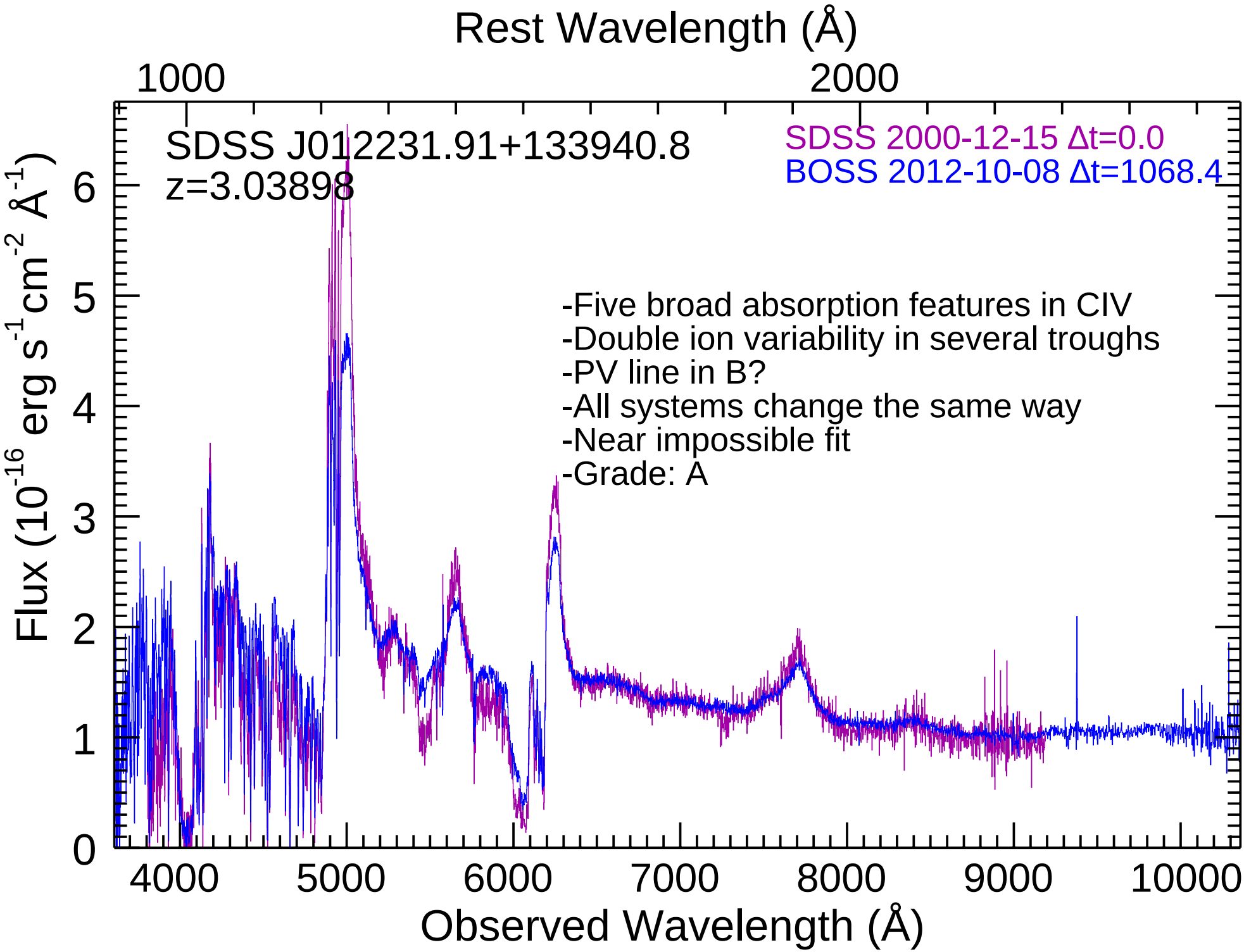
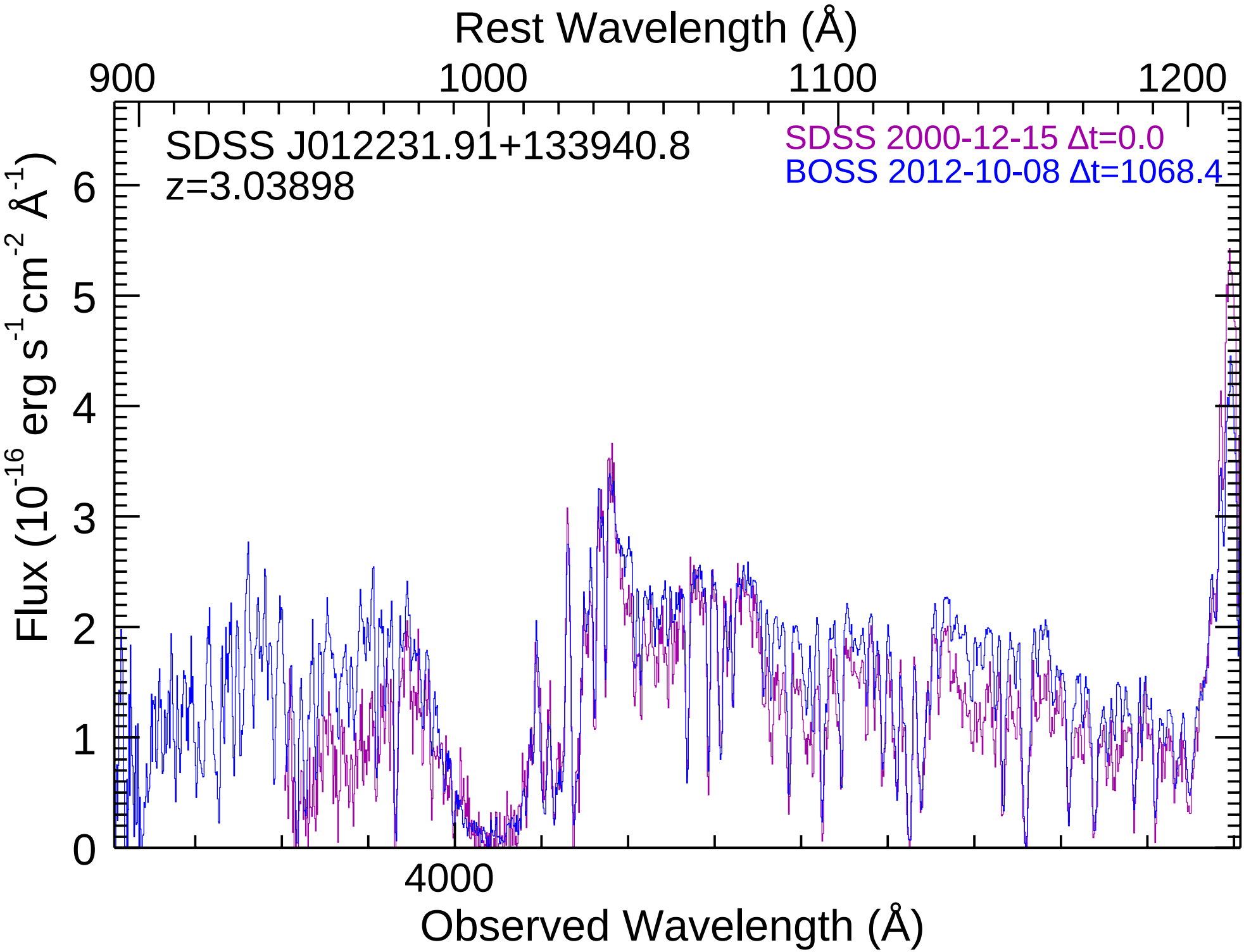
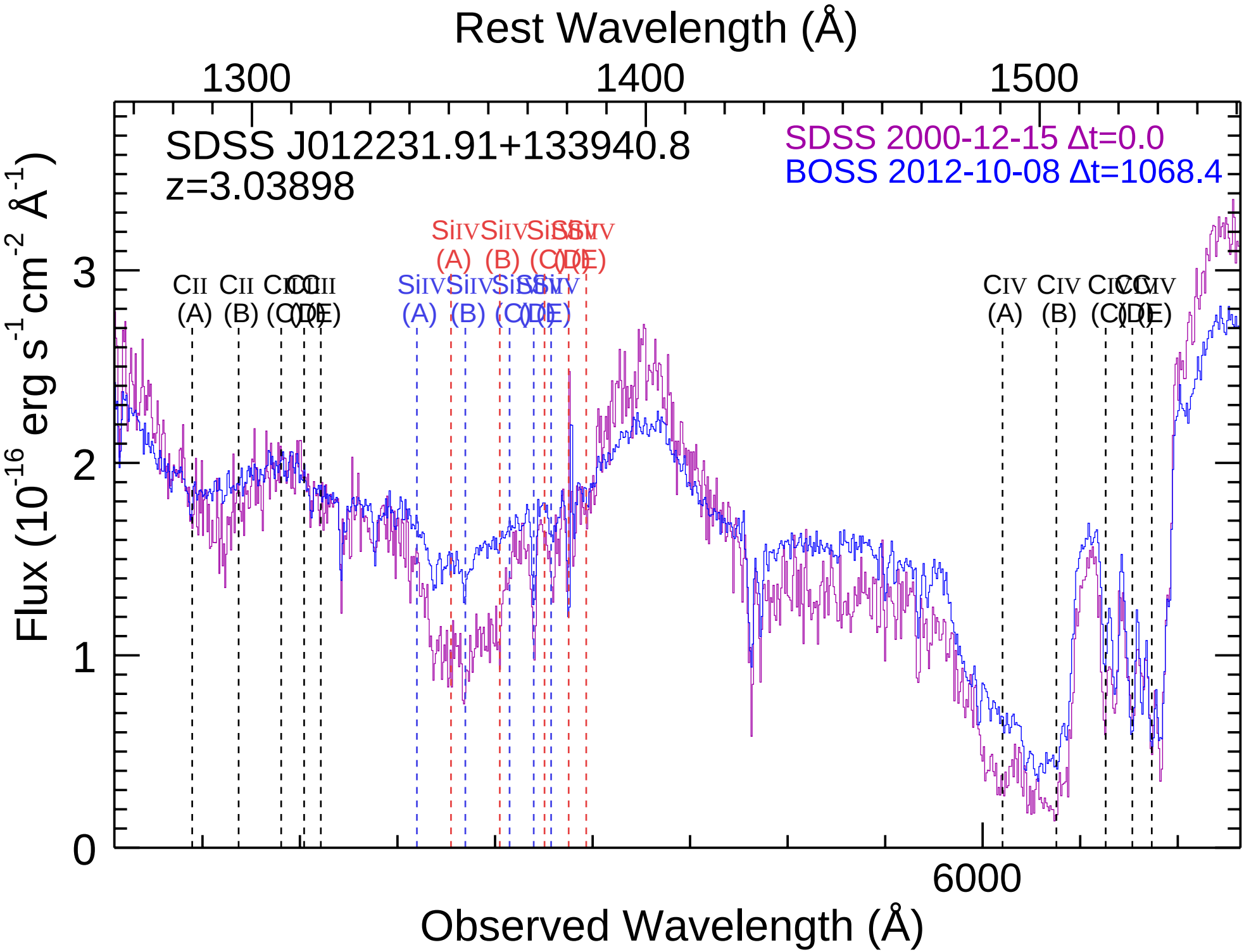
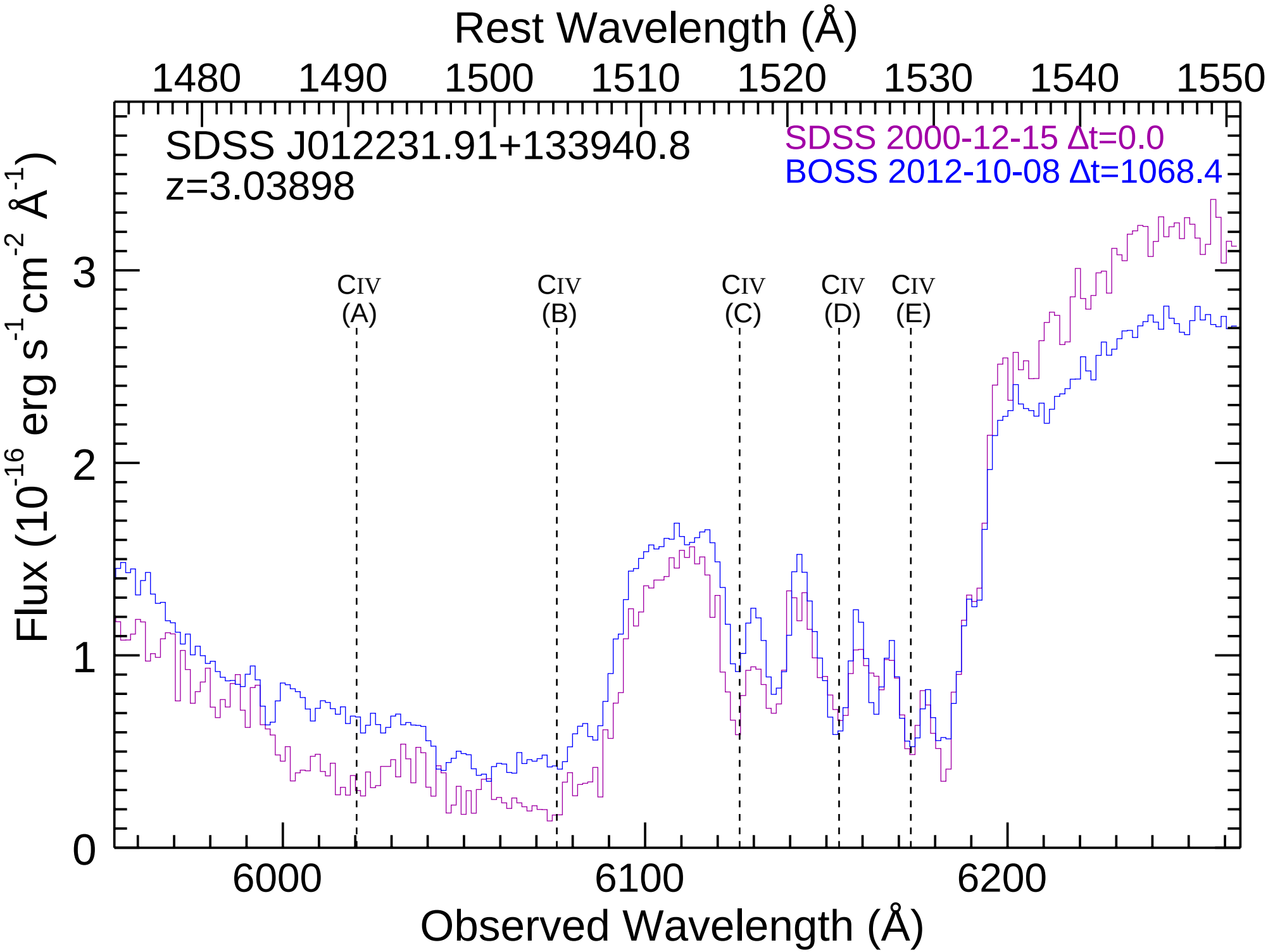
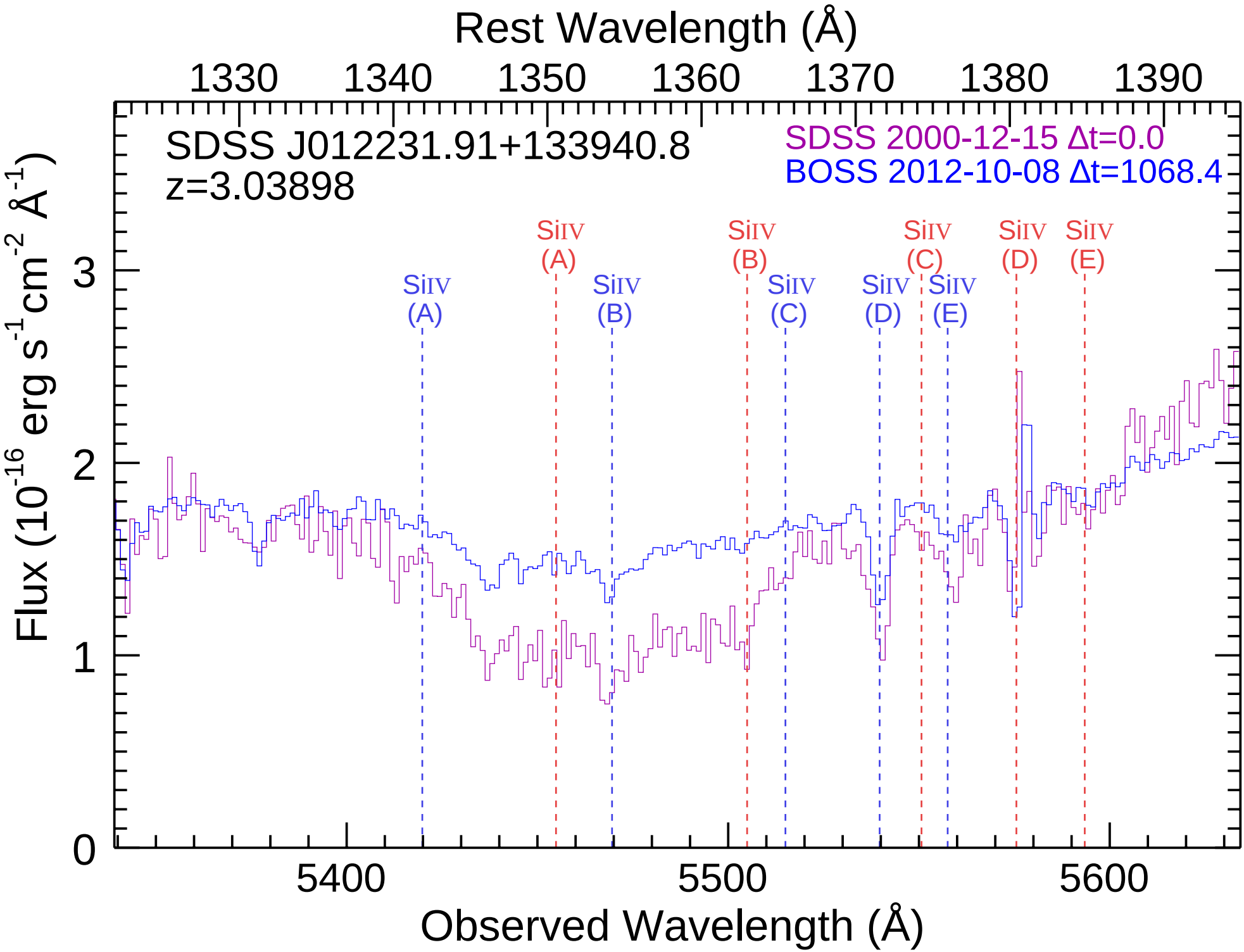
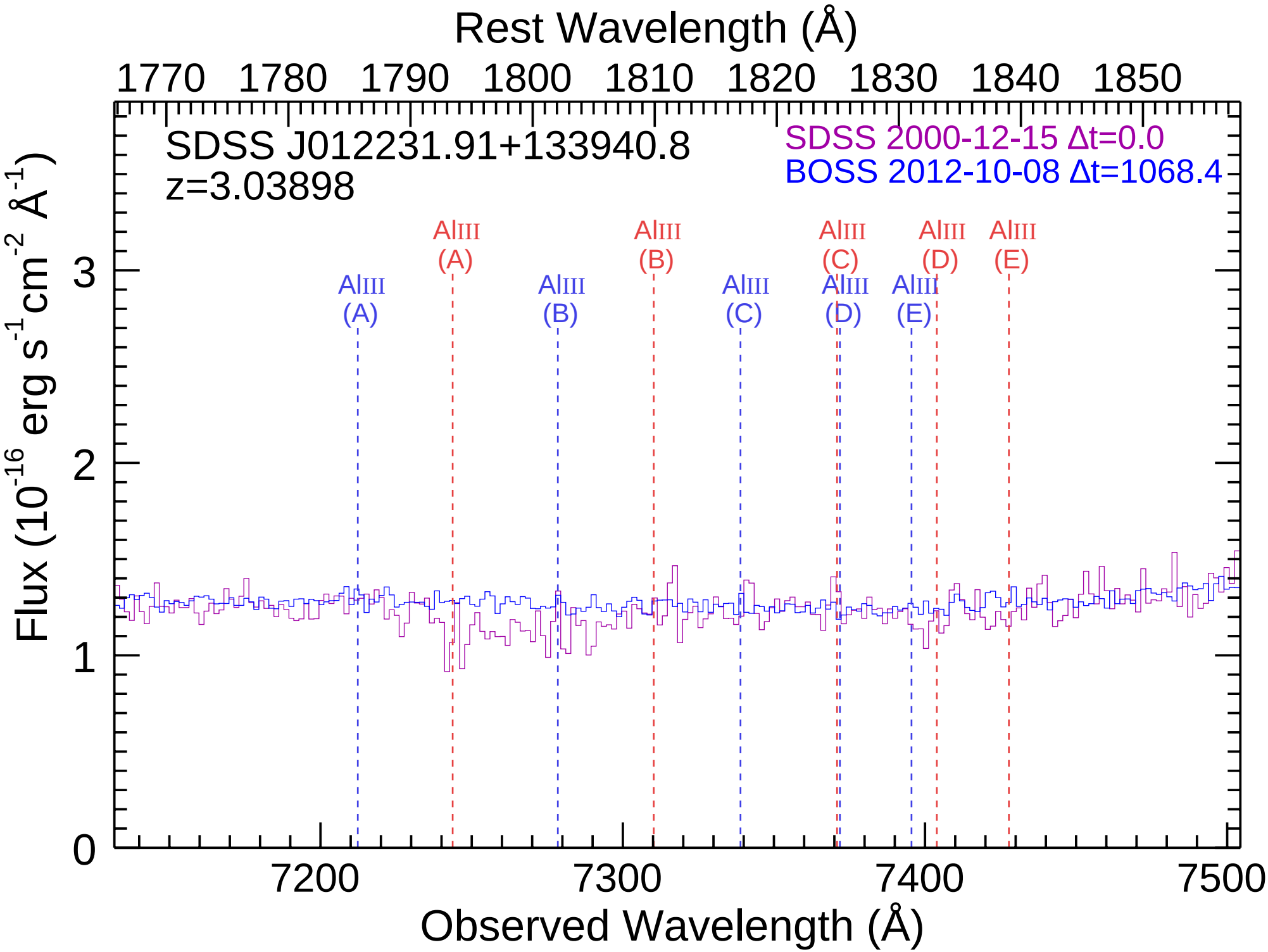

Rest Wavelength (Å)
1000
2000
SDSS J012231.91+133940.8
z=3.03898
SDSS 2000-12-15 Δt=0.0
BOSS 2012-10-08 Δt=1068.4
-Five broad absorption features in CIV
-Double ion variability in several troughs
-PV line in B?
-All systems change the same way
-Near impossible fit
-Grade: A
Flux (10^{-16} erg s^{-1}cm^{-2} Å^{-1})
0
1
2
3
4
5
6
4000
5000
6000
7000
8000
9000
10000
Observed Wavelength (Å)

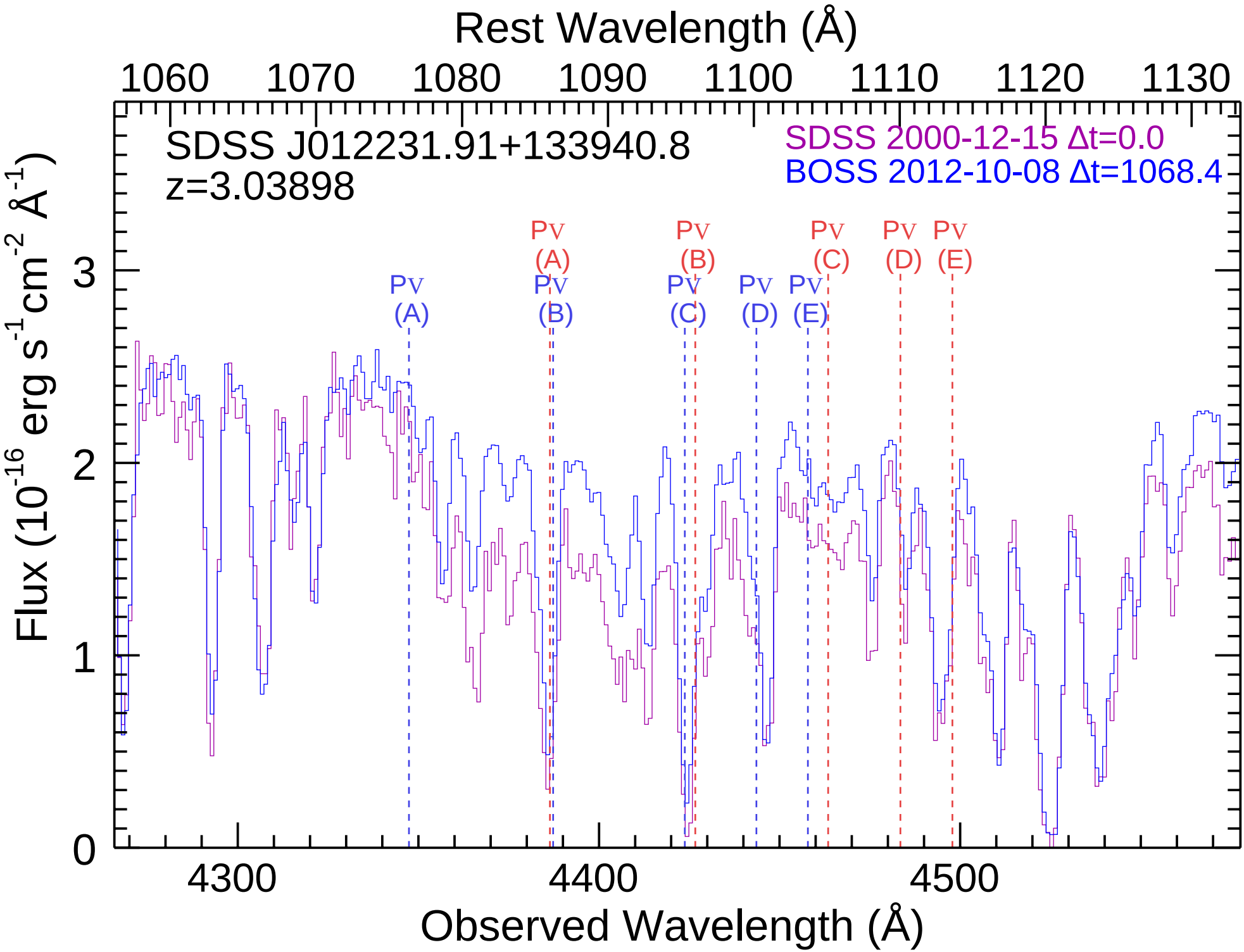

Rest Wavelength (Å)
900
1000
1100
1200
SDSS J012231.91+133940.8
z=3.03898
SDSS 2000-12-15 Δt=0.0
BOSS 2012-10-08 Δt=1068.4
Flux (10^{-16} erg s^{-1}cm^{-2} Å^{-1})
0
1
2
3
4
5
6
4000
Observed Wavelength (Å)

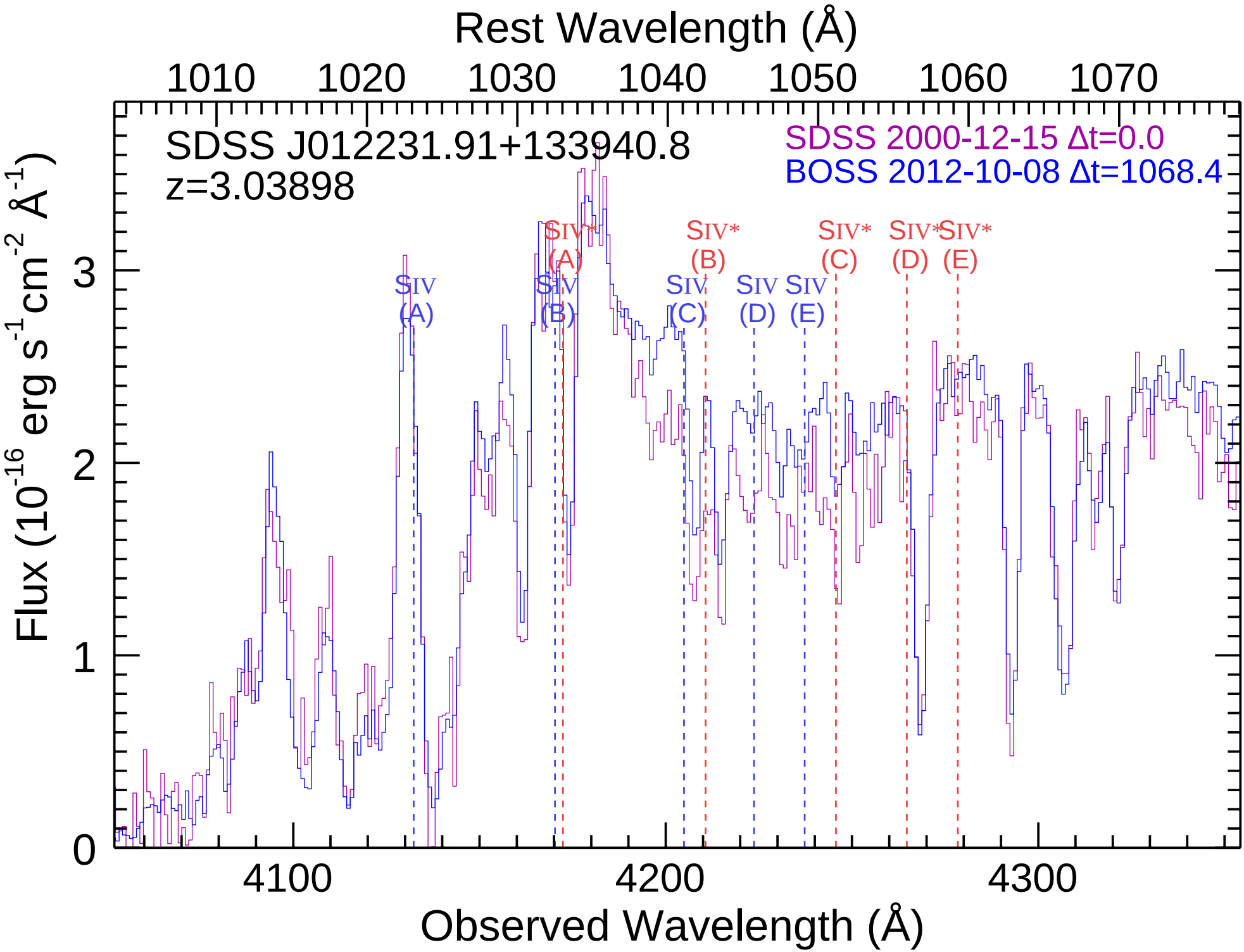

Rest Wavelength (Å)
1300
1400
1500
SDSS J012231.91+133940.8
z=3.03898
SDSS 2000-12-15 Δt=0.0
BOSS 2012-10-08 Δt=1068.4
CII (A)
CII (B)
CII (C)
CII (D)
CII (E)
SiIV (A)
SiIV (B)
SiIV (C)
SiIV (D)
SiIV (E)
CIV (A)
CIV (B)
CIV (C)
CIV (D)
CIV (E)
Flux (10^{-16} erg s^{-1}cm^{-2} Å^{-1})
0
1
2
3
6000
Observed Wavelength (Å)


Rest Wavelength (Å)
1480
1490
1500
1510
1520
1530
1540
1550
SDSS J012231.91+133940.8
z=3.03898
SDSS 2000-12-15 Δt=0.0
BOSS 2012-10-08 Δt=1068.4
CIV (A)
CIV (B)
CIV (C)
CIV (D)
CIV (E)
Flux (10^{-16} erg s^{-1}cm^{-2} Å^{-1})
0
1
2
3
6000
6100
6200
Observed Wavelength (Å)


Rest Wavelength (Å)
1330
1340
1350
1360
1370
1380
1390
SDSS J012231.91+133940.8
z=3.03898
SDSS 2000-12-15 Δt=0.0
BOSS 2012-10-08 Δt=1068.4
SiIV (A)
SiIV (B)
SiIV (C)
SiIV (D)
SiIV (E)
SiIV (A)
SiIV (B)
SiIV (C)
SiIV (D)
SiIV (E)
Flux (10^{-16} erg s^{-1}cm^{-2} Å^{-1})
0
1
2
3
5400
5500
5600
Observed Wavelength (Å)


Rest Wavelength (Å)
1770
1780
1790
1800
1810
1820
1830
1840
1850
SDSS J012231.91+133940.8
z=3.03898
SDSS 2000-12-15 Δt=0.0
BOSS 2012-10-08 Δt=1068.4
AlIII (A)
AlIII (B)
AlIII (C)
AlIII (D)
AlIII (E)
AlIII (A)
AlIII (B)
AlIII (C)
AlIII (D)
AlIII (E)
Flux (10^{-16} erg s^{-1}cm^{-2} Å^{-1})
0
1
2
3
7200
7300
7400
7500
Observed Wavelength (Å)


Rest Wavelength (Å)
1060
1070
1080
1090
1100
1110
1120
1130
SDSS J012231.91+133940.8
z=3.03898
SDSS 2000-12-15 Δt=0.0
BOSS 2012-10-08 Δt=1068.4
PV (A)
PV (B)
PV (C)
PV (D)
PV (E)
PV (A)
PV (B)
PV (C)
PV (D)
PV (E)
Flux (10^{-16} erg s^{-1}cm^{-2} Å^{-1})
0
1
2
3
4300
4400
4500
Observed Wavelength (Å)


Rest Wavelength (Å)
1010
1020
1030
1040
1050
1060
1070
SDSS J012231.91+133940.8
z=3.03898
SDSS 2000-12-15 Δt=0.0
BOSS 2012-10-08 Δt=1068.4
SIV (A)
SIV (B)
SIV (C)
SIV (D)
SIV (E)
SIV* (A)
SIV* (B)
SIV* (C)
SIV* (D)
SIV* (E)
Flux (10^{-16} erg s^{-1}cm^{-2} Å^{-1})
0
1
2
3
4100
4200
4300
Observed Wavelength (Å)