

| | | | | | | | |
|--------------|----|----------|------|----------|----------|-------------|-------------|
| Lyman series | | | | | | | |
| n1 | n2 | | | 1/Tau | Tau | | |
| 2 | 1 | 2.50E-01 | 1.00 | 6.70E+08 | 1.49E-09 | | |
| 3 | 1 | 1.11E-01 | 0.44 | 2.98E+08 | 3.36E-09 | | |
| 4 | 1 | 6.25E-02 | 0.25 | 1.67E+08 | 5.97E-09 | | |
| 5 | 1 | 4.00E-02 | 0.16 | 1.07E+08 | 9.34E-09 | | |
| 6 | 1 | 2.78E-02 | 0.11 | 7.44E+07 | 1.34E-08 | H avg n=6 | He avg. |
| 7 | 1 | 2.04E-02 | 0.08 | 5.47E+07 | 1.83E-08 | 1.47872E-07 | 9.24197E-09 |
| 8 | 1 | 1.56E-02 | 0.06 | 4.18E+07 | 2.39E-08 | | |
| 9 | 1 | 1.23E-02 | 0.05 | 3.31E+07 | 3.02E-08 | | |
| 10 | 1 | 1.00E-02 | 0.04 | 2.68E+07 | 3.73E-08 | | |
| 11 | 1 | 8.26E-03 | 0.03 | 2.21E+07 | 4.52E-08 | | |
| 12 | 1 | 6.94E-03 | 0.03 | 1.86E+07 | 5.38E-08 | | |
| 13 | 1 | 5.92E-03 | 0.02 | 1.58E+07 | 6.31E-08 | | |
| 14 | 1 | 5.10E-03 | 0.02 | 1.37E+07 | 7.32E-08 | | |
| 15 | 1 | 4.44E-03 | 0.02 | 1.19E+07 | 8.40E-08 | | |
| 16 | 1 | 3.91E-03 | 0.02 | 1.05E+07 | 9.56E-08 | | |
| 17 | 1 | 3.46E-03 | 0.01 | 9.27E+06 | 1.08E-07 | | |
| 18 | 1 | 3.09E-03 | 0.01 | 8.27E+06 | 1.21E-07 | | |
| 19 | 1 | 2.77E-03 | 0.01 | 7.42E+06 | 1.35E-07 | | |
| 20 | 1 | 2.50E-03 | 0.01 | 6.70E+06 | 1.49E-07 | | |
| | | | | | | | |
| | | | | | | | |
| Balmer | | | | | | | |
| n1 | n2 | | | | | | |
| 3 | 2 | 2.78E-02 | 1.00 | 7.44E+07 | 1.34E-08 | | |
| 4 | 2 | 1.56E-02 | 0.56 | 4.18E+07 | 2.39E-08 | | |
| 5 | 2 | 1.00E-02 | 0.36 | 2.68E+07 | 3.73E-08 | | |
| 6 | 2 | 6.94E-03 | 0.25 | 1.86E+07 | 5.38E-08 | | |
| 7 | 2 | 5.10E-03 | 0.18 | 1.37E+07 | 7.32E-08 | | |
| 8 | 2 | 3.91E-03 | 0.14 | 1.05E+07 | 9.56E-08 | | |
| 9 | 2 | 3.09E-03 | 0.11 | 8.27E+06 | 1.21E-07 | | |
| 10 | 2 | 2.50E-03 | 0.09 | 6.70E+06 | 1.49E-07 | | |
| 11 | 2 | 2.07E-03 | 0.07 | 5.53E+06 | 1.81E-07 | | |
| 12 | 2 | 1.74E-03 | 0.06 | 4.65E+06 | 2.15E-07 | | |
| 13 | 2 | 1.48E-03 | 0.05 | 3.96E+06 | 2.52E-07 | | |
| 14 | 2 | 1.28E-03 | 0.05 | 3.42E+06 | 2.93E-07 | | |
| 15 | 2 | 1.11E-03 | 0.04 | 2.98E+06 | 3.36E-07 | | |
| 16 | 2 | 9.77E-04 | 0.04 | 2.62E+06 | 3.82E-07 | | |
| 17 | 2 | 8.65E-04 | 0.03 | 2.32E+06 | 4.32E-07 | | |
| 18 | 2 | 7.72E-04 | 0.03 | 2.07E+06 | 4.84E-07 | | |
| 19 | 2 | 6.93E-04 | 0.02 | 1.85E+06 | 5.39E-07 | | |
| 20 | 2 | 6.25E-04 | 0.02 | 1.67E+06 | 5.97E-07 | | |
| | | | | | | | |
| | | | | | | | |
| Paschen | | | | | | | |
| n1 | n2 | | | | | | |
| 4 | 3 | 6.94E-03 | 1.00 | 1.86E+07 | 5.38E-08 | | |
| 5 | 3 | 4.44E-03 | 0.64 | 1.19E+07 | 8.40E-08 | | |
| 6 | 3 | 3.09E-03 | 0.44 | 8.27E+06 | 1.21E-07 | | |
| 7 | 3 | 2.27E-03 | 0.33 | 6.07E+06 | 1.65E-07 | | |
| 8 | 3 | 1.74E-03 | 0.25 | 4.65E+06 | 2.15E-07 | | |
| 9 | 3 | 1.37E-03 | 0.20 | 3.67E+06 | 2.72E-07 | | |
| 10 | 3 | 1.11E-03 | 0.16 | 2.98E+06 | 3.36E-07 | | |
| 11 | 3 | 9.18E-04 | 0.13 | 2.46E+06 | 4.07E-07 | | |
| 12 | 3 | 7.72E-04 | 0.11 | 2.07E+06 | 4.84E-07 | | |
| 13 | 3 | 6.57E-04 | 0.09 | 1.76E+06 | 5.68E-07 | | |

| | | | | | | | |
|-------------------|----|----------|------|----------|----------|--|--|
| 14 | 3 | 5.67E-04 | 0.08 | 1.52E+06 | 6.59E-07 | | |
| 15 | 3 | 4.94E-04 | 0.07 | 1.32E+06 | 7.56E-07 | | |
| 16 | 3 | 4.34E-04 | 0.06 | 1.16E+06 | 8.60E-07 | | |
| 17 | 3 | 3.84E-04 | 0.06 | 1.03E+06 | 9.71E-07 | | |
| 18 | 3 | 3.43E-04 | 0.05 | 9.18E+05 | 1.09E-06 | | |
| 19 | 3 | 3.08E-04 | 0.04 | 8.24E+05 | 1.21E-06 | | |
| 20 | 3 | 2.78E-04 | 0.04 | 7.44E+05 | 1.34E-06 | | |
| Brackett | | | | | | | |
| n1 | n2 | | | | | | |
| 5 | 4 | 2.50E-03 | 1.00 | 6.70E+06 | 1.49E-07 | | |
| 6 | 4 | 1.74E-03 | 0.69 | 4.65E+06 | 2.15E-07 | | |
| 7 | 4 | 1.28E-03 | 0.51 | 3.42E+06 | 2.93E-07 | | |
| 8 | 4 | 9.77E-04 | 0.39 | 2.62E+06 | 3.82E-07 | | |
| 9 | 4 | 7.72E-04 | 0.31 | 2.07E+06 | 4.84E-07 | | |
| 10 | 4 | 6.25E-04 | 0.25 | 1.67E+06 | 5.97E-07 | | |
| 11 | 4 | 5.17E-04 | 0.21 | 1.38E+06 | 7.23E-07 | | |
| 12 | 4 | 4.34E-04 | 0.17 | 1.16E+06 | 8.60E-07 | | |
| 13 | 4 | 3.70E-04 | 0.15 | 9.90E+05 | 1.01E-06 | | |
| 14 | 4 | 3.19E-04 | 0.13 | 8.54E+05 | 1.17E-06 | | |
| 15 | 4 | 2.78E-04 | 0.11 | 7.44E+05 | 1.34E-06 | | |
| 16 | 4 | 2.44E-04 | 0.10 | 6.54E+05 | 1.53E-06 | | |
| 17 | 4 | 2.16E-04 | 0.09 | 5.79E+05 | 1.73E-06 | | |
| 18 | 4 | 1.93E-04 | 0.08 | 5.17E+05 | 1.94E-06 | | |
| 19 | 4 | 1.73E-04 | 0.07 | 4.64E+05 | 2.16E-06 | | |
| 20 | 4 | 1.56E-04 | 0.06 | 4.18E+05 | 2.39E-06 | | |
| Pfund | | | | | | | |
| n1 | n2 | | | | | | |
| 6 | 5 | 1.11E-03 | 1.00 | 2.98E+06 | 3.36E-07 | | |
| 7 | 5 | 8.16E-04 | 0.73 | 2.19E+06 | 4.57E-07 | | |
| 8 | 5 | 6.25E-04 | 0.56 | 1.67E+06 | 5.97E-07 | | |
| 9 | 5 | 4.94E-04 | 0.44 | 1.32E+06 | 7.56E-07 | | |
| 10 | 5 | 4.00E-04 | 0.36 | 1.07E+06 | 9.34E-07 | | |
| 11 | 5 | 3.31E-04 | 0.30 | 8.85E+05 | 1.13E-06 | | |
| 12 | 5 | 2.78E-04 | 0.25 | 7.44E+05 | 1.34E-06 | | |
| 13 | 5 | 2.37E-04 | 0.21 | 6.34E+05 | 1.58E-06 | | |
| 14 | 5 | 2.04E-04 | 0.18 | 5.47E+05 | 1.83E-06 | | |
| 15 | 5 | 1.78E-04 | 0.16 | 4.76E+05 | 2.10E-06 | | |
| 16 | 5 | 1.56E-04 | 0.14 | 4.18E+05 | 2.39E-06 | | |
| 17 | 5 | 1.38E-04 | 0.12 | 3.71E+05 | 2.70E-06 | | |
| 18 | 5 | 1.23E-04 | 0.11 | 3.31E+05 | 3.02E-06 | | |
| 19 | 5 | 1.11E-04 | 0.10 | 2.97E+05 | 3.37E-06 | | |
| 20 | 5 | 1.00E-04 | 0.09 | 2.68E+05 | 3.73E-06 | | |
| n>6 to n=6 series | | | | | | | |
| n1 | n2 | | | | | | |
| 7 | 6 | 5.67E-04 | 1.00 | 1.52E+06 | 6.59E-07 | | |
| 8 | 6 | 4.34E-04 | 0.77 | 1.16E+06 | 8.60E-07 | | |
| 9 | 6 | 3.43E-04 | 0.60 | 9.18E+05 | 1.09E-06 | | |
| 10 | 6 | 2.78E-04 | 0.49 | 7.44E+05 | 1.34E-06 | | |
| 11 | 6 | 2.30E-04 | 0.40 | 6.15E+05 | 1.63E-06 | | |
| 12 | 6 | 1.93E-04 | 0.34 | 5.17E+05 | 1.94E-06 | | |
| 13 | 6 | 1.64E-04 | 0.29 | 4.40E+05 | 2.27E-06 | | |
| 14 | 6 | 1.42E-04 | 0.25 | 3.80E+05 | 2.63E-06 | | |
| 15 | 6 | 1.23E-04 | 0.22 | 3.31E+05 | 3.02E-06 | | |

| | | | | | | | |
|-----|-----|----------|------|----------|----------|--|--|
| 16 | 6 | 1.09E-04 | 0.19 | 2.91E+05 | 3.44E-06 | | |
| 17 | 6 | 9.61E-05 | 0.17 | 2.57E+05 | 3.88E-06 | | |
| 18 | 6 | 8.57E-05 | 0.15 | 2.30E+05 | 4.36E-06 | | |
| 19 | 6 | 7.69E-05 | 0.14 | 2.06E+05 | 4.85E-06 | | |
| 20 | 6 | 6.94E-05 | 0.12 | 1.86E+05 | 5.38E-06 | | |
| | | | | | | | |
| n1 | n2 | | | | | | |
| 8 | 7 | 3.19E-04 | 1.00 | 8.54E+05 | 1.17E-06 | | |
| 9 | 7 | 2.52E-04 | 0.79 | 6.75E+05 | 1.48E-06 | | |
| 10 | 7 | 2.04E-04 | 0.64 | 5.47E+05 | 1.83E-06 | | |
| 11 | 7 | 1.69E-04 | 0.53 | 4.52E+05 | 2.21E-06 | | |
| 12 | 7 | 1.42E-04 | 0.44 | 3.80E+05 | 2.63E-06 | | |
| 13 | 7 | 1.21E-04 | 0.38 | 3.23E+05 | 3.09E-06 | | |
| 14 | 7 | 1.04E-04 | 0.33 | 2.79E+05 | 3.59E-06 | | |
| 15 | 7 | 9.07E-05 | 0.28 | 2.43E+05 | 4.12E-06 | | |
| 16 | 7 | 7.97E-05 | 0.25 | 2.13E+05 | 4.68E-06 | | |
| 17 | 7 | 7.06E-05 | 0.22 | 1.89E+05 | 5.29E-06 | | |
| 18 | 7 | 6.30E-05 | 0.20 | 1.69E+05 | 5.93E-06 | | |
| 19 | 7 | 5.65E-05 | 0.18 | 1.51E+05 | 6.61E-06 | | |
| 20 | 7 | 5.10E-05 | 0.16 | 1.37E+05 | 7.32E-06 | | |
| | | | | | | | |
| | | | | | | | |
| n1 | n2 | | | | | | |
| 9 | 8 | 1.93E-04 | 1.00 | 5.17E+05 | 1.94E-06 | | |
| 10 | 8 | 1.56E-04 | 0.81 | 4.18E+05 | 2.39E-06 | | |
| 11 | 8 | 1.29E-04 | 0.67 | 3.46E+05 | 2.89E-06 | | |
| 12 | 8 | 1.09E-04 | 0.56 | 2.91E+05 | 3.44E-06 | | |
| 13 | 8 | 9.25E-05 | 0.48 | 2.48E+05 | 4.04E-06 | | |
| 14 | 8 | 7.97E-05 | 0.41 | 2.13E+05 | 4.68E-06 | | |
| 15 | 8 | 6.94E-05 | 0.36 | 1.86E+05 | 5.38E-06 | | |
| 16 | 8 | 6.10E-05 | 0.32 | 1.63E+05 | 6.12E-06 | | |
| 17 | 8 | 5.41E-05 | 0.28 | 1.45E+05 | 6.91E-06 | | |
| 18 | 8 | 4.82E-05 | 0.25 | 1.29E+05 | 7.74E-06 | | |
| 19 | 8 | 4.33E-05 | 0.22 | 1.16E+05 | 8.63E-06 | | |
| 20 | 8 | 3.91E-05 | 0.20 | 1.05E+05 | 9.56E-06 | | |
| | | | | | | | |
| | | | | | | | |
| n1 | n2 | | | | | | |
| 101 | 1 | 9.80E-05 | 1.00 | 2.63E+05 | 3.81E-06 | | |
| 102 | 1 | 9.61E-05 | 0.98 | 2.57E+05 | 3.88E-06 | | |
| 103 | 1 | 9.43E-05 | 0.96 | 2.52E+05 | 3.96E-06 | | |
| 104 | 1 | 9.25E-05 | 0.94 | 2.48E+05 | 4.04E-06 | | |
| 105 | 1 | 9.07E-05 | 0.93 | 2.43E+05 | 4.12E-06 | | |
| 106 | 1 | 8.90E-05 | 0.91 | 2.38E+05 | 4.20E-06 | | |
| 107 | 1 | 8.73E-05 | 0.89 | 2.34E+05 | 4.28E-06 | | |
| 108 | 1 | 8.57E-05 | 0.87 | 2.30E+05 | 4.36E-06 | | |
| 109 | 1 | 8.42E-05 | 0.86 | 2.25E+05 | 4.44E-06 | | |
| 110 | 1 | 8.26E-05 | 0.84 | 2.21E+05 | 4.52E-06 | | |
| | | | | | | | |
| | | | | | | | |
| n1 | n2 | | | | | | |
| 101 | 100 | 9.80E-09 | 1.00 | 2.63E+01 | 3.81E-02 | | |
| 102 | 100 | 9.61E-09 | 0.98 | 2.57E+01 | 3.88E-02 | | |
| 103 | 100 | 9.43E-09 | 0.96 | 2.52E+01 | 3.96E-02 | | |

| | | | | | | | |
|-----|-----|----------|------|----------|----------|--|--|
| 104 | 100 | 9.25E-09 | 0.94 | 2.48E+01 | 4.04E-02 | | |
| 105 | 100 | 9.07E-09 | 0.93 | 2.43E+01 | 4.12E-02 | | |
| 106 | 100 | 8.90E-09 | 0.91 | 2.38E+01 | 4.20E-02 | | |
| 107 | 100 | 8.73E-09 | 0.89 | 2.34E+01 | 4.28E-02 | | |
| 108 | 100 | 8.57E-09 | 0.87 | 2.30E+01 | 4.36E-02 | | |
| 109 | 100 | 8.42E-09 | 0.86 | 2.25E+01 | 4.44E-02 | | |
| 110 | 100 | 8.26E-09 | 0.84 | 2.21E+01 | 4.52E-02 | | |
| | | | | | | | |
| n1 | n2 | | | | | | |
| 501 | 1 | 3.98E-06 | 1.00 | 1.07E+04 | 9.37E-05 | | |
| 502 | 1 | 3.97E-06 | 1.00 | 1.06E+04 | 9.41E-05 | | |
| 503 | 1 | 3.95E-06 | 0.99 | 1.06E+04 | 9.45E-05 | | |
| 504 | 1 | 3.94E-06 | 0.99 | 1.05E+04 | 9.49E-05 | | |
| 505 | 1 | 3.92E-06 | 0.98 | 1.05E+04 | 9.52E-05 | | |
| 506 | 1 | 3.91E-06 | 0.98 | 1.05E+04 | 9.56E-05 | | |
| 507 | 1 | 3.89E-06 | 0.98 | 1.04E+04 | 9.60E-05 | | |
| 508 | 1 | 3.88E-06 | 0.97 | 1.04E+04 | 9.64E-05 | | |
| 509 | 1 | 3.86E-06 | 0.97 | 1.03E+04 | 9.67E-05 | | |
| 510 | 1 | 3.84E-06 | 0.97 | 1.03E+04 | 9.71E-05 | | |
| | | | | | | | |
| n1 | n2 | | | | | | |
| 501 | 100 | 3.98E-10 | 1.00 | 1.07E+00 | 9.37E-01 | | |
| 502 | 100 | 3.97E-10 | 1.00 | 1.06E+00 | 9.41E-01 | | |
| 503 | 100 | 3.95E-10 | 0.99 | 1.06E+00 | 9.45E-01 | | |
| 504 | 100 | 3.94E-10 | 0.99 | 1.05E+00 | 9.49E-01 | | |
| 505 | 100 | 3.92E-10 | 0.98 | 1.05E+00 | 9.52E-01 | | |
| 506 | 100 | 3.91E-10 | 0.98 | 1.05E+00 | 9.56E-01 | | |
| 507 | 100 | 3.89E-10 | 0.98 | 1.04E+00 | 9.60E-01 | | |
| 508 | 100 | 3.88E-10 | 0.97 | 1.04E+00 | 9.64E-01 | | |
| 509 | 100 | 3.86E-10 | 0.97 | 1.03E+00 | 9.67E-01 | | |
| 510 | 100 | 3.84E-10 | 0.97 | 1.03E+00 | 9.71E-01 | | |
| | | | | | | | |
| n1 | n2 | | | | | | |
| 501 | 500 | 1.59E-11 | 1.00 | 4.27E-02 | 2.34E+01 | | |
| 502 | 500 | 1.59E-11 | 1.00 | 4.25E-02 | 2.35E+01 | | |
| 503 | 500 | 1.58E-11 | 0.99 | 4.23E-02 | 2.36E+01 | | |
| 504 | 500 | 1.57E-11 | 0.99 | 4.22E-02 | 2.37E+01 | | |
| 505 | 500 | 1.57E-11 | 0.98 | 4.20E-02 | 2.38E+01 | | |
| 506 | 500 | 1.56E-11 | 0.98 | 4.18E-02 | 2.39E+01 | | |
| 507 | 500 | 1.56E-11 | 0.98 | 4.17E-02 | 2.40E+01 | | |
| 508 | 500 | 1.55E-11 | 0.97 | 4.15E-02 | 2.41E+01 | | |
| 509 | 500 | 1.54E-11 | 0.97 | 4.13E-02 | 2.42E+01 | | |
| 510 | 500 | 1.54E-11 | 0.97 | 4.12E-02 | 2.43E+01 | | |
| | | | | | | | |
| n1 | n2 | | | Exp | | | |
| 4 | 2 | 1.56E-02 | 2.25 | 2.6 | | | |
| 4 | 3 | 6.94E-03 | | | | | |
| 5 | 2 | 1.00E-02 | 2.25 | 2.5 | | | |
| 5 | 3 | 4.44E-03 | | | | | |
| 6 | 2 | 6.94E-03 | 2.25 | 2 | | | |
| 6 | 3 | 3.09E-03 | | | | | |