

**SDSS\_J1048+4457\_MJD57449**

**Rest Wavelength ( $\text{\AA}$ )**

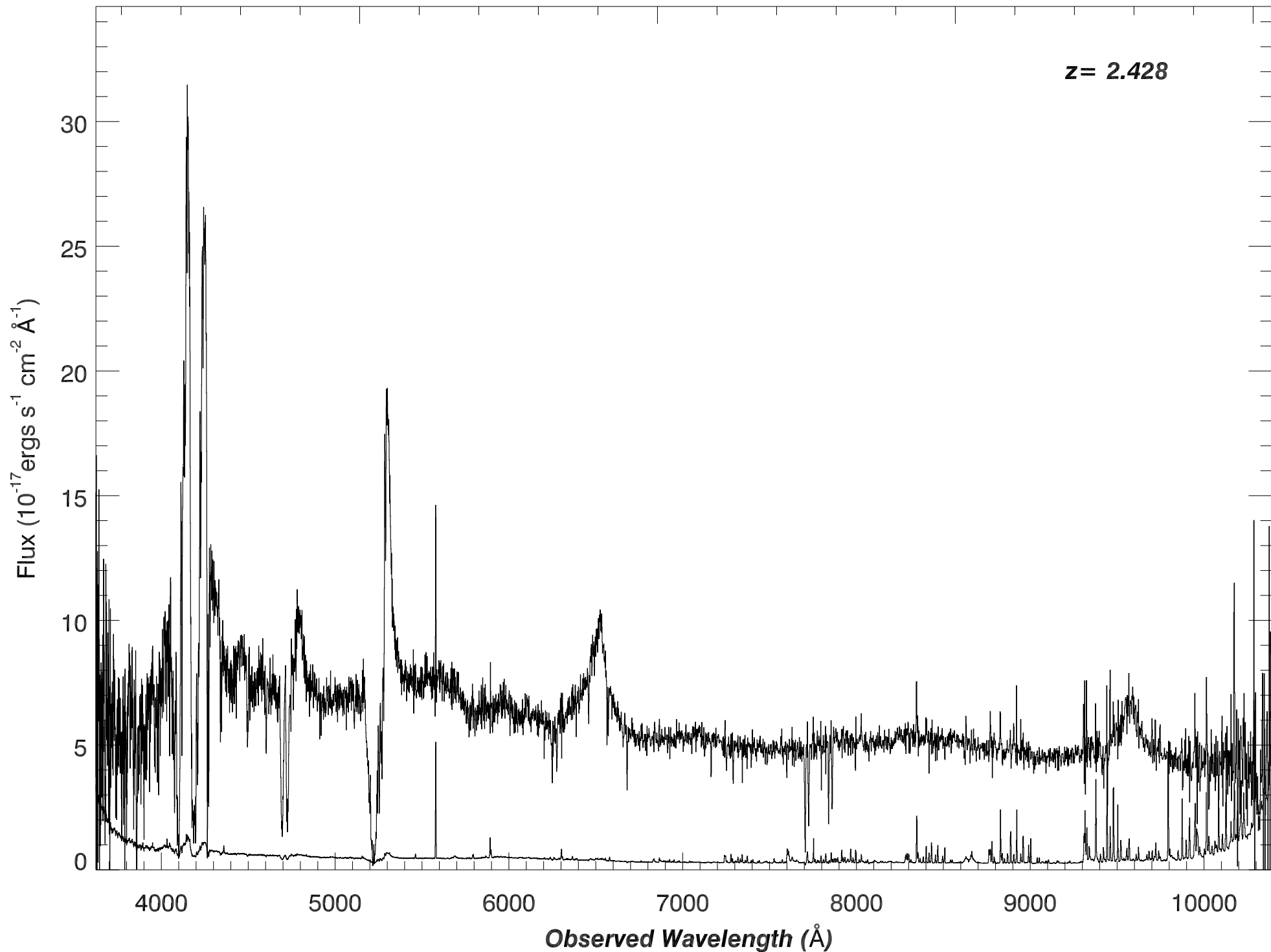
**1500**

**2000**

**2500**

**3000**

**$z = 2.428$**



# SDSS\_J1048+4457\_MJD57449

Rest Wavelength (Å)

1100

1150

1200

1250

1300

$z=2.3691$

$z=2.428$

Flux ( $10^{-17}$  ergs  $s^{-1}$   $cm^{-2}$   $\text{\AA}^{-1}$ )

30

20

10

0

-2  
-1  
0  
1

C II 1335 1.7555

C II 1335 1.8034

P V 1118 0.0

Fe III 1123 0.0

Fe III<sup>\*</sup> 1125 0.4

Fe III<sup>\*</sup> 1126 0.7

Fe III<sup>\*</sup> 1131 0.9

Si IV 1394 1.7555

Si IV 1403 1.7555

Si IV 1394 1.8034

Si IV 1403 1.8034

C III<sup>\*</sup> 1176 52.4

Si II 1190 0.0

Si III<sup>\*</sup> 1195 0.3

Si II 1193 0.0

Si III<sup>\*</sup> 1197 0.3

Si III 1207 0.0

H I 1216 0.0

NV 1243 0.0

NV 1239 0.0

Si II 1260 0.0

Si III<sup>\*</sup> 1265 0.3

C IV 1548 1.7555

C IV 1551 1.7555

C I 1277 0.0

C I<sup>\*</sup> 1278 0.04

C IV 1548 1.8034

C IV 1551 1.8034

O I 1302 0.0

Si II 1304 0.0

Si III<sup>\*</sup> 1309 0.3

Fe II 1608 1.7555

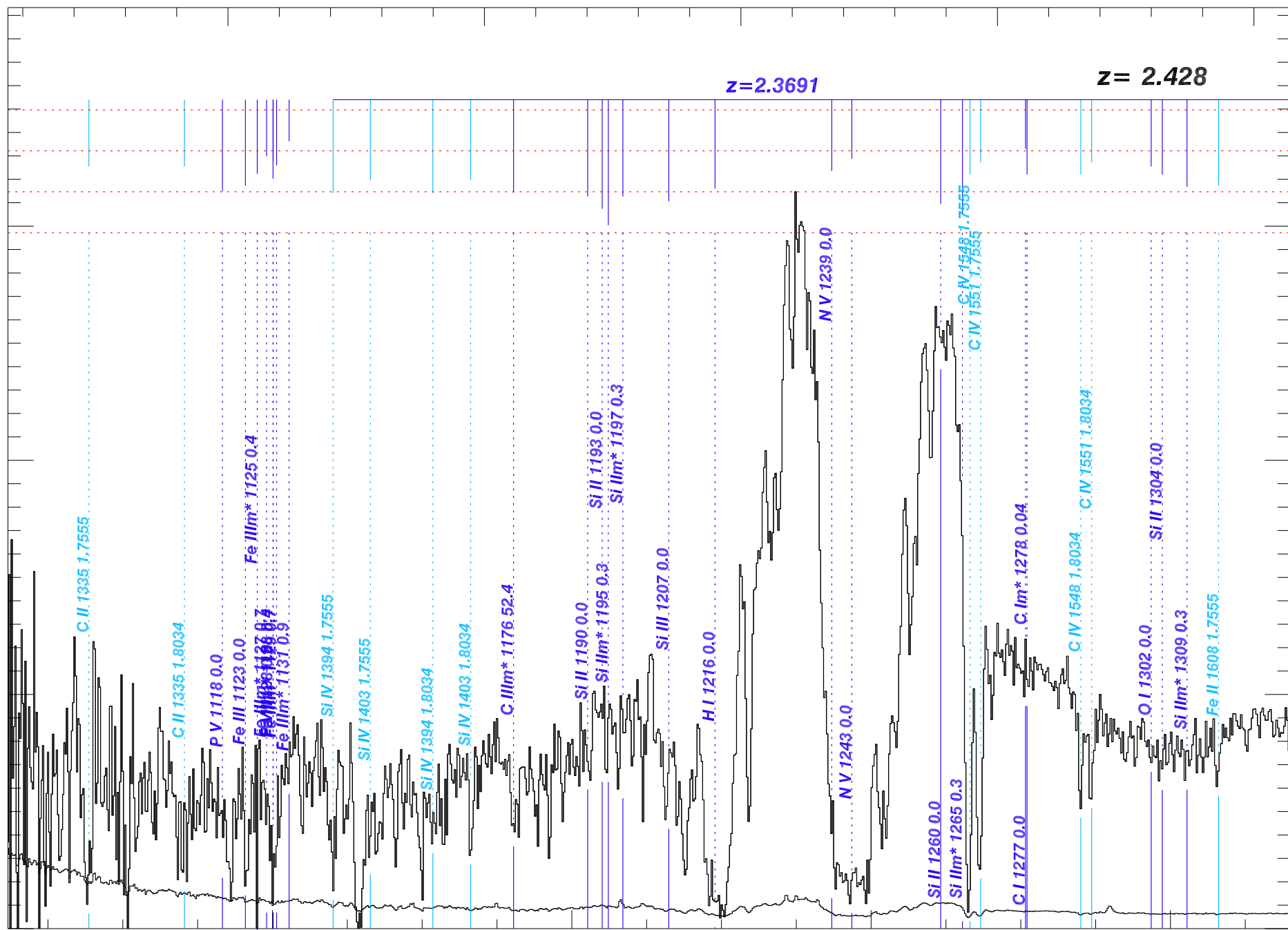
3800

4000

4200

4400

Observed Wavelength (Å)



# SDSS\_J1048+4457\_MJD57449

Rest Wavelength ( $\text{\AA}$ )

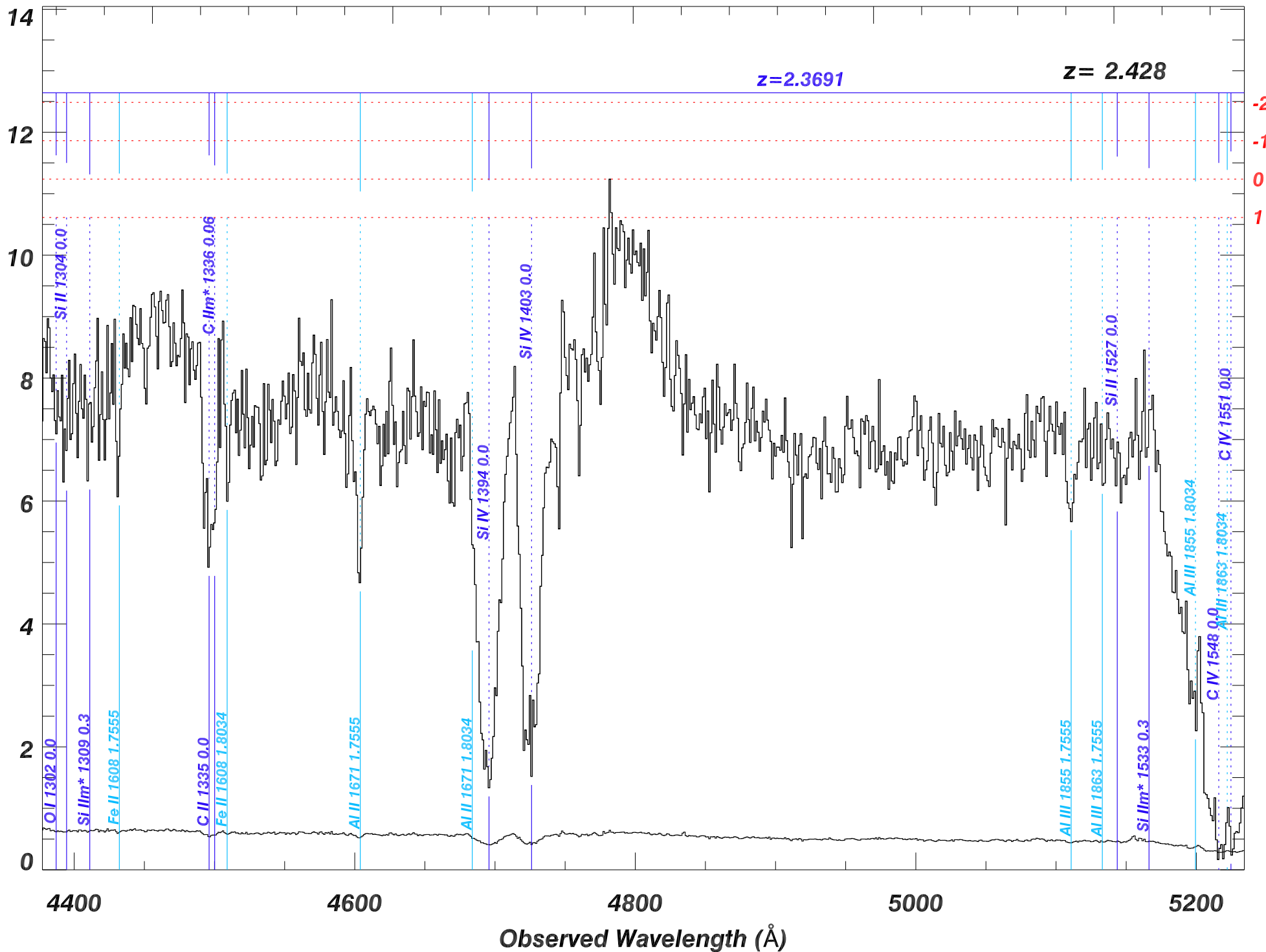
1300

1350

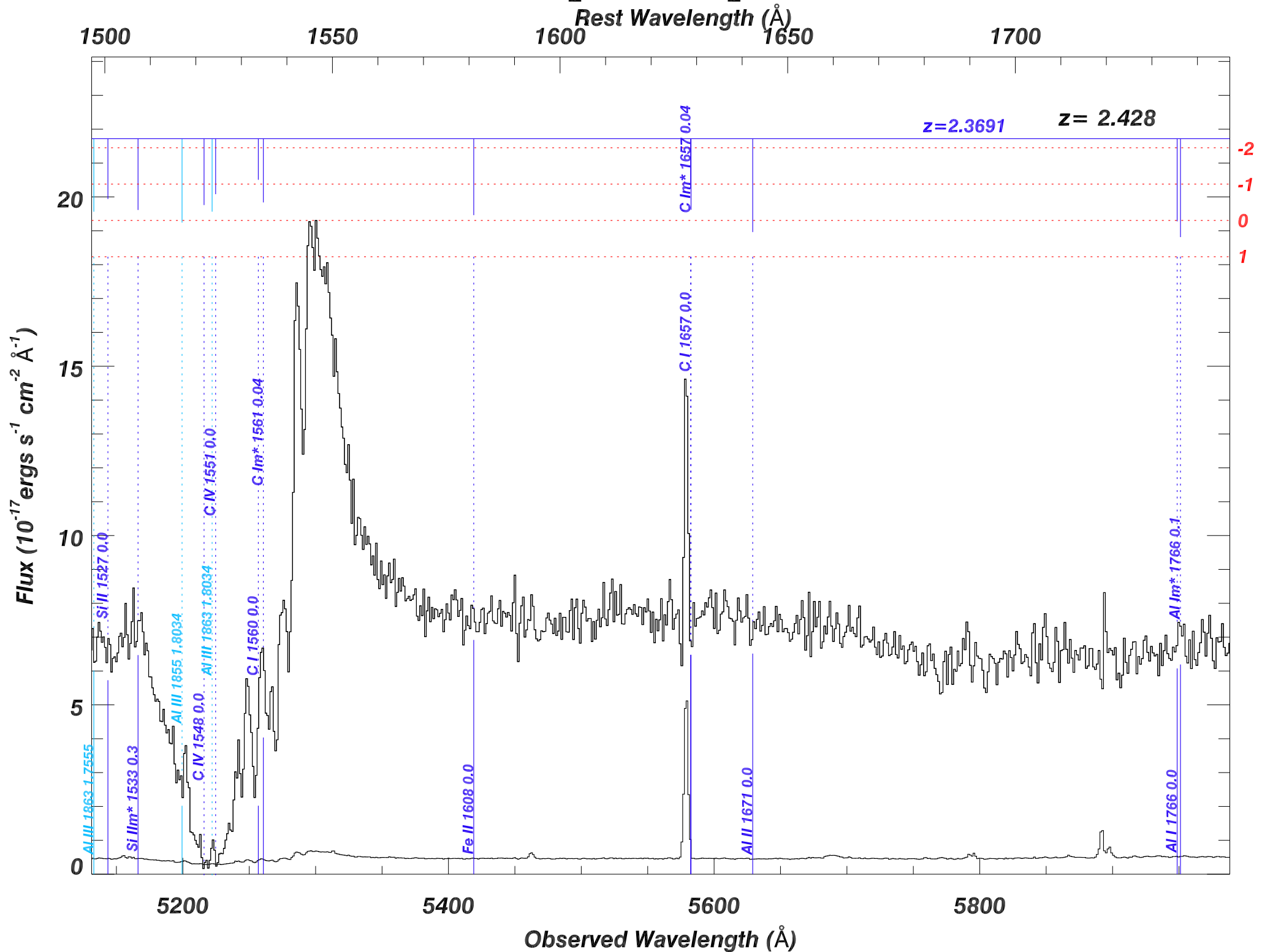
1400

1450

1500



# SDSS\_J1048+4457\_MJD57449



# SDSS\_J1048+4457\_MJD57449

Rest Wavelength ( $\text{\AA}$ )

1750

1800

1850

1900

1950

12

$z=2.3691$

$z=2.428$

-2

-1

0

1

10

8

6

4

2

0

Flux ( $10^{-17} \text{ ergs s}^{-1} \text{ cm}^{-2} \text{ \AA}^{-1}$ )

Al I  $\lambda$  1766 0.1

Al I  $\lambda$  1766 0.0

Al III  $\lambda$  1855 0.0

Al III  $\lambda$  1863 0.0

Fe II  $\lambda$  2344 1.7555

Al I  $\lambda$  1932 0.0

Al I  $\lambda$  1936 0.1

Fe II  $\lambda$  2374 1.7555

Fe II  $\lambda$  2383 1.7555

Fe II  $\lambda$  2344 1.8034

Fe II  $\lambda$  2374 1.8034

Fe II  $\lambda$  2383 1.8034

6000

6200

6400

6600

Observed Wavelength ( $\text{\AA}$ )

# SDSS\_J1048+4457\_MJD57449

Rest Wavelength ( $\text{\AA}$ )

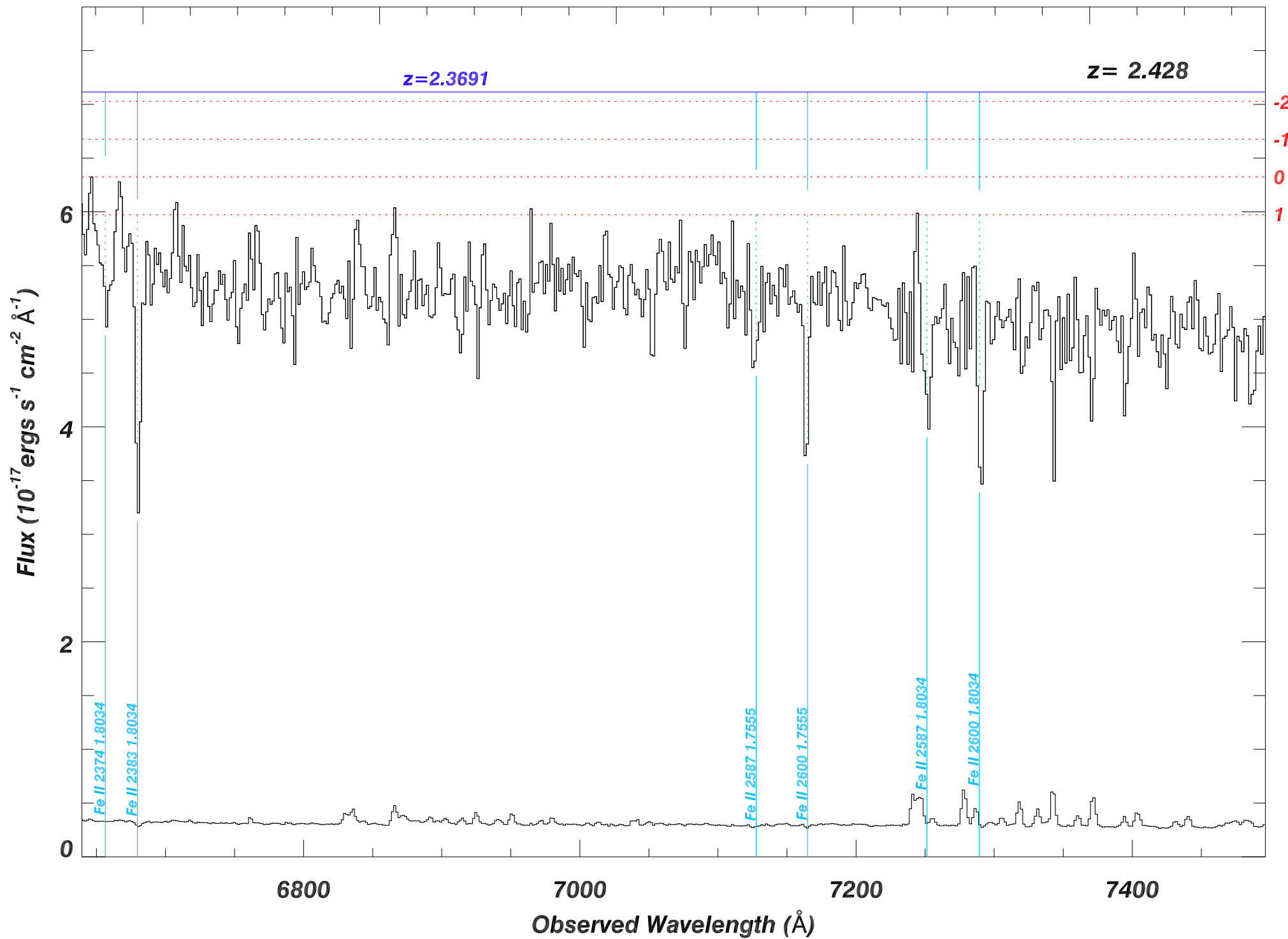
1950

2000

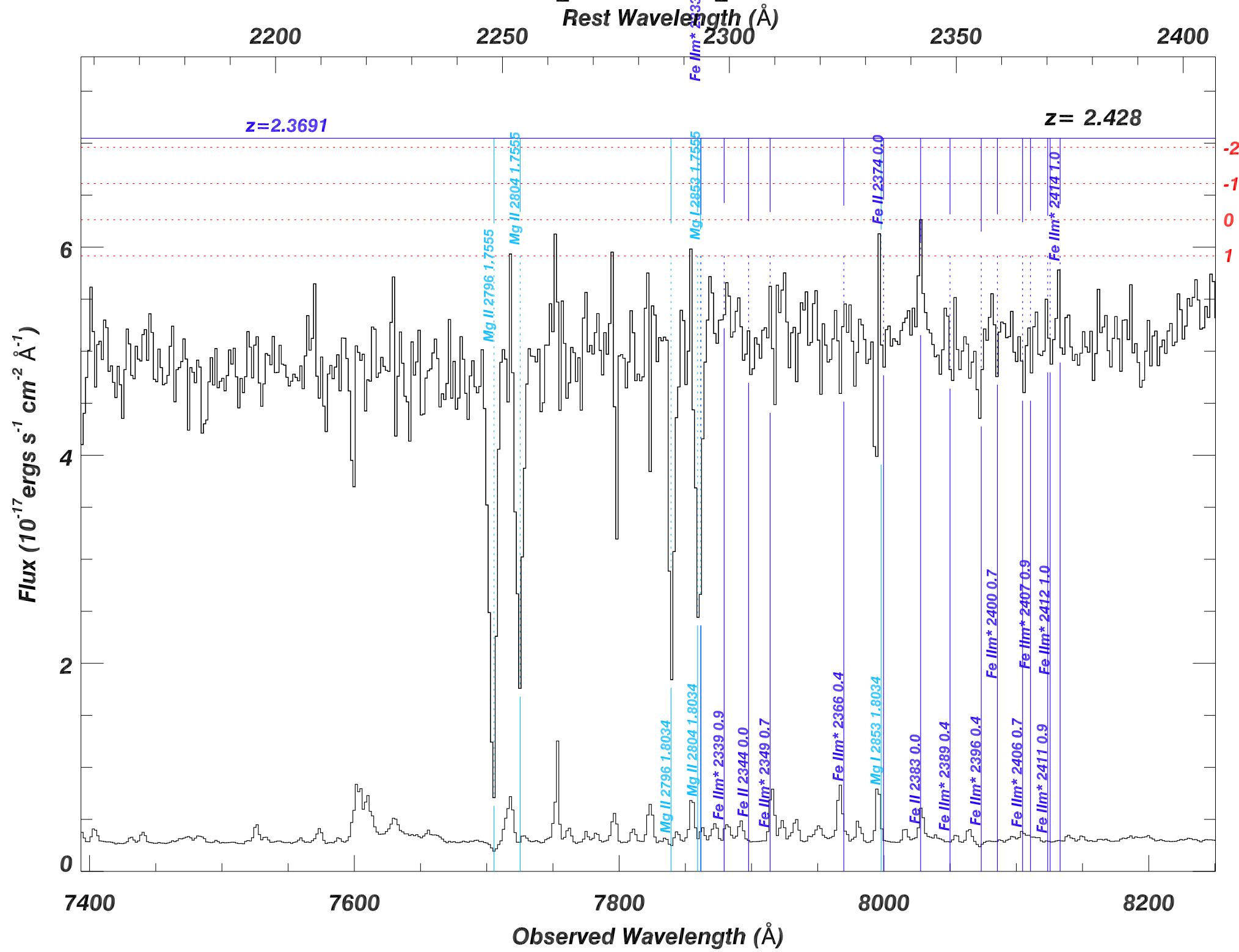
2050

2100

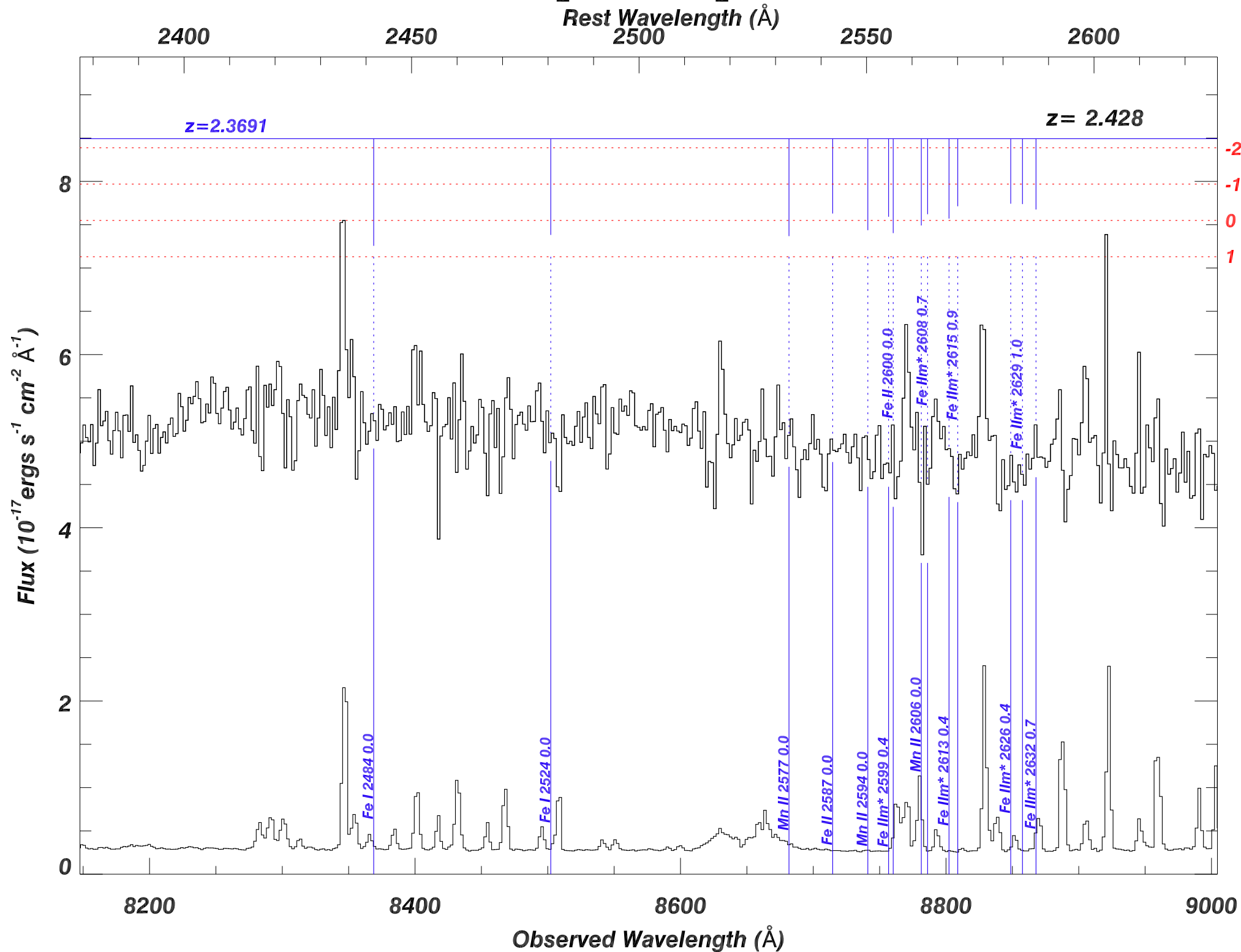
2150



# SDSS\_J1048+4457\_MJD57449

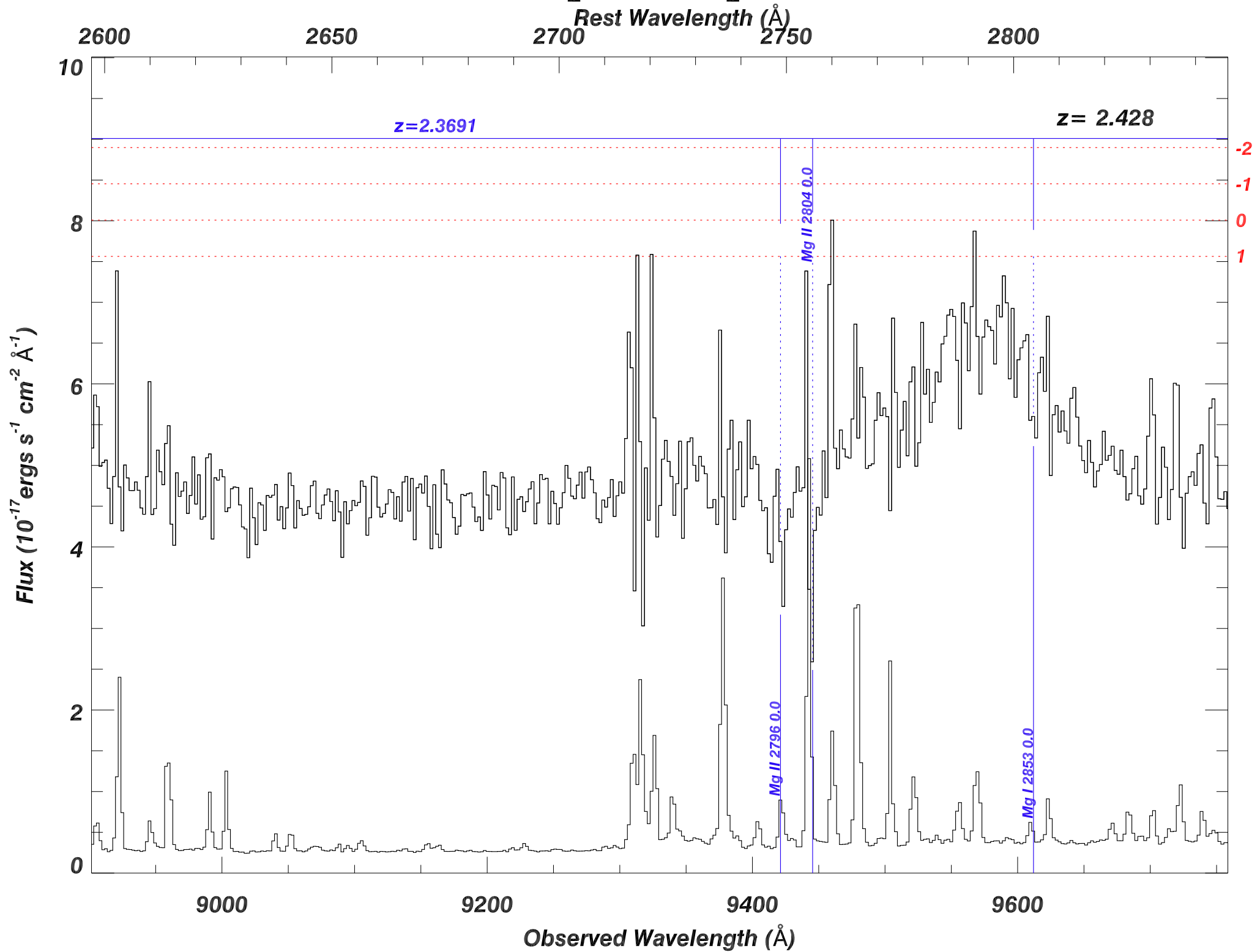


# SDSS\_J1048+4457\_MJD57449





# SDSS\_J1048+4457\_MJD57449



# SDSS\_J1048+4457\_MJD57449

Rest Wavelength ( $\text{\AA}$ )

2850

2900

2950

3000

3050

$z=2.3691$

$z = 2.428$

-2

-1

0

1

Flux ( $10^{-17} \text{ ergs s}^{-1} \text{ cm}^{-2} \text{ \AA}^{-1}$ )

15

10

5

0

He I $\lambda$  2946.159.9

$9.80 \times 10^3$

$1.00 \times 10^4$

$1.02 \times 10^4$

$1.04 \times 10^4$

Observed Wavelength ( $\text{\AA}$ )

