Table 19. HFS TABLES

Ion	λ (Å)	EP (eV)	$\log gf$
Sc II	4670.400	1.357	−1.182
Sc II	4670.403	1.357	−1.353
Sc II	4670.405	1.357	−1.560
Sc II	4670.408	1.357	−1.831
Sc II	4670.409	1.357	−1.922
Sc II	4670.410	1.357	−2.249
Sc II	4670.410	1.357	−1.739
Sc II	4670.412	1.357	−1.706
Sc II	4670.413	1.357	−1.765
Sc II	4670.414	1.357	−1.948
Sc II	4670.416	1.357	−2.027
Sc II	4670.416	1.357	−2.124
Sc II	4670.416	1.357	−2.922
Sc II	4670.417	1.357	−2.270
Sc II	4670.417	1.357	−2.504
Sc II	5239.823	1.455	−0.770
Sc II	5318.336	1.357	−3.751
Sc II	5318.342	1.357	−3.311
Sc II	5318.342	1.357	−3.052
Sc II	5318.347	1.357	−3.040
Sc II	5318.347	1.357	−2.936
Sc II	5318.350	1.357	−3.056
Sc II	5318.350	1.357	−2.563
Sc II	5318.353	1.357	−2.856
Sc II	5318.355	1.357	−3.311
Sc II	5526.770	1.768	−2.665
Sc II	5526.775	1.768	−2.262
Sc II	5526.779	1.768	−2.050
Sc II	5526.779	1.768	−1.452
Sc II	5526.783	1.768	−1.940
Sc II	5526.783	1.768	−1.247
Sc II	5526.786	1.768	−1.181
Sc II	5526.787	1.768	−1.919
Sc II	5526.788	1.768	−1.185
Sc II	5526.789	1.768	−0.523
Sc II	5526.790	1.768	−2.028
Sc II	5526.790	1.768	−1.246
Sc II	5526.791	1.768	−0.644
Sc II	5526.792	1.768	−1.368

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
Sc II	5526.793	1.768	−1.551
Sc II	5526.793	1.768	−0.780
Sc II	5526.794	1.768	−0.936
Sc II	5526.795	1.768	−1.697
Sc II	5526.795	1.768	−1.355
Sc II	5526.795	1.768	−1.121
Sc II	5552.215	1.455	−2.650
Sc II	5552.227	1.455	−2.747
Sc II	5552.236	1.455	−2.872
Sc II	5657.886	1.507	−1.126
Sc II	5657.888	1.507	−1.696
Sc II	5657.893	1.507	−1.696
Sc II	5657.894	1.507	−1.524
Sc II	5657.895	1.507	−1.538
Sc II	5657.899	1.507	−1.538
Sc II	5657.901	1.507	−2.220
Sc II	5657.902	1.507	−1.549
Sc II	5657.904	1.507	−1.549
Sc II	5657.906	1.507	−1.722
Sc II	5657.906	1.507	−3.646
Sc II	5657.908	1.507	−1.722
Sc II	5657.909	1.507	−1.898
Sc II	5667.136	1.500	−1.834
Sc II	5667.141	1.500	−2.030
Sc II	5667.148	1.500	−2.030
Sc II	5667.154	1.500	−3.215
Sc II	5667.157	1.500	−2.034
Sc II	5667.163	1.500	−2.034
Sc II	5667.167	1.500	−2.289
Sc II	5669.038	1.500	−1.500
Sc II	5669.044	1.500	−1.597
Sc II	5669.047	1.500	−1.722
Sc II	5684.190	1.507	−1.603
Sc II	5684.191	1.507	−2.092
Sc II	5684.193	1.507	−2.791
Sc II	5684.204	1.507	−1.896
Sc II	5684.205	1.507	−1.976

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
Sc II	5684.206	1.507	−2.351
Sc II	5684.215	1.507	−2.351
Sc II	5684.216	1.507	−2.096
Sc II	5684.217	1.507	−2.080
Sc II	6245.621	1.507	−1.736
Sc II	6245.629	1.507	−2.476
Sc II	6245.631	1.507	−1.907
Sc II	6245.636	1.507	−3.476
Sc II	6245.638	1.507	−2.293
Sc II	6245.640	1.507	−2.114
Sc II	6245.644	1.507	−3.058
Sc II	6245.646	1.507	−2.260
Sc II	6245.647	1.507	−2.385
Sc II	6245.650	1.507	−2.824
Sc II	6245.651	1.507	−2.319
Sc II	6245.652	1.507	−2.803
Sc II	6245.655	1.507	−2.678
Sc II	6245.656	1.507	−2.502
Sc II	6245.657	1.507	−2.581
Sc II	6604.582	1.357	−2.676
Sc II	6604.590	1.357	−2.518
Sc II	6604.594	1.357	−2.106
Sc II	6604.596	1.357	−2.529
Sc II	6604.599	1.357	−2.504
Sc II	6604.602	1.357	−2.702
Sc II	6604.604	1.357	−3.200
Sc II	6604.607	1.357	−4.626
Sc II	6604.609	1.357	−2.878
Sc II	6604.611	1.357	−2.676
Sc II	6604.613	1.357	−2.518
Sc II	6604.615	1.357	−2.702
Sc II	6604.615	1.357	−2.529
V I	4400.559	0.262	−1.216
V I	4400.559	0.262	−1.195
V I	4400.559	0.262	−1.341
V I	4400.578	0.262	−1.672
V I	4400.578	0.262	−1.195
V I	4400.578	0.262	−0.874

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
V I	4444.186	0.267	−1.791
V I	4444.186	0.267	−1.615
V I	4444.194	0.267	−1.615
V I	4444.194	0.267	−1.490
V I	4444.205	0.267	−1.490
V I	4444.205	0.267	−1.808
V I	4444.205	0.267	−1.603
V I	4444.219	0.267	−1.603
V I	4451.929	1.868	−0.564
V I	4451.941	1.868	−1.485
V I	4451.941	1.868	−0.498
V I	4451.956	1.868	−2.865
V I	4451.956	1.868	−1.262
V I	4451.956	1.868	−0.429
V I	4451.973	1.868	−2.613
V I	4451.973	1.868	−1.168
V I	4451.973	1.868	−0.360
V I	4451.994	1.868	−2.555
V I	4451.994	1.868	−1.138
V I	4451.994	1.868	−0.293
V I	4452.017	1.868	−2.613
V I	4452.017	1.868	−1.161
V I	4452.017	1.868	−0.228
V I	4452.044	1.868	−2.789
V I	4452.044	1.868	−1.251
V I	4452.044	1.868	−0.166
V I	4452.073	1.868	−3.166
V I	4452.073	1.868	−1.476
V I	4452.073	1.868	−0.105
V I	4577.148	0.000	−2.252
V I	4577.148	0.000	−2.252
V I	4577.148	0.000	−2.553
V I	4577.160	0.000	−2.428
V I	4577.160	0.000	−2.088
V I	4577.160	0.000	−2.114
V I	4577.175	0.000	−2.678
V I	4577.175	0.000	−2.080
V I	4577.175	0.000	−1.831
V I	4577.195	0.000	−3.106
V I	4577.195	0.000	−2.241

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
V I	4577.195	0.000	−1.615
V I	4594.093	0.069	−2.098
V I	4594.096	0.069	−2.550
V I	4594.096	0.069	−1.980
V I	4594.101	0.069	−3.550
V I	4594.101	0.069	−2.339
V I	4594.101	0.069	−1.862
V I	4594.107	0.069	−3.344
V I	4594.107	0.069	−2.243
V I	4594.107	0.069	−1.750
V I	4594.115	0.069	−3.315
V I	4594.115	0.069	−2.207
V I	4594.115	0.069	−1.646
V I	4594.125	0.069	−3.395
V I	4594.125	0.069	−2.223
V I	4594.125	0.069	−1.550
V I	4594.136	0.069	−3.587
V I	4594.136	0.069	−2.305
V I	4594.136	0.069	−1.460
V I	4594.149	0.069	−3.976
V I	4594.149	0.069	−2.523
V I	4594.149	0.069	−1.376
V I	4831.618	0.017	−3.028
V I	4831.618	0.017	−2.773
V I	4831.623	0.017	−2.773
V I	4831.623	0.017	−4.682
V I	4831.623	0.017	−2.574
V I	4831.630	0.017	−2.574
V I	4831.630	0.017	−3.438
V I	4831.630	0.017	−2.510
V I	4831.640	0.017	−2.510
V I	4831.640	0.017	−2.721
V I	4831.640	0.017	−2.541
V I	4831.653	0.017	−2.541
V I	4831.653	0.017	−2.315
V I	4831.653	0.017	−2.722
V I	4831.668	0.017	−2.722
V I	4831.668	0.017	−2.023
V I	4851.453	0.000	−1.945

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
V I	4851.466	0.000	−1.924
V I	4851.466	0.000	−2.401
V I	4851.483	0.000	−2.070
V I	4851.483	0.000	−1.924
V I	4851.505	0.000	−1.603
V I	4864.703	0.017	−2.165
V I	4864.708	0.017	−2.165
V I	4864.708	0.017	−2.341
V I	4864.715	0.017	−2.466
V I	4864.715	0.017	−2.001
V I	4864.715	0.017	−2.591
V I	4864.725	0.017	−2.027
V I	4864.725	0.017	−1.994
V I	4864.725	0.017	−3.019
V I	4864.738	0.017	−1.744
V I	4864.738	0.017	−2.154
V I	4864.753	0.017	−1.528
V I	4875.462	0.040	−2.616
V I	4875.464	0.040	−2.331
V I	4875.464	0.040	−2.586
V I	4875.468	0.040	−2.586
V I	4875.468	0.040	−2.143
V I	4875.468	0.040	−2.637
V I	4875.474	0.040	−2.198
V I	4875.474	0.040	−2.052
V I	4875.474	0.040	−2.762
V I	4875.481	0.040	−1.943
V I	4875.481	0.040	−2.030
V I	4875.481	0.040	−2.984
V I	4875.491	0.040	−1.745
V I	4875.491	0.040	−2.084
V I	4875.491	0.040	−3.394
V I	4875.503	0.040	−1.581
V I	4875.503	0.040	−2.280
V I	4875.517	0.040	−1.440
V I	4932.022	1.218	−2.374
V I	4932.024	1.218	−2.374
V I	4932.024	1.218	−2.550
V I	4932.026	1.218	−2.675

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
V I	4932.026	1.218	−2.210
V I	4932.026	1.218	−2.800
V I	4932.030	1.218	−2.236
V I	4932.030	1.218	−2.202
V I	4932.030	1.218	−3.228
V I	4932.035	1.218	−1.952
V I	4932.035	1.218	−2.363
V I	4932.040	1.218	−1.737
V I	5627.612	1.081	−1.951
V I	5627.612	1.081	−1.048
V I	5627.624	1.081	−1.747
V I	5627.624	1.081	−1.235
V I	5627.624	1.081	−1.951
V I	5627.634	1.081	−1.683
V I	5627.634	1.081	−1.454
V I	5627.634	1.081	−1.747
V I	5627.642	1.081	−1.689
V I	5627.642	1.081	−1.717
V I	5627.642	1.081	−1.683
V I	5627.649	1.081	−1.755
V I	5627.649	1.081	−2.048
V I	5627.649	1.081	−1.689
V I	5627.654	1.081	−1.893
V I	5627.654	1.081	−2.495
V I	5627.654	1.081	−1.755
V I	5627.658	1.081	−2.173
V I	5627.658	1.081	−3.194
V I	5627.658	1.081	−1.893
V I	5627.659	1.081	−2.173
V I	5670.832	1.081	−3.407
V I	5670.832	1.081	−2.106
V I	5670.832	1.081	−1.098
V I	5670.844	1.081	−3.009
V I	5670.844	1.081	−1.896
V I	5670.844	1.081	−1.203
V I	5670.854	1.081	−2.805
V I	5670.854	1.081	−1.822
V I	5670.854	1.081	−1.319
V I	5670.863	1.081	−2.708
V I	5670.863	1.081	−1.816

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
V I	5670.863	1.081	−1.448
V I	5670.870	1.081	−2.708
V I	5670.870	1.081	−1.863
V I	5670.870	1.081	−1.594
V I	5670.875	1.081	−2.863
V I	5670.875	1.081	−1.968
V I	5670.875	1.081	−1.764
V I	5670.878	1.081	−2.164
V I	5670.878	1.081	−1.968
V I	5670.880	1.081	−2.231
V I	5703.574	1.051	−1.416
V I	5703.574	1.051	−1.416
V I	5703.574	1.051	−1.717
V I	5703.575	1.051	−1.592
V I	5703.575	1.051	−1.252
V I	5703.575	1.051	−1.278
V I	5703.575	1.051	−1.842
V I	5703.575	1.051	−1.244
V I	5703.575	1.051	−0.994
V I	5703.575	1.051	−2.270
V I	5703.575	1.051	−1.405
V I	5703.575	1.051	−0.779
V I	5727.027	1.081	−2.994
V I	5727.027	1.081	−1.693
V I	5727.027	1.081	−0.685
V I	5727.039	1.081	−2.596
V I	5727.039	1.081	−1.482
V I	5727.039	1.081	−0.790
V I	5727.049	1.081	−2.392
V I	5727.049	1.081	−1.409
V I	5727.049	1.081	−0.906
V I	5727.058	1.081	−2.295
V I	5727.058	1.081	−1.403
V I	5727.058	1.081	−1.035
V I	5727.065	1.081	−2.295
V I	5727.065	1.081	−1.450
V I	5727.065	1.081	−1.181
V I	5727.070	1.081	−2.450
V I	5727.070	1.081	−1.555
V I	5727.070	1.081	−1.351

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
V I	5727.074	1.081	−1.751
V I	5727.074	1.081	−1.555
V I	5727.076	1.081	−1.818
V I	6081.417	1.051	−1.660
V I	6081.417	1.051	−1.484
V I	6081.427	1.051	−1.484
V I	6081.428	1.051	−1.359
V I	6081.442	1.051	−1.359
V I	6081.442	1.051	−1.677
V I	6081.442	1.051	−1.472
V I	6081.460	1.051	−1.472
V I	6090.199	1.081	−0.692
V I	6090.207	1.081	−0.833
V I	6090.213	1.081	−0.997
V I	6090.213	1.081	−1.532
V I	6090.218	1.081	−1.195
V I	6090.218	1.081	−1.336
V I	6090.223	1.081	−1.450
V I	6090.223	1.081	−1.282
V I	6090.225	1.081	−2.646
V I	6090.226	1.081	−1.304
V I	6090.227	1.081	−1.838
V I	6090.228	1.081	−2.236
V I	6090.229	1.081	−1.394
V I	6090.231	1.081	−1.583
V I	6090.231	1.081	−2.014
V I	6090.232	1.081	−1.889
V I	6090.233	1.081	−1.868
V I	6090.233	1.081	−1.838
V I	6119.510	1.064	−1.825
V I	6119.514	1.064	−1.386
V I	6119.516	1.064	−1.524
V I	6119.519	1.064	−1.524
V I	6119.519	1.064	−1.103
V I	6119.521	1.064	−1.360
V I	6119.527	1.064	−1.700
V I	6119.527	1.064	−0.887
V I	6119.528	1.064	−1.352
V I	6119.535	1.064	−1.950

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
V I	6119.537	1.064	−1.513
V I	6119.546	1.064	−2.378
V I	6199.155	0.287	−1.958
V I	6199.173	0.287	−2.063
V I	6199.188	0.287	−2.179
V I	6199.203	0.287	−2.308
V I	6199.207	0.287	−2.966
V I	6199.215	0.287	−2.454
V I	6199.218	0.287	−2.755
V I	6199.226	0.287	−2.624
V I	6199.227	0.287	−2.682
V I	6199.235	0.287	−2.676
V I	6199.236	0.287	−2.828
V I	6199.241	0.287	−2.723
V I	6199.244	0.287	−3.091
V I	6199.246	0.287	−2.828
V I	6199.249	0.287	−3.024
V I	6199.252	0.287	−4.267
V I	6199.256	0.287	−3.869
V I	6199.259	0.287	−3.723
V I	6199.259	0.287	−3.665
V I	6199.260	0.287	−3.568
V I	6199.261	0.287	−3.568
V I	6216.315	0.275	−1.920
V I	6216.333	0.275	−2.061
V I	6216.348	0.275	−2.225
V I	6216.362	0.275	−2.423
V I	6216.362	0.275	−2.760
V I	6216.372	0.275	−2.564
V I	6216.374	0.275	−2.678
V I	6216.382	0.275	−2.510
V I	6216.385	0.275	−3.066
V I	6216.389	0.275	−2.532
V I	6216.394	0.275	−2.623
V I	6216.398	0.275	−2.811
V I	6216.401	0.275	−3.874
V I	6216.404	0.275	−3.096
V I	6216.406	0.275	−3.464
V I	6216.408	0.275	−3.066
V I	6216.408	0.275	−3.242

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
V I	6216.409	0.275	−3.117
V I	6243.043	0.301	−2.750
V I	6243.059	0.301	−2.535
V I	6243.073	0.301	−2.458
V I	6243.086	0.301	−2.447
V I	6243.086	0.301	−1.687
V I	6243.096	0.301	−1.823
V I	6243.097	0.301	−2.490
V I	6243.104	0.301	−1.971
V I	6243.107	0.301	−2.593
V I	6243.112	0.301	−2.130
V I	6243.117	0.301	−2.814
V I	6243.118	0.301	−2.299
V I	6243.123	0.301	−2.466
V I	6243.127	0.301	−2.604
V I	6243.130	0.301	−2.618
V I	6243.138	0.301	−2.750
V I	6243.140	0.301	−2.814
V I	6243.141	0.301	−2.535
V I	6243.143	0.301	−2.593
V I	6243.144	0.301	−2.490
V I	6243.144	0.301	−2.458
V I	6243.145	0.301	−2.447
V I	6251.771	0.287	−2.924
V I	6251.788	0.287	−2.720
V I	6251.804	0.287	−2.655
V I	6251.806	0.287	−2.021
V I	6251.817	0.287	−2.662
V I	6251.818	0.287	−2.208
V I	6251.829	0.287	−2.728
V I	6251.829	0.287	−2.427
V I	6251.837	0.287	−2.690
V I	6251.839	0.287	−2.866
V I	6251.844	0.287	−3.021
V I	6251.848	0.287	−3.146
V I	6251.849	0.287	−3.468
V I	6251.853	0.287	−4.167
V I	6251.853	0.287	−2.924
V I	6251.859	0.287	−3.146
V I	6251.859	0.287	−2.720

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
V I	6251.862	0.287	−2.655
V I	6251.863	0.287	−2.866
V I	6251.864	0.287	−2.728
V I	6251.864	0.287	−2.662
V I	6274.607	0.267	−2.932
V I	6274.629	0.267	−2.455
V I	6274.641	0.267	−2.476
V I	6274.655	0.267	−2.134
V I	6274.657	0.267	−2.455
V I	6274.678	0.267	−2.601
V I	6285.098	0.275	−3.568
V I	6285.117	0.275	−3.140
V I	6285.122	0.275	−2.703
V I	6285.134	0.275	−2.890
V I	6285.137	0.275	−2.542
V I	6285.148	0.275	−2.714
V I	6285.149	0.275	−2.550
V I	6285.152	0.275	−2.077
V I	6285.157	0.275	−2.714
V I	6285.162	0.275	−2.293
V I	6285.168	0.275	−2.576
V I	6285.172	0.275	−3.015
V I	6504.140	1.184	−2.492
V I	6504.148	1.184	−2.036
V I	6504.156	1.184	−2.015
V I	6504.160	1.184	−2.015
V I	6504.176	1.184	−2.161
V I	6504.176	1.184	−1.694
Mn I	4453.007	2.941	−1.824
Mn I	4453.007	2.941	−1.280
Mn I	4453.007	2.941	−0.916
Mn I	4453.018	2.941	−1.377
Mn I	4453.019	2.941	−1.393
Mn I	4453.019	2.941	−1.280
Mn I	4457.018	3.073	−2.713
Mn I	4457.028	3.073	−2.333
Mn I	4457.031	3.073	−1.759

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
Mn I	4457.035	3.073	−2.157
Mn I	4457.037	3.073	−1.613
Mn I	4457.039	3.073	−2.111
Mn I	4457.041	3.073	−1.634
Mn I	4457.042	3.073	−1.789
Mn I	4457.046	3.073	−1.070
Mn I	4457.049	3.073	−1.965
Mn I	4457.050	3.073	−1.555
Mn I	4457.050	3.073	−1.282
Mn I	4470.137	2.941	−0.995
Mn I	4470.138	2.941	−1.472
Mn I	4470.144	2.941	−1.370
Mn I	4470.144	2.941	−1.544
Mn I	4470.144	2.941	−1.472
Mn I	4470.149	2.941	−1.502
Mn I	4470.149	2.941	−3.079
Mn I	4470.149	2.941	−1.370
Mn I	4470.152	2.941	−1.870
Mn I	4470.152	2.941	−1.502
Mn I	4498.895	2.941	−0.858
Mn I	4498.901	2.941	−1.070
Mn I	4498.901	2.941	−1.547
Mn I	4498.905	2.941	−2.501
Mn I	4498.906	2.941	−1.343
Mn I	4498.906	2.941	−1.401
Mn I	4498.909	2.941	−2.121
Mn I	4498.910	2.941	−1.753
Mn I	4498.910	2.941	−1.422
Mn I	4498.912	2.941	−1.577
Mn I	4498.912	2.941	−1.945
Mn I	4498.914	2.941	−1.899
Mn I	4502.200	2.920	−0.912
Mn I	4502.207	2.920	−1.830
Mn I	4502.210	2.920	−1.052
Mn I	4502.212	2.920	−3.047
Mn I	4502.215	2.920	−1.654
Mn I	4502.217	2.920	−1.210
Mn I	4502.219	2.920	−2.695
Mn I	4502.221	2.920	−1.628

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
Mn I	4502.223	2.920	−1.394
Mn I	4502.224	2.920	−2.570
Mn I	4502.226	2.920	−1.695
Mn I	4502.227	2.920	−1.616
Mn I	4502.228	2.920	−2.650
Mn I	4502.229	2.920	−1.871
Mn I	4502.230	2.920	−1.901
Mn I	4709.693	2.890	−0.950
Mn I	4709.698	2.890	−1.941
Mn I	4709.701	2.890	−1.941
Mn I	4709.706	2.890	−1.120
Mn I	4709.711	2.890	−1.759
Mn I	4709.713	2.890	−1.759
Mn I	4709.717	2.890	−1.305
Mn I	4709.721	2.890	−1.728
Mn I	4709.723	2.890	−1.728
Mn I	4709.726	2.890	−1.497
Mn I	4709.729	2.890	−1.793
Mn I	4709.730	2.890	−1.793
Mn I	4709.733	2.890	−1.672
Mn I	4709.735	2.890	−1.991
Mn I	4709.736	2.890	−1.991
Mn I	4709.737	2.890	−1.736
Mn I	4739.072	2.941	−1.518
Mn I	4739.072	2.941	−1.041
Mn I	4739.088	2.941	−1.416
Mn I	4739.088	2.941	−1.590
Mn I	4739.088	2.941	−1.518
Mn I	4739.100	2.941	−1.416
Mn I	4739.101	2.941	−1.548
Mn I	4739.101	2.941	−3.125
Mn I	4739.109	2.941	−1.916
Mn I	4739.109	2.941	−1.548
Mn I	4754.022	2.282	−0.653
Mn I	4754.033	2.282	−0.793
Mn I	4754.043	2.282	−0.951
Mn I	4754.051	2.282	−1.135
Mn I	4754.054	2.282	−1.571
Mn I	4754.059	2.282	−1.357

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
Mn I	4754.060	2.282	−1.395
Mn I	4754.064	2.282	−1.369
Mn I	4754.066	2.282	−1.642
Mn I	4754.068	2.282	−1.436
Mn I	4754.070	2.282	−1.612
Mn I	4754.079	2.282	−2.391
Mn I	4754.081	2.282	−2.311
Mn I	4754.081	2.282	−2.788
Mn I	4754.082	2.282	−2.436
Mn I	4761.499	2.953	−1.025
Mn I	4761.507	2.953	−0.564
Mn I	4761.511	2.953	−0.928
Mn I	4761.519	2.953	−1.041
Mn I	4761.524	2.953	−0.928
Mn I	4761.536	2.953	−1.472
Mn I	4762.347	2.889	−0.177
Mn I	4762.355	2.889	−1.273
Mn I	4762.360	2.889	−0.281
Mn I	4762.361	2.889	−2.688
Mn I	4762.367	2.889	−1.085
Mn I	4762.371	2.889	−0.394
Mn I	4762.373	2.889	−2.353
Mn I	4762.377	2.889	−1.047
Mn I	4762.381	2.889	−0.516
Mn I	4762.382	2.889	−2.256
Mn I	4762.385	2.889	−1.102
Mn I	4762.388	2.889	−0.646
Mn I	4762.389	2.889	−2.387
Mn I	4762.391	2.889	−1.290
Mn I	4762.393	2.889	−0.779
Mn I	4783.391	2.300	−1.559
Mn I	4783.403	2.300	−1.377
Mn I	4783.414	2.300	−1.346
Mn I	4783.415	2.300	−0.568
Mn I	4783.423	2.300	−1.410
Mn I	4783.424	2.300	−0.738
Mn I	4783.430	2.300	−0.923
Mn I	4783.431	2.300	−1.609
Mn I	4783.436	2.300	−1.115

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
Mn I	4783.439	2.300	−1.290
Mn I	4783.442	2.300	−1.354
Mn I	4783.448	2.300	−1.559
Mn I	4783.450	2.300	−1.609
Mn I	4783.451	2.300	−1.377
Mn I	4783.452	2.300	−1.410
Mn I	4783.452	2.300	−1.346
Mn I	4823.469	2.320	−2.969
Mn I	4823.484	2.320	−2.634
Mn I	4823.490	2.320	−1.554
Mn I	4823.498	2.320	−2.537
Mn I	4823.502	2.320	−1.366
Mn I	4823.510	2.320	−2.668
Mn I	4823.512	2.320	−1.328
Mn I	4823.515	2.320	−0.458
Mn I	4823.521	2.320	−1.383
Mn I	4823.523	2.320	−0.562
Mn I	4823.527	2.320	−1.571
Mn I	4823.530	2.320	−0.675
Mn I	4823.535	2.320	−0.797
Mn I	4823.537	2.320	−0.927
Mn I	4823.538	2.320	−1.060
Mn I	5004.887	2.920	−4.332
Mn I	5004.887	2.920	−3.115
Mn I	5004.887	2.920	−2.197
Mn I	5004.891	2.920	−3.980
Mn I	5004.891	2.920	−2.939
Mn I	5004.891	2.920	−2.337
Mn I	5004.894	2.920	−3.855
Mn I	5004.894	2.920	−2.913
Mn I	5004.894	2.920	−2.495
Mn I	5004.896	2.920	−3.934
Mn I	5004.896	2.920	−2.980
Mn I	5004.896	2.920	−2.679
Mn I	5004.898	2.920	−3.186
Mn I	5004.898	2.920	−3.156
Mn I	5004.898	2.920	−2.901
Mn I	5260.736	3.135	−3.781
Mn I	5260.740	3.135	−3.138

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
Mn I	5260.742	3.135	−3.585
Mn I	5260.747	3.135	−3.084
Mn I	5260.749	3.135	−3.529
Mn I	5260.751	3.135	−3.781
Mn I	5260.756	3.135	−2.978
Mn I	5260.759	3.135	−3.570
Mn I	5260.762	3.135	−3.585
Mn I	5260.767	3.135	−2.854
Mn I	5260.771	3.135	−3.760
Mn I	5260.774	3.135	−3.529
Mn I	5260.781	3.135	−2.726
Mn I	5260.789	3.135	−3.570
Mn I	5260.797	3.135	−2.601
Mn I	5260.807	3.135	−3.760
Mn I	5394.626	0.000	−4.070
Mn I	5394.657	0.000	−4.988
Mn I	5394.661	0.000	−4.210
Mn I	5394.684	0.000	−6.205
Mn I	5394.687	0.000	−4.812
Mn I	5394.690	0.000	−4.368
Mn I	5394.709	0.000	−5.853
Mn I	5394.712	0.000	−4.786
Mn I	5394.714	0.000	−4.552
Mn I	5394.728	0.000	−5.728
Mn I	5394.730	0.000	−4.853
Mn I	5394.731	0.000	−4.774
Mn I	5394.741	0.000	−5.807
Mn I	5394.742	0.000	−5.029
Mn I	5394.743	0.000	−5.059
Mn I	5399.450	3.850	−1.345
Mn I	5399.455	3.850	−1.213
Mn I	5399.465	3.850	−1.713
Mn I	5399.465	3.850	−1.315
Mn I	5399.478	3.850	−2.923
Mn I	5399.494	3.850	−1.345
Mn I	5399.497	3.850	−1.387
Mn I	5399.521	3.850	−1.213
Mn I	5399.522	3.850	−0.838
Mn I	5399.555	3.850	−1.315

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
Mn I	5432.506	0.000	−4.377
Mn I	5432.510	0.000	−5.155
Mn I	5432.535	0.000	−5.155
Mn I	5432.538	0.000	−4.640
Mn I	5432.541	0.000	−4.992
Mn I	5432.561	0.000	−4.992
Mn I	5432.564	0.000	−4.971
Mn I	5432.566	0.000	−4.987
Mn I	5432.580	0.000	−4.987
Mn I	5432.583	0.000	−5.418
Mn I	5432.584	0.000	−5.089
Mn I	5432.594	0.000	−5.089
Mn I	5432.595	0.000	−6.117
Mn I	5432.596	0.000	−5.351
Mn I	5432.601	0.000	−5.351
Mn I	5537.694	2.187	−2.920
Mn I	5537.713	2.187	−2.807
Mn I	5537.740	2.187	−3.351
Mn I	5537.742	2.187	−2.904
Mn I	5537.769	2.187	−2.807
Mn I	5537.807	2.187	−2.443
Mn I	6013.478	3.073	−0.766
Mn I	6013.499	3.073	−0.978
Mn I	6013.518	3.073	−1.251
Mn I	6013.527	3.073	−1.455
Mn I	6013.533	3.073	−1.661
Mn I	6013.538	3.073	−1.309
Mn I	6013.547	3.073	−1.330
Mn I	6013.552	3.073	−1.485
Mn I	6013.562	3.073	−1.807
Mn I	6013.566	3.073	−1.853
Mn I	6013.566	3.073	−2.409
Mn I	6013.567	3.073	−2.029
Mn I	6016.619	3.075	−1.576
Mn I	6016.645	3.075	−1.413
Mn I	6016.647	3.075	−0.798
Mn I	6016.667	3.075	−1.408
Mn I	6016.668	3.075	−1.061
Mn I	6016.684	3.075	−1.392

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
Mn I	6016.685	3.075	−1.510
Mn I	6016.696	3.075	−1.839
Mn I	6016.696	3.075	−1.576
Mn I	6016.698	3.075	−1.772
Mn I	6016.704	3.075	−2.538
Mn I	6016.707	3.075	−1.413
Mn I	6016.713	3.075	−1.408
Mn I	6016.714	3.075	−1.772
Mn I	6016.716	3.075	−1.510
Mn I	6021.746	3.075	−2.668
Mn I	6021.772	3.075	−1.451
Mn I	6021.774	3.075	−2.316
Mn I	6021.795	3.075	−1.275
Mn I	6021.798	3.075	−2.191
Mn I	6021.804	3.075	−0.533
Mn I	6021.813	3.075	−1.249
Mn I	6021.817	3.075	−2.271
Mn I	6021.821	3.075	−0.673
Mn I	6021.827	3.075	−1.316
Mn I	6021.834	3.075	−0.831
Mn I	6021.837	3.075	−1.492
Mn I	6021.843	3.075	−1.015
Mn I	6021.846	3.075	−1.522
Mn I	6021.847	3.075	−1.237
Co I	5094.927	2.042	−2.557
Co I	5094.936	2.042	−2.773
Co I	5094.943	2.042	−3.056
Co I	5094.950	2.042	−3.495
Co I	5094.952	2.042	−3.183
Co I	5094.957	2.042	−3.022
Co I	5094.960	2.042	−3.030
Co I	5094.963	2.042	−3.194
Co I	5094.972	2.042	−3.194
Co I	5094.973	2.042	−3.370
Co I	5094.974	2.042	−3.620
Co I	5094.974	2.042	−4.048
Co I	5146.690	3.568	−1.904
Co I	5146.708	3.568	−1.700
Co I	5146.724	3.568	−1.635

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
Co I	5146.731	3.568	−1.001
Co I	5146.738	3.568	−1.642
Co I	5146.743	3.568	−1.188
Co I	5146.751	3.568	−1.708
Co I	5146.753	3.568	−1.407
Co I	5146.761	3.568	−1.846
Co I	5146.761	3.568	−1.670
Co I	5146.768	3.568	−2.001
Co I	5146.771	3.568	−2.126
Co I	5146.773	3.568	−2.448
Co I	5146.776	3.568	−3.147
Co I	5146.783	3.568	−1.904
Co I	5146.784	3.568	−2.126
Co I	5146.788	3.568	−1.846
Co I	5146.788	3.568	−1.700
Co I	5146.790	3.568	−1.708
Co I	5146.790	3.568	−1.635
Co I	5146.791	3.568	−1.642
Co I	5212.591	3.515	−1.882
Co I	5212.618	3.515	−1.667
Co I	5212.642	3.515	−1.590
Co I	5212.649	3.515	−0.819
Co I	5212.664	3.515	−1.579
Co I	5212.669	3.515	−0.955
Co I	5212.683	3.515	−1.622
Co I	5212.687	3.515	−1.103
Co I	5212.700	3.515	−1.725
Co I	5212.701	3.515	−1.262
Co I	5212.713	3.515	−1.431
Co I	5212.714	3.515	−1.946
Co I	5212.722	3.515	−1.598
Co I	5212.728	3.515	−1.882
Co I	5212.729	3.515	−1.736
Co I	5212.734	3.515	−1.750
Co I	5212.738	3.515	−1.667
Co I	5212.745	3.515	−1.590
Co I	5212.748	3.515	−1.946
Co I	5212.750	3.515	−1.579
Co I	5212.751	3.515	−1.725
Co I	5212.752	3.515	−1.622

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
Co I	5235.104	2.137	−4.054
Co I	5235.116	2.137	−3.644
Co I	5235.127	2.137	−3.422
Co I	5235.137	2.137	−3.297
Co I	5235.147	2.137	−3.246
Co I	5235.150	2.137	−2.940
Co I	5235.154	2.137	−2.744
Co I	5235.156	2.137	−3.276
Co I	5235.157	2.137	−2.690
Co I	5235.160	2.137	−2.712
Co I	5235.162	2.137	−2.802
Co I	5235.163	2.137	−2.991
Co I	5235.179	2.137	−3.246
Co I	5235.185	2.137	−2.858
Co I	5235.191	2.137	−2.603
Co I	5235.196	2.137	−2.405
Co I	5235.200	2.137	−2.241
Co I	5235.204	2.137	−2.100
Co I	5280.532	3.629	−3.012
Co I	5280.559	3.629	−2.614
Co I	5280.566	3.629	−1.711
Co I	5280.583	3.629	−2.410
Co I	5280.588	3.629	−1.500
Co I	5280.603	3.629	−2.313
Co I	5280.605	3.629	−0.703
Co I	5280.606	3.629	−1.427
Co I	5280.620	3.629	−2.313
Co I	5280.622	3.629	−1.421
Co I	5280.622	3.629	−0.808
Co I	5280.634	3.629	−2.468
Co I	5280.634	3.629	−1.468
Co I	5280.635	3.629	−0.924
Co I	5280.644	3.629	−1.573
Co I	5280.646	3.629	−1.053
Co I	5280.650	3.629	−1.769
Co I	5280.653	3.629	−1.199
Co I	5280.658	3.629	−1.836
Co I	5280.658	3.629	−1.369
Co I	5280.659	3.629	−1.573
Co I	5301.008	1.711	−3.345

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
Co I	5301.017	1.711	−2.646
Co I	5301.026	1.711	−3.164
Co I	5301.034	1.711	−2.937
Co I	5301.041	1.711	−3.133
Co I	5301.043	1.711	−3.345
Co I	5301.048	1.711	−3.344
Co I	5301.052	1.711	−3.197
Co I	5301.056	1.711	−3.164
Co I	5301.058	1.711	−4.061
Co I	5301.061	1.711	−3.396
Co I	5301.065	1.711	−5.305
Co I	5301.065	1.711	−3.133
Co I	5301.070	1.711	−3.651
Co I	5301.071	1.711	−3.197
Co I	5301.074	1.711	−3.396
Co I	5342.693	4.020	−0.640
Co I	5342.693	4.020	−0.557
Co I	5342.693	4.020	−0.471
Co I	5342.694	4.020	−0.387
Co I	5342.696	4.020	−0.305
Co I	5342.699	4.020	−0.228
Co I	5342.701	4.020	−1.365
Co I	5342.702	4.020	−0.154
Co I	5342.704	4.020	−1.147
Co I	5342.706	4.020	−0.084
Co I	5342.707	4.020	−1.053
Co I	5342.712	4.020	−1.021
Co I	5342.713	4.020	−2.578
Co I	5342.716	4.020	−1.041
Co I	5342.718	4.020	−2.344
Co I	5342.722	4.020	−1.128
Co I	5342.725	4.020	−2.298
Co I	5342.728	4.020	−1.351
Co I	5342.732	4.020	−2.365
Co I	5342.739	4.020	−2.548
Co I	5342.748	4.020	−2.930
Co I	5351.893	3.577	−3.244
Co I	5351.925	3.577	−2.854
Co I	5351.953	3.577	−2.663
Co I	5351.953	3.577	−1.791

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
Co I	5351.976	3.577	−1.573
Co I	5351.978	3.577	−2.584
Co I	5351.997	3.577	−1.491
Co I	5352.000	3.577	−2.612
Co I	5352.015	3.577	−1.475
Co I	5352.019	3.577	−2.818
Co I	5352.020	3.577	−0.644
Co I	5352.029	3.577	−1.511
Co I	5352.036	3.577	−0.728
Co I	5352.041	3.577	−1.607
Co I	5352.049	3.577	−0.818
Co I	5352.050	3.577	−1.818
Co I	5352.059	3.577	−0.914
Co I	5352.066	3.577	−1.018
Co I	5352.070	3.577	−1.366
Co I	5352.070	3.577	−1.130
Co I	5352.072	3.577	−1.248
Co I	5369.566	1.740	−2.217
Co I	5369.577	1.740	−2.433
Co I	5369.587	1.740	−2.716
Co I	5369.593	1.740	−2.843
Co I	5369.597	1.740	−3.155
Co I	5369.599	1.740	−2.682
Co I	5369.605	1.740	−2.690
Co I	5369.610	1.740	−2.854
Co I	5369.615	1.740	−3.708
Co I	5369.617	1.740	−3.280
Co I	5369.619	1.740	−2.854
Co I	5369.619	1.740	−3.030
Co I	5483.309	1.711	−2.120
Co I	5483.334	1.711	−2.261
Co I	5483.344	1.711	−2.961
Co I	5483.354	1.711	−2.425
Co I	5483.363	1.711	−2.764
Co I	5483.370	1.711	−2.623
Co I	5483.372	1.711	−4.074
Co I	5483.378	1.711	−2.710
Co I	5483.383	1.711	−2.878
Co I	5483.387	1.711	−3.664
Co I	5483.389	1.711	−2.732

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
Co I	5483.393	1.711	−3.266
Co I	5483.397	1.711	−2.822
Co I	5483.397	1.711	−3.442
Co I	5483.402	1.711	−3.011
Co I	5483.403	1.711	−3.317
Co I	5483.407	1.711	−3.296
Co I	5483.407	1.711	−3.266
Co I	5530.734	1.711	−2.690
Co I	5530.757	1.711	−2.832
Co I	5530.767	1.711	−3.530
Co I	5530.776	1.711	−2.995
Co I	5530.785	1.711	−3.334
Co I	5530.791	1.711	−3.193
Co I	5530.794	1.711	−4.644
Co I	5530.799	1.711	−3.280
Co I	5530.803	1.711	−3.448
Co I	5530.808	1.711	−4.234
Co I	5530.809	1.711	−3.302
Co I	5530.812	1.711	−3.836
Co I	5530.816	1.711	−3.393
Co I	5530.817	1.711	−4.012
Co I	5530.820	1.711	−3.581
Co I	5530.822	1.711	−3.887
Co I	5530.825	1.711	−3.866
Co I	5530.825	1.711	−3.836
Co I	5647.207	2.280	−2.127
Co I	5647.220	2.280	−2.343
Co I	5647.232	2.280	−2.626
Co I	5647.239	2.280	−2.753
Co I	5647.243	2.280	−3.065
Co I	5647.246	2.280	−2.592
Co I	5647.253	2.280	−2.600
Co I	5647.259	2.280	−2.764
Co I	5647.265	2.280	−3.618
Co I	5647.267	2.280	−3.190
Co I	5647.269	2.280	−2.764
Co I	5647.269	2.280	−2.940
Co I	6188.925	1.710	−3.795
Co I	6188.937	1.710	−3.096

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
Co I	6188.968	1.710	−3.614
Co I	6188.979	1.710	−3.388
Co I	6188.991	1.710	−3.795
Co I	6189.003	1.710	−3.583
Co I	6189.012	1.710	−3.794
Co I	6189.024	1.710	−3.614
Co I	6189.030	1.710	−3.647
Co I	6189.038	1.710	−4.511
Co I	6189.048	1.710	−3.583
Co I	6189.052	1.710	−3.846
Co I	6189.057	1.710	−5.754
Co I	6189.065	1.710	−3.647
Co I	6189.069	1.710	−4.101
Co I	6189.075	1.710	−3.846
Co I	6454.937	3.632	−2.056
Co I	6454.937	3.632	−1.793
Co I	6454.941	3.632	−1.589
Co I	6454.948	3.632	−1.989
Co I	6454.950	3.632	−1.419
Co I	6454.958	3.632	−1.793
Co I	6454.964	3.632	−1.273
Co I	6454.969	3.632	−2.688
Co I	6454.972	3.632	−1.688
Co I	6454.982	3.632	−1.144
Co I	6454.989	3.632	−2.533
Co I	6454.992	3.632	−1.641
Co I	6455.006	3.632	−1.028
Co I	6455.014	3.632	−2.533
Co I	6455.016	3.632	−1.647
Co I	6455.034	3.632	−0.923
Co I	6455.044	3.632	−2.630
Co I	6455.045	3.632	−1.720
Co I	6455.079	3.632	−2.834
Co I	6455.079	3.632	−1.931
Co I	6455.118	3.632	−3.232
Co I	6632.406	2.280	−2.567
Co I	6632.421	2.280	−2.783
Co I	6632.436	2.280	−3.066
Co I	6632.447	2.280	−3.193
Co I	6632.449	2.280	−3.505

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
Co I	6632.455	2.280	−3.032
Co I	6632.463	2.280	−3.040
Co I	6632.470	2.280	−3.204
Co I	6632.481	2.280	−4.058
Co I	6632.482	2.280	−3.630
Co I	6632.483	2.280	−3.204
Co I	6632.483	2.280	−3.380
Co I	6678.762	1.956	−3.942
Co I	6678.790	1.956	−3.486
Co I	6678.790	1.956	−3.465
Co I	6678.811	1.956	−3.465
Co I	6678.824	1.956	−3.144
Co I	6678.839	1.956	−3.611
Co I	6814.889	1.956	−2.793
Co I	6814.915	1.956	−2.680
Co I	6814.936	1.956	−2.805
Co I	6814.943	1.956	−2.998
Co I	6814.968	1.956	−2.980
Co I	6814.979	1.956	−2.793
Co I	6814.987	1.956	−2.680
Co I	6814.991	1.956	−2.805
Co I	7388.678	2.718	−2.783
Co I	7388.679	2.718	−2.585
Co I	7388.681	2.718	−3.038
Co I	7388.684	2.718	−2.421
Co I	7388.686	2.718	−3.426
Co I	7388.696	2.718	−2.280
Co I	7388.701	2.718	−3.171
Co I	7388.703	2.718	−2.983
Co I	7388.708	2.718	−3.456
Co I	7388.708	2.718	−2.892
Co I	7388.717	2.718	−2.870
Co I	7388.719	2.718	−3.426
Co I	7388.729	2.718	−2.924
Co I	7388.731	2.718	−3.477
Co I	7388.747	2.718	−3.602
Co I	7388.749	2.718	−3.120
Co I	7388.767	2.718	−3.824
Co I	7388.794	2.718	−4.234

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
Co I	7417.308	2.042	−2.637
Co I	7417.349	2.042	−2.853
Co I	7417.384	2.042	−3.136
Co I	7417.385	2.042	−3.263
Co I	7417.413	2.042	−3.102
Co I	7417.414	2.042	−3.575
Co I	7417.435	2.042	−3.110
Co I	7417.449	2.042	−4.128
Co I	7417.452	2.042	−3.274
Co I	7417.464	2.042	−3.700
Co I	7417.473	2.042	−3.450
Co I	7417.477	2.042	−3.274
Co I	8093.803	4.021	−3.013
Co I	8093.827	4.021	−2.625
Co I	8093.849	4.021	−2.433
Co I	8093.855	4.021	−1.561
Co I	8093.869	4.021	−2.353
Co I	8093.873	4.021	−1.343
Co I	8093.887	4.021	−2.382
Co I	8093.888	4.021	−1.261
Co I	8093.902	4.021	−2.588
Co I	8093.902	4.021	−1.245
Co I	8093.913	4.021	−1.281
Co I	8093.914	4.021	−0.414
Co I	8093.922	4.021	−1.377
Co I	8093.925	4.021	−0.498
Co I	8093.929	4.021	−1.588
Co I	8093.934	4.021	−0.588
Co I	8093.941	4.021	−0.684
Co I	8093.946	4.021	−1.136
Co I	8093.946	4.021	−0.788
Co I	8093.948	4.021	−1.018
Co I	8093.948	4.021	−0.900
Co I	8372.697	4.072	−1.812
Co I	8372.723	4.072	−1.597
Co I	8372.747	4.072	−1.520
Co I	8372.755	4.072	−0.749
Co I	8372.770	4.072	−1.509
Co I	8372.772	4.072	−0.885

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
Co I	8372.789	4.072	−1.033
Co I	8372.790	4.072	−1.552
Co I	8372.804	4.072	−1.192
Co I	8372.808	4.072	−1.655
Co I	8372.817	4.072	−1.361
Co I	8372.823	4.072	−1.876
Co I	8372.828	4.072	−1.528
Co I	8372.830	4.072	−1.812
Co I	8372.836	4.072	−1.666
Co I	8372.838	4.072	−1.597
Co I	8372.842	4.072	−1.680
Co I	8372.845	4.072	−1.520
Co I	8372.851	4.072	−1.509
Co I	8372.854	4.072	−1.552
Co I	8372.855	4.072	−1.876
Co I	8372.856	4.072	−1.655
Cu I	5105.505	1.390	−3.874
Cu I	5105.509	1.390	−2.920
Cu I	5105.511	1.390	−2.874
Cu I	5105.512	1.390	−4.050
Cu I	5105.517	1.390	−2.807
Cu I	5105.520	1.390	−2.552
Cu I	5105.531	1.390	−2.904
Cu I	5105.536	1.390	−2.302
Cu I	5105.558	1.390	−2.096
Cu I	5105.503	1.390	−4.226
Cu I	5105.506	1.390	−3.271
Cu I	5105.509	1.390	−3.226
Cu I	5105.510	1.390	−4.402
Cu I	5105.515	1.390	−3.159
Cu I	5105.519	1.390	−2.903
Cu I	5105.530	1.390	−3.256
Cu I	5105.536	1.390	−2.653
Cu I	5105.560	1.390	−2.447
Cu I	5218.191	3.820	−1.094
Cu I	5218.193	3.820	−1.140
Cu I	5218.193	3.820	−0.772
Cu I	5218.196	3.820	−2.094
Cu I	5218.196	3.820	−1.027
Cu I	5218.196	3.820	−0.522

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
Cu I	5218.202	3.820	−2.270
Cu I	5218.202	3.820	−1.124
Cu I	5218.202	3.820	−0.316
Cu I	5218.190	3.820	−1.446
Cu I	5218.192	3.820	−1.491
Cu I	5218.192	3.820	−1.123
Cu I	5218.196	3.820	−2.446
Cu I	5218.196	3.820	−1.379
Cu I	5218.196	3.820	−0.874
Cu I	5218.202	3.820	−2.622
Cu I	5218.202	3.820	−1.475
Cu I	5218.202	3.820	−0.667
Cu I	5782.059	1.642	−3.144
Cu I	5782.066	1.642	−3.445
Cu I	5782.078	1.642	−2.746
Cu I	5782.106	1.642	−2.746
Cu I	5782.117	1.642	−2.746
Cu I	5782.170	1.642	−2.299
Cu I	5782.053	1.642	−3.496
Cu I	5782.062	1.642	−3.797
Cu I	5782.074	1.642	−3.098
Cu I	5782.105	1.642	−3.098
Cu I	5782.117	1.642	−3.098
Cu I	5782.173	1.642	−2.651
Cu I	8092.605	3.817	−1.810
Cu I	8092.615	3.817	−1.111
Cu I	8092.627	3.817	−0.664
Cu I	8092.638	3.817	−1.509
Cu I	8092.643	3.817	−1.111
Cu I	8092.653	3.817	−1.111
Cu I	8092.604	3.817	−2.162
Cu I	8092.613	3.817	−1.463
Cu I	8092.626	3.817	−1.015
Cu I	8092.639	3.817	−1.860
Cu I	8092.644	3.817	−1.463
Cu I	8092.654	3.817	−1.463
Ba II	5853.696	0.604	−3.015
Ba II	5853.697	0.604	−2.957
Ba II	5853.697	0.604	−3.248

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
Ba II	5853.698	0.604	−3.190
Ba II	5853.699	0.604	−3.395
Ba II	5853.699	0.604	−3.161
Ba II	5853.700	0.604	−2.860
Ba II	5853.700	0.604	−3.793
Ba II	5853.700	0.604	−2.646
Ba II	5853.700	0.604	−2.630
Ba II	5853.700	0.604	−3.559
Ba II	5853.700	0.604	−2.413
Ba II	5853.700	0.604	−1.154
Ba II	5853.700	0.604	−2.112
Ba II	5853.700	0.604	−3.094
Ba II	5853.701	0.604	−3.395
Ba II	5853.702	0.604	−3.161
Ba II	5853.703	0.604	−2.957
Ba II	5853.703	0.604	−3.190
Ba II	5853.704	0.604	−3.248
Ba II	5853.704	0.604	−3.015
Ba II	6141.695	0.704	−3.631
Ba II	6141.695	0.704	−3.397
Ba II	6141.697	0.704	−2.485
Ba II	6141.697	0.704	−2.251
Ba II	6141.698	0.704	−3.455
Ba II	6141.698	0.704	−3.221
Ba II	6141.699	0.704	−1.676
Ba II	6141.699	0.704	−1.443
Ba II	6141.699	0.704	−2.388
Ba II	6141.699	0.704	−2.154
Ba II	6141.700	0.704	−1.690
Ba II	6141.700	0.704	−0.214
Ba II	6141.700	0.704	−1.172
Ba II	6141.701	0.704	−1.882
Ba II	6141.701	0.704	−1.649
Ba II	6141.701	0.704	−2.500
Ba II	6141.701	0.704	−2.267
Ba II	6141.702	0.704	−1.899
Ba II	6141.702	0.704	−2.455
Ba II	6141.702	0.704	−2.133
Ba II	6141.703	0.704	−2.221
Ba II	6496.900	0.604	−2.000

Table 19—Continued

Ion	λ (Å)	EP (eV)	$\log gf$
Ba II	6496.906	0.604	−2.764
Ba II	6496.907	0.604	−2.367
Ba II	6496.889	0.604	−3.066
Ba II	6496.910	0.604	−2.367
Ba II	6496.892	0.604	−2.367
Ba II	6496.896	0.604	−1.919
Ba II	6496.900	0.604	−1.482
Ba II	6496.906	0.604	−2.531
Ba II	6496.908	0.604	−2.133
Ba II	6496.888	0.604	−2.832
Ba II	6496.912	0.604	−2.133
Ba II	6496.891	0.604	−2.133
Ba II	6496.896	0.604	−1.686
Ba II	6496.900	0.604	−0.524