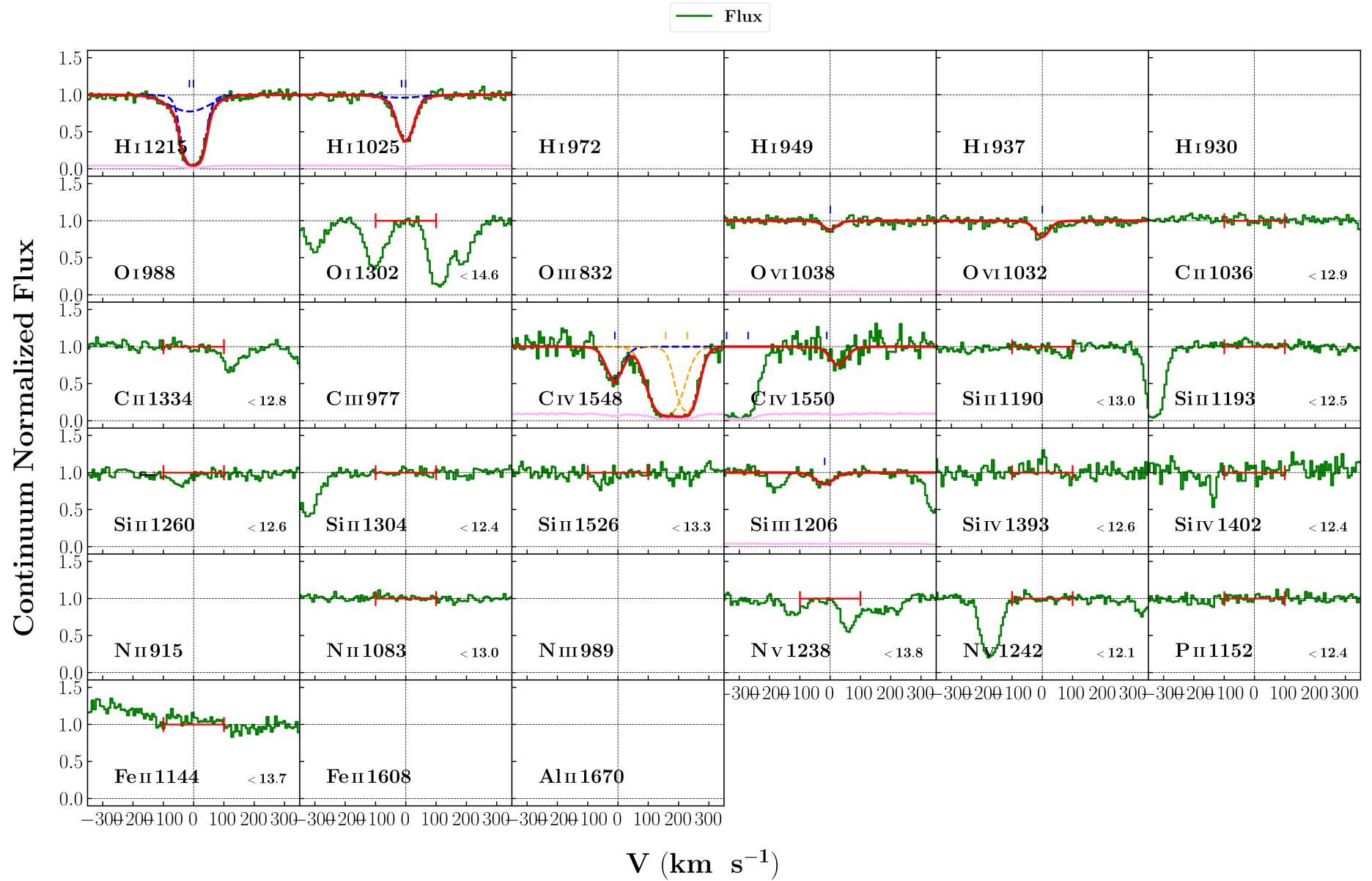


# System plots

March 11, 2024

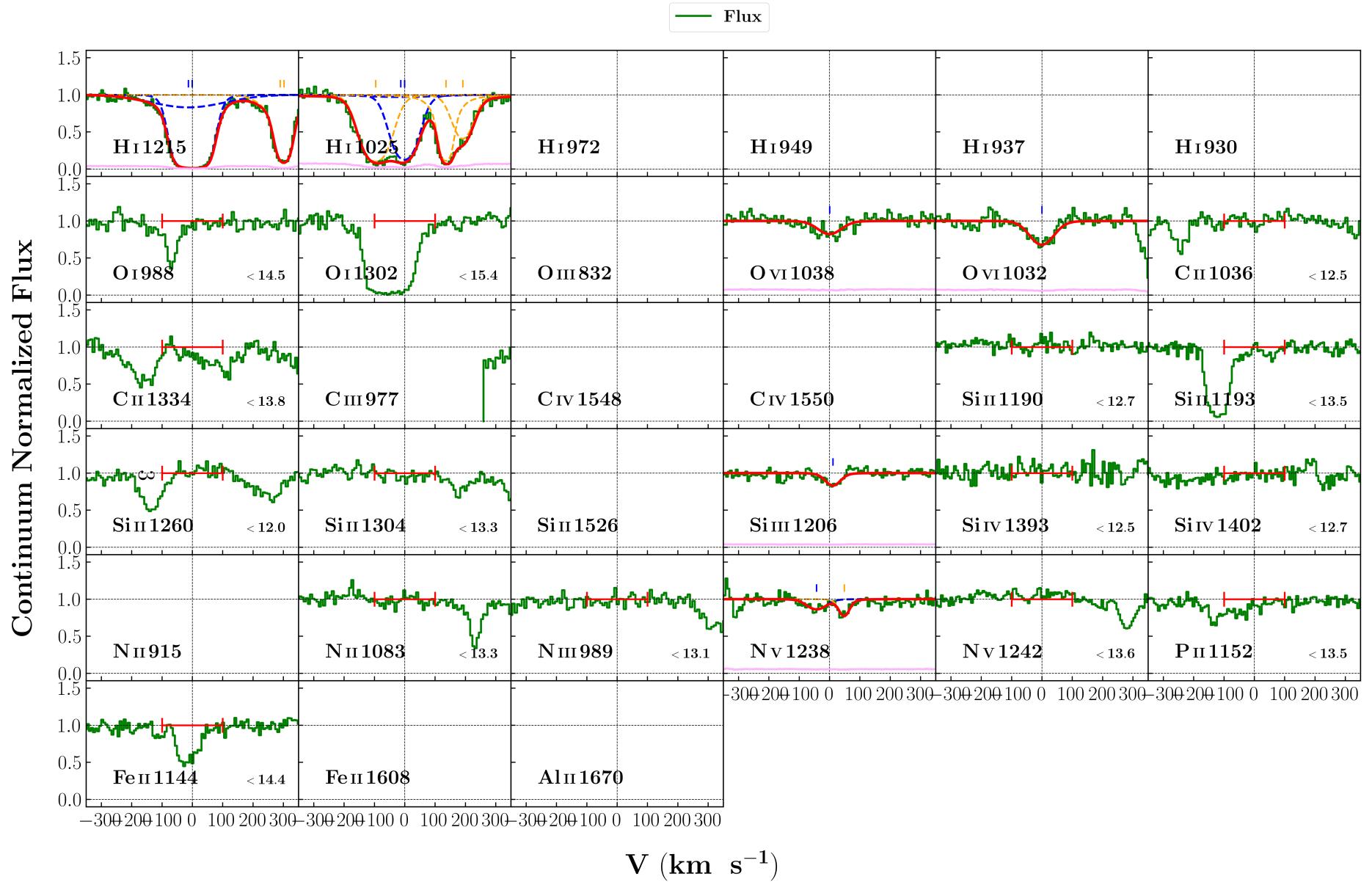
3C263 ( $z_{\text{abs}} = 0.140756$ )



**Comments:**

- $\Delta v = [-100, 100]$

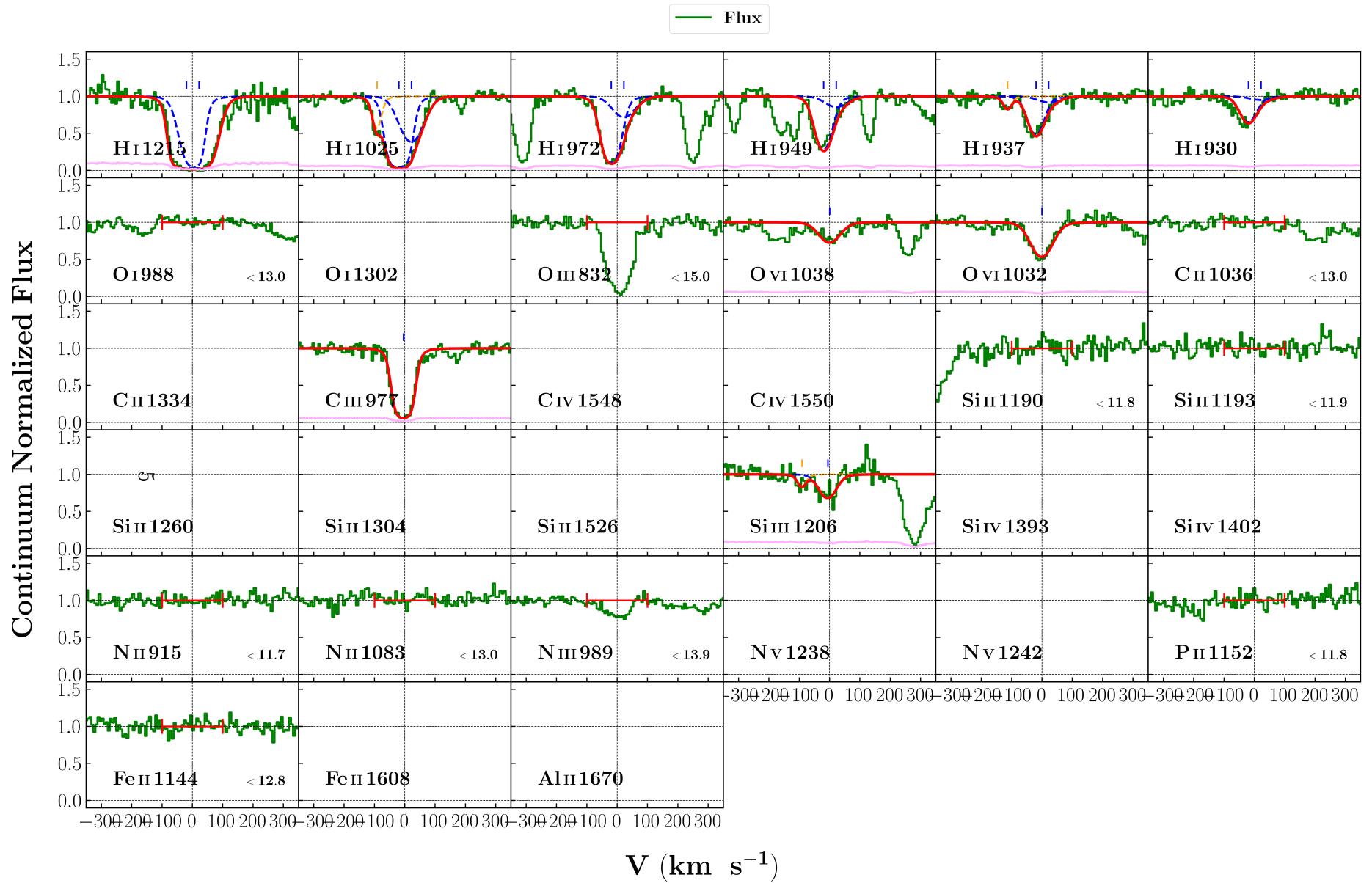
PKS0637 – 752 ( $z_{\text{abs}} = 0.161064$ )



**Comments:**

- $\Delta v = [-100, 100]$
- Fe II 1144 : contaminated with H I 937 from z=0.417415

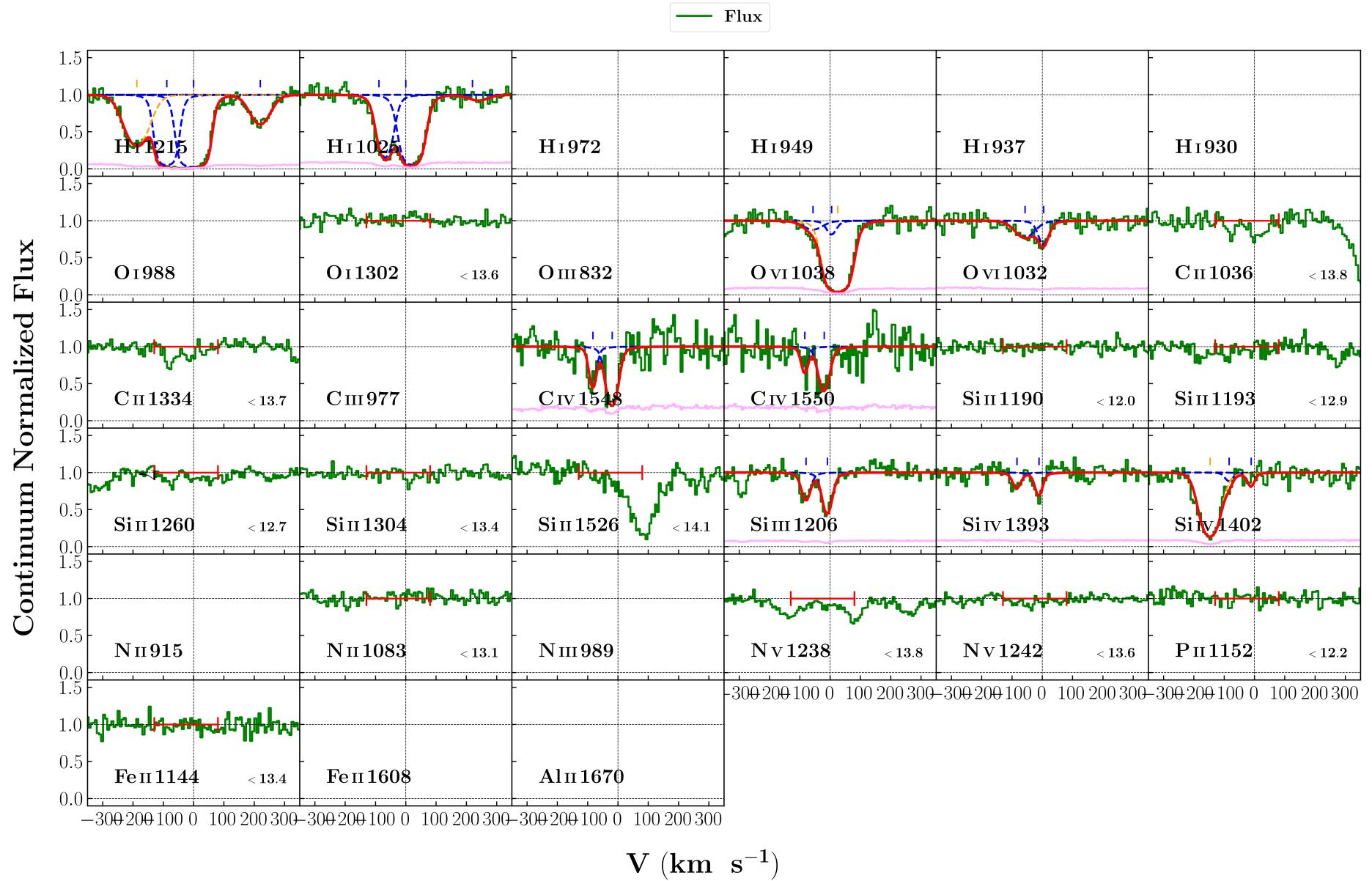
PKS0637 – 752 ( $z_{\text{abs}} = 0.417539$ )



**Comments:**

- $\Delta v = [-100, 100]$
- O III 832 : contaminated with galactic Si IV 1402

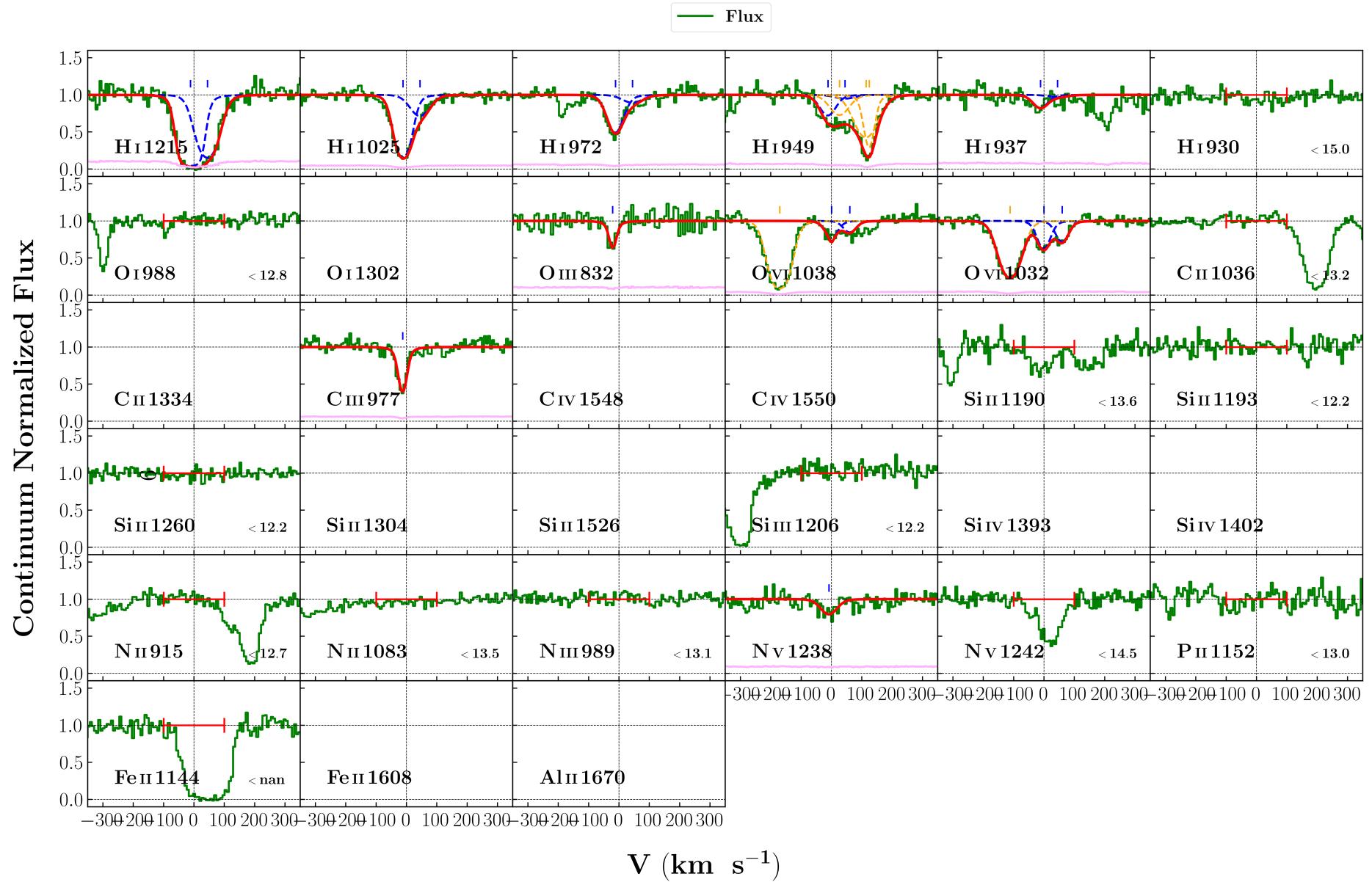
PG1424 + 240 ( $z_{\text{abs}} = 0.147104$ )



**Comments:**

- $\Delta v = [-130, 80]$
- C II 1036 : contaminated with galactic C I 1188

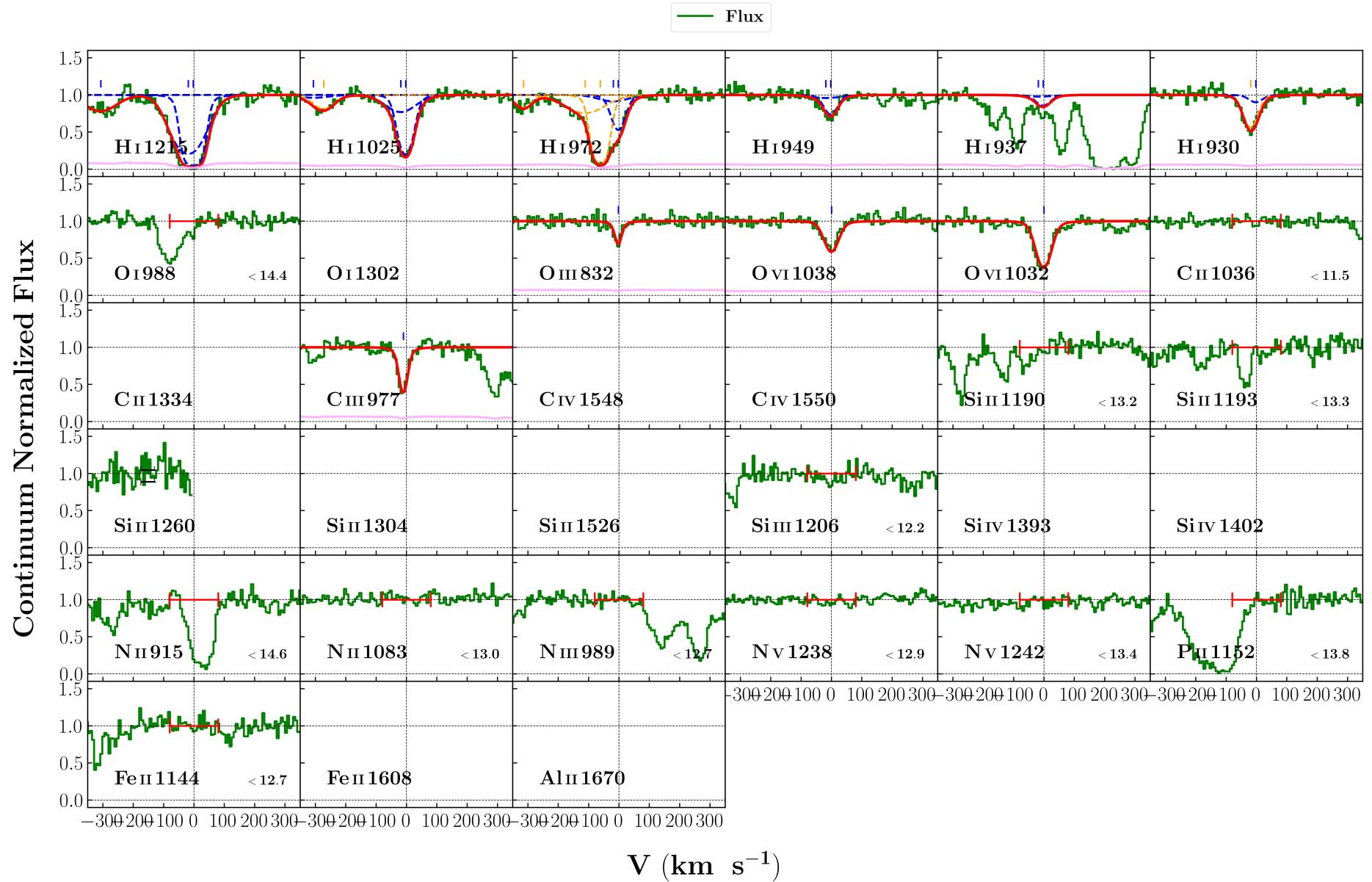
PG0003 + 158 ( $z_{\text{abs}} = 0.386089$ )



**Comments:**

- $\Delta v = [-100, 100]$
- Si II 1190 : contaminated from Ly $\alpha$  from z=0.357973
- Fe II 1144 : contaminated from Ly $\alpha$  from z=0.305467
- N V 1242 : contaminated from Ly $\alpha$  from z=0.417160

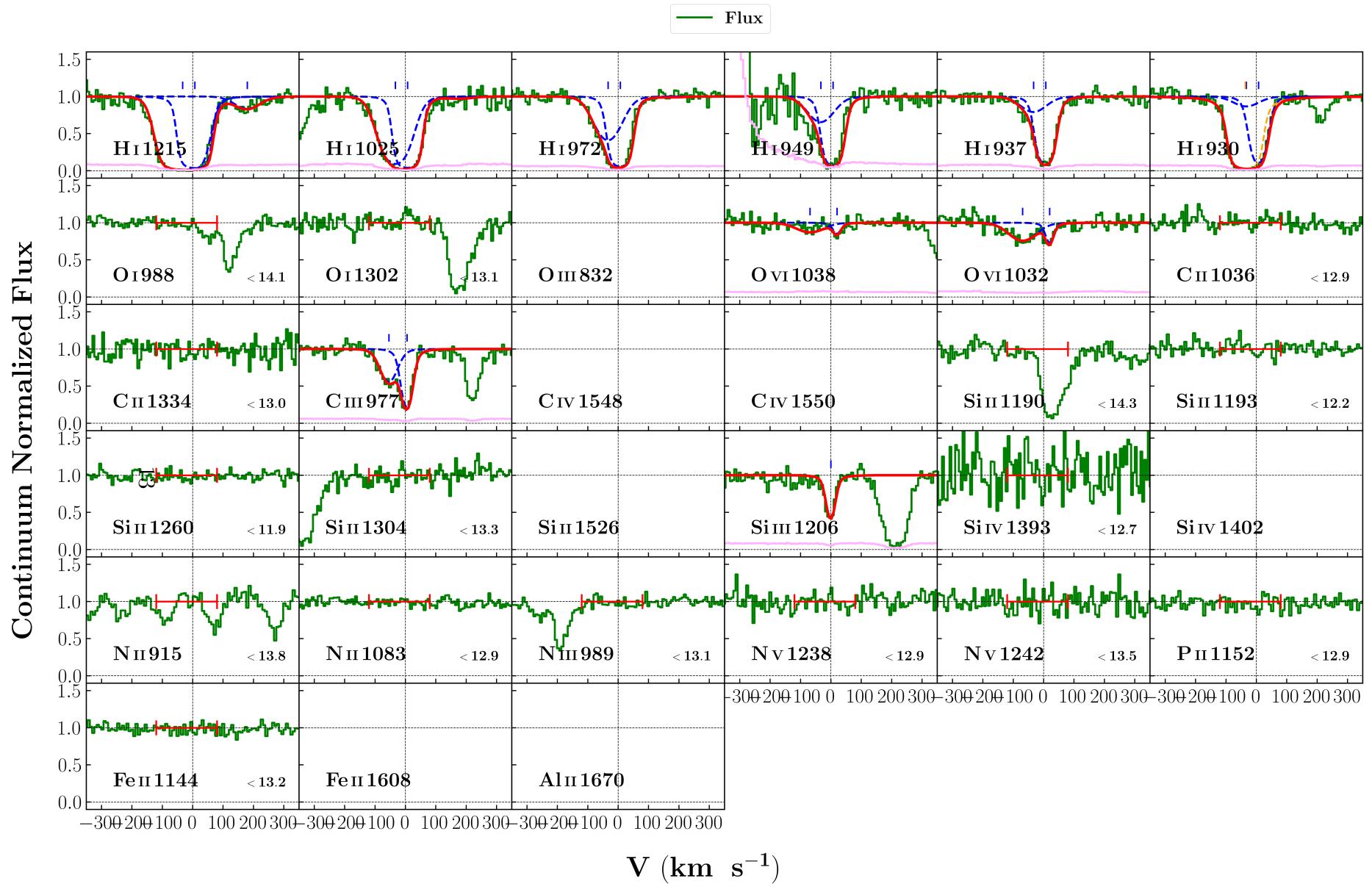
PG0003 + 158 ( $z_{\text{abs}} = 0.421923$ )



**Comments:**

- $\Delta v = [-80, 80]$
- N II 915 : contaminated from galactic O I 1302

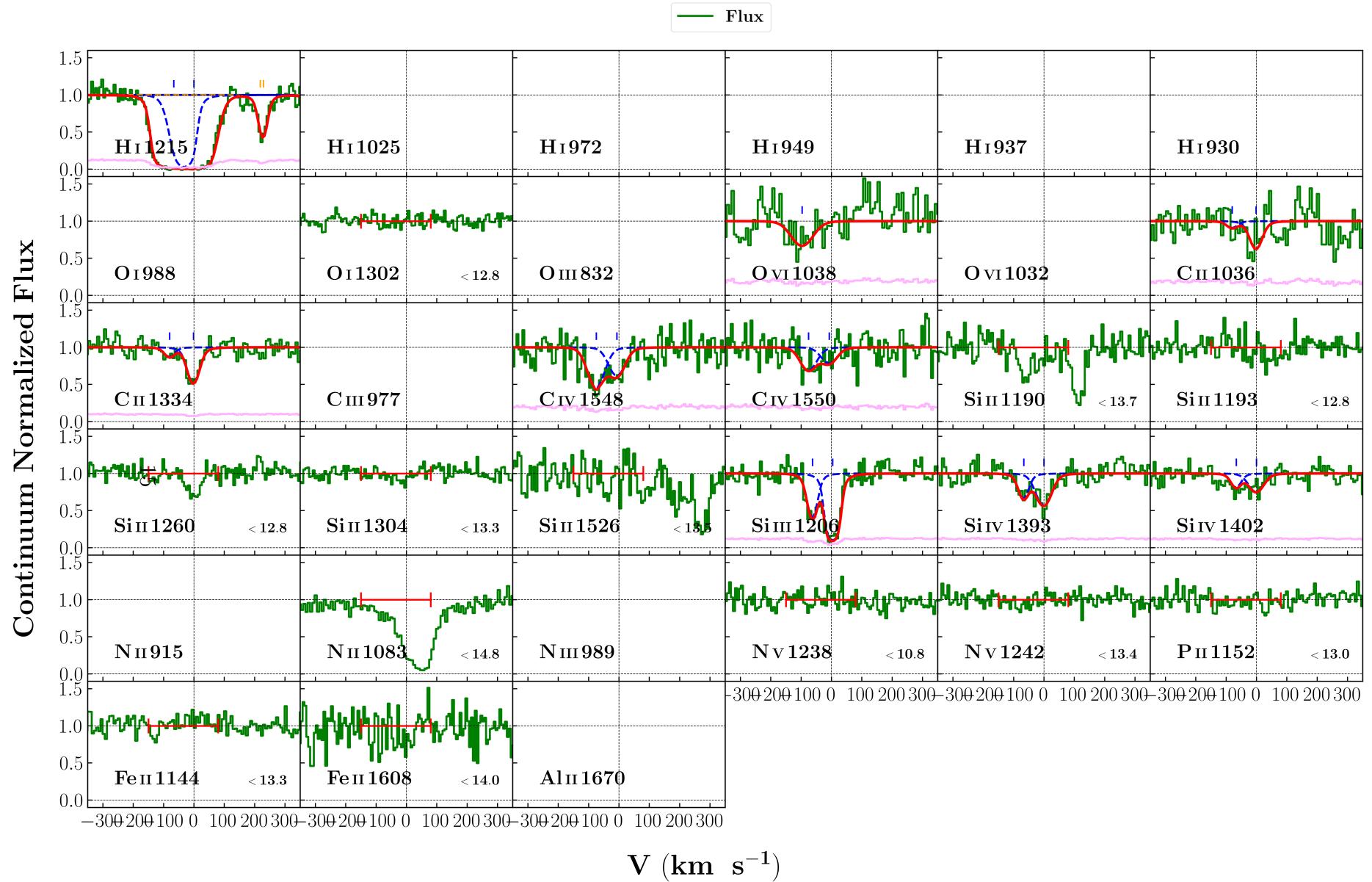
PG1216 + 069 ( $z_{\text{abs}} = 0.282286$ )



**Comments:**

- $\Delta v = [-120, 80]$
- Si II 1190 : contaminated from galactic Si II 1526

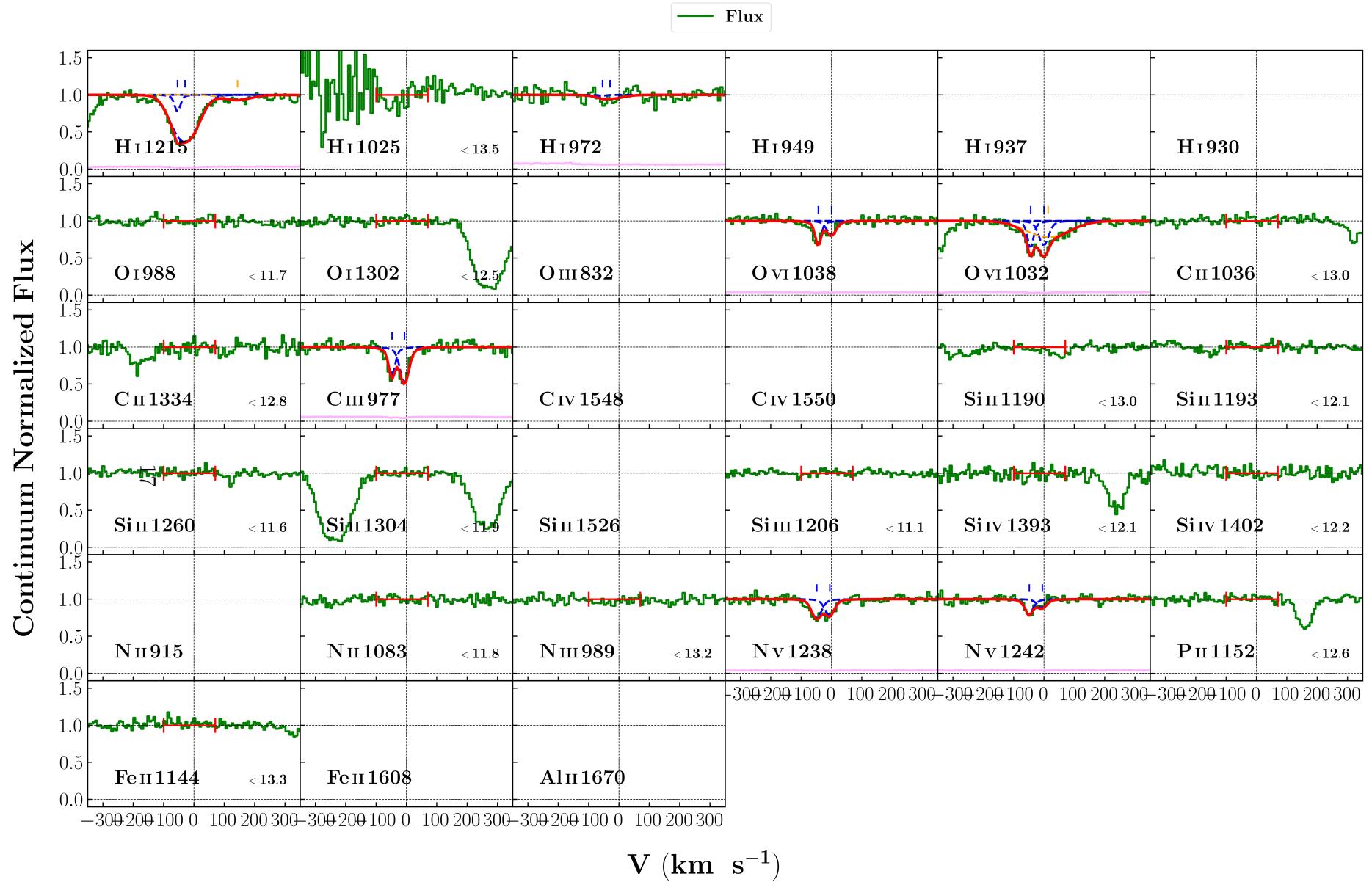
SDSSJ135712.61 + 170444 ( $z_{\text{abs}} = 0.097869$ )



**Comments:**

- $\Delta v = [-150, 80]$
- Si II 1260 : identified as Si III 1260 from  $z=0.146946$ , no absorption in other Si II lines
- N II 1083 : contaminated from galactic Si II 1190

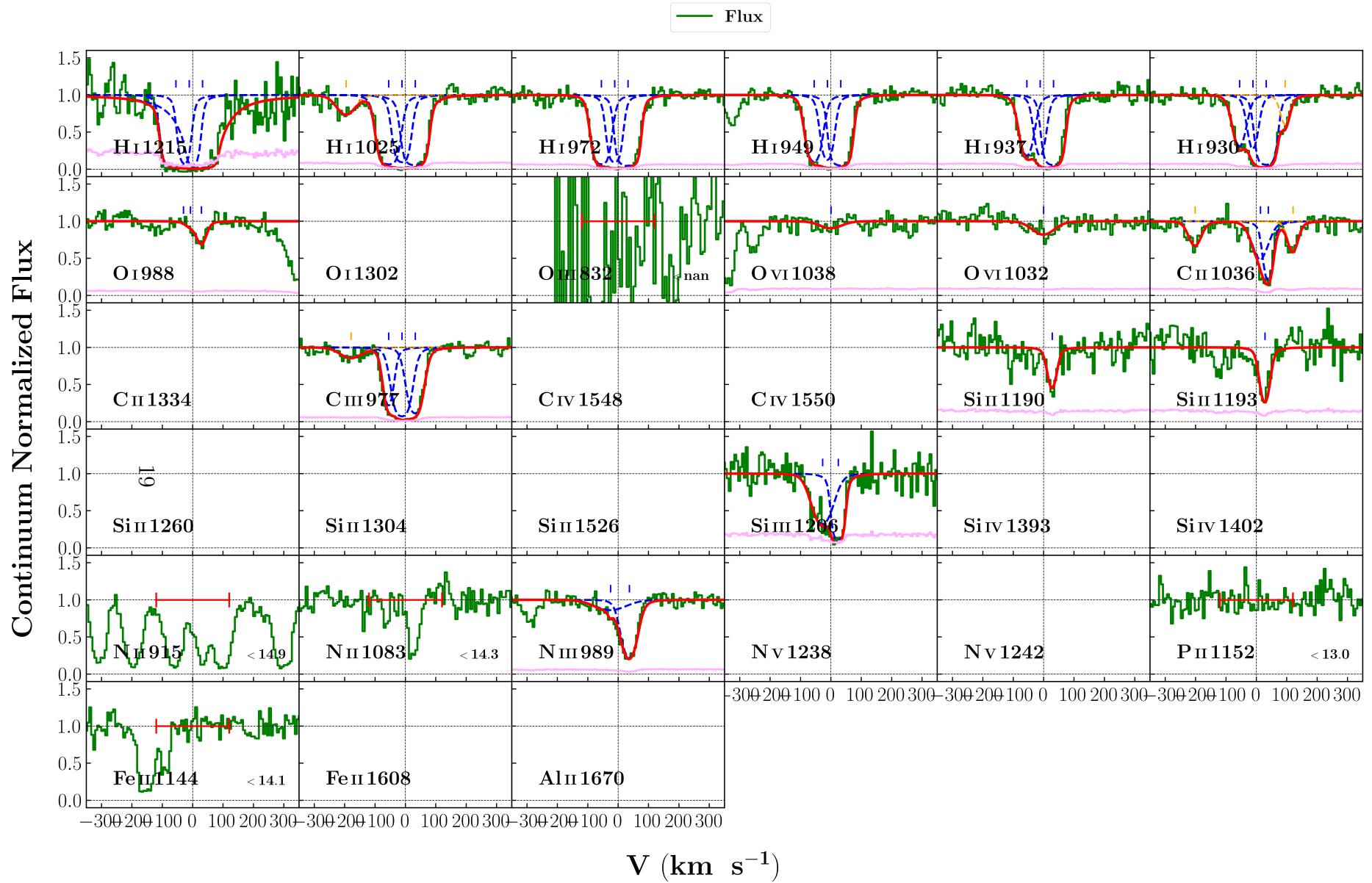
1ES1553 + 113 ( $z_{\text{abs}} = 0.187764$ )



**Comments:**

- $\Delta v = [-100, 70]$

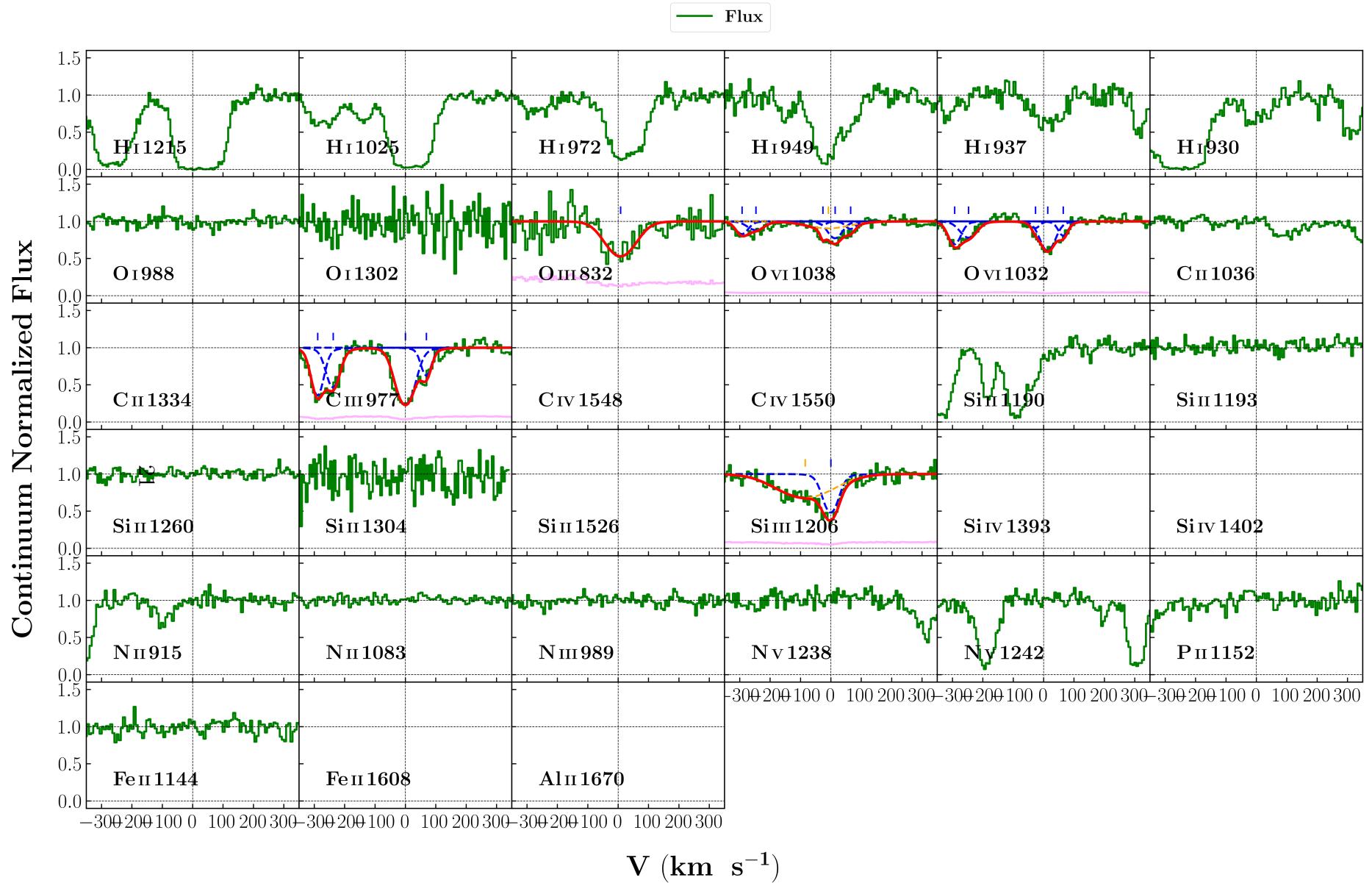
SBS1108 + 560 ( $z_{\text{abs}} = 0.463207$ )



**Comments:**

- $\Delta v = [-120, 120]$
- N II 1083 : contaminated from Ly $\alpha$  from z=0.304868

PG1222 + 216 ( $z_{\text{abs}} = 0.378389$ )

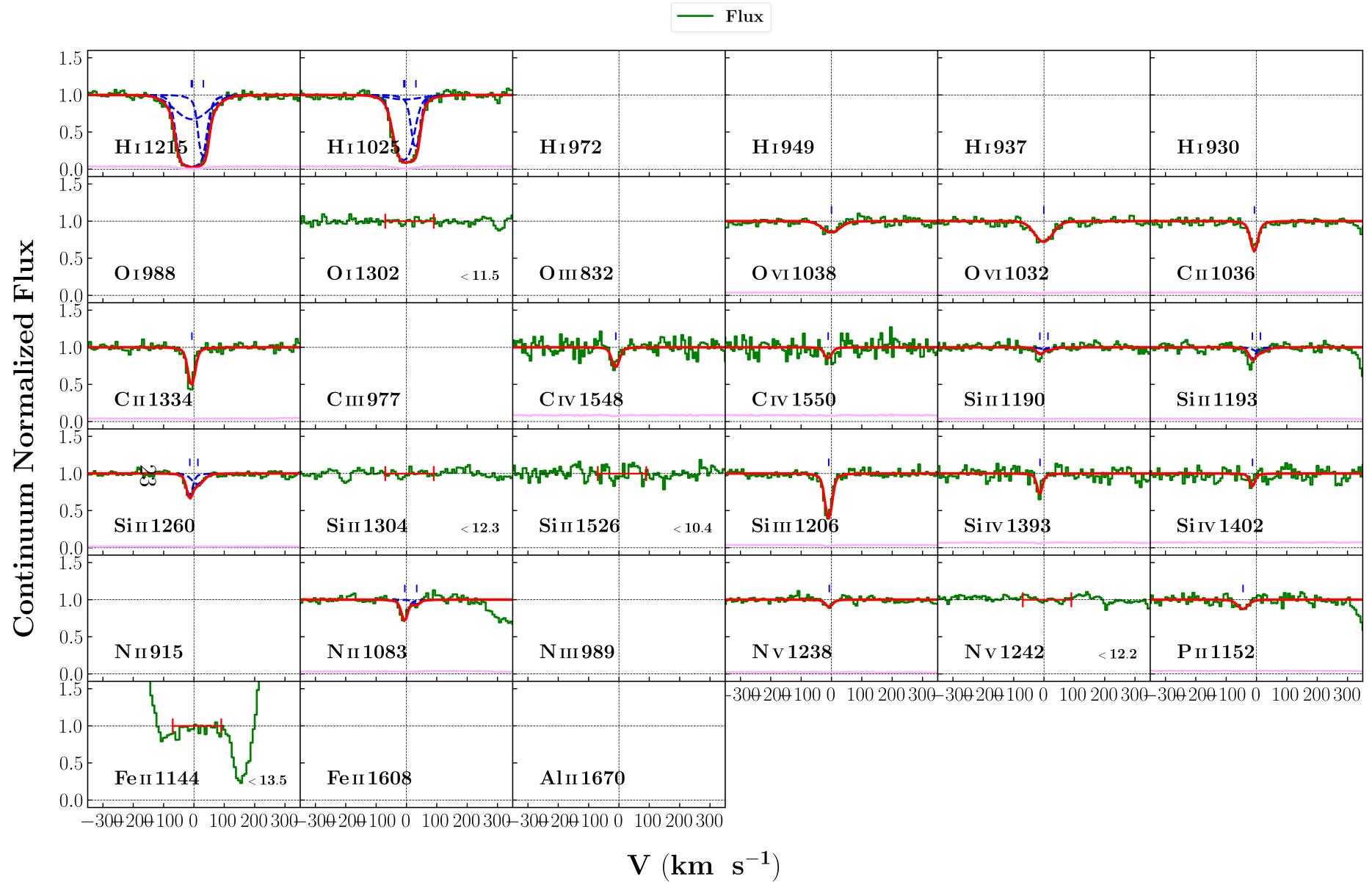


**Comments:**

- $\Delta v =$

-

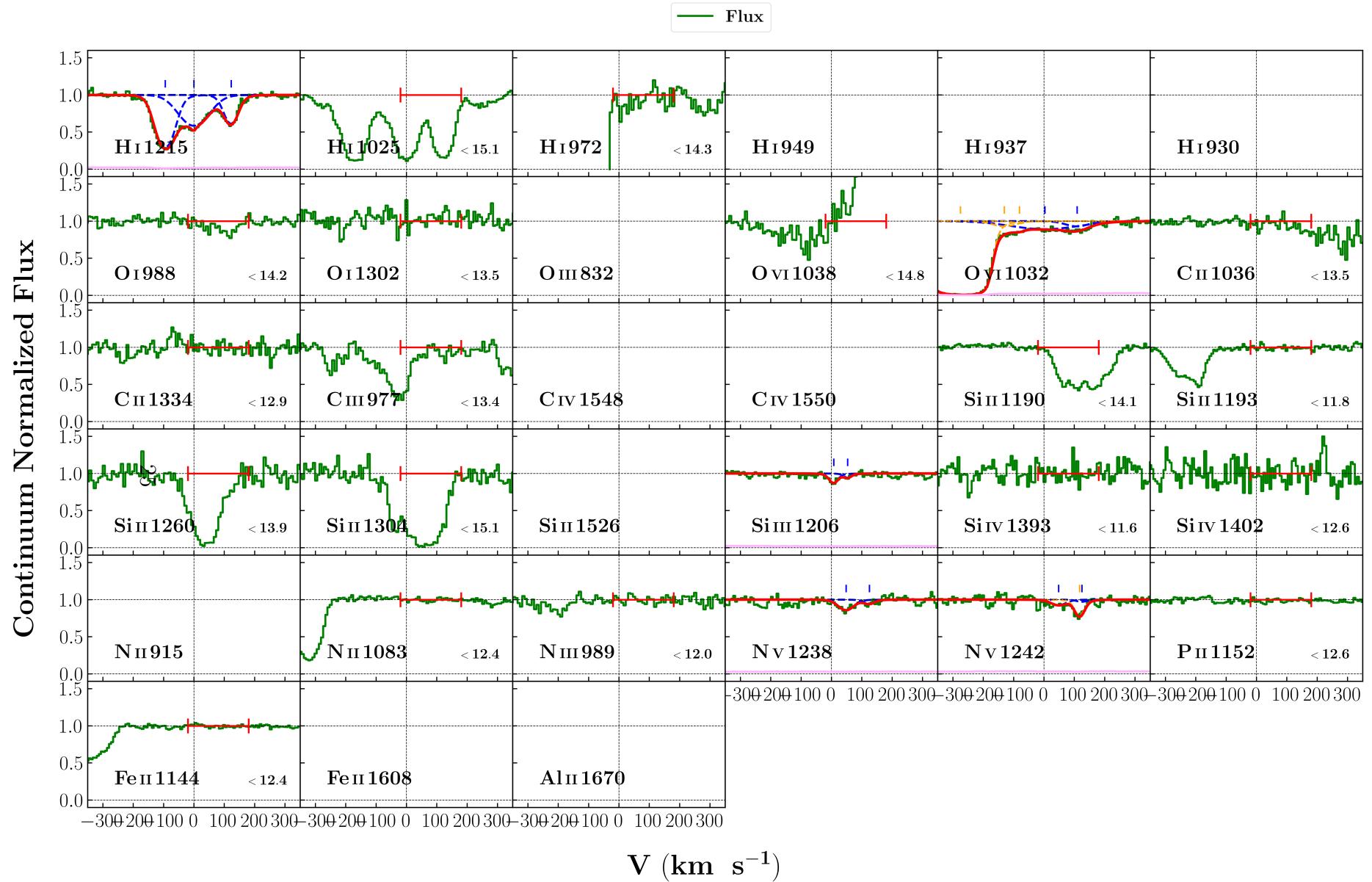
PG1116 + 215 ( $z_{\text{abs}} = 0.138527$ )



**Comments:**

- $\Delta v = [-70, 90]$
- N II 1083 : contaminated from Ly $\alpha$  from z=0.304868

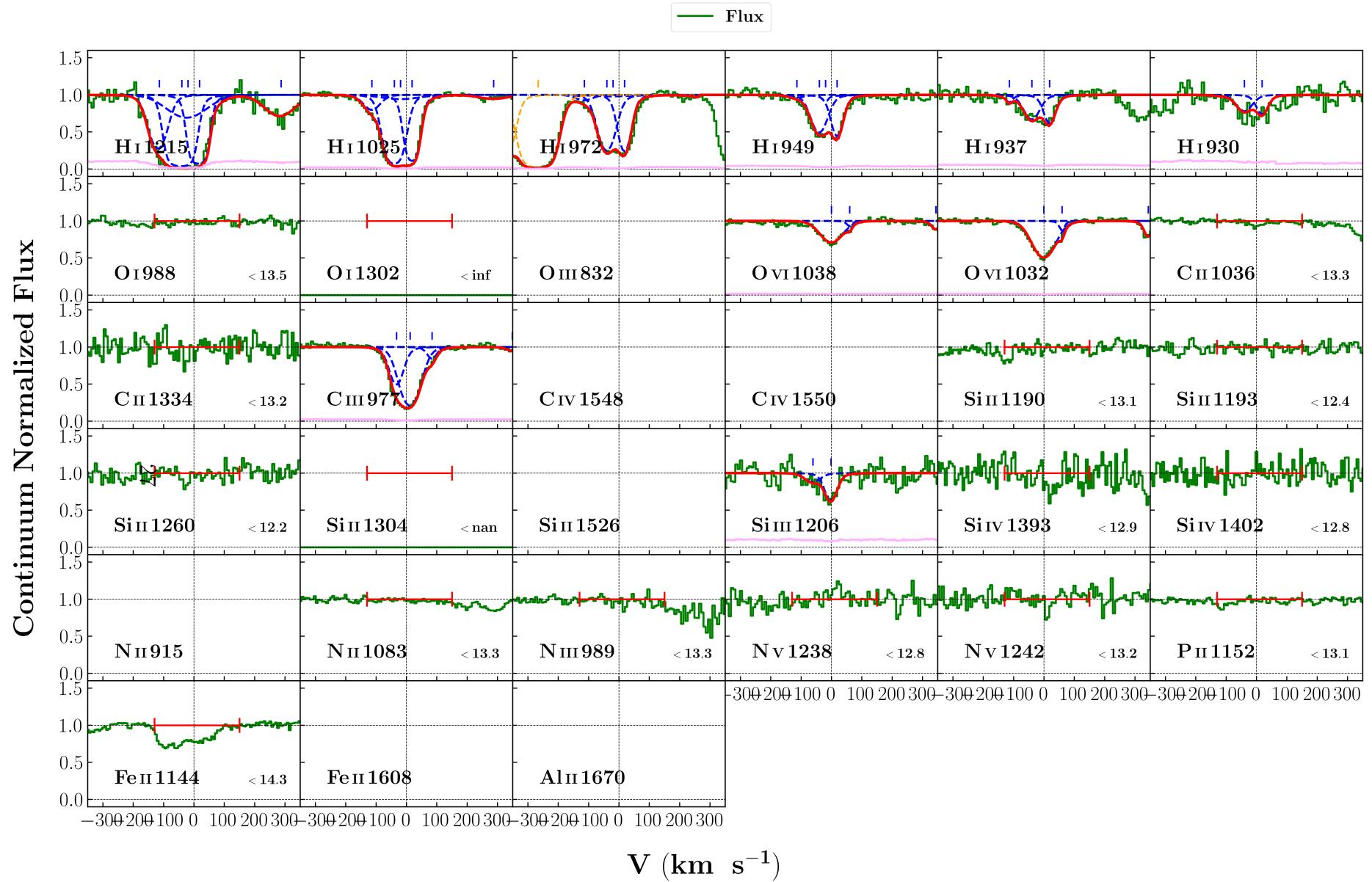
H1821 + 643 ( $z_{\text{abs}} = 0.170006$ )



**Comments:**

- $\Delta v = [-20, 180]$
- C III 977 : contaminated from galactic Fe II 1142, 1143, 1144 lines
- Si II 1260 : contaminated from Ly $\alpha$  from z=0.213207
- Si II 1304 : contaminated from galactic Si II 1526

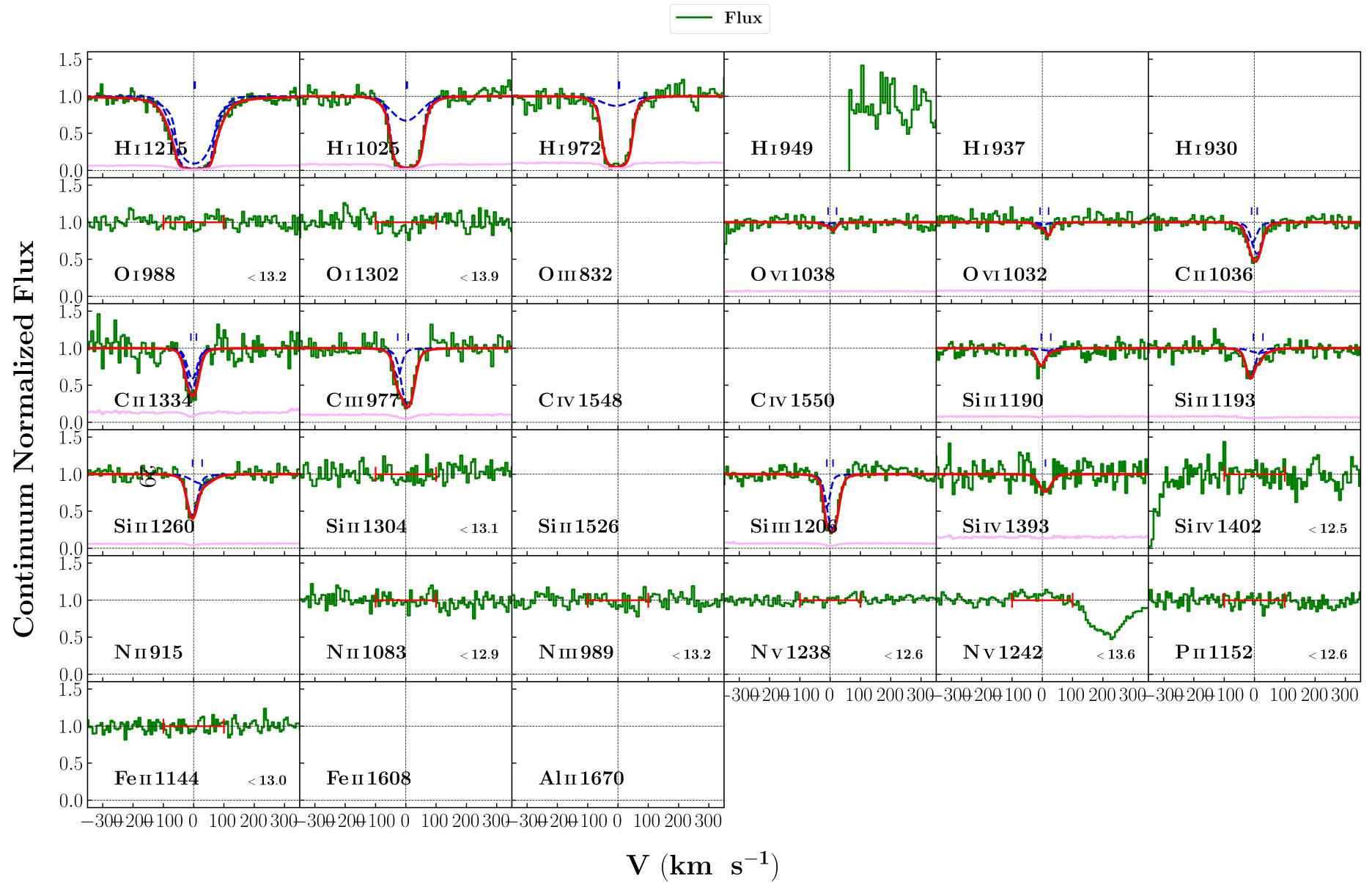
H1821 + 643 ( $z_{\text{abs}} = 0.224981$ )



**Comments:**

- $\Delta v = [-130, 150]$
- C II 1036 : contaminated from Ly $\alpha$  from z=0.044297
- Fe II 1144 : contaminated from galactic Si IV 1402

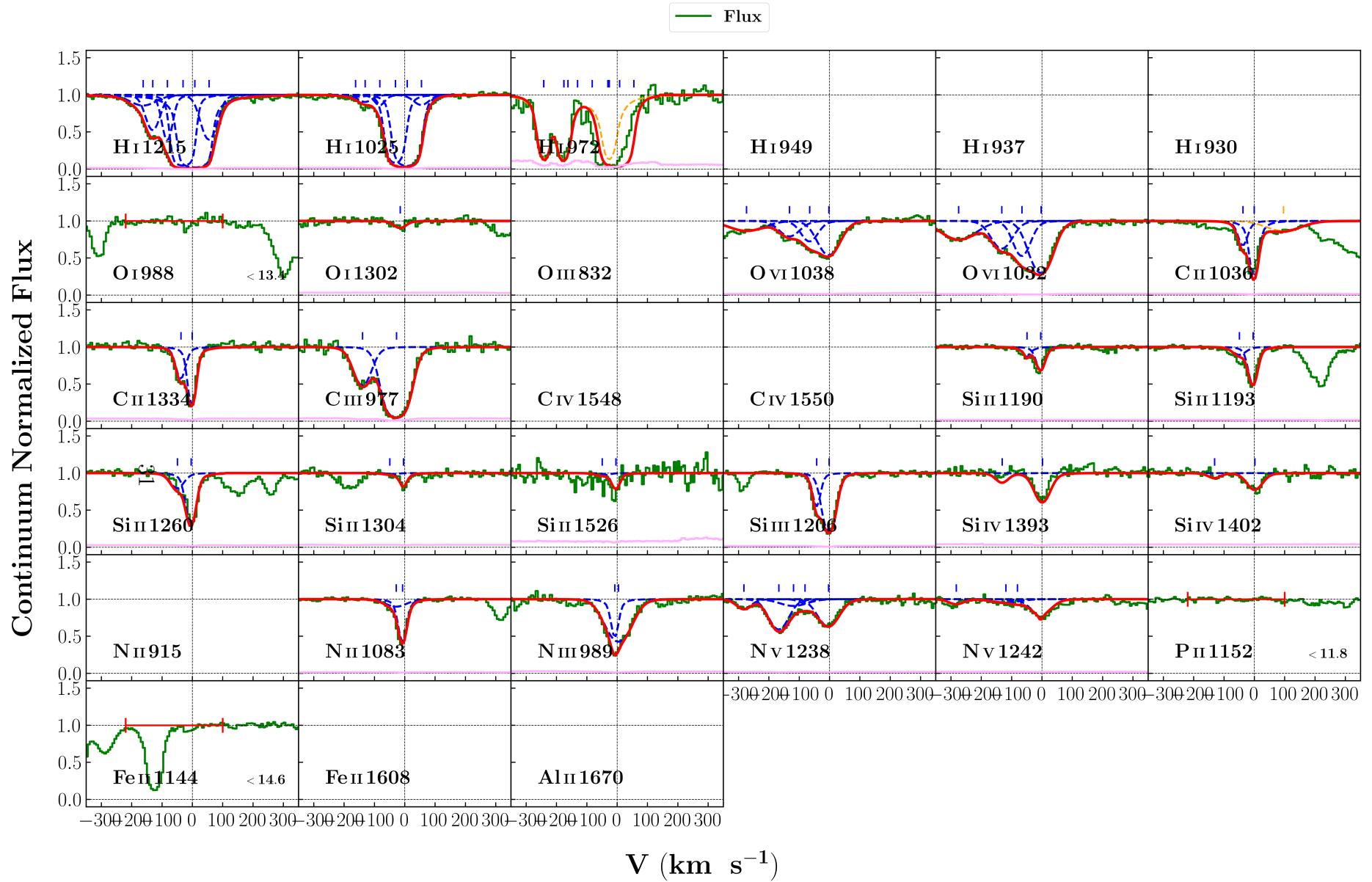
PG1121 + 422 ( $z_{\text{abs}} = 0.192393$ )



**Comments:**

- $\Delta v = [-100, 100]$
- C II 1036 : contaminated from Ly $\alpha$  from z=0.044297
- Fe II 1144 : contaminated from galactic Si IV 1402

PKS0405 – 123 ( $z_{\text{abs}} = 0.167125$ )



**Comments:**

- $\Delta v = [-220, 100]$
- C II 1036 : contaminated from Ly $\alpha$  from z=0.044297
- Fe II 1144 : contaminated from galactic Si IV 1402

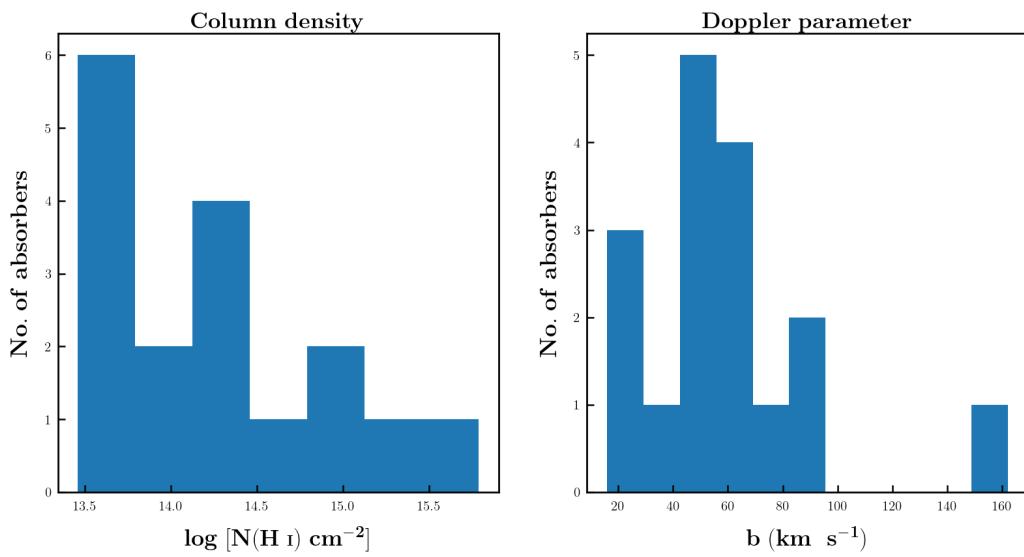


Figure 1: Distribution of column density and doppler parameters of the Lyman lines in the 17 absorbers

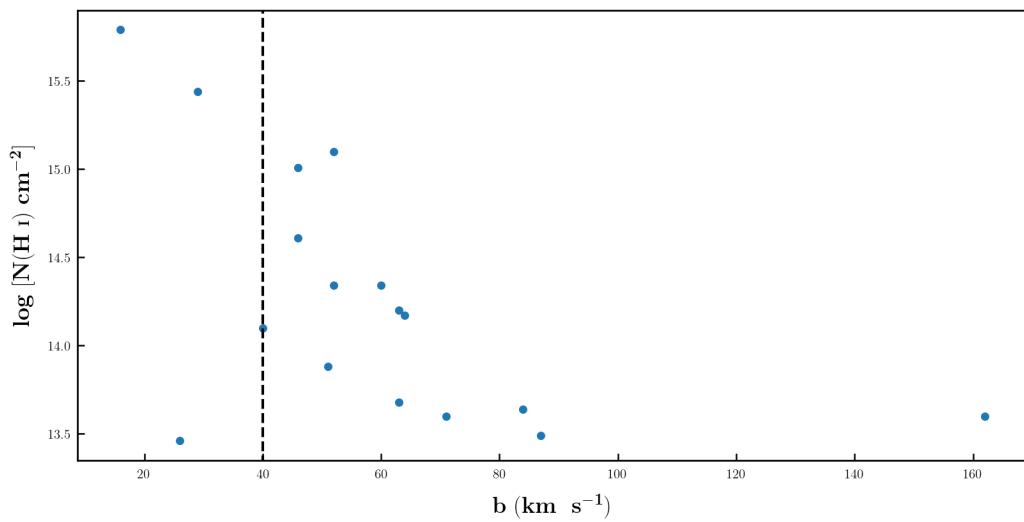


Figure 2: Column desnity v/s doppler parameter. Vertical black dashed line shows the doppler parameter of  $40 \text{ km s}^{-1}$

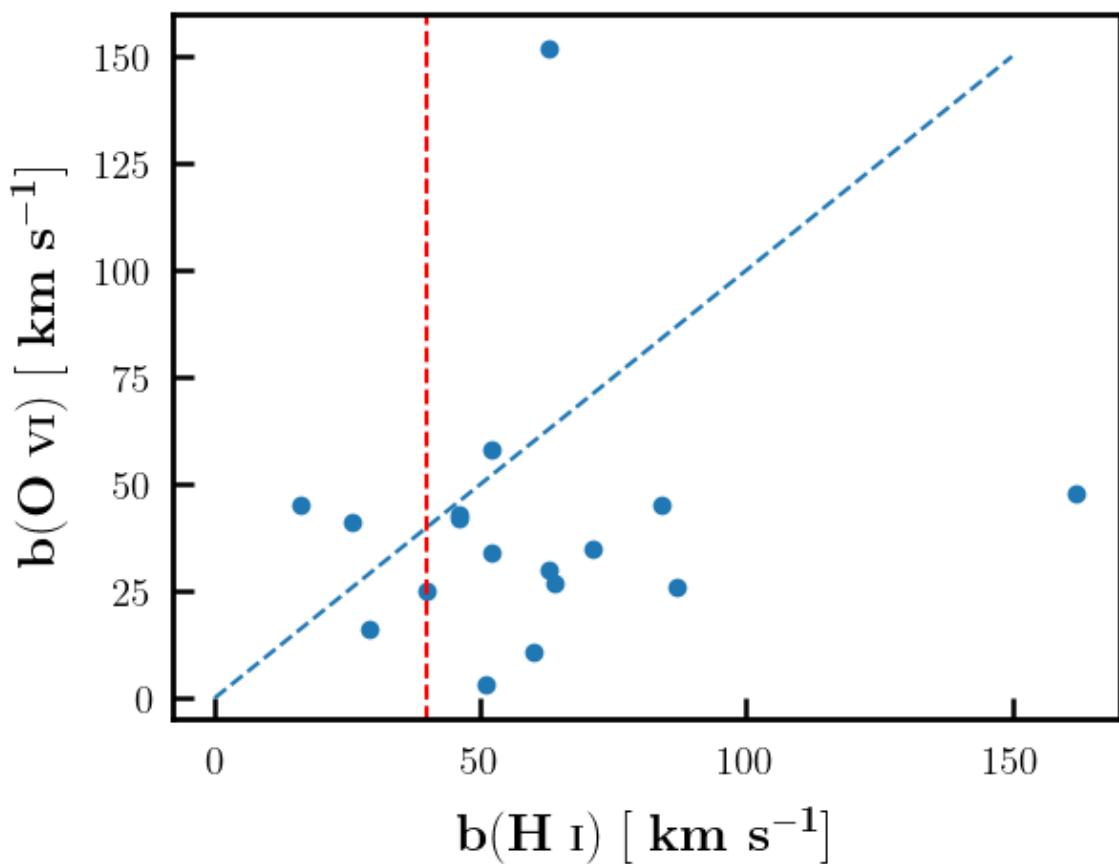


Figure 3:  $b(\text{H I})$  v/s  $b(\text{O VI})$ . Vertical red dashed line shows the doppler parameter of  $40 \text{ km s}^{-1}$ . And blue dashed line shows the  $b(\text{H I}) = b(\text{O VI})$  line