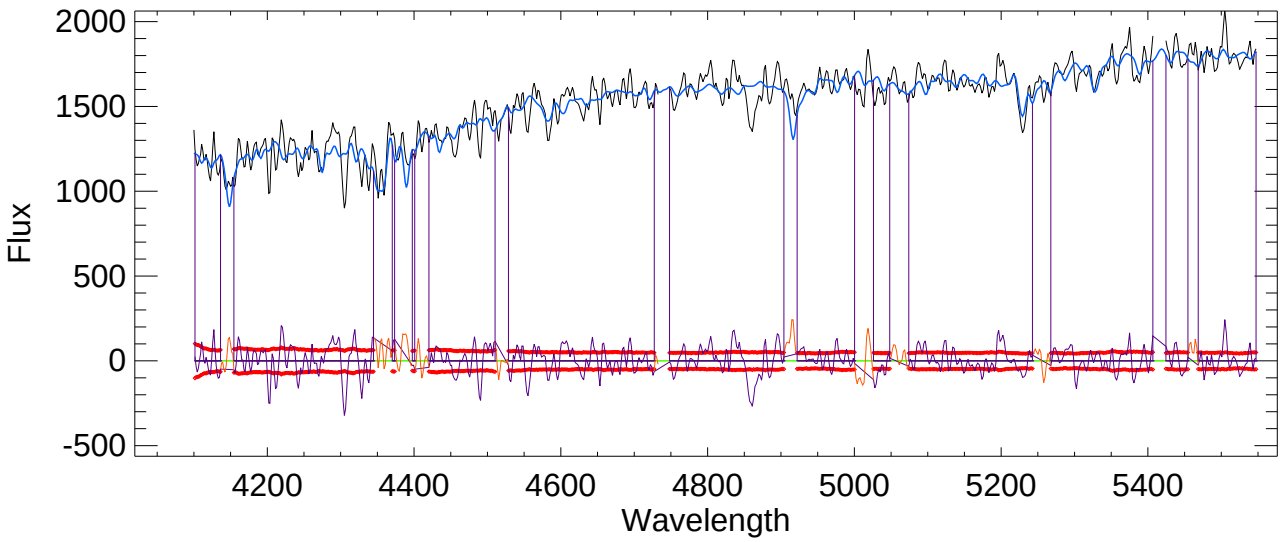

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

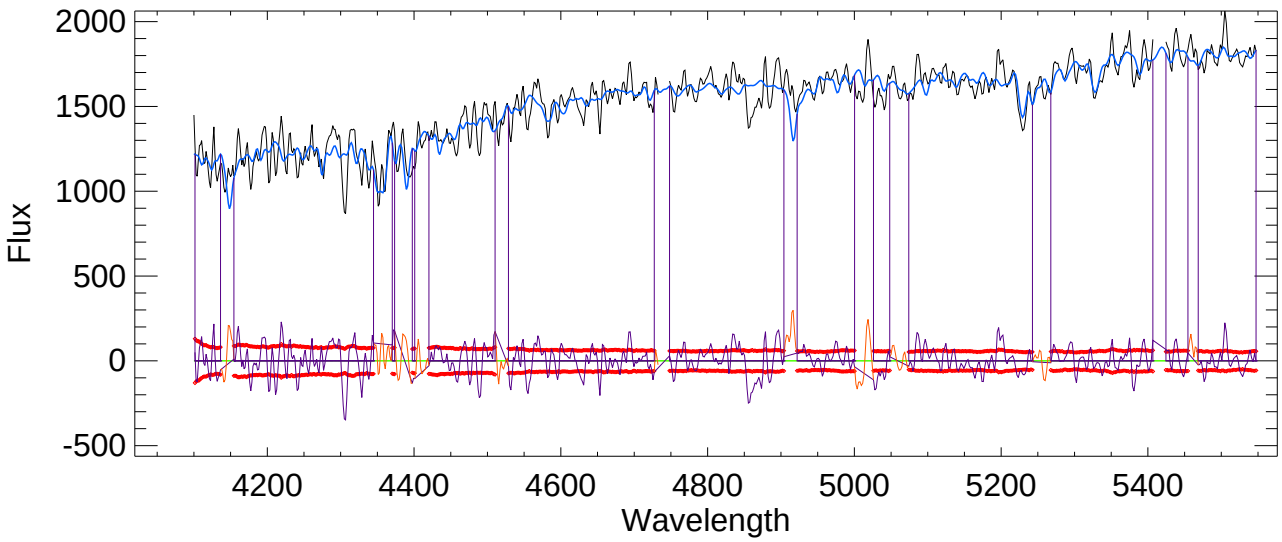

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

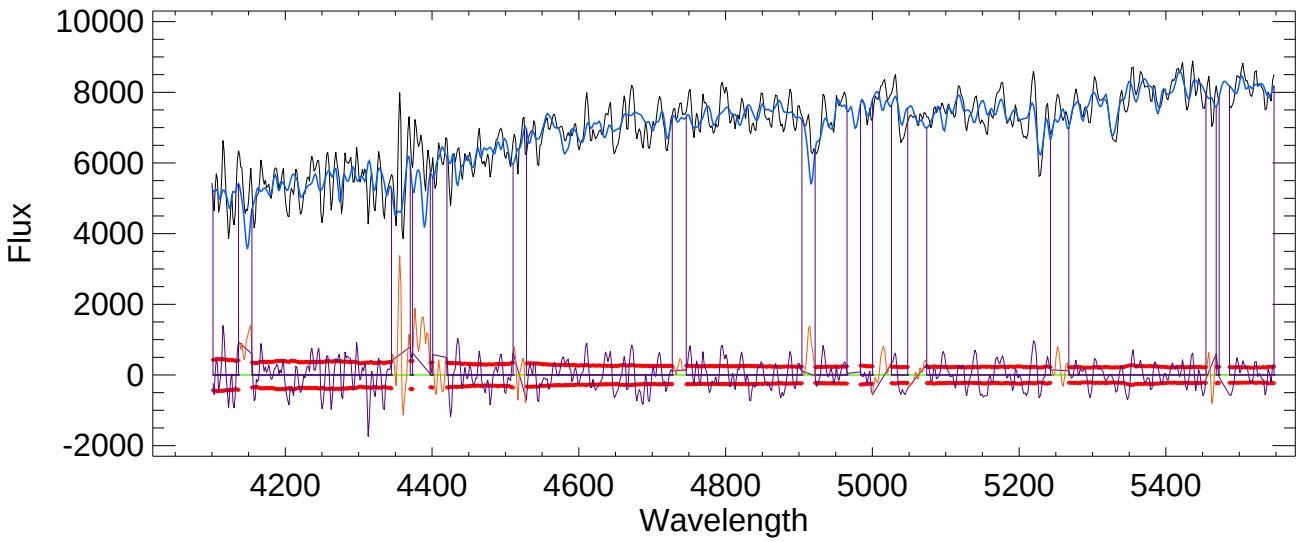

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

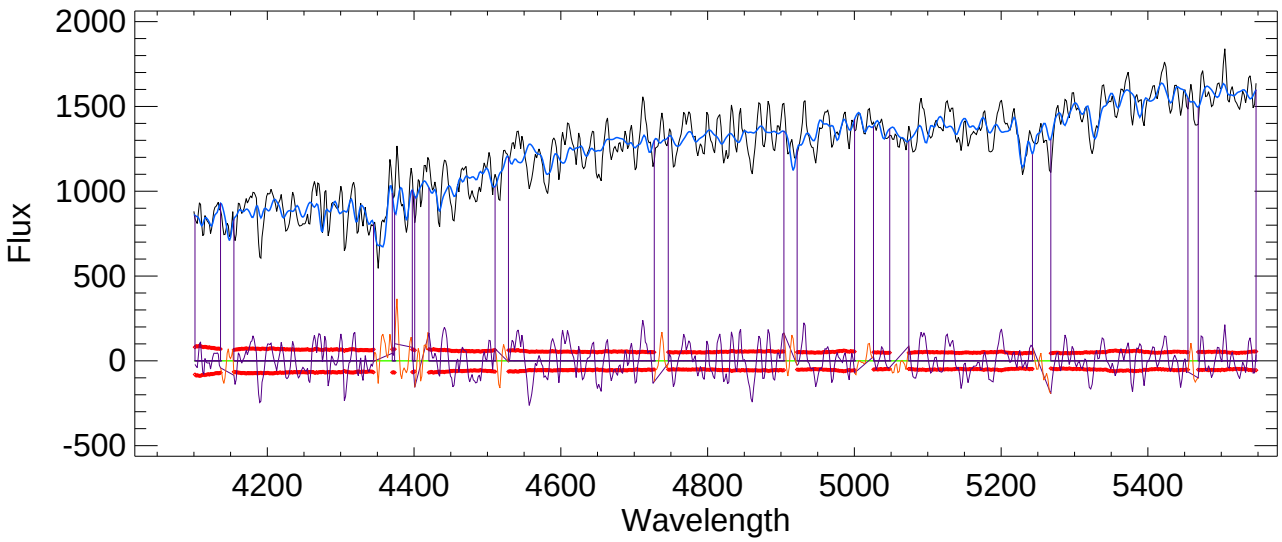

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

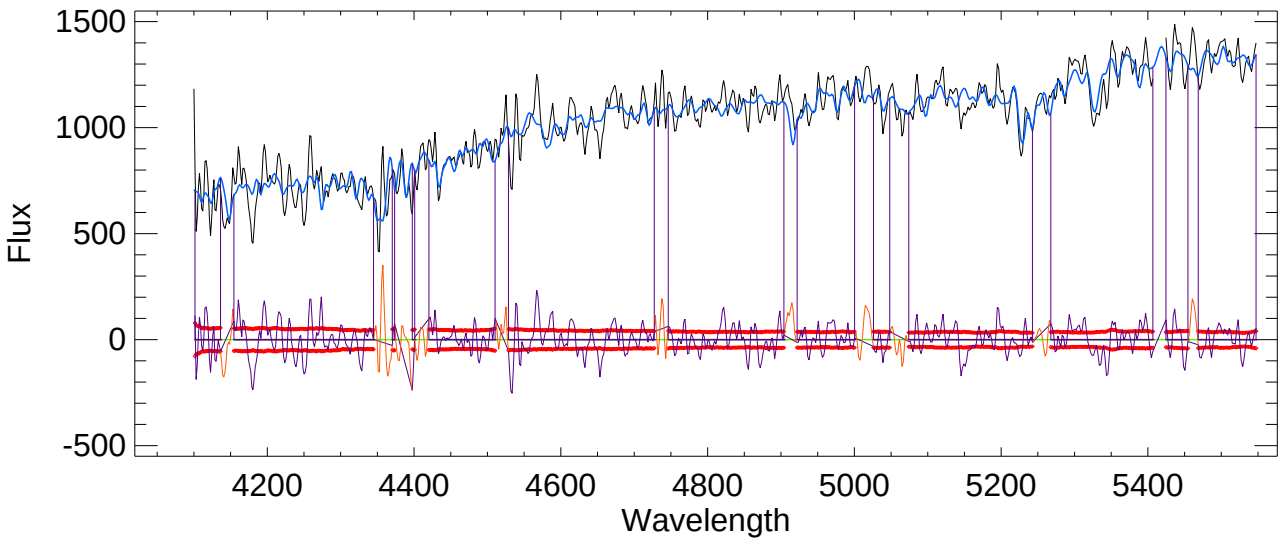

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

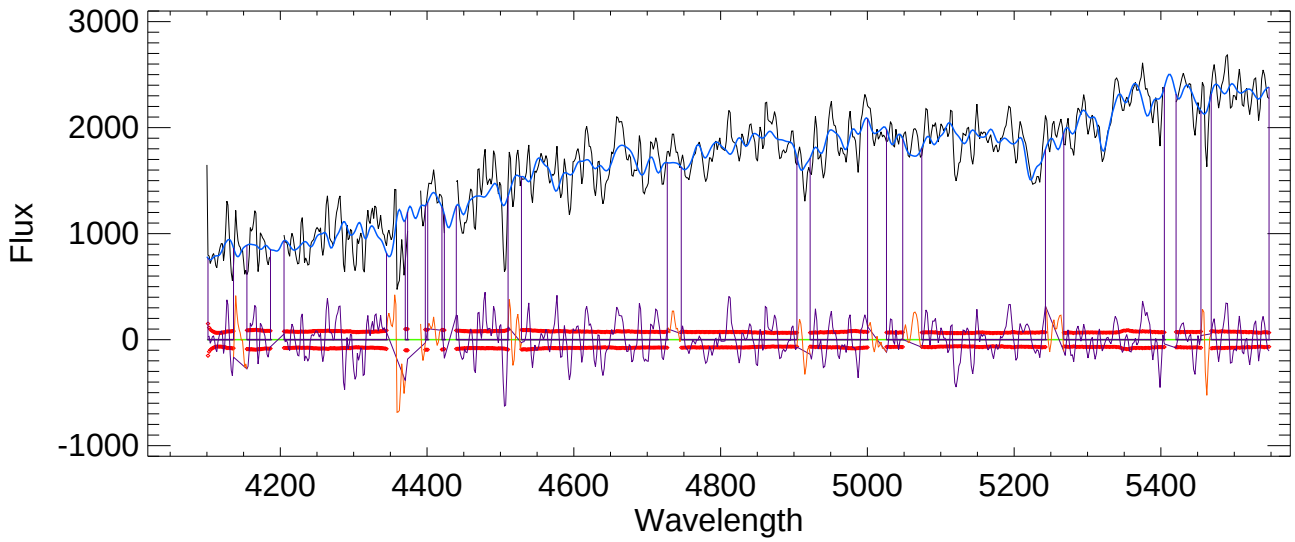

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

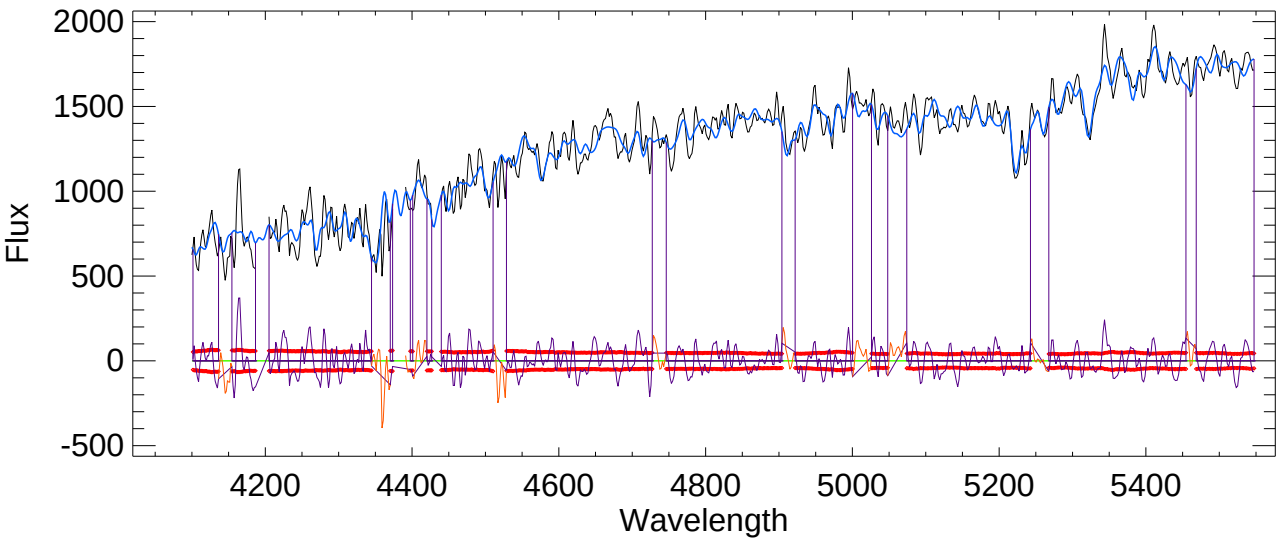

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

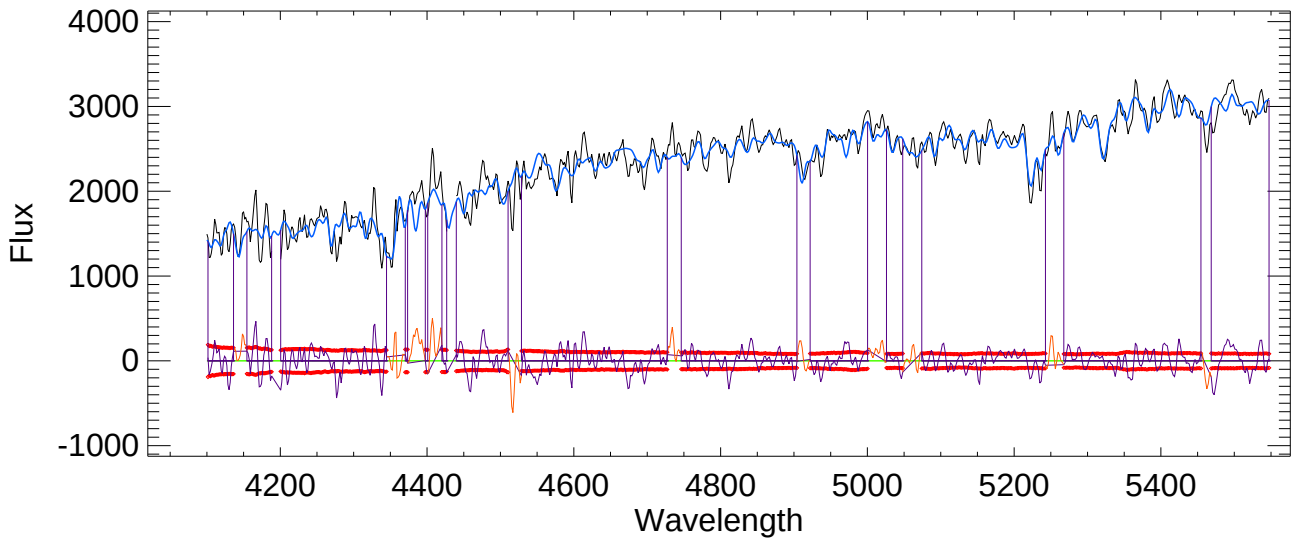

10000
8000
6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

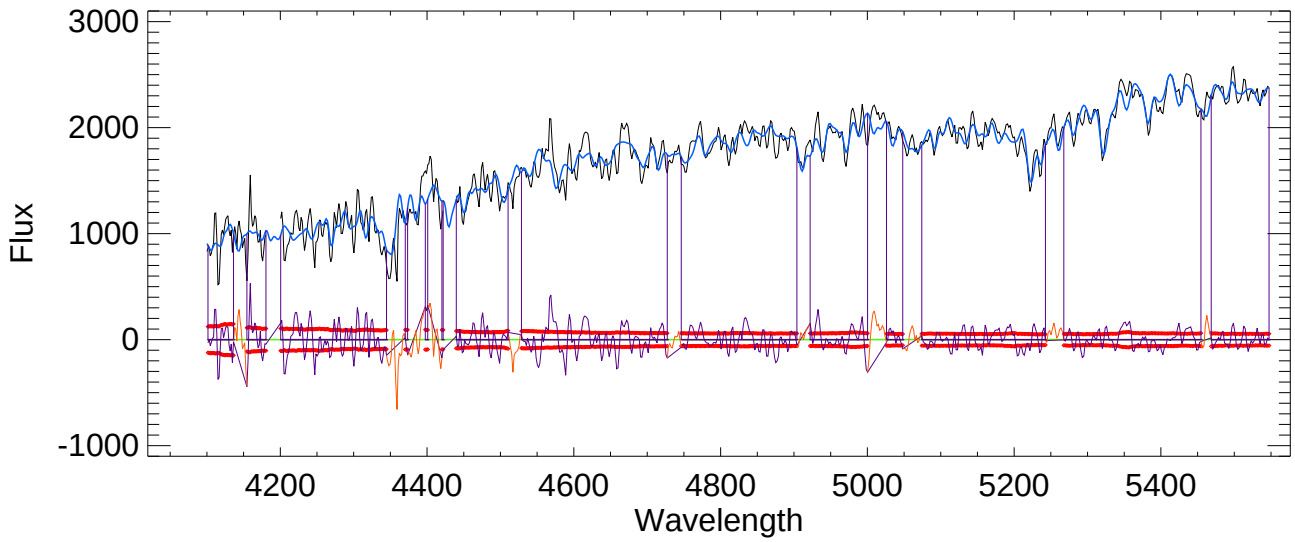

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

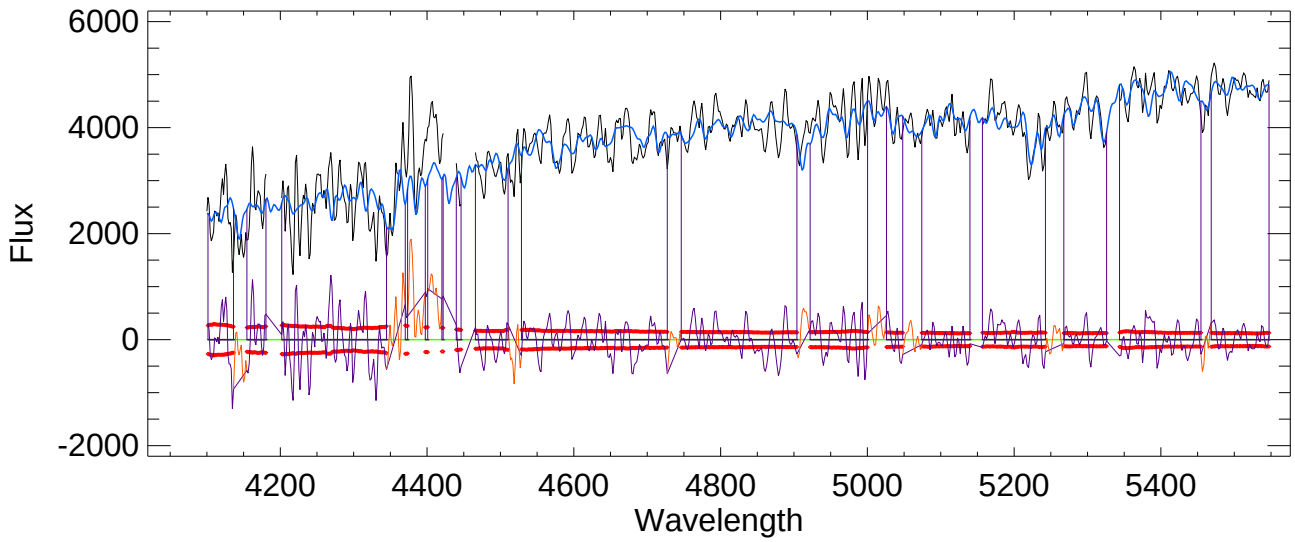

1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

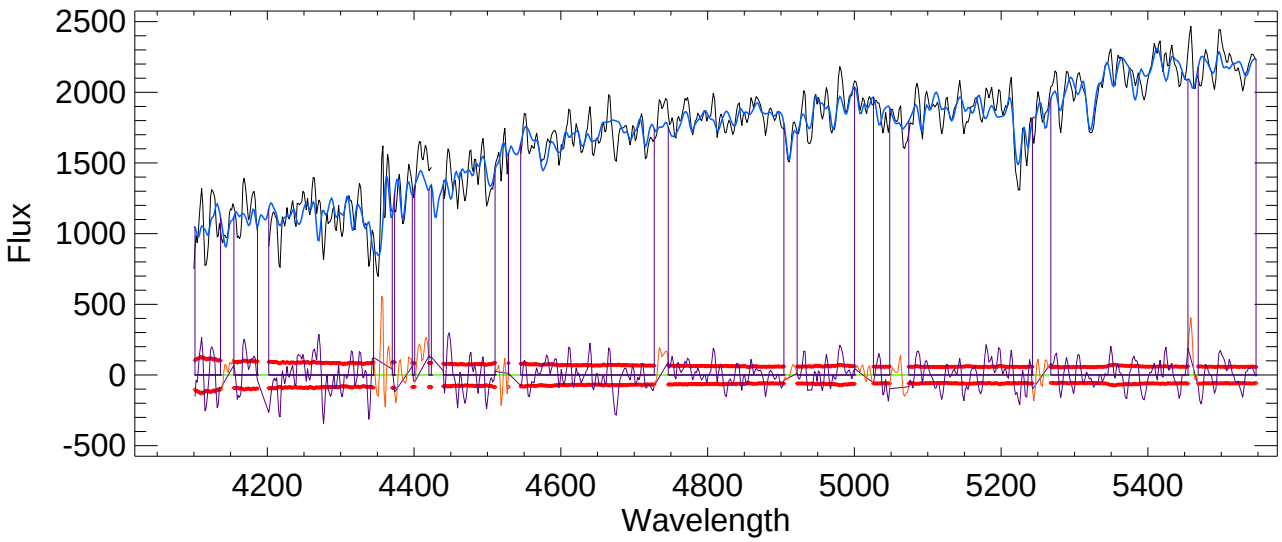

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

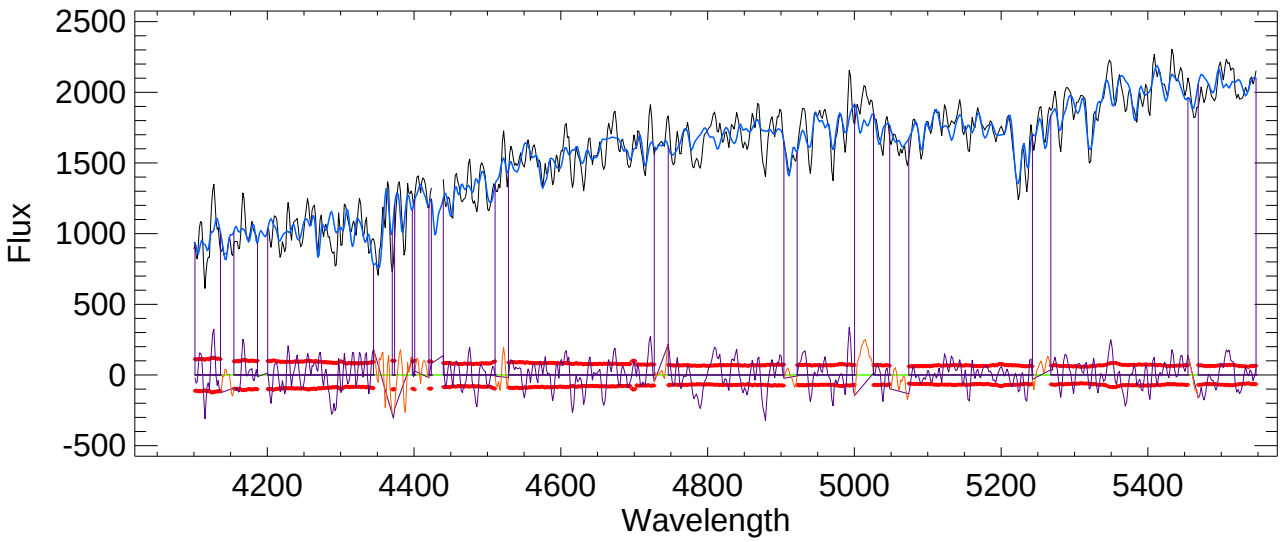

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

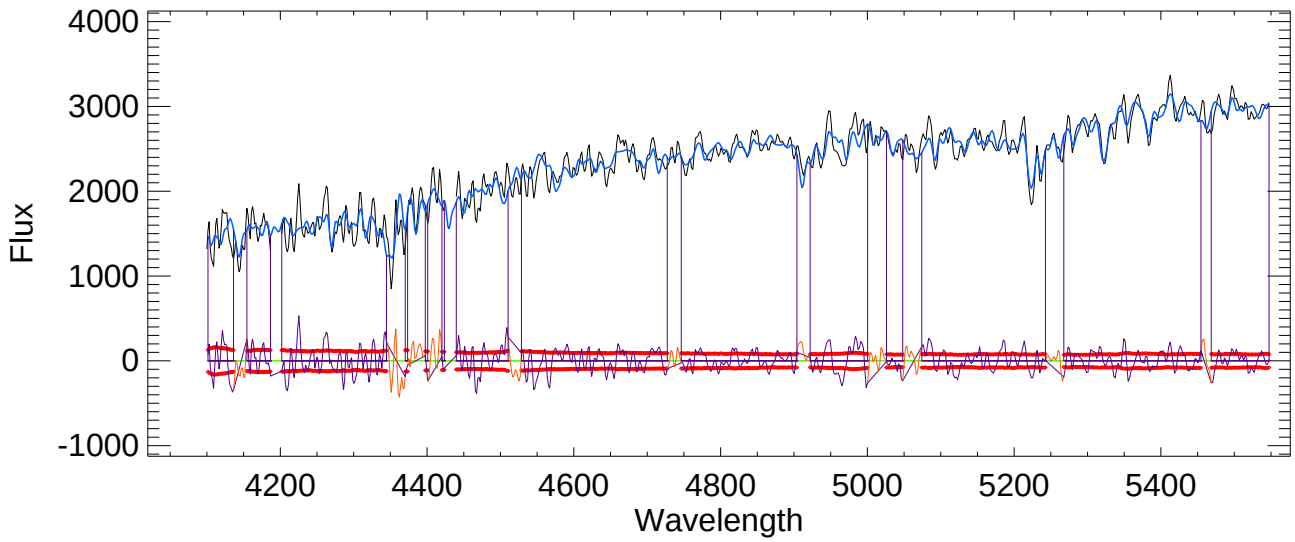

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

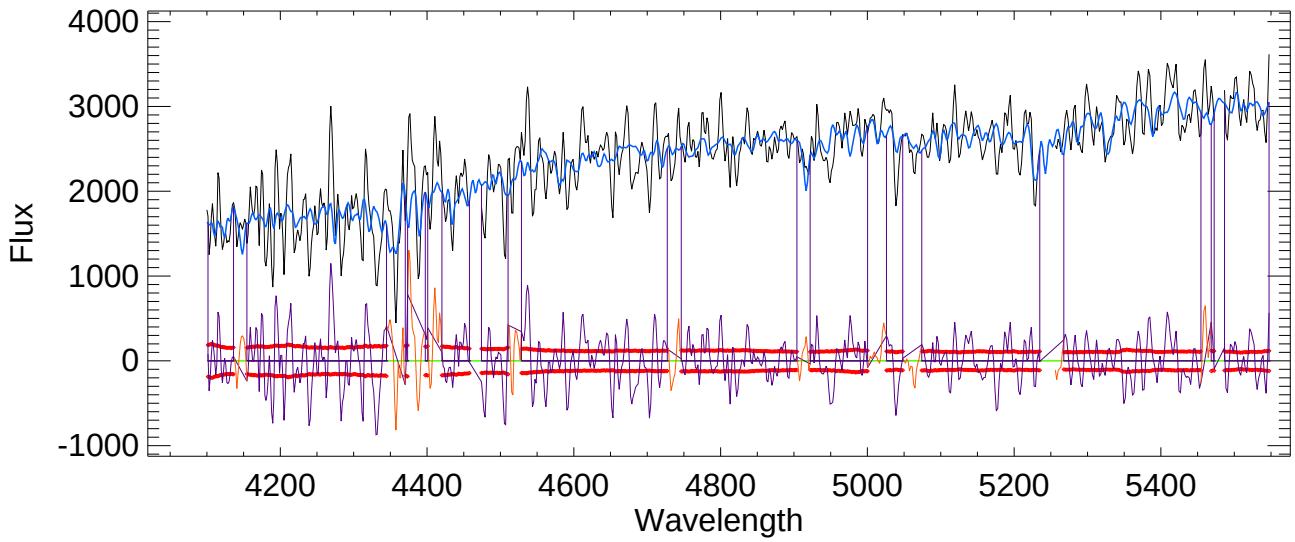

3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

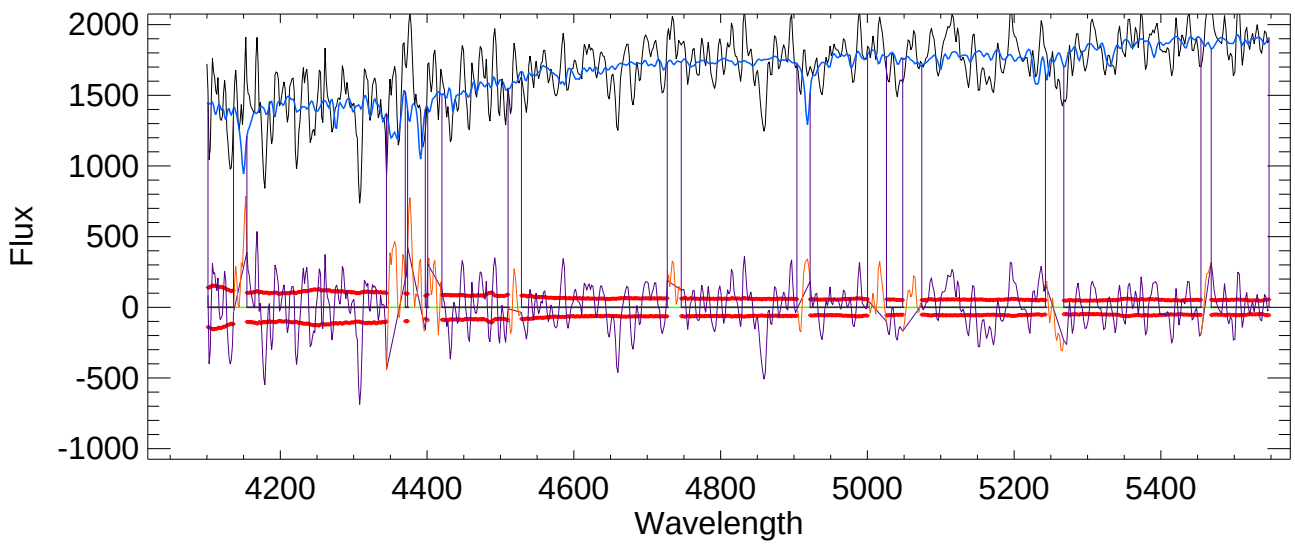

6000
4000
2000
0
-2000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

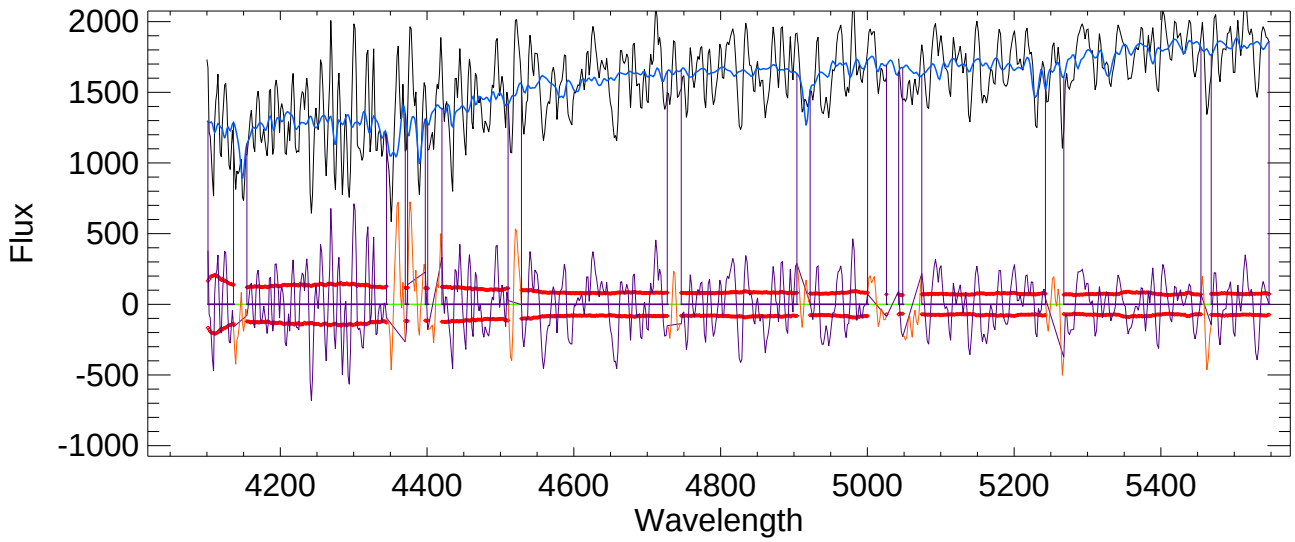

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

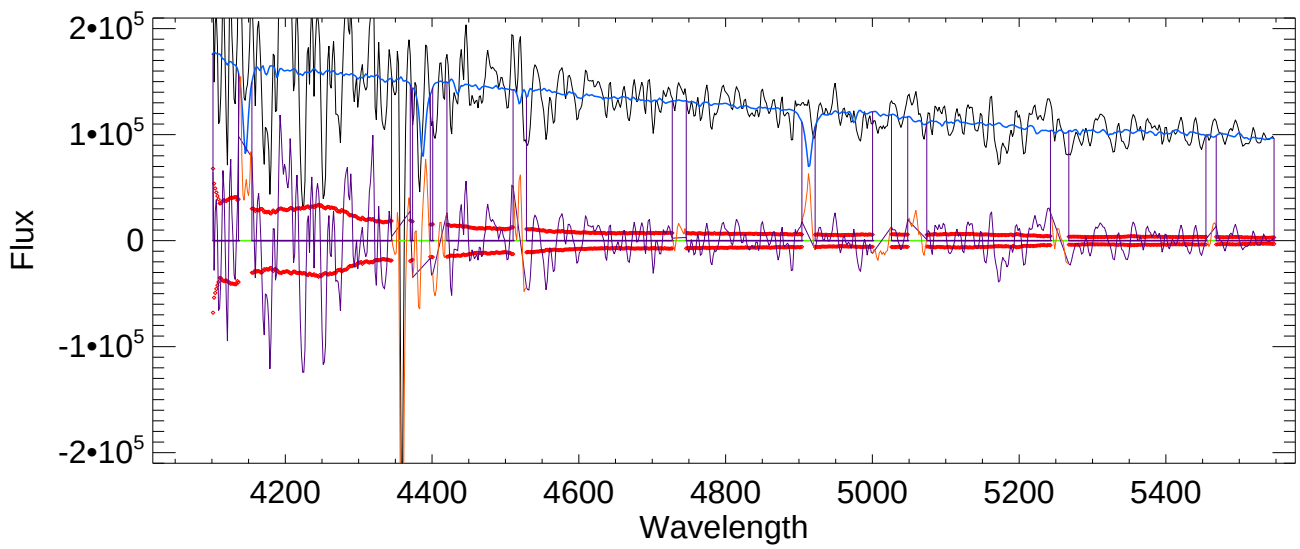

2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

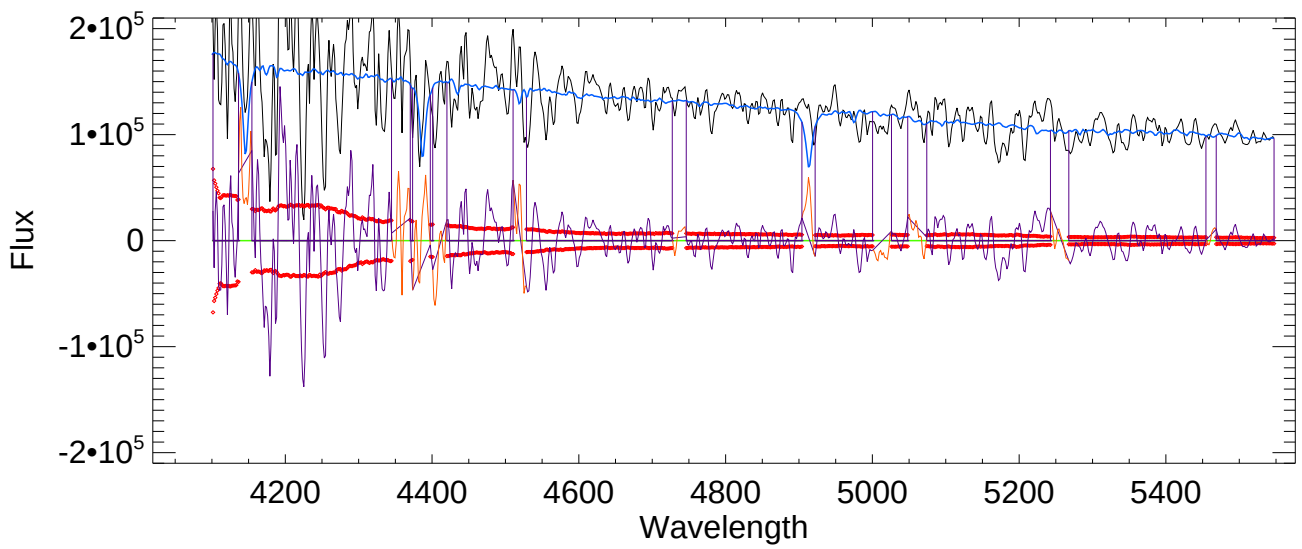

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

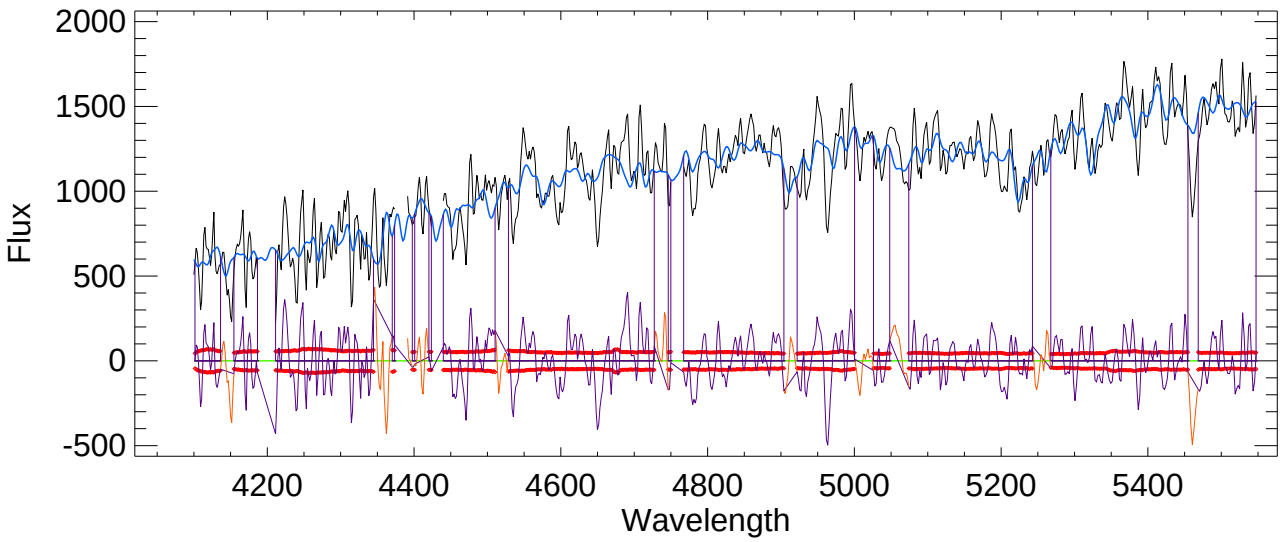

4000
3000
2000
1000
0
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

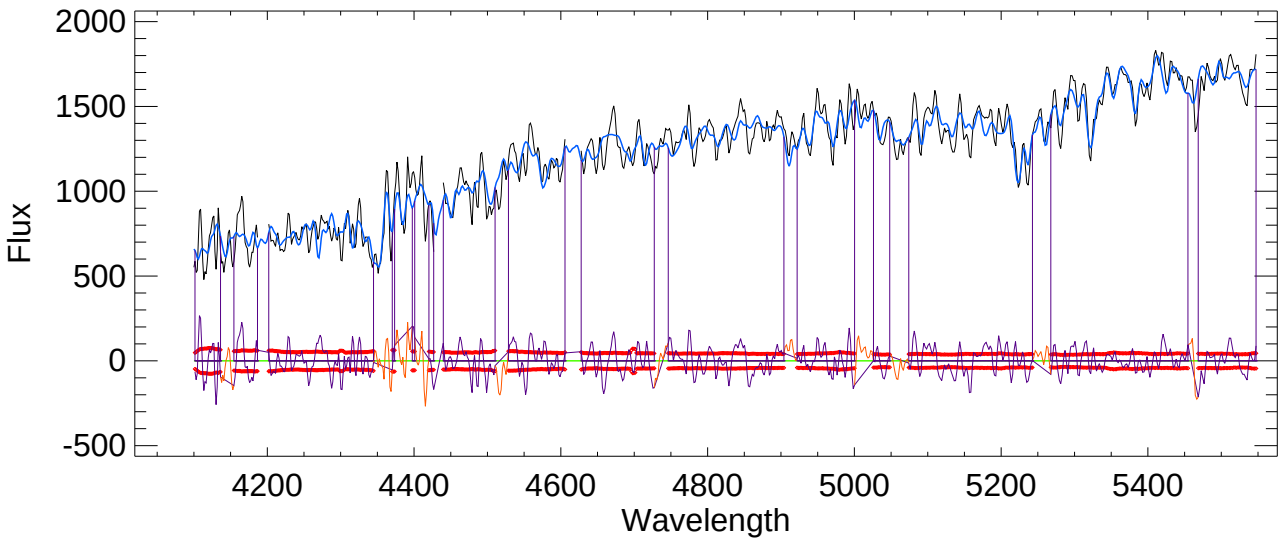

2000
1500
1000
500
0
-500
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

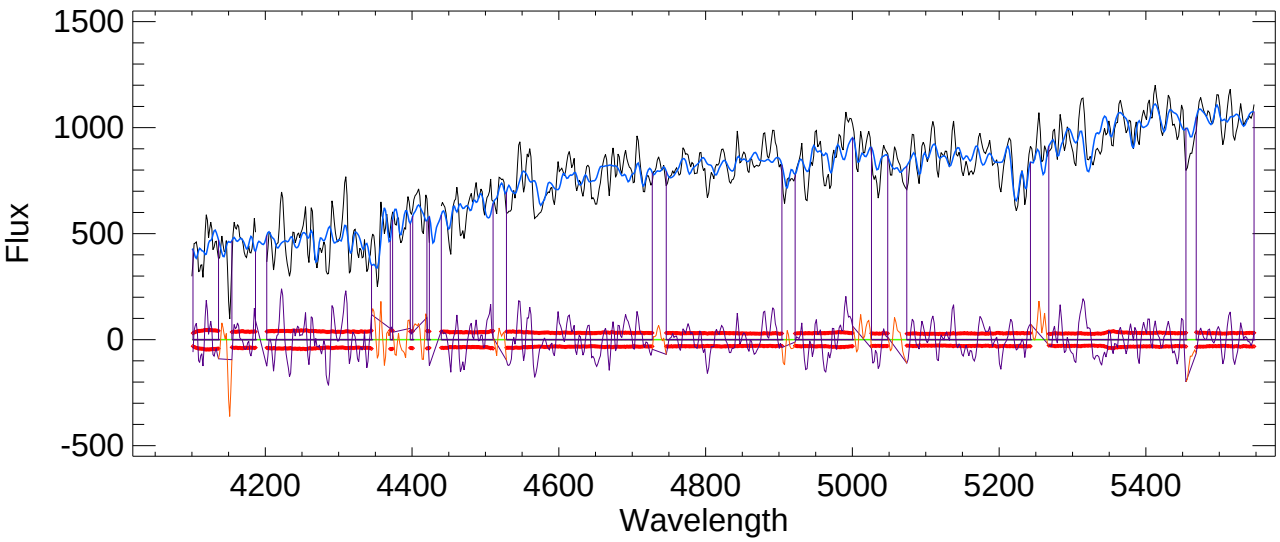

2000
1500
1000
500
0
-500
-1000
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

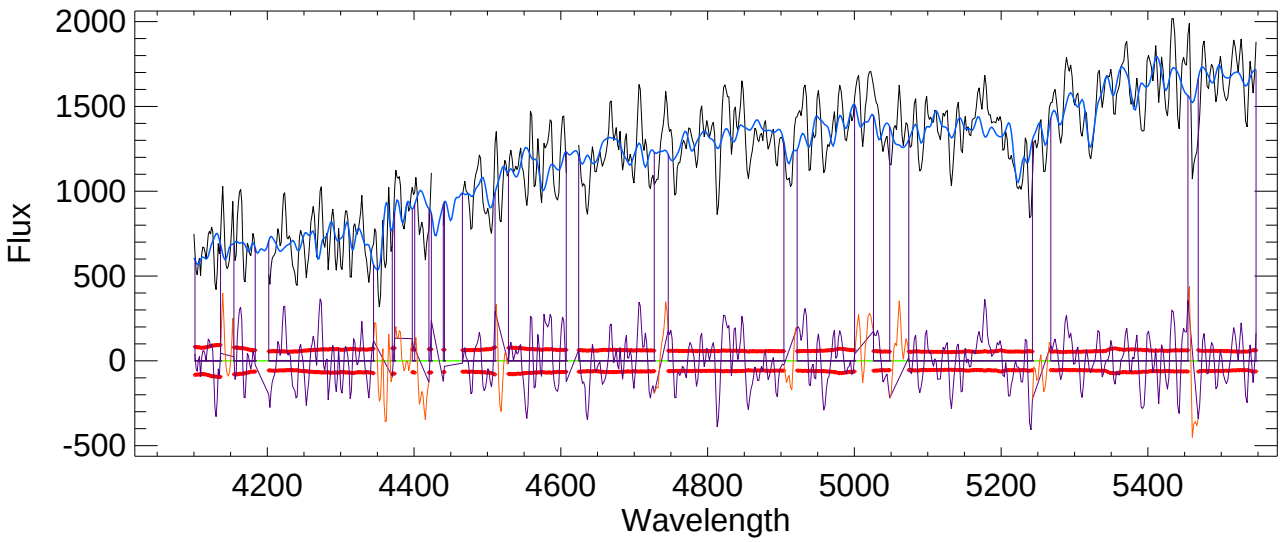

2•10^5
1•10^5
0
-1•10^5
-2•10^5
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

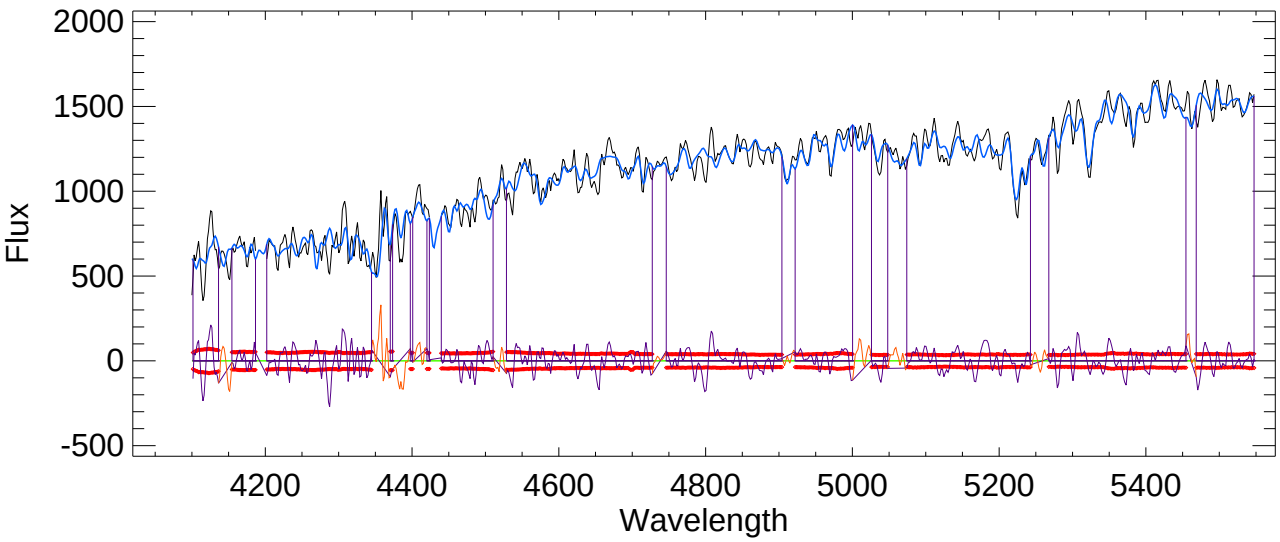

2•10^5
1•10^5
0
-1•10^5
-2•10^5
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength

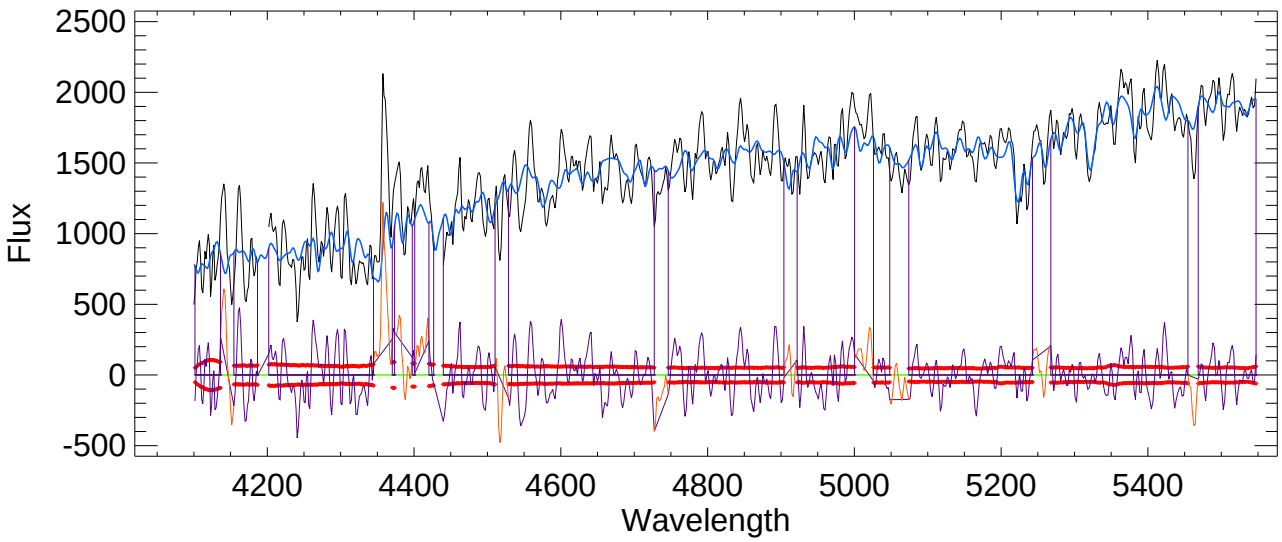

2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength


2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength


1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength


2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength


2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength


2500
2000
1500
1000
500
0
-500
Flux
4200
4400
4600
4800
5000
5200
5400
Wavelength