
ADF36: hydrogenic series limit feature file

Provides interpolable spectral series profiles and populations for reconstruction of a hydrogen or hydrogenic ion series, series limit and neighbouring continuum emission composite spectral feature in thermal impure plasmas.

Utilising subroutines :

ADAS217, ADAS605

Formatted files to ADF36 specification :

Database Status	Date = March 17, 2003	Data type =	Data root =/.../adas/adas/adf36/
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unspecified

Data lines :

Undergoing re-specification

Format:

variable identification :

<i>name</i>	<i>meaning</i>
symb	chemical symbol for element
z	charge of emitting ion
z0	nuclear charge of emitting ion
atmass	atomic mass of ion in units of the proton mass
nseries	lower level n-shell for spectral series (eg n=2 for Balmer series)
lammin	minimum wavelength of tabulated spectral interval (Angstrom)

lammax maximum wavelength of tabulated spectral interval (Angstrom)

Undergoing re-specification

Table B36c - example.

```
H + 0            /z0= 1/atmass= 2.000/nseries= 2/lammin= 3740.00/lammax= 3900.0/
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  1 n*= 1            (2)0( 0.5)            0.0
  2 n*= 2            (2)0( 3.5)            82259.0

 24 n*=24            (2)0( 3.5)            82259.0

 28 v*=28.41        (2)0( 3.5)            82259.0

 33 k*=28.41        (2)0( 3.5)            119679.5
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---/subblock= Te & Ne/-----
5.000E+03 1.000E+04 1.500E+04 2.000E+04 2.500E+04 3.000E+04 3.500E+04 4.000E+04
4.500E+04 5.000E+04 5.500E+04 6.000E+04 6.500E+04 7.000E+04 7.500E+04 8.000E+04
8.500E+04 9.000E+04 9.500E+04 1.000E+05 1.050E+05 1.100E+05 1.150E+05 1.200E+05
1.250E+05
1.000E+12 2.000E+12 3.000E+12 5.000E+12 6.000E+12 7.000E+12 8.000E+12 9.000E+12
1.000E+13 2.000E+13 3.000E+13 5.000E+13 6.000E+13 7.000E+13 8.000E+13 9.000E+13
1.000E+14 2.000E+14 3.000E+14 5.000E+14 6.000E+14 7.000E+14 8.000E+14 9.000E+14
1.000E+15
-----
---/subblock= ionbal/-----
1.047E-07 1.242E-07 1.346E-07 1.420E-07 1.484E-07 1.536E-07 1.572E-07 1.608E-07
1.637E-07 1.656E-07 1.671E-07 1.675E-07 1.671E-07 1.675E-07 1.687E-07 1.706E-07
1.722E-07 1.723E-07 1.720E-07 1.720E-07 1.725E-07 1.735E-07 1.752E-07 1.775E-07
1.803E-07
1.054E-07 1.251E-07 1.355E-07 1.430E-07 1.494E-07 1.546E-07 1.581E-07 1.617E-07
1.647E-07 1.667E-07 1.682E-07 1.686E-07 1.684E-07 1.688E-07 1.702E-07 1.722E-07
1.739E-07 1.741E-07 1.738E-07 1.740E-07 1.746E-07 1.758E-07 1.775E-07 1.799E-07
1.828E-07
-----
---/subblock= recom b-factors/-----
indx = 1
1.036E-07 1.228E-07 1.330E-07 1.404E-07 1.469E-07 1.521E-07 1.557E-07 1.593E-07
1.622E-07 1.641E-07 1.655E-07 1.657E-07 1.652E-07 1.654E-07 1.666E-07 1.683E-07
1.698E-07 1.697E-07 1.692E-07 1.691E-07 1.695E-07 1.703E-07 1.718E-07 1.739E-07
1.766E-07
1.043E-07 1.236E-07 1.339E-07 1.413E-07 1.478E-07 1.530E-07 1.566E-07 1.602E-07
1.631E-07 1.650E-07 1.664E-07 1.667E-07 1.663E-07 1.666E-07 1.678E-07 1.696E-07
1.712E-07 1.712E-07 1.707E-07 1.708E-07 1.712E-07 1.721E-07 1.737E-07 1.759E-07
1.787E-07
indx = 2
1.036E-07 1.228E-07 1.330E-07 1.404E-07 1.469E-07 1.521E-07 1.557E-07 1.593E-07
1.622E-07 1.641E-07 1.655E-07 1.657E-07 1.652E-07 1.654E-07 1.666E-07 1.683E-07
1.698E-07 1.697E-07 1.692E-07 1.691E-07 1.695E-07 1.703E-07 1.718E-07 1.739E-07
1.766E-07
1.043E-07 1.236E-07 1.339E-07 1.413E-07 1.478E-07 1.530E-07 1.566E-07 1.602E-07
1.631E-07 1.650E-07 1.664E-07 1.667E-07 1.663E-07 1.666E-07 1.678E-07 1.696E-07
1.712E-07 1.712E-07 1.707E-07 1.708E-07 1.712E-07 1.721E-07 1.737E-07 1.759E-07
1.787E-07
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indx = 34
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1.622E-07 1.641E-07 1.655E-07 1.657E-07 1.652E-07 1.654E-07 1.666E-07 1.683E-07
1.698E-07 1.697E-07 1.692E-07 1.691E-07 1.695E-07 1.703E-07 1.718E-07 1.739E-07
1.766E-07
1.043E-07 1.236E-07 1.339E-07 1.413E-07 1.478E-07 1.530E-07 1.566E-07 1.602E-07
1.631E-07 1.650E-07 1.664E-07 1.667E-07 1.663E-07 1.666E-07 1.678E-07 1.696E-07
1.712E-07 1.712E-07 1.707E-07 1.708E-07 1.712E-07 1.721E-07 1.737E-07 1.759E-07
1.787E-07
-----/subblock= excit b-factors/-----
indx = 1
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1.622E-07 1.641E-07 1.655E-07 1.657E-07 1.652E-07 1.654E-07 1.666E-07 1.683E-07
1.698E-07 1.697E-07 1.692E-07 1.691E-07 1.695E-07 1.703E-07 1.718E-07 1.739E-07
1.766E-07
1.043E-07 1.236E-07 1.339E-07 1.413E-07 1.478E-07 1.530E-07 1.566E-07 1.602E-07
1.631E-07 1.650E-07 1.664E-07 1.667E-07 1.663E-07 1.666E-07 1.678E-07 1.696E-07
1.712E-07 1.712E-07 1.707E-07 1.708E-07 1.712E-07 1.721E-07 1.737E-07 1.759E-07
1.787E-07
indx = 2
1.036E-07 1.228E-07 1.330E-07 1.404E-07 1.469E-07 1.521E-07 1.557E-07 1.593E-07
1.622E-07 1.641E-07 1.655E-07 1.657E-07 1.652E-07 1.654E-07 1.666E-07 1.683E-07
1.698E-07 1.697E-07 1.692E-07 1.691E-07 1.695E-07 1.703E-07 1.718E-07 1.739E-07
1.766E-07
1.043E-07 1.236E-07 1.339E-07 1.413E-07 1.478E-07 1.530E-07 1.566E-07 1.602E-07
1.631E-07 1.650E-07 1.664E-07 1.667E-07 1.663E-07 1.666E-07 1.678E-07 1.696E-07
1.712E-07 1.712E-07 1.707E-07 1.708E-07 1.712E-07 1.721E-07 1.737E-07 1.759E-07
1.787E-07
indx = 34
1.036E-07 1.228E-07 1.330E-07 1.404E-07 1.469E-07 1.521E-07 1.557E-07 1.593E-07
1.622E-07 1.641E-07 1.655E-07 1.657E-07 1.652E-07 1.654E-07 1.666E-07 1.683E-07
1.698E-07 1.697E-07 1.692E-07 1.691E-07 1.695E-07 1.703E-07 1.718E-07 1.739E-07
1.766E-07
1.043E-07 1.236E-07 1.339E-07 1.413E-07 1.478E-07 1.530E-07 1.566E-07 1.602E-07
1.631E-07 1.650E-07 1.664E-07 1.667E-07 1.663E-07 1.666E-07 1.678E-07 1.696E-07
1.712E-07 1.712E-07 1.707E-07 1.708E-07 1.712E-07 1.721E-07 1.737E-07 1.759E-07
1.787E-07
-----/block= profiles/nlam= 1000/dref= 1.0e13/tref= 1.0000/indxref= 5-----
-----/subblock= lam & Ne/-----
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4.500E+04 5.000E+04 5.500E+04 6.000E+04 6.500E+04 7.000E+04 7.500E+04 8.000E+04
8.500E+04 9.000E+04 9.500E+04 1.000E+05 1.050E+05 1.100E+05 1.150E+05 1.200E+05
1.250E+05
1.000E+12 2.000E+12 3.000E+12 5.000E+12 6.000E+12 7.000E+12 8.000E+12 9.000E+12
1.000E+13 2.000E+13 3.000E+13 5.000E+13 6.000E+13 7.000E+13 8.000E+13 9.000E+13
1.000E+14 2.000E+14 3.000E+14 5.000E+14 6.000E+14 7.000E+14 8.000E+14 9.000E+14
1.000E+15

```

-----subblock= recom b-factors/-----
indx_1
1.036E-07 1.228E-07 1.330E-07 1.404E-07 1.469E-07 1.521E-07 1.557E-07 1.593E-07
1.622E-07 1.641E-07 1.655E-07 1.657E-07 1.652E-07 1.654E-07 1.666E-07 1.683E-07
1.698E-07 1.697E-07 1.692E-07 1.691E-07 1.695E-07 1.703E-07 1.718E-07 1.739E-07
1.766E-07
1.043E-07 1.236E-07 1.339E-07 1.413E-07 1.478E-07 1.530E-07 1.566E-07 1.602E-07
1.631E-07 1.650E-07 1.664E-07 1.667E-07 1.663E-07 1.663E-07 1.678E-07 1.696E-07
1.712E-07 1.712E-07 1.707E-07 1.708E-07 1.712E-07 1.721E-07 1.737E-07 1.759E-07
1.787E-07
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1.622E-07 1.641E-07 1.655E-07 1.657E-07 1.652E-07 1.654E-07 1.666E-07 1.683E-07
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1.766E-07
1.043E-07 1.236E-07 1.339E-07 1.413E-07 1.478E-07 1.530E-07 1.566E-07 1.602E-07
1.631E-07 1.650E-07 1.664E-07 1.667E-07 1.663E-07 1.663E-07 1.678E-07 1.696E-07
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1.787E-07
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1.746E-07 1.749E-07 1.746E-07 1.749E-07 1.755E-07 1.767E-07 1.785E-07 1.809E-07
1.839E-07
1.059E-07 1.257E-07 1.363E-07 1.438E-07 1.502E-07 1.554E-07 1.589E-07 1.625E-07
1.654E-07 1.675E-07 1.691E-07 1.695E-07 1.694E-07 1.699E-07 1.713E-07 1.734E-07
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1.060E-07 1.260E-07 1.366E-07 1.441E-07 1.506E-07 1.557E-07 1.592E-07 1.628E-07
1.658E-07 1.678E-07 1.694E-07 1.699E-07 1.698E-07 1.704E-07 1.718E-07 1.739E-07
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1.857E-07
1.062E-07 1.262E-07 1.369E-07 1.445E-07 1.509E-07 1.560E-07 1.595E-07 1.631E-07
1.661E-07 1.681E-07 1.698E-07 1.703E-07 1.702E-07 1.708E-07 1.723E-07 1.744E-07
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2.023E-07
1.103E-07 1.323E-07 1.442E-07 1.522E-07 1.586E-07 1.636E-07 1.671E-07 1.707E-07
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2.083E-07
1.118E-07 1.342E-07 1.462E-07 1.543E-07 1.608E-07 1.658E-07 1.693E-07 1.729E-07
1.760E-07 1.784E-07 1.806E-07 1.818E-07 1.826E-07 1.841E-07 1.864E-07 1.894E-07
1.922E-07 1.936E-07 1.944E-07 1.956E-07 1.974E-07 1.996E-07 2.025E-07 2.059E-07
2.098E-07
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1.932E-07 1.946E-07 1.954E-07 1.968E-07 1.986E-07 2.009E-07 2.038E-07 2.073E-07
2.113E-07
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1.804E-07 1.830E-07 1.855E-07 1.871E-07 1.883E-07 1.902E-07 1.929E-07 1.963E-07
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1.823E-07 1.851E-07 1.877E-07 1.895E-07 1.909E-07 1.929E-07 1.958E-07 1.995E-07
2.029E-07 2.048E-07 2.063E-07 2.082E-07 2.105E-07 2.134E-07 2.169E-07 2.210E-07
2.256E-07
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1.843E-07 1.872E-07 1.900E-07 1.919E-07 1.935E-07 1.958E-07 1.988E-07 2.027E-07
2.063E-07 2.085E-07 2.101E-07 2.122E-07 2.148E-07 2.179E-07 2.217E-07 2.259E-07
2.307E-07
1.203E-07 1.422E-07 1.537E-07 1.616E-07 1.683E-07 1.737E-07 1.774E-07 1.814E-07
1.849E-07 1.878E-07 1.906E-07 1.926E-07 1.943E-07 1.966E-07 1.997E-07 2.036E-07
2.073E-07 2.096E-07 2.112E-07 2.134E-07 2.161E-07 2.193E-07 2.230E-07 2.274E-07
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1.853E-07 1.883E-07 1.911E-07 1.932E-07 1.949E-07 1.972E-07 2.004E-07 2.043E-07
2.081E-07 2.104E-07 2.121E-07 2.143E-07 2.170E-07 2.203E-07 2.241E-07 2.285E-07
2.334E-07
1.214E-07 1.429E-07 1.542E-07 1.622E-07 1.689E-07 1.743E-07 1.781E-07 1.821E-07
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2.087E-07 2.110E-07 2.128E-07 2.150E-07 2.178E-07 2.211E-07 2.249E-07 2.293E-07
2.343E-07
1.218E-07 1.431E-07 1.544E-07 1.624E-07 1.691E-07 1.745E-07 1.783E-07 1.824E-07
1.859E-07 1.889E-07 1.918E-07 1.939E-07 1.957E-07 1.981E-07 2.013E-07 2.053E-07
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2.350E-07
1.222E-07 1.434E-07 1.546E-07 1.625E-07 1.693E-07 1.747E-07 1.785E-07 1.826E-07
1.861E-07 1.891E-07 1.921E-07 1.942E-07 1.960E-07 1.984E-07 2.017E-07 2.057E-07
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2.356E-07

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1.000E+03 2.000E+03 3.000E+03 5.000E+03 6.000E+03 7.000E+03 8.000E+03 8.966E+03
1.000E+04 2.000E+04 3.000E+04 5.000E+04

2.021E-07 2.017E-07 1.992E-07 1.945E-07 1.926E-07 1.926E-07 1.909E-07 1.894E-07 1.881E-07
1.869E-07 1.798E-07 1.761E-07 1.719E-07 1.706E-07 1.695E-07 1.687E-07 1.680E-07
1.673E-07 1.638E-07 1.623E-07 1.608E-07
