

## ADF05: general z excitation data collections

Provides general z excitation data. Formatting conventions and variable storage are given below.

*Utilising subroutines :*

ADAS203

*Formatted files to ADF05 specification :*

Database Status	Date = July, 20 1996	Data type =general z excit. files	Data root =/.../adas/adas/adf05/		
<i>sequence</i>	<i>Members</i>	<i>Library</i>	<i>ZI range</i>	<i>Comments</i>	<i>Quality</i>
H-like	hs1977	hlike	2-10	unspecified	unknown
	hs1978		2-10	unspecified	unknown
	sampson		14-42	Sampson et al.	moderate
	sgc1983		6-42	Sampson et al.	moderate
He-like	bsc1980	helike	5-41	Sampson & Clark	moderate
	kt1983		5-11	Kingston & Tayal	moderate
	pnh1981		5-41	Pradhan, Norcross & Hummer	moderate
	pard1983		25-41	Pradhan	moderate
	pard1985		19-33	Pradhan	moderate
	pardrev		25-41	Pradhan	moderate
	sc1980		5-41	Sampson & Clark	moderate
Li-like	cmcw1983	lilike	4-24	Cochrane & McWhirter	high
	kp1986		12-24	Kingston	unknown
	zsf1989		6-24	Zhang, Sampson	moderate
Be-like	bbdk1984	belike	3-11	Berrington, Burke et al.	good
	csp1980		11-39	Sampson & Parks	moderate
	csp1980		11-39	Sampson & Parks	moderate
	jl1990		3-17	Lang assessment	high
	jl1995		7-23	Lang assessment	high

B-like	bfd1980	blike	18-32	Bhatia, Feldmann & Doschek	moderate
	sams1986		10-38	Sampson	moderate
F-like	bfd1980	flike	14-28	Bhatia, Feldmann & Doschek	moderate
Na-like	bd1978	nalike	10-32	unspecified	unknown
	fn1975		4-16	Flower & Nussbaumer	moderate

Notes:

*Data lines :*

```

SEQ, IZMAX, (Z1A(IZ),IZ=1,IZMAX), IGSEL, IGPH
until IND = -1
    IND, SPEC, N, IS, IL, IJ
-1
(EIA(IZ),IZ=1,IZMAX)
for IND = 1 , NLEVELS
    IND, (WVNA(IZ,IND), IZ=1,IZMAX)
repeat
until itr = -1
    J, I, NJ, NI, WJ, WI, ITEMP, IEC1, IAC1, IAC2, FAC2, IGC1, FGC2
    for it=1,ITEMP
        TR(it),(UPS(it,itr,IZ,IZ=1,IZMAX))
    repeat
-1

```

*Format:*

*variable identification :*

<i>name</i>	<i>meaning</i>
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SEQ	isoelectronic sequence symbol	
IZMAX	number of charge states of sequence	
Z1A()	ion charges + 1	
IGSEL	unused - set to 0	
IGPH	unused - set to 0	
IND	energy level index	
SPEC	energy level specification	
N	principal quantum number of outer electron	
IS	term multiplicity	
IL	term total orbital angular momentum	
IJ	(statistical weight -1)/2	
EIA()	ionisation potential of ion (cm-1)	
WVNA(,)	excitation energy of levels (cm-1)	
J	upper level index of transition	
I	lower level index of transition	
NJ	upper principal quantum number of transition	
NI	lower principal quantum number of transition	
WJ	statistical weight of upper level	
WI	statistical weight of lower level	
ITEM	number of temperatures	
IEC1	energy spline variable selector (1=>Z1, 2=> 1/Z1)	
IAC1	A-value spline variable selector (1=>Z1, 2=> 1/Z1)	
IAC2	transition type (1=> dipole, 2=> non dipole, 3=> spin change, 4=>	other)
FAC2	A-value scale factor (A~ const*Z1**FAC2)	
IGC1	Upsilon spline variable selector (1=>Z1, 2=> 1/Z1)	

