System-Plots/3C263_z=0.140756_sys_plot.png

Ion	v (km s^{-1})	b (km s^{-1})	log [N cm^{-2}]
Si III	-18 ± 8	35 ± 11	12.39 ± 0.09
C IV	-10 ± 3	33 ± 0	13.71 ± 0.04
O VI	0 ± 2	26 ± 4	13.63 ± 0.04
H I	-14 ± 1	87 ± 10	13.49 ± 0.06
H I	0 ± 1	28 ± 1	14.49 ± 0.02

N(H I)=13.49

Excluding O VI : n_H = -3.88 ± 0.04 Z = 1.06 ± 0.05
Including O VI : n_H = -4.13 ± 0.02 Z = 0.99 ± 0.04

Ionisation-Modelling-Plots/3c263-z=0.140756-compI.png

System-Plots/PKS0637-752_z=0.161064_sys_plot.png

Ion	v (km s^{-1})	b (km s^{-1})	log [N cm^{-2}]
N V	-42.0 ± 6.0	40 ± 9	13.37 ± 0.07
Si III	11.0 ± 4.0	30 ± 7	12.37 ± 0.06
O VI	0.0 ± 3.0	48 ± 5	14.02 ± 0.03
H I	-13.0 ± 2.0	162 ± 21	13.6 ± 0.06
H I	-1.0 ± 1.0	45 ± 1	15.01 ± 0.02

N(H I)=13.60

Excluding O VI : n_H = -4.05 ± 0.03 Z = 1.20 ± 0.05
Including O VI : n_H = -4.12 ± 0.01 Z = 1.30 ± 0.04

Ionisation-Modelling-Plots/pks0637-z=0.161064-compI.png


System-Plots/PKS0637-752_z=0.417539_sys_plot.png

Ion	v (km s^{-1})	b (km s^{-1})	log [N cm^{-2}]
Si III	-5.0 ± 4.0	35 ± 7	12.74 ± 0.06
C III	-4.0 ± 1.0	24 ± 2	14.44 ± 0.15
O VI	0.0 ± 1.0	42 ± 6	14.19 ± 0.05
H I	-17.0 ± 1.0	30 ± 1	15.41 ± 0.03
H I	20.0 ± 1.0	46 ± 4	14.61 ± 0.07

N(H I)=15.41

Excluding O VI : n_H = -3.54 ± 0.11 Z = -0.49 ± 0.11
Including O VI : n_H = -3.74 ± 0.02 Z = -0.23 ± 0.04

NOTE : MCMC walkers initialised near the solution for excluding O VI case.

Ionisation-Modelling-Plots/pks0637-z=0.417539-compI.png

System-Plots/PG1424+240_z=0.147104_sys_plot.png

Ion	v (km s^{-1})	b (km s^{-1})	log [N cm^{-2}]
C IV	-81.0 ± 2.0	11 ± 4	13.58 ± 0.09
C IV	-18.0 ± 2.0	20 ± 3	14.06 ± 0.05
Si III	-78.0 ± 2.0	15 ± 3	12.58 ± 0.05
Si III	-9.0 ± 1.0	16 ± 2	12.87 ± 0.03
Si IV	-82.0 ± 4.0	13 ± 7	12.69 ± 0.1
Si IV	-11.0 ± 2.0	11 ± 5	12.88 ± 0.07
O VI	-56.0 ± 9.0	39 ± 13	13.77 ± 0.11
O VI	4.0 ± 4.0	16 ± 6	13.73 ± 0.11
H I	-454.0 ± 3.0	27 ± 5	13.16 ± 0.05
H I	-87.0 ± 3.0	23 ± 2	14.88 ± 0.05
H I	0.0 ± 3.0	29 ± 2	15.44 ± 0.14
H I	216.0 ± 2.0	40 ± 3	13.49 ± 0.02

N(H I)=15.44

Excluding O VI : n_H = -3.81 ± 0.03 Z = -0.46 ± 0.03
Including O VI : n_H = -3.88 ± 0.02 Z = -0.42 ± 0.02

N(H I)=14.88

Excluding O VI : n_H = -3.74 ± 0.05 Z = -0.22 ± 0.04
Including O VI : n_H = -3.96 ± 0.03 Z = -0.07 ± 0.04

Figure 1: N(H I)=15.44

Figure 2: N(H I)=14.88


System-Plots/PG0003+158_z=0.386089_sys_plot.png

Ion	v (km s^{-1})	b (km s^{-1})	log [N cm^{-2}]
O III	-18.0 ± 2.0	9 ± 5	13.93 ± 0.08
C III	-11.0 ± 1.0	13 ± 2	13.35 ± 0.05
N V	-7.0 ± 1.0	33 ± 11	13.49 ± 0.11
O VI	0.0 ± 2.0	25 ± 3	13.87 ± 0.04
O VI	54.0 ± 3.0	25 ± 4	13.71 ± 0.06
H I	-10.0 ± 1.0	29 ± 0	14.81 ± 0.03
H I	40.0 ± 9.0	40 ± 4	14.1 ± 0.05

N(H I)=14.81

Excluding O VI : n_H = -4.12 ± 0.06 Z = -0.65 ± 0.04
Including O VI : n_H = -4.07 ± 0.02 Z = -0.68 ± 0.03

Ionisation-Modelling-Plots/pg0003-z=0.386089-compI.png


System-Plots/PG0003+158_z=0.421923_sys_plot.png

Ion	v (km s^{-1})	b (km s^{-1})	log [N cm^{-2}]
C III	-9.0 ± 1.0	13 ± 1	13.35 ± 0.04
O III	-1.0 ± 2.0	7 ± 5	13.83 ± 0.13
O VI	0.0 ± 1.0	27 ± 1	14.27 ± 0.02
H I	-272.0 ± 6.0	66 ± 10	13.37 ± 0.05
H I	-16.0 ± 1.0	64 ± 3	14.17 ± 0.04
H I	-2.0 ± 1.0	26 ± 1	14.71 ± 0.02

N(H I)=14.17

Excluding O VI : n_H = -2.66 ± 0.22 Z = 0.42 ± 0.23
Including O VI : n_H = -4.24 ± 0.02 Z = -0.09 ± 0.03

NOTE : Convergence is not good for excluding O VI case

Ionisation-Modelling-Plots/pg0003-z=0.421923-compII.png


System-Plots/PG1216+069_z=0.282286_sys_plot.png

Ion	**v (km s^{-1})**	**b (km s^{-1})**	**log [N cm^{-2}]**
Si III	0.0 ± 1.0	14 ± 3	12.92 ± 0.05
C III	-51.0 ± 3.0	32 ± 5	13.33 ± 0.05
C III	5.0 ± 1.0	16 ± 2	13.76 ± 0.07
O VI	-64.0 ± 6.0	58 ± 9	13.93 ± 0.05
O VI	19.0 ± 2.0	12 ± 5	13.54 ± 0.09
H I	-31.0 ± 1.0	52 ± 3	15.1 ± 0.05
H I	7.0 ± 1.0	22 ± 1	16.4 ± 0.03
H I	169.0 ± 22.0	53 ± 10	13.15 ± 0.18

N(H I)=15.10

Excluding O VI : n_H = -2.13 ± 0.15 Z = 0.65 ± 0.22
Including O VI : n_H = -3.86 ± 0.02 Z = -0.37 ± 0.03

NOTE : Convergence is not much good for excluding O VI case

N(H I)=16.40

Excluding O VI : n_H = -2.08 ± 0.43 Z = -0.37 ± 0.59
Including O VI : n_H = -3.68 ± 0.02 Z = -1.55 ± 0.04

NOTE : Convergence is not much good for excluding O VI case

Figure 3: N(H I)=15.10

Figure 4: N(H I)=16.40


System-Plots/SDSSJ135712.61+170444_z=0.097869_sys_plot.png

Ion	v (km s^{-1})	b (km s^{-1})	log [N cm^{-2}]
Si III	-62.0 ± 2.0	17 ± 3	12.94 ± 0.05
Si III	4.0 ± 1.0	13 ± 10	14.67 ± 2.87
C IV	-74.0 ± 6.0	33 ± 1	13.82 ± 0.09
C IV	-7.0 ± 8.0	32 ± 12	13.63 ± 0.12
Si IV	-66.0 ± 4.0	18 ± 6	13.02 ± 0.08
Si IV	0.0 ± 4.0	29 ± 5	13.3 ± 0.05
C II	-79.0 ± 8.0	19 ± 14	13.17 ± 0.16
C II	-1.0 ± 2.0	22 ± 3	13.92 ± 0.04
O VI	-96.0 ± 10.0	43 ± 16	14.3 ± 0.11
H I	-536.0 ± 3.0	29 ± 5	13.36 ± 0.05
H I	-66.0 ± 0.0	29 ± 8	16.49 ± 0.12
H I	0.0 ± 0.0	46 ± 4	15.01 ± 0.16
H I	424.0 ± 3.0	34 ± 4	13.52 ± 0.04

N(H I)=16.49

Excluding O VI : n_H = -3.76 ± 0.05 Z = -1.49 ± 0.04
Including O VI : n_H = -4.06 ± 0.02 Z = -1.32 ± 0.04

N(H I)=15.01

Excluding O VI : n_H = -3.25 ± 0.04 Z = 0.93 ± 0.04
Including O VI : n_H = -3.84 ± 0.03 Z = 0.75 ± 0.03

NOTE : Using O VI column density from other component to compare.

Figure 5: N(H I)=16.49

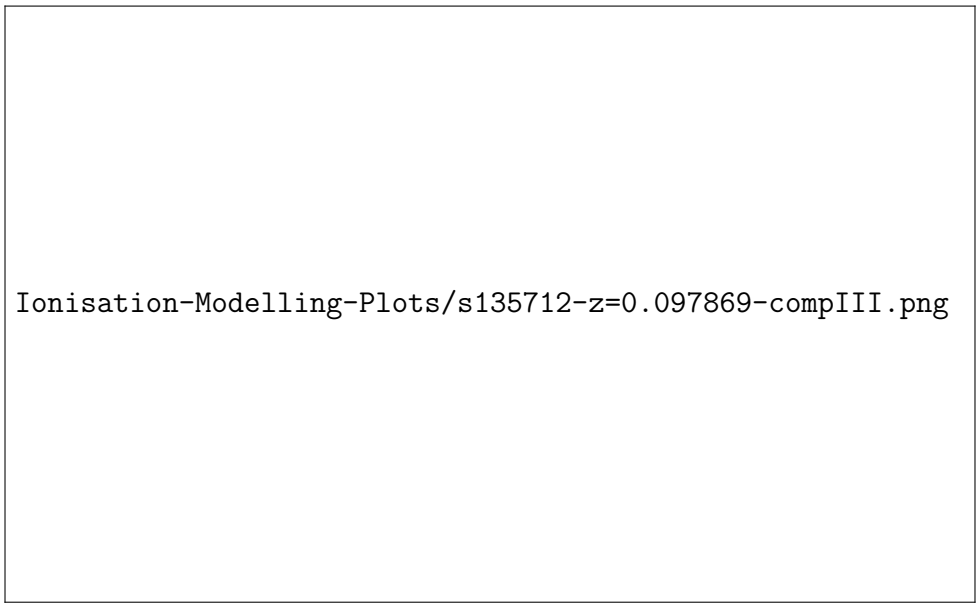

Figure 6: N(H I)=15.01


System-Plots/1ES1553+113_z=0.187764_sys_plot.png

Ion	v (km s^{-1})	b (km s^{-1})	log [N cm^{-2}]
C III	-46.0 ± 1.0	5 ± 4	13.17 ± 0.46
C III	-6.0 ± 1.0	13 ± 2	13.21 ± 0.03
N V	-47.0 ± 2.0	17 ± 0	13.43 ± 0.05
N V	-5.0 ± 2.0	16 ± 4	13.33 ± 0.06
O VI	-42.0 ± 1.0	3 ± 1	14.23 ± 0.33
O VI	0.0 ± 1.0	15 ± 3	13.71 ± 0.03
O VI	511.0 ± 3.0	28 ± 5	13.49 ± 0.05
H I	-52.0 ± 3.0	8 ± 6	12.76 ± 0.15
H I	-28.0 ± 1.0	51 ± 1	13.88 ± 0.01
H I	425.0 ± 3.0	25 ± 5	13.02 ± 0.07
H I	496.0 ± 2.0	37 ± 3	13.46 ± 0.03

N(H I)=12.76

Excluding O VI : n_H = -4.62 ± 0.04 Z = 1.37 ± 0.06
Including O VI : n_H = -4.63 ± 0.03 Z = 1.37 ± 0.06

NOTE : Reference metallicity at log Z = 1. Low N(H I), and error for column density for C III and O VI for component I were obtained from χ^2, else they were large and convergence was not good. Nearly similar solution for both the cases.

N(H I)=13.88

Excluding O VI : n_H = -4.6 ± 0.04 Z = 0.03 ± 0.03
Including O VI : n_H = -4.44 ± 0.02 Z = -0.06 ± 0.02

Figure 7: N(H I)=12.76

Figure 8: N(H I)=13.88