

ADAS Subroutine a8slv2

```
      subroutine a8slv2( itype, x0 , sig0 , xk , sigk , xn , sign ,  
&          s , f1 , f2 , f3 , b , bp , ifail  
&          )
```

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c  
c  
c ***** fortran77 subroutine a8slv2 *****  
c  
c purpose: to find the approximate form parameters for a neutral atoms  
c  
c calling program:  adas108.for  
c  
c input:  
c          (i*4)  itype   = type of transition (1=dipole,2=non-dipole  
c                    non-spin change, 3=spin change, 4=null)  
c          (r*8)  x0      = x-parameter at first energy point n  
c          (r*8)  sig0    = collisions strength at first energy pt. n  
c          (r*8)  xk      = x-parameter at matching point k  
c          (r*8)  sigk    = collisions strength at matching point k  
c          (r*8)  xn      = x-parameter at last energy point n  
c          (r*8)  sign    = collisions strength at last energy pt. n  
c          (r*8)  s       = line strength for type 1 case  
c          (i*4)  ifail   = failure code on entry (ifail=0 two point  
c                    fit, ifail=-1 one point fit)  
c  
c output:  
c          (r*8)  f1      = threshold form parameter  
c          (r*8)  f2      = asymptotic form parameter  
c          (r*8)  f3      = asymptotic form parameter  
c          (r*8)  b       = threshold form parameter  
c          (r*8)  bp      = matching parameter  
c          (i*4)  ifail   = failure code on exit  
c                    (ifail=0 successful two point fit  
c                    ifail=1 converted to one point fit)  
c  
c  
c routines:  
c          a8slvf adas solves for asymptotic parms f2 and f3  
c  
c author:   Hugh Summers, University of Strathclyde ext.4196  
c  
c  
c version 1.1                               date:   16/06/99  
c modified: Hugh Summers  
c - first release  
c  
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```

INTEGER	IFAIL,	ITYPE		
REAL*8	B,	BP,	F1,	F2
REAL*8	F3,	S,	SIG0,	SIGK
REAL*8	SIGN,	X0,	XK,	XN