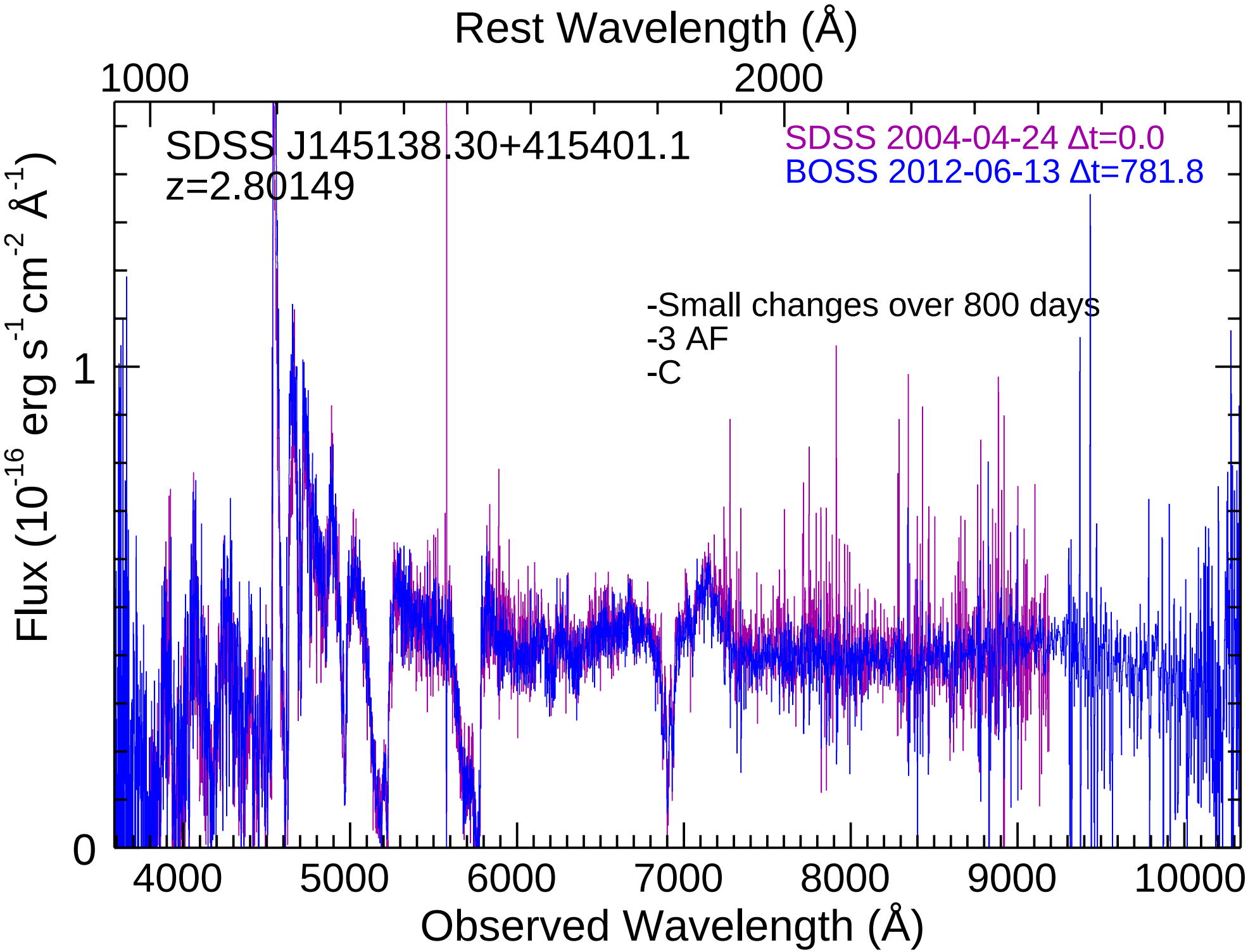
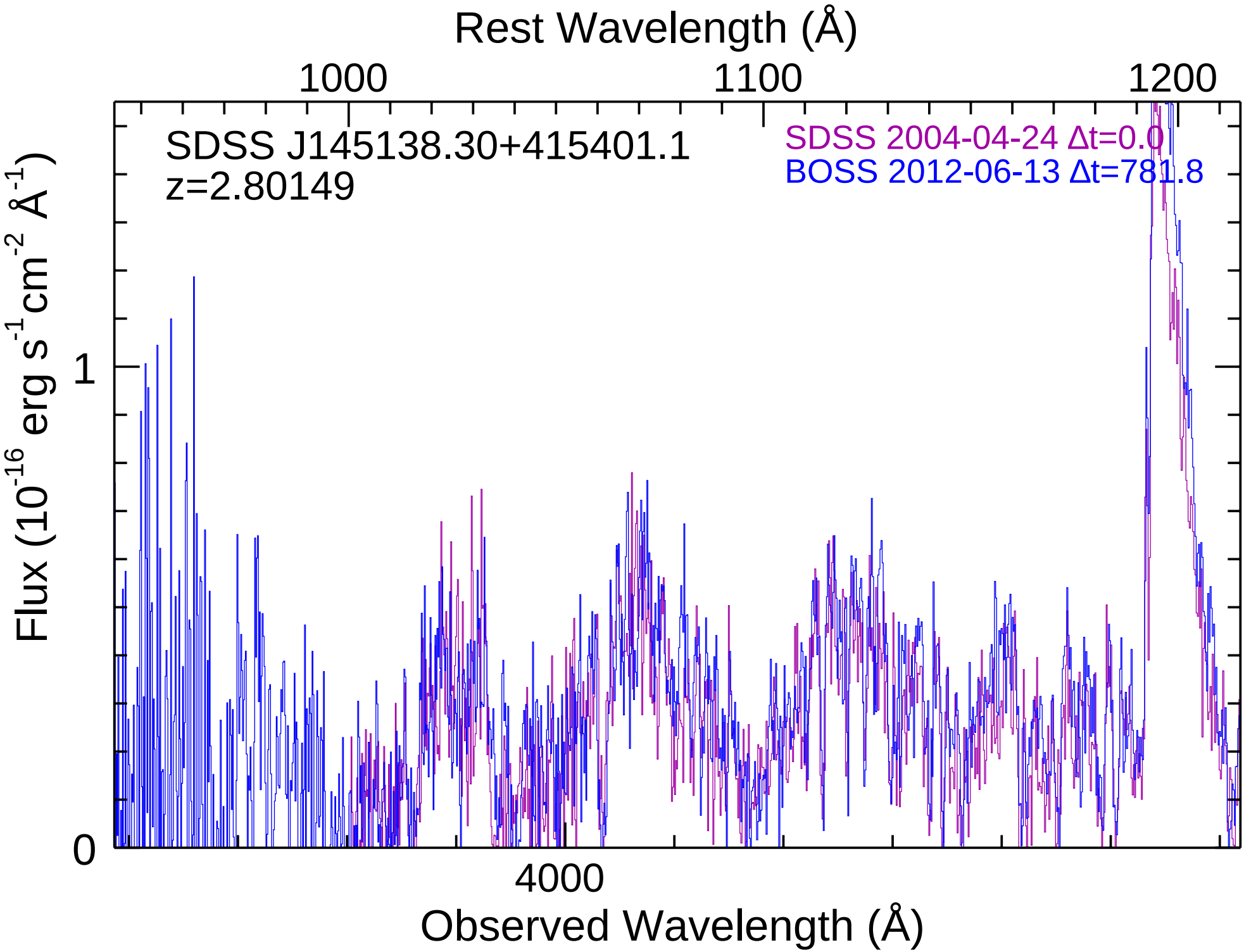
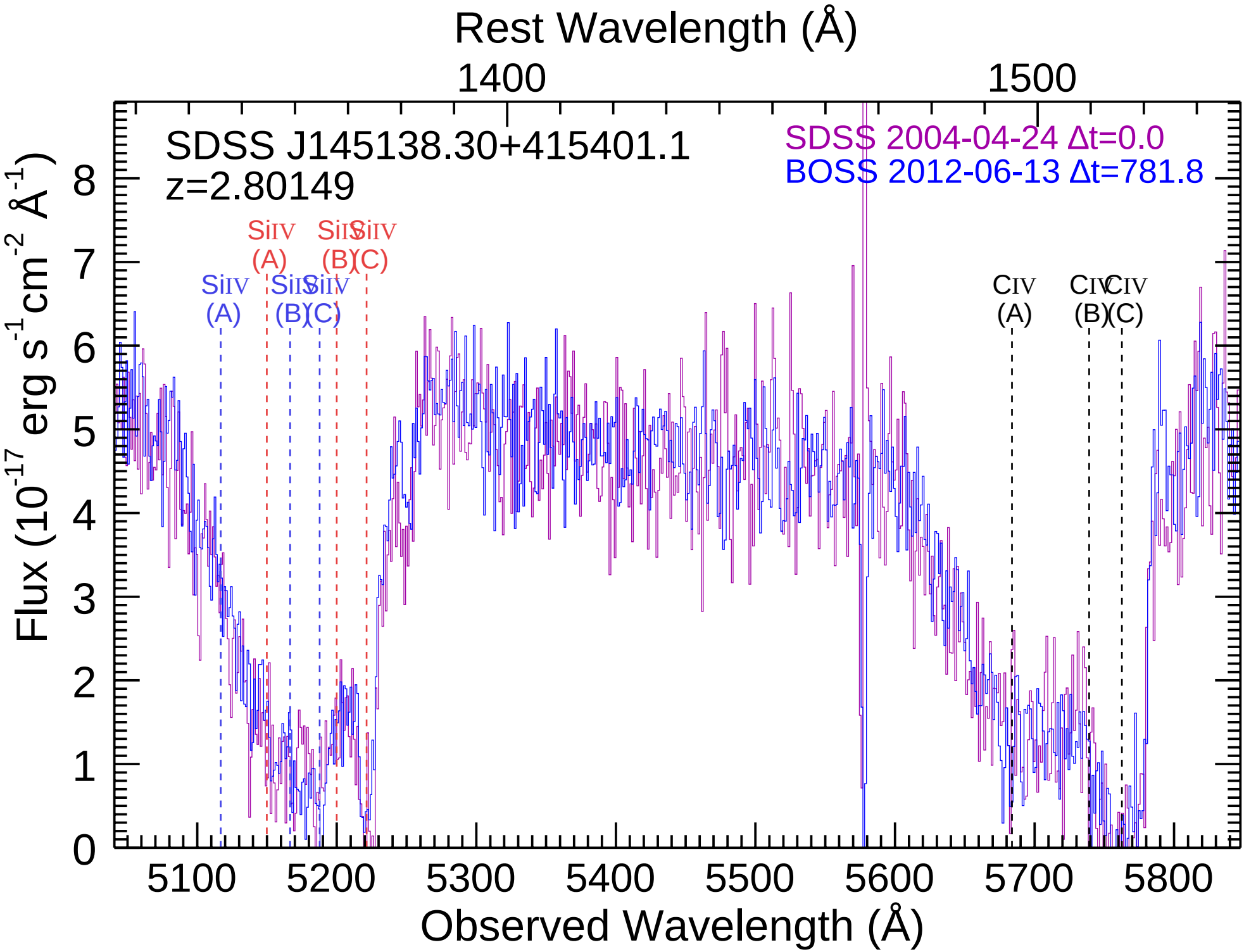
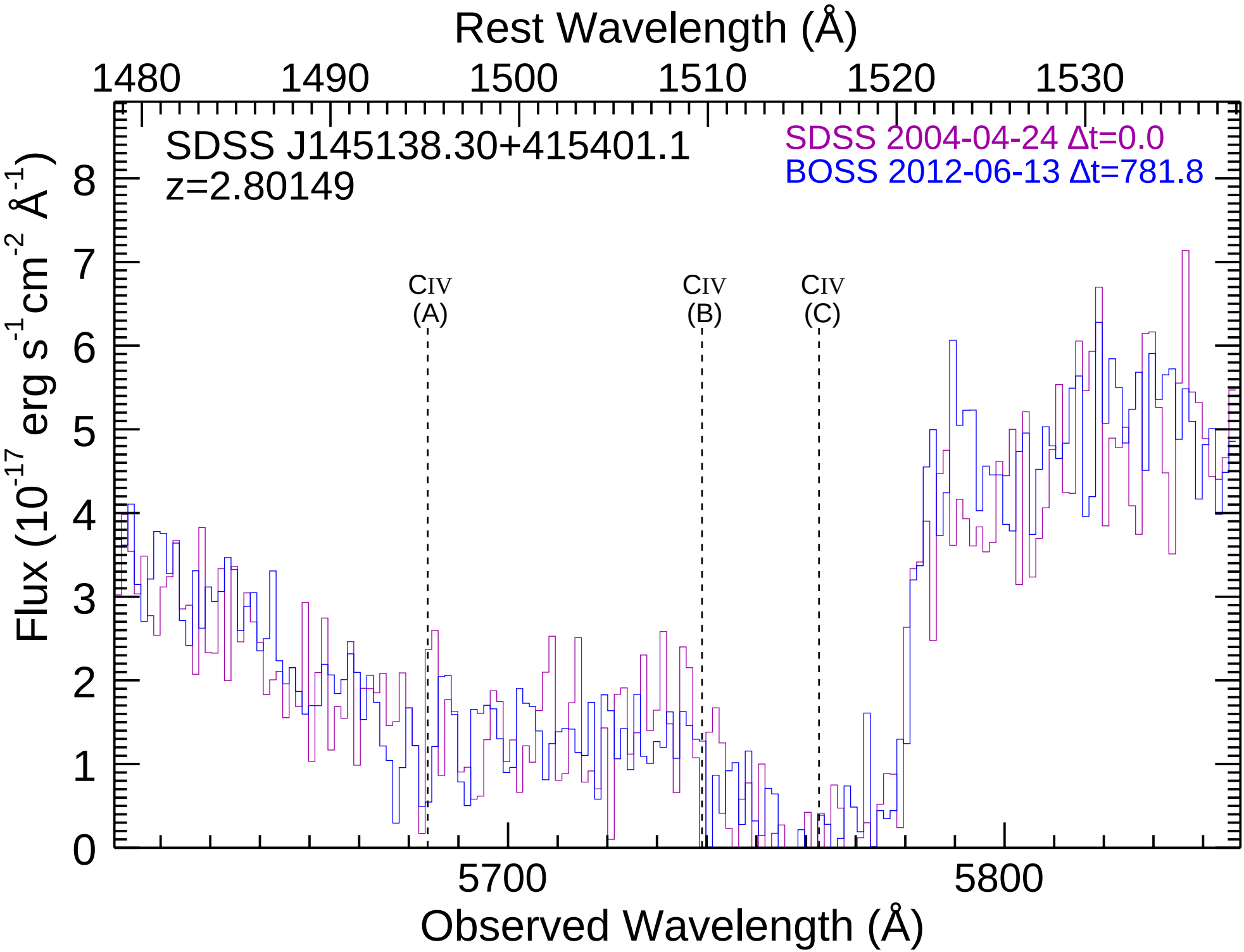
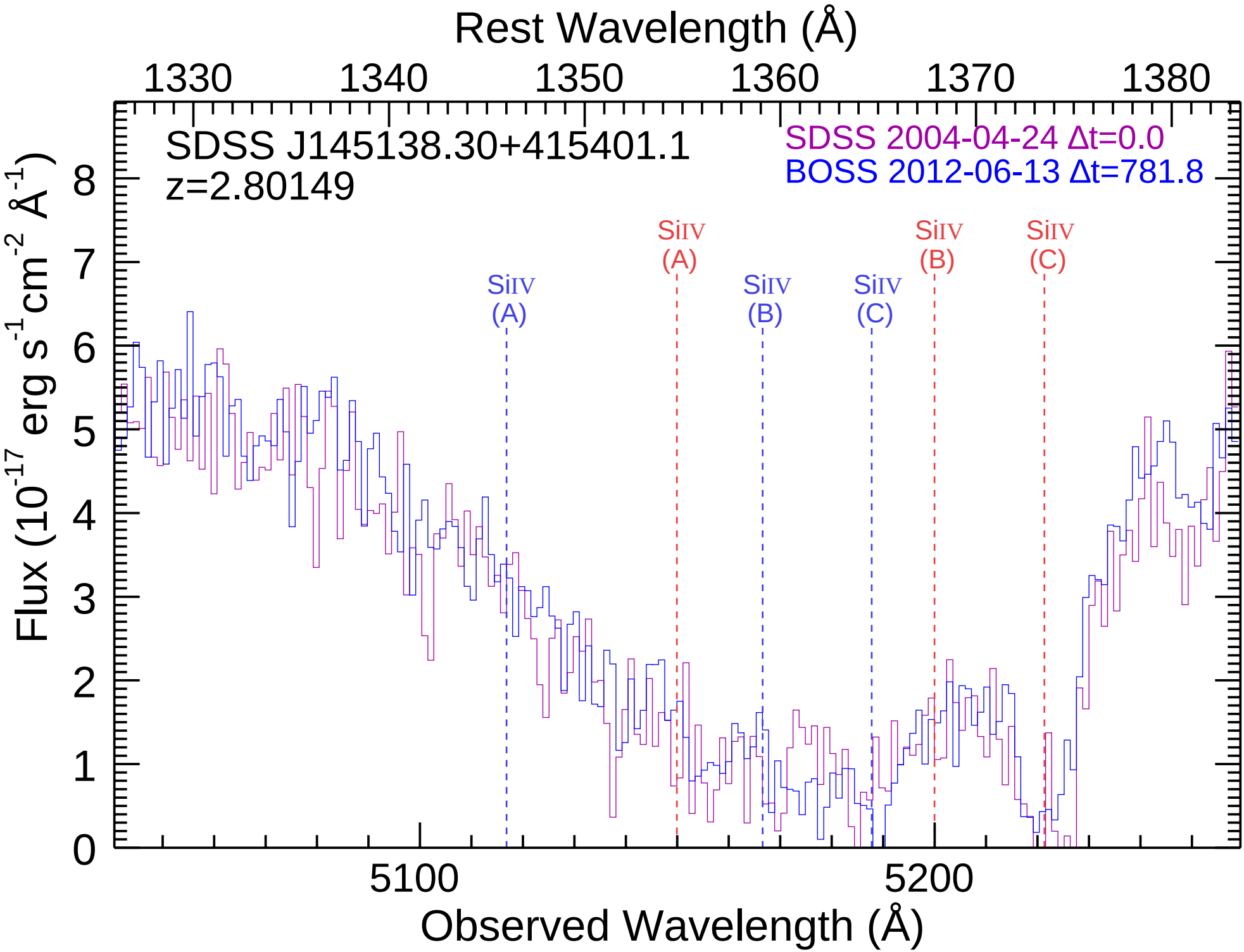
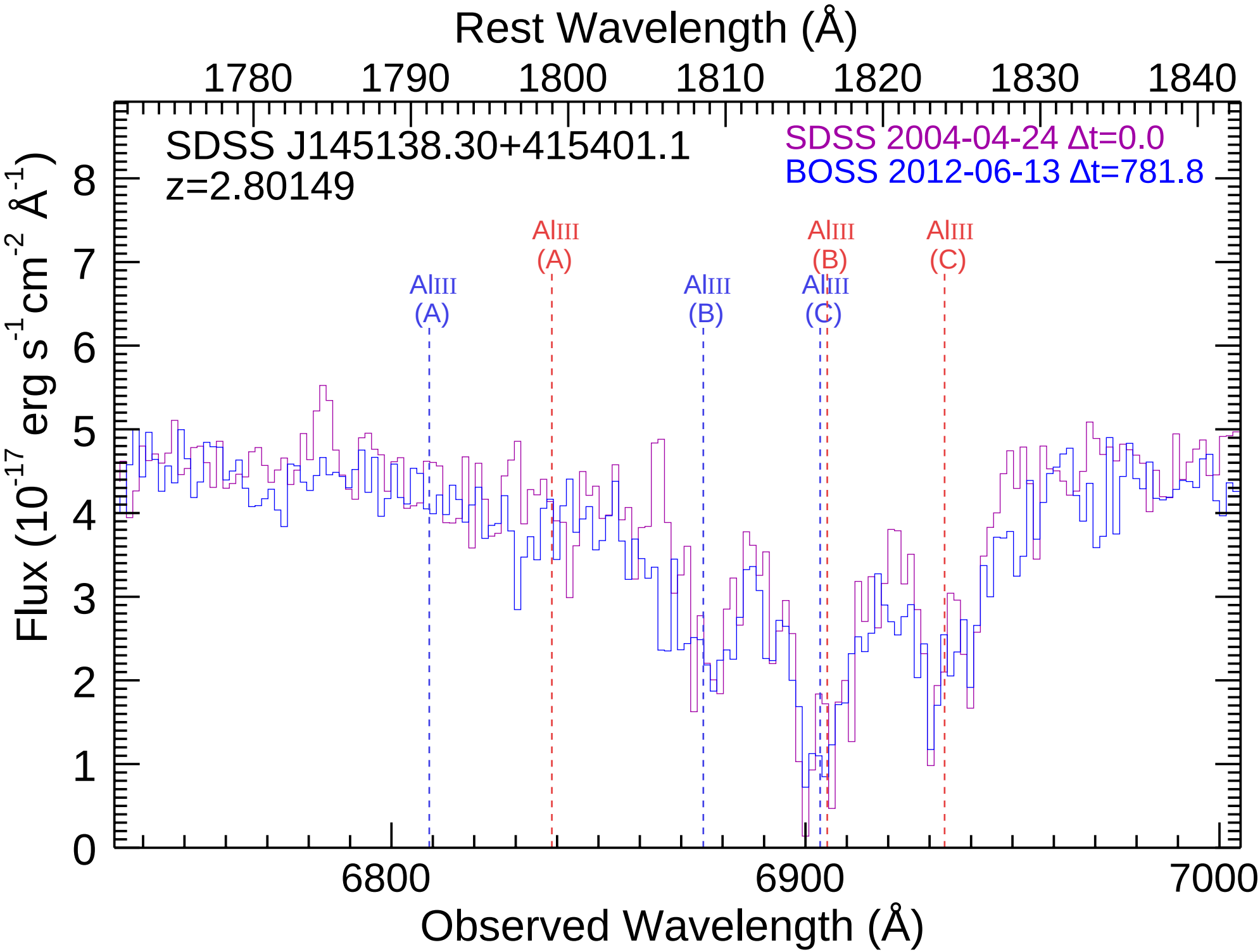

Rest Wavelength (Å)
1000
2000
SDSS J145138.30+415401.1
z=2.80149
SDSS 2004-04-24 Δt=0.0
BOSS 2012-06-13 Δt=781.8
-Small changes over 800 days
-3 AF
-C
Flux (10^{-16} erg s^{-1}cm^{-2} Å^{-1})
1
0
4000
5000
6000
7000
8000
9000
10000
Observed Wavelength (Å)

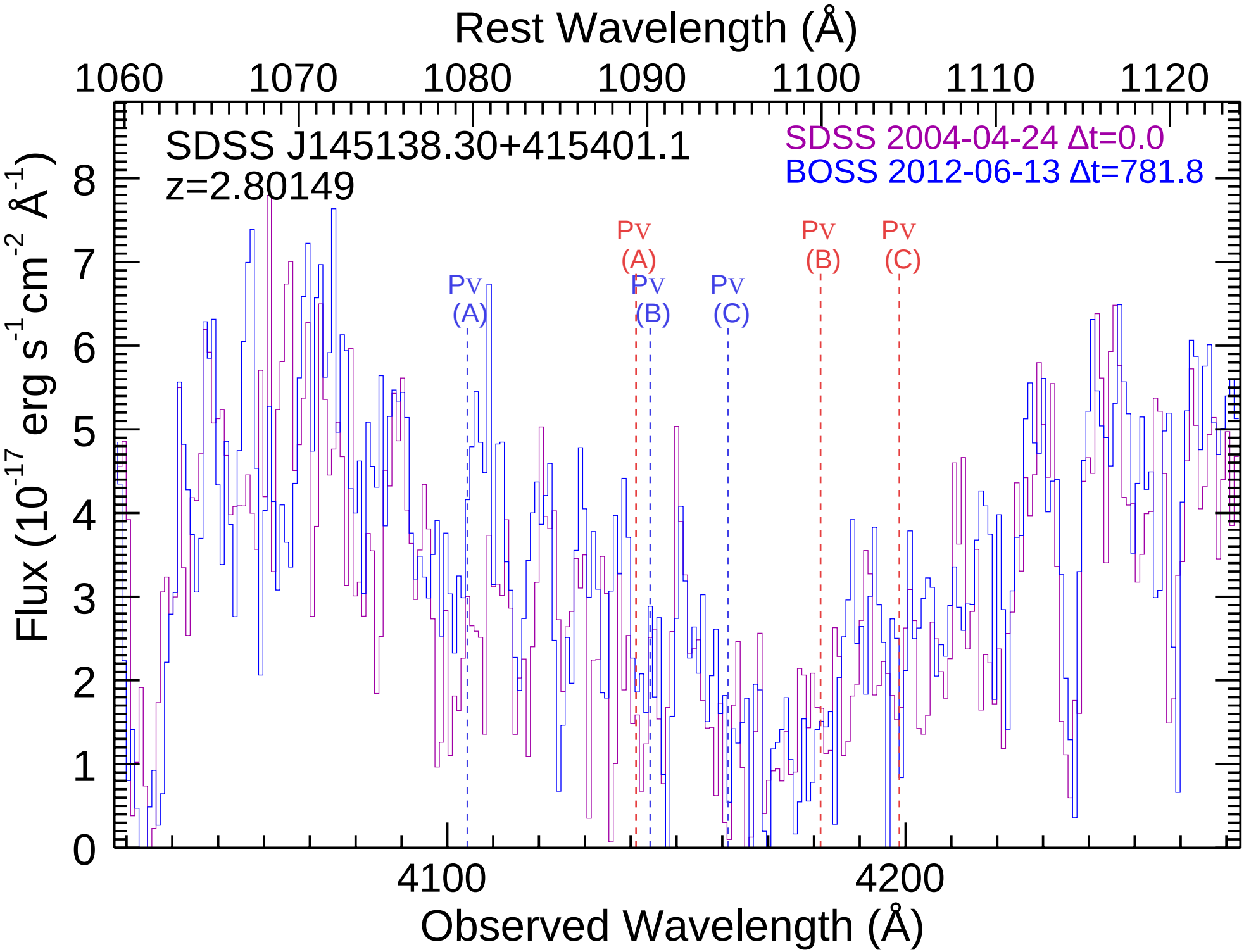

Rest Wavelength (Å)
1000
1100
1200
SDSS J145138.30+415401.1
z=2.80149
SDSS 2004-04-24 Δt=0.0
BOSS 2012-06-13 Δt=781.8
Flux (10^{-16} erg s^{-1}cm^{-2} Å^{-1})
1
0
4000
Observed Wavelength (Å)

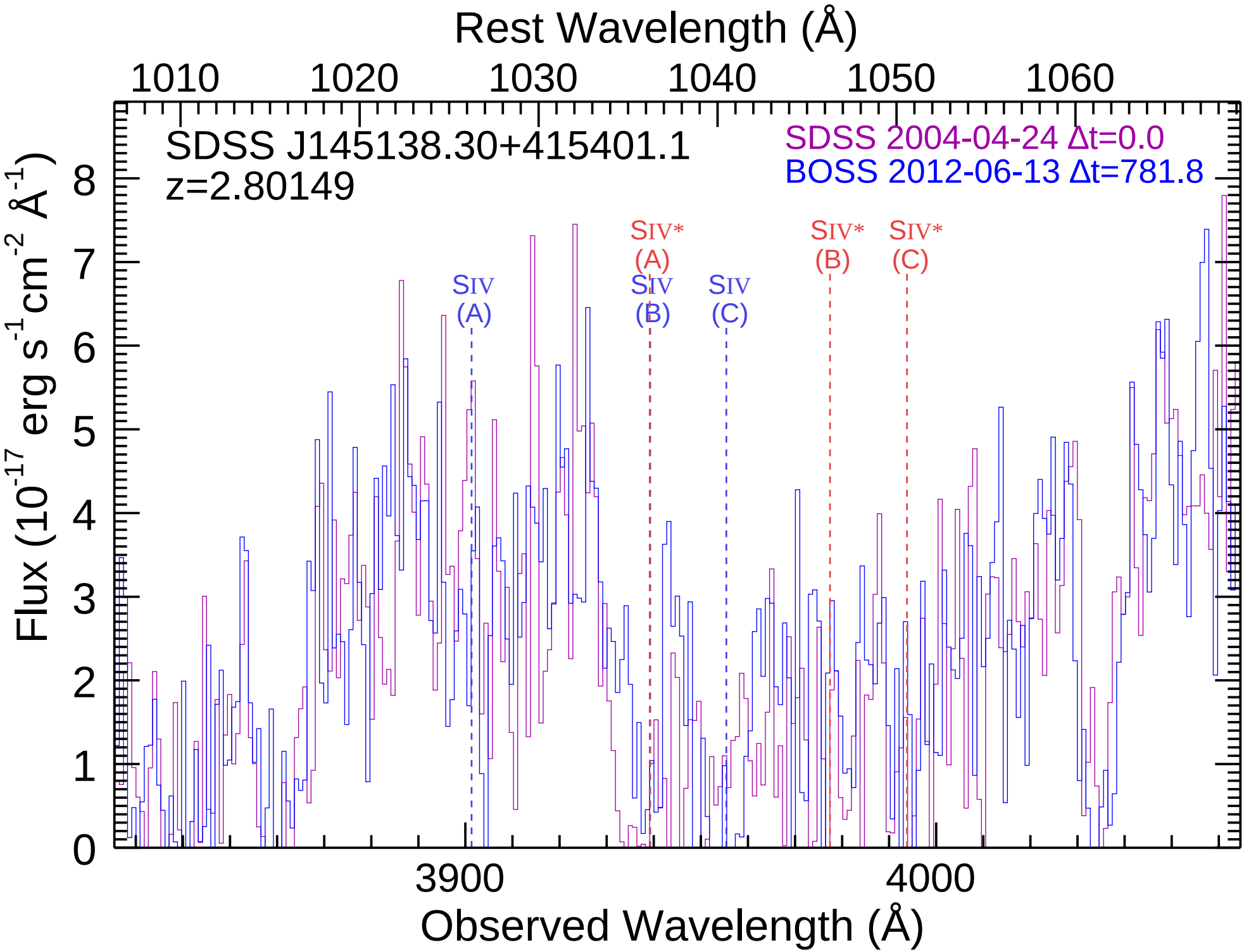

Rest Wavelength (Å)
1400
1500
SDSS J145138.30+415401.1
z=2.80149
SDSS 2004-04-24 Δt=0.0
BOSS 2012-06-13 Δt=781.8
SiIV (A)
SiIV (B)
SiIV (C)
SiIV (A)
SiIV (B)
SiIV (C)
CIV (A)
CIV (B)
CIV (C)
Flux (10^{-17} erg s^{-1}cm^{-2} Å^{-1})
0
1
2
3
4
5
6
7
8
5100
5200
5300
5400
5500
5600
5700
5800
Observed Wavelength (Å)


Rest Wavelength (Å)
1480
1490
1500
1510
1520
1530
SDSS J145138.30+415401.1
z=2.80149
SDSS 2004-04-24 Δt=0.0
BOSS 2012-06-13 Δt=781.8
CIV (A)
CIV (B)
CIV (C)
Flux (10^{-17} erg s^{-1}cm^{-2} Å^{-1})
0
1
2
3
4
5
6
7
8
5700
5800
Observed Wavelength (Å)


Rest Wavelength (Å)
1330
1340
1350
1360
1370
1380
SDSS J145138.30+415401.1
z=2.80149
SDSS 2004-04-24 Δt=0.0
BOSS 2012-06-13 Δt=781.8
SiIV (A)
SiIV (B)
SiIV (C)
SiIV (A)
SiIV (B)
SiIV (C)
Flux (10^{-17} erg s^{-1}cm^{-2} Å^{-1})
0
1
2
3
4
5
6
7
8
5100
5200
Observed Wavelength (Å)


Rest Wavelength (Å)
1780
1790
1800
1810
1820
1830
1840
SDSS J145138.30+415401.1
z=2.80149
SDSS 2004-04-24 Δt=0.0
BOSS 2012-06-13 Δt=781.8
AlIII (A)
AlIII (A)
AlIII (B)
AlIII (B)
AlIII (C)
AlIII (C)
Flux (10^{-17} erg s^{-1}cm^{-2} Å^{-1})
0
1
2
3
4
5
6
7
8
6800
6900
7000
Observed Wavelength (Å)


Rest Wavelength (Å)
1060
1070
1080
1090
1100
1110
1120
SDSS J145138.30+415401.1
z=2.80149
SDSS 2004-04-24 Δt=0.0
BOSS 2012-06-13 Δt=781.8
PV (A)
PV (B)
PV (C)
PV (A)
PV (B)
PV (C)
Flux (10^{-17} erg s^{-1}cm^{-2} Å^{-1})
0
1
2
3
4
5
6
7
8
4100
4200
Observed Wavelength (Å)


Rest Wavelength (Å)
1010
1020
1030
1040
1050
1060
SDSS J145138.30+415401.1
z=2.80149
SDSS 2004-04-24 Δt=0.0
BOSS 2012-06-13 Δt=781.8
SIV (A)
SIV* (A)
SIV (B)
SIV (C)
SIV* (B)
SIV* (C)
Flux (10^{-17} erg s^{-1}cm^{-2} Å^{-1})
0
1
2
3
4
5
6
7
8
3900
4000
Observed Wavelength (Å)