Table 4: Atmospheric parameters for our model for Gl 588

m ($g\ cm^{-2}$)	T (K)	V_t (km/s)	$\tau_{5000\text{Å}}$	N_H (cm^{-3})	N_p (cm^{-3})	N_e (cm^{-3})	h (km)
1.286E-06	145000	2.07	0.00E+00	1.57E+09	1.57E+09	1.88E+09	1125
1.288E-06	122300	2.07	5.47E-10	1.86E+09	1.86E+09	2.24E+09	1121
1.290E-06	103100	2.06	1.20E-09	2.21E+09	2.21E+09	2.66E+09	1117
1.292E-06	86980	2.06	1.97E-09	2.62E+09	2.62E+09	3.15E+09	1113
1.295E-06	73360	2.06	2.88E-09	3.12E+09	3.12E+09	3.74E+09	1109
1.298E-06	61870	2.05	3.97E-09	3.70E+09	3.70E+09	4.45E+09	1105
1.303E-06	50000	2.05	5.62E-09	4.60E+09	4.60E+09	5.52E+09	1100
1.314E-06	45590	2.04	9.49E-09	5.08E+09	5.08E+09	6.11E+09	1090
1.333E-06	39700	2.03	1.61E-08	5.93E+09	5.92E+09	7.11E+09	1075
1.348E-06	36200	2.02	2.11E-08	6.57E+09	6.56E+09	7.87E+09	1065
1.373E-06	31250	2.00	2.96E-08	7.78E+09	7.75E+09	9.25E+09	1050
1.429E-06	23000	1.98	4.75E-08	1.17E+10	1.14E+10	1.23E+10	1025
1.513E-06	18000	1.97	7.04E-08	1.71E+10	1.48E+10	1.51E+10	1000
1.908E-06	14000	1.97	1.69E-07	2.92E+10	2.25E+10	2.27E+10	926
2.832E-06	12000	1.96	4.20E-07	5.24E+10	3.69E+10	3.71E+10	826
3.946E-06	10830	1.95	7.51E-07	8.75E+10	4.93E+10	4.95E+10	756
6.493E-06	9499	1.94	1.33E-06	2.05E+11	4.58E+10	4.61E+10	676
1.124E-05	8415	1.93	1.72E-06	4.54E+11	2.64E+10	2.72E+10	611
2.641E-05	7064	1.92	2.03E-06	1.32E+12	1.30E+10	1.47E+10	530
4.552E-05	6330	1.90	2.18E-06	2.54E+12	9.76E+09	1.21E+10	486
6.850E-05	5830	1.88	2.30E-06	4.15E+12	8.24E+09	1.04E+10	456
1.058E-04	5600	1.82	2.45E-06	6.69E+12	6.26E+09	9.11E+09	426
1.664E-04	5400	1.76	2.63E-06	1.09E+13	4.37E+09	8.44E+09	396
2.541E-04	5200	1.72	2.86E-06	1.73E+13	3.21E+09	8.52E+09	369
4.211E-04	5000	1.67	3.25E-06	2.99E+13	3.27E+09	9.51E+09	338
7.007E-04	4800	1.65	3.84E-06	5.18E+13	2.30E+09	9.69E+09	308
1.099E-03	4400	1.61	4.56E-06	8.85E+13	9.70E+08	1.11E+10	283
1.804E-03	3956	1.59	5.82E-06	1.61E+14	4.06E+08	1.51E+10	258
2.794E-03	3600	1.57	7.87E-06	2.73E+14	1.70E+08	1.96E+10	238
7.087E-03	3000	1.53	2.41E-05	8.34E+14	2.76E+07	3.18E+10	201
3.359E-02	2780	1.48	1.69E-04	4.83E+15	1.76E+05	3.55E+10	150
2.310E-01	2700	1.44	1.35E-03	4.33E+16	1.15E+02	8.74E+10	100
8.925E-01	2800	1.40	7.03E-03	1.70E+17	4.42E+01	2.62E+11	70
2.083E+00	3014	1.37	2.81E-02	3.57E+17	1.07E+03	6.23E+11	50
5.360E+00	3282	1.31	1.75E-01	8.14E+17	8.42E+04	1.90E+12	25
1.242E+01	3550	1.29	1.00E+00	1.68E+18	3.13E+06	5.63E+12	0
2.593E+01	3900	1.23	4.94E+00	3.00E+18	1.61E+08	1.57E+13	-25
4.773E+01	4400	1.18	2.18E+01	4.46E+18	1.24E+10	4.89E+13	-50
7.981E+01	4800	1.18	7.88E+01	6.57E+18	1.85E+11	1.22E+14	-75
1.253E+02	5300	1.18	2.45E+02	9.03E+18	2.84E+12	3.08E+14	-100
1.866E+02	5852	1.18	6.56E+02	1.19E+19	3.37E+13	6.96E+14	-125

Table 5: Atmospheric parameters for our model for Gl 628

m ($g\ cm^{-2}$)	T (K)	V_t (km/s)	$\tau_{5000\AA}$	N_H (cm^{-3})	N_p (cm^{-3})	N_e (cm^{-3})	h (km)
1.288E-06	145000	2.07	0.00E+00	1.57E+09	1.57E+09	1.89E+09	1125
1.289E-06	122300	2.07	5.47E-10	1.86E+09	1.86E+09	2.24E+09	1121
1.291E-06	103100	2.06	1.20E-09	2.21E+09	2.21E+09	2.66E+09	1117
1.293E-06	86980	2.06	1.97E-09	2.63E+09	2.63E+09	3.16E+09	1113
1.296E-06	73360	2.06	2.89E-09	3.12E+09	3.12E+09	3.75E+09	1109
1.299E-06	61870	2.05	3.97E-09	3.71E+09	3.71E+09	4.45E+09	1105
1.304E-06	50000	2.05	5.63E-09	4.60E+09	4.60E+09	5.53E+09	1100
1.315E-06	45590	2.04	9.50E-09	5.09E+09	5.09E+09	6.11E+09	1090
1.335E-06	39700	2.03	1.61E-08	5.93E+09	5.93E+09	7.12E+09	1075
1.349E-06	36200	2.02	2.11E-08	6.58E+09	6.57E+09	7.88E+09	1065
1.375E-06	31250	2.00	2.96E-08	7.79E+09	7.77E+09	9.26E+09	1050
1.431E-06	23000	1.98	4.75E-08	1.17E+10	1.14E+10	1.23E+10	1025
1.515E-06	18000	1.97	7.04E-08	1.72E+10	1.48E+10	1.51E+10	1000
1.808E-06	14000	1.97	1.41E-07	2.80E+10	2.10E+10	2.11E+10	944
2.694E-06	12000	1.96	3.71E-07	5.02E+10	3.46E+10	3.48E+10	844
3.761E-06	10830	1.95	6.72E-07	8.39E+10	4.64E+10	4.66E+10	774
6.203E-06	9499	1.94	1.19E-06	1.96E+11	4.31E+10	4.35E+10	694
1.074E-05	8415	1.93	1.55E-06	4.34E+11	2.51E+10	2.58E+10	629
2.525E-05	7064	1.92	1.83E-06	1.26E+12	1.24E+10	1.41E+10	548
4.352E-05	6330	1.90	1.97E-06	2.43E+12	9.49E+09	1.18E+10	504
6.549E-05	5830	1.88	2.08E-06	3.97E+12	8.12E+09	1.02E+10	474
1.012E-04	5600	1.82	2.22E-06	6.39E+12	6.32E+09	9.08E+09	444
1.591E-04	5400	1.76	2.39E-06	1.04E+13	4.40E+09	8.33E+09	414
2.429E-04	5200	1.72	2.59E-06	1.66E+13	2.84E+09	8.00E+09	387
7.240E-04	5000	1.67	3.90E-06	5.14E+13	5.76E+09	1.63E+10	320
9.337E-04	4800	1.65	4.42E-06	6.90E+13	2.50E+09	1.25E+10	305
1.466E-03	4400	1.61	5.44E-06	1.18E+14	8.92E+08	1.47E+10	280
2.407E-03	3956	1.59	7.39E-06	2.15E+14	3.78E+08	2.09E+10	255
3.727E-03	3600	1.57	1.08E-05	3.64E+14	1.90E+08	2.87E+10	235
9.433E-03	3020	1.53	4.22E-05	1.10E+15	3.05E+07	5.23E+10	198
4.333E-02	2800	1.48	3.30E-04	6.24E+15	1.09E+05	6.01E+10	148
2.754E-01	2720	1.44	2.47E-03	5.14E+16	2.12E+02	1.44E+11	100
9.679E-01	2936	1.40	1.14E-02	1.66E+17	4.71E+02	3.26E+11	70
2.118E+00	3080	1.37	3.74E-02	3.45E+17	3.54E+03	6.88E+11	50
5.282E+00	3310	1.31	1.92E-01	7.84E+17	1.29E+05	1.95E+12	25
1.211E+01	3550	1.29	1.00E+00	1.63E+18	3.14E+06	5.51E+12	0
2.527E+01	3900	1.23	4.78E+00	2.92E+18	1.62E+08	1.54E+13	-25
4.644E+01	4400	1.18	2.09E+01	4.33E+18	1.24E+10	4.80E+13	-50
7.756E+01	4800	1.18	7.55E+01	6.37E+18	1.84E+11	1.20E+14	-75
1.217E+02	5300	1.18	2.34E+02	8.75E+18	2.83E+12	3.02E+14	-100
1.811E+02	5852	1.18	6.25E+02	1.16E+19	3.35E+13	6.81E+14	-125