Table1: Stark full width and shift for Mn II and Mn III

Transition	T (K)	W (nm)	d (nm)
	5000.	.848E-02	-.183E-02
Mn II	10000.	.591E-02	-.130E-02
$a^7S - z^7P^0$	20000.	.409E-02	-.932E-03
	30000.	.330E-02	-.771E-03
$\overline{\lambda} = 258.97$ nm	40000.	.285E-02	-.674E-03
	50000.	.257E-02	-.609E-03
	5000.	.528E-02	.208E-03
Mn II	10000.	.368E-02	.181E-03
$a^7S - x^7P^0$	20000.	.267E-02	.182E-03
	30000.	.238E-02	.207E-03
$\overline{\lambda} = 116.30$ nm	40000.	.226E-02	.291E-03
	50000.	.221E-02	.309E-03
	5000.	.287E-01	.159E-01
Mn II	10000.	.199E-01	.119E-01
$z^7P^0 - e^7S$	20000.	.144E-01	.950E-02
	30000.	.125E-01	.906E-02
$\overline{\lambda} = 278.19$ nm	40000.	.118E-01	.888E-02
	50000.	.115E-01	.886E-02
	5000.	.132E-01	.842E-02
Mn II	10000.	.909E-02	.625E-02
$z^7P^0 - e^7D$	20000.	.641E-02	.488E-02
	30000.	.550E-02	.446E-02
$\overline{\lambda} = 244.24$ nm	40000.	.517E-02	.440E-02
	50000.	.504E-02	.461E-02
	5000.	.156E-01	.846E-02
Mn II	10000.	.112E-01	.675E-02
$z^7P^0 - w^7D$	20000.	.928E-02	.657E-02
	30000.	.906E-02	.664E-02
$\overline{\lambda} = 163.17$ nm	40000.	.927E-02	.675E-02
	50000.	.955E-02	.663E-02
	5000.	.489	-.129
Mn II	10000.	.340	-.954E-01
$e^7S - x^7P^0$	20000.	.248	-.750E-01
	30000.	.222	-.708E-01
$\overline{\lambda} = 875.16$ nm	40000.	.213	-.652E-01
	50000.	.210	-.645E-01
	5000.	1.18	-.250
Mn II	10000.	.820	-.182
$e^7D - x^7P^0$	20000.	.596	-.138
	30000.	.533	-.121
$\overline{\lambda} = 1555.25$ nm	40000.	.514	-.107
	50000.	.510	-.114

Transition	T (K)	W (nm)	d (nm)
	5000.	1.04	.122E-01
Mn II	10000.	.760	.319E-01
$x^7P^0 - f^7D$	20000.	.627	.638E-01
	30000.	.607	.787E-01
$\overline{\lambda} = 1122.10$ nm	40000.	.598	.729E-01
	50000.	.596	.707E-01
	5000.	.122E-01	-.252E-02
Mn II	10000.	.851E-02	-.179E-02
$a^5S - z^5P^0$	20000.	.589E-02	-.129E-02
	30000.	.476E-02	-.107E-02
$\overline{\lambda} = 294.35$ nm	40000.	.413E-02	-.940E-03
	50000.	.374E-02	-.858E-03
	5000.	.622E-02	-.594E-03
Mn II	10000.	.433E-02	-.404E-03
$a^5S - w^5P^0$	20000.	.318E-02	-.261E-03
	30000.	.284E-02	-.188E-03
$\overline{\lambda} = 129.11$ nm	40000.	.271E-02	-.628E-04
	50000.	.266E-02	-.363E-04
	5000.	.362E-01	.194E-01
Mn II	10000.	.252E-01	.146E-01
$z^5P^0 - e^5S$	20000.	.183E-01	.118E-01
	30000.	.161E-01	.114E-01
$\overline{\lambda} = 303.69$ nm	40000.	.153E-01	.112E-01
	50000.	.149E-01	.111E-01
	5000.	.170E-01	.106E-01
Mn II	10000.	.118E-01	.794E-02
$z^5P^0 - e^5D$	20000.	.835E-02	.627E-02
	30000.	.726E-02	.582E-02
$\overline{\lambda} = 258.41$ nm	40000.	.687E-02	.590E-02
	50000.	.673E-02	.617E-02
	5000.	.182E-01	.122E-01
Mn II	10000.	.131E-01	.974E-02
$z^5P^0 - f^5D$	20000.	.112E-01	.950E-02
	30000.	.111E-01	.946E-02
$\overline{\lambda} = 174.70$ nm	40000.	.114E-01	.948E-02
	50000.	.118E-01	.928E-02
	5000.	.565	-.199
Mn II	10000.	.394	-.148
$e^5S - w^5P^0$	20000.	.290	-.118
	30000.	.263	-.112
$\overline{\lambda} = 947.97$ nm	40000.	.254	-.104
	50000.	.252	-.103
	5000.	2.15	-.748
Mn II	10000.	1.49	-.552
$e^7D - w^5P^0$	20000.	1.09	-.426
	30000.	.990	-.387
$\overline{\lambda} = 2092.61$ nm	40000.	.962	-.365
	50000.	.959	-.379

Transition	T (K)	W (nm)	d (nm)
	5000.	.428	.209
Mn II	10000.	.306	.166
$w^5P^0 - f^5D$	20000.	.254	.161
	30000.	.249	.159
$\overline{\lambda} = 726.51$ nm	40000.	.256	.158
	50000.	.264	.153
	5000.	.455E-02	-.785E-03
Mn III	10000.	.319E-02	-.561E-03
$a^6D - z^6F^0$	50000.	.138E-02	-.253E-03
	100000.	.101E-02	-.175E-03
$\overline{\lambda} = 208.39$ nm	250000.	.832E-03	-.869E-04
	500000.	.829E-03	-.521E-04
	5000.	.440E-02	-.779E-03
Mn III	10000.	.308E-02	-.557E-03
$a^6D - z^6P^0$	50000.	.133E-02	-.251E-03
	100000.	.973E-03	-.173E-03
$\overline{\lambda} = 204.12$ nm	250000.	.804E-03	-.861E-04
	500000.	.801E-03	-.518E-04
	5000.	.416E-02	-.592E-03
Mn III	10000.	.292E-02	-.423E-03
$a^6D - z^6D^0$	50000.	.126E-02	-.189E-03
	100000.	.921E-03	-.127E-03
$\overline{\lambda} = 194.75$ nm	250000.	.761E-03	-.553E-04
	500000.	.758E-03	-.272E-04

Table2: Stark full width and shift for Ga III

	5000.	.822E-03	-.565E-04
Ga III	10000.	.573E-03	-.390E-04
$4s^2S-5p^2P^0$	50000.	.268E-03	-.982E-05
	100000.	.231E-03	.877E-05
$\overline{\lambda}=62.06$ nm	250000.	.227E-03	.205E-04
	500000.	.214E-03	.169E-04
	5000.	.455E-02	.237E-02
Ga III	10000.	.318E-02	.171E-02
$4p^2P^0-5s^2S$	50000.	.148E-02	.842E-03
	100000.	.123E-02	.687E-03
$\overline{\lambda}=134.35$ nm	250000.	.114E-02	.542E-03
	500000.	.108E-02	.427E-03
	5000.	.208E-02	.125E-02
Ga III	10000.	.145E-02	.905E-03
$4p^2P^0-4d^2D$	50000.	.635E-03	.455E-03
	100000.	.517E-03	.394E-03
$\overline{\lambda}=128.47$ nm	250000.	.523E-03	.358E-03
	500000.	.541E-03	.294E-03
	5000.	.220E-02	.125E-02
Ga III	10000.	.153E-02	.920E-03
$4p^2P^0-5d^2D$	50000.	.821E-03	.574E-03
	100000.	.803E-03	.525E-03
$\overline{\lambda}=81.36$ nm	250000.	.794E-03	.415E-03
	500000.	.735E-03	.317E-03
	5000.	.106	-.318E-01
Ga III	10000.	.742E-01	-.229E-01
$5s^2S-5p^2P^0$	50000.	.348E-01	-.108E-01
	100000.	.296E-01	-.790E-02
$\overline{\lambda}=490.73$ nm	250000.	.280E-01	-.558E-02
	500000.	.259E-01	-.438E-02
	5000.	.109	-.267E-01
Ga III	10000.	.761E-01	-.191E-01
$4d^2D-5p^2P^0$	50000.	.351E-01	-.893E-02
	100000.	.299E-01	-.647E-02
$\overline{\lambda}=589.27$ nm	250000.	.294E-01	-.515E-02
	500000.	.279E-01	-.430E-02
	5000.	.208E-01	-.404E-02
Ga III	10000.	.144E-01	-.277E-02
$4d^2D-4f^2F^0$	50000.	.750E-02	-.455E-03
	100000.	.738E-02	.323E-03
$\overline{\lambda}=242.24$ nm	250000.	.772E-02	.495E-03
	500000.	.753E-02	.346E-03
	5000.	.166E-01	-.111E-02
Ga III	10000.	.117E-01	-.467E-03
$4d^2D-5f^2F^0$	50000.	.849E-02	.154E-02
	100000.	.848E-02	.162E-02
$\overline{\lambda}=156.84$ nm	250000.	.804E-02	.107E-02
	500000.	.627E-02	.657E-03

Transition	T (K)	W (nm)	d (nm)
	5000.	.614E-01	.202E-01
Ga III	10000.	.427E-01	.149E-01
$5p^2P^0-5D^2D$	50000.	.222E-01	.963E-02
	100000.	.214E-01	.884E-02
$\overline{\lambda}=355.86$ nm	250000.	.215E-01	.697E-02
	500000.	.199E-01	.538E-02
	5000.	.253	-.453E-01
Ga III	10000.	.177	-.295E-01
$5d^2D-5f^2F^0$	50000.	.123	.100E-02
	100000.	.125	.299E-02
$\overline{\lambda}=535.12$ nm	250000.	.119	.720E-03
	500000.	.955E-01	-.971E-03

Table3: Stark full width and shift for Ge III and Ge IV

Transition	T (K)	W (nm)	d (nm)
	5000.	.441E-02	.237E-02
Ge III	10000.	.308E-02	.171E-02
$4p^1P^0-5s^1S$	50000.	.142E-02	.836E-03
	100000.	.118E-02	.679E-03
$\overline{\lambda}$= 139.55 nm	250000.	.110E-02	.537E-03
	500000.	.104E-02	.427E-03
	5000.	.187E-02	.149E-02
Ge III	10000.	.130E-02	.107E-02
$4p^1P^0-4d^1D$	50000.	.580E-03	.535E-03
	100000.	.488E-03	.468E-03
$\overline{\lambda}$= 115.92 nm	250000.	.470E-03	.403E-03
	500000.	.463E-03	.329E-03
	5000.	.956E-01	-.236E-01
Ge III	10000.	.668E-01	-.170E-01
$5s^1S-5p^1P^0$	50000.	.311E-01	-.799E-02
	100000.	.262E-01	-.577E-02
$\overline{\lambda}$= 481.57 nm	250000.	.247E-01	-.399E-02
	500000.	.228E-01	-.310E-02
	5000.	.859	-.239
Ge III	10000.	.599	-.172
$4d^1D-5p^1P^0$	50000.	.275	-.825E-01
	100000.	.234	-.657E-01
$\overline{\lambda}$= 1623.98 nm	250000.	.231	-.518E-01
	500000.	.219	-.421E-01
	5000.	.229E-02	.118E-02
Ge III	10000.	.160E-02	.850E-03
$4p^3P^0-5s^3S$	50000.	.728E-03	.412E-03
	100000.	.595E-03	.333E-03
$\overline{\lambda}$= 105.00 nm	250000.	.552E-03	.270E-03
	500000.	.519E-03	.214E-03
	5000.	.849E-03	.614E-03
Ge III	10000.	.590E-03	.443E-03
$4p^2P^0-4d^2D$	50000.	.255E-03	.224E-03

	100000.	.208E-03	.187E-03
$\overline{\lambda}$= 100.38 nm	250000.	.217E-03	.178E-03
	500000.	.232E-03	.150E-03
	5000.	.698E-01	-.207E-01
Ge III	10000.	.488E-01	-.149E-01
$5s^3S-5p^3P^0$	50000.	.224E-01	-.689E-02
	100000.	.186E-01	-.496E-02
$\overline{\lambda}$= 421.96 nm	250000.	.175E-01	-.351E-02
	500000.	.162E-01	-.276E-02

Transition	T (K)	W (nm)	d (nm)
	5000.	.720E-01	-.190E-01
Ge III	10000.	.502E-01	-.136E-01
$4d^2D - 5p^2P^0$	50000.	.227E-01	-.632E-02
	100000.	.190E-01	-.433E-02
$\overline{\lambda}$= 517.65 nm	250000.	.187E-01	-.345E-02
	500000.	.179E-01	-.293E-02
	5000.	.844E-03	.389E-03
Ge IV	10000.	.590E-03	.281E-03
$4p^2P^0 - 5d^2D$	50000.	.270E-03	.142E-03
	100000.	.225E-03	.123E-03
$\overline{\lambda}$= 54.24 nm	250000.	.214E-03	.101E-03
	500000.	.200E-03	.807E-04
	5000.	.134E-02	.565E-03
Ge IV	10000.	.938E-03	.413E-03
$4p^2P^0 - 6d^2D$	50000.	.501E-03	.243E-03
	100000.	.466E-03	.209E-03
$\overline{\lambda}$= 45.46 nm	250000.	.426E-03	.160E-03
	500000.	.373E-03	.121E-03
	5000.	.157E-01	-.250E-02
Ge IV	10000.	.110E-01	-.178E-02
$4d^2D - 5p^2P^0$	50000.	.484E-02	-.792E-03
	100000.	.376E-02	-.528E-03
$\overline{\lambda}$= 275.26 nm	250000.	.341E-02	-.304E-03
	500000.	.337E-02	-.261E-03
	5000.	.521E-02	-.135E-02
Ge IV	10000.	.363E-02	-.949E-03
$4d^2D - 4f^2F^0$	50000.	.162E-02	-.370E-03
	100000.	.134E-02	-.145E-03
$\overline{\lambda}$= 149.83 nm	250000.	.133E-02	.290E-04
	500000.	.131E-02	.457E-04
	5000.	.539E-02	-.112E-03
Ge IV	10000.	.376E-02	-.672E-04
$4d^2D - 6p^2P^0$	50000.	.189E-02	.310E-04
	100000.	.169E-02	.971E-04
$\overline{\lambda}$= 108.03 nm	250000.	.156E-02	.102E-03
	500000.	.142E-02	.733E-04
	5000.	.396E-01	-.101E-01
Ge IV	10000.	.277E-01	-.722E-02
$5s^2S - 5p^2P^0$	50000.	.124E-01	-.320E-02
	100000.	.981E-02	-.226E-02
$\overline{\lambda}$= 359.48 nm	250000.	.884E-02	-.139E-02
	500000.	.828E-02	-.109E-02
	5000.	.793E-02	-.774E-03
Ge IV	10000.	.554E-02	-.541E-03
$5s^2S - 6p^2P^0$	50000.	.274E-02	-.166E-03
	100000.	.242E-02	-.310E-04
$\overline{\lambda}$= 118.97 nm	250000.	.223E-02	.280E-04
	500000.	.200E-02	.188E-04

Transition	T (K)	W (nm)	d (nm)
	5000.	.240E-01	.685E-02
Ge IV	10000.	.168E-01	.495E-02
$5p^2P^0 - 5d^2D$	50000.	.763E-02	.248E-02
	100000.	.634E-02	.215E-02
$\overline{\lambda}$= 247.24 nm	250000.	.609E-02	.168E-02
	500000.	.574E-02	.131E-02
	5000.	.130E-01	.438E-02
Ge IV	10000.	.912E-02	.320E-02
$5p^2P^0 - 6d^2D$	50000.	.476E-02	.190E-02
	100000.	.437E-02	.163E-02
$\overline{\lambda}$= 131.47 nm	250000.	.403E-02	.122E-02
	500000.	.357E-02	.910E-03
	5000.	.416	.941E-01
Ge IV	10000.	.290	.674E-01
$4f^2F^0 - 5d^2D$	50000.	.133	.325E-01
	100000.	.114	.261E-01
$\overline{\lambda}$= 996.63 nm	250000.	.114	.198E-01
	500000.	.109	.156E-01
	5000.	.375E-01	.113E-01
Ge IV	10000.	.262E-01	.827E-02
$4f^2F^0 - 6d^2D$	50000.	.136E-01	.490E-02
	100000.	.127E-01	.411E-02
$\overline{\lambda}$= 219.06 nm	250000.	.119E-01	.301E-02
	500000.	.107E-01	.225E-02
	5000.	.723E-01	-.163E-01
Ge IV	10000.	.514E-01	-.112E-01
$5d^2D - 5f^2F^0$	50000.	.272E-01	-.259E-02
	100000.	.253E-01	-.760E-03
$\overline{\lambda}$=332.9 nm	250000.	.244E-01	-.212E-03
	500000.	.202E-01	-.201E-03
	5000.	.257	.585E-01
Ge IV	10000.	.179	.427E-01
$6p^2P^0 - 6d^2D$	50000.	.950E-01	.246E-01
	100000.	.886E-01	.202E-01
$\overline{\lambda}$= 504.37 nm	250000.	.819E-01	.147E-01
	500000.	.721E-01	.109E-01
	5000.	.550	-.161
Ge IV	10000.	.384	-.115
$6s^2S - 6p^2P^0$	50000.	.199	-.516E-01
	100000.	.182	-.375E-01
$\overline{\lambda}$= 786.57 nm	250000.	.165	-.269E-01
	500000.	.142	-.201E-01