RRR information

- **Format: RMatrix**
- **Upper bound: 1036000.0**
- **Lower bound: 1e-05**
- **Scattering length (R'): 5.437299999987541 fm**
- **Lmax: 4**
- **No. channels: 5**
- **No. resonances: 737**

No URR in this evaluation

Particle pairs

- **n + Fe54:**
- **photon + Fe55:**

Channels

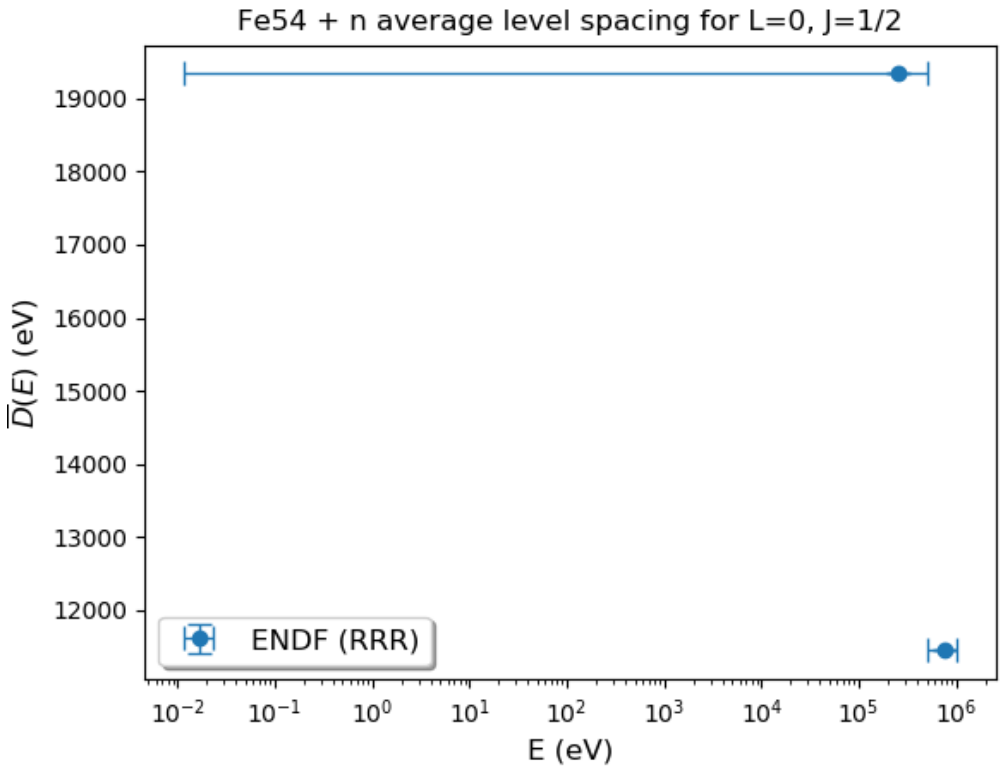
	No. resonances	No. resonances w/ ER<0	gfact	Threshold E (eV)	Eliminated?	Competative?	Relativistic?	Pot. scatt. only?	RRR <D> (eV)	RRR <Gamma> (eV)
photon + Fe55 (j=0.5,l=0,s=0.0)	324	2	1.0	-9472308.63327	True	False	False	False	5.5e3 +/- 5.6e3 eV	0.53 +/- 0.39 eV
n + Fe54 (j=0.5,l=0,s=0.5)	148	2	1.0	-0.0	False	False	False	False	1.4e4 +/- 1.0e4 eV	6.e3 +/- 1.1e4 eV
n + Fe54 (j=0.5,l=1,s=0.5)	176	0	1.0	-0.0	False	False	False	False	8.5e3 +/- 7.0e3 eV	1.0e3 +/- 3.3e3 eV
photon + Fe55 (j=1.5,l=0,s=0.0)	370	0	1.0	-9472308.63327	True	False	False	False	4.3e3 +/- 3.7e3 eV	0.47 +/- 0.14 eV
n + Fe54 (j=1.5,l=1,s=0.5)	196	0	2.0	-0.0	False	False	False	False	7.6e3 +/- 5.7e3 eV	188. +/- 4.9e2 eV
n + Fe54 (j=1.5,l=2,s=0.5)	174	0	2.0	-0.0	False	False	False	False	1.e4 +/-	177. +/- 4.5e2 eV

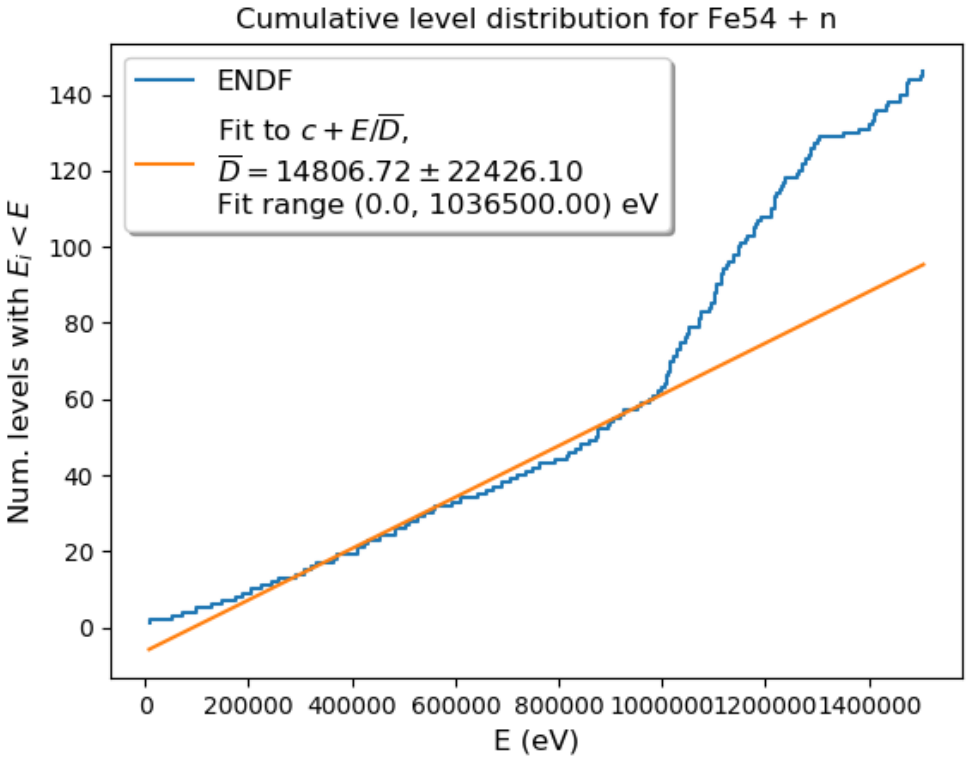
									1.1e4 eV	
photon + Fe55 (j=2.5,l=0,s=0.0)	43	0	1.0	-9472308.63327	True	False	False	False	2.1e4 +/- 5.6e4 eV	0.46 +/- 0.17 eV
n + Fe54 (j=2.5,l=2,s=0.5)	43	0	3.0	-0.0	False	False	False	False	2.1e4 +/- 5.6e4 eV	140. +/- 3.2e2 eV

Spin Group L=0, J=1/2

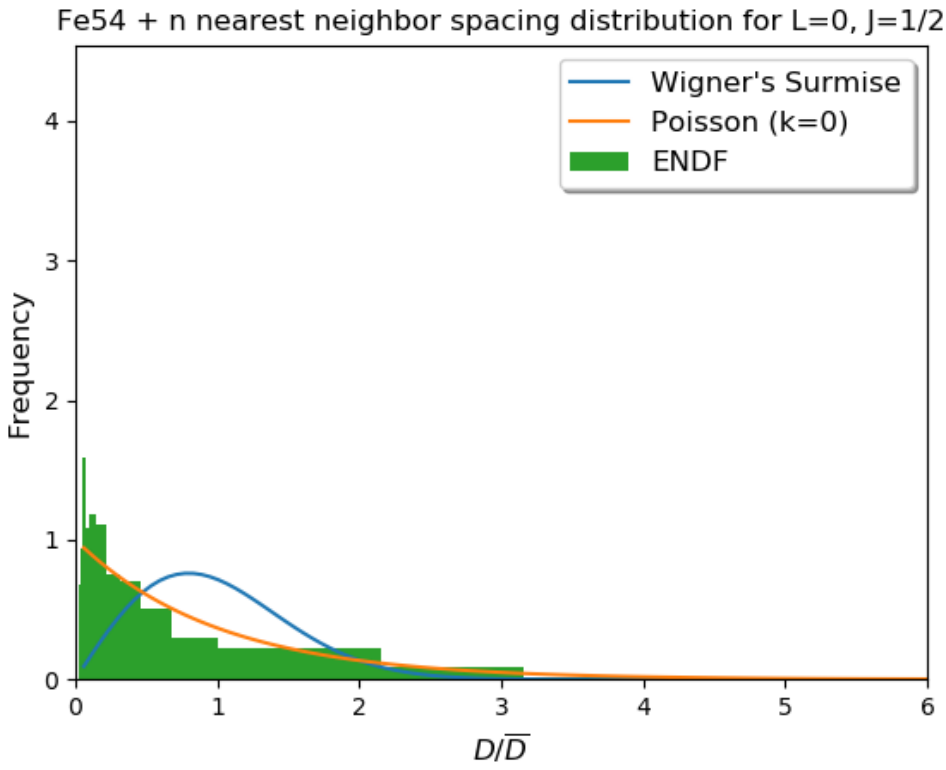
Level analysis

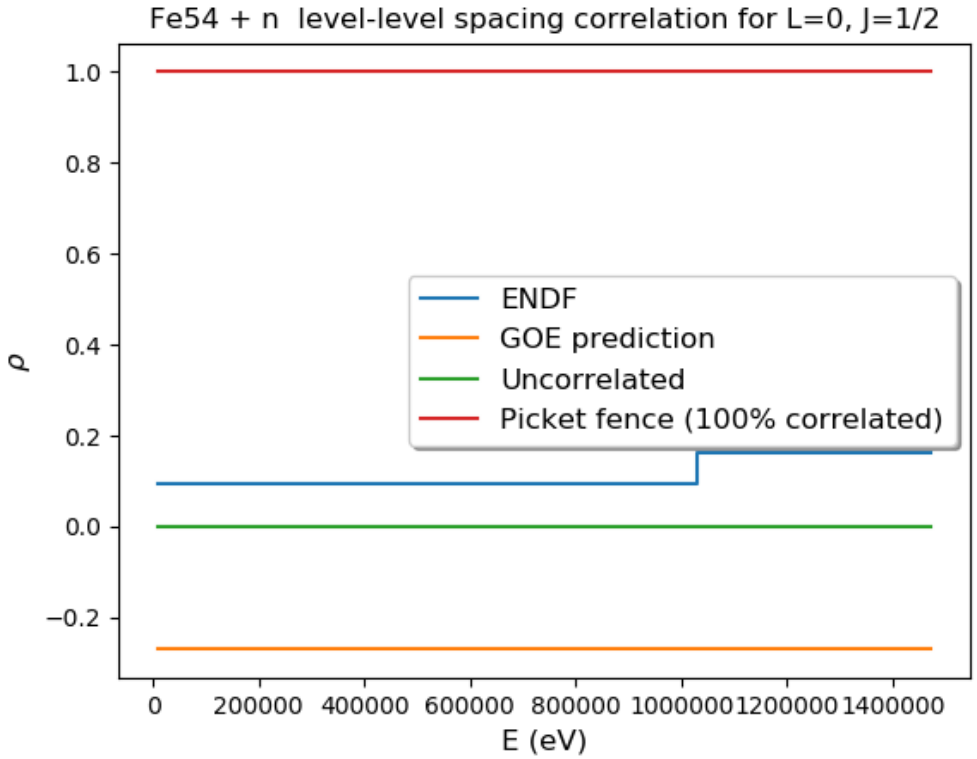
Secular variation of levels

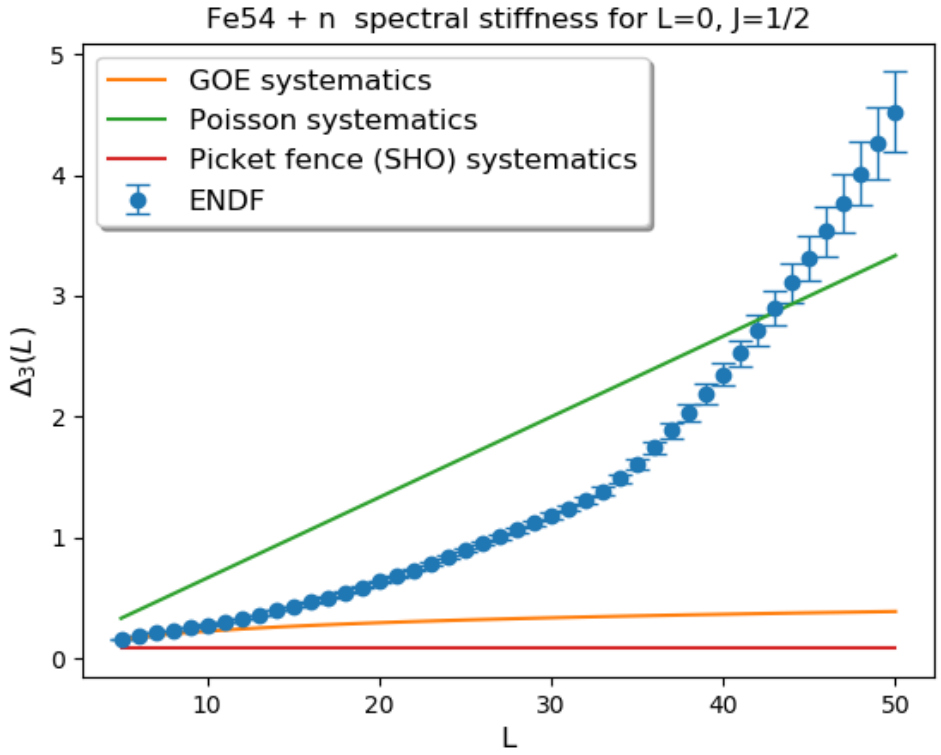


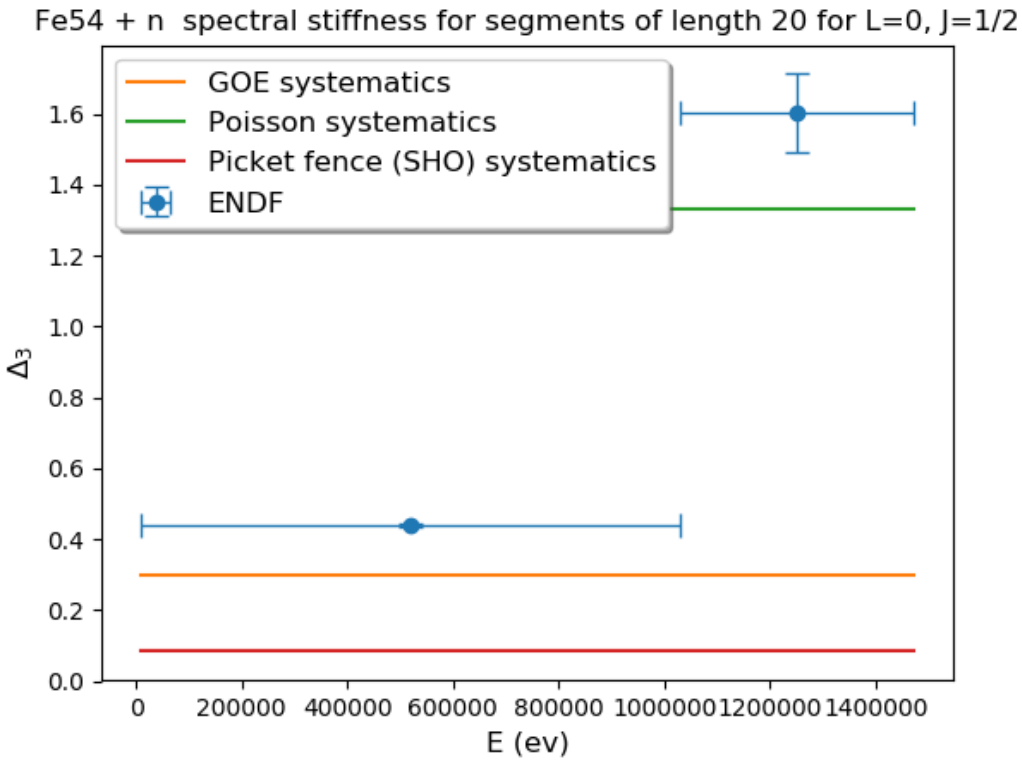


Local fluctuations in levels

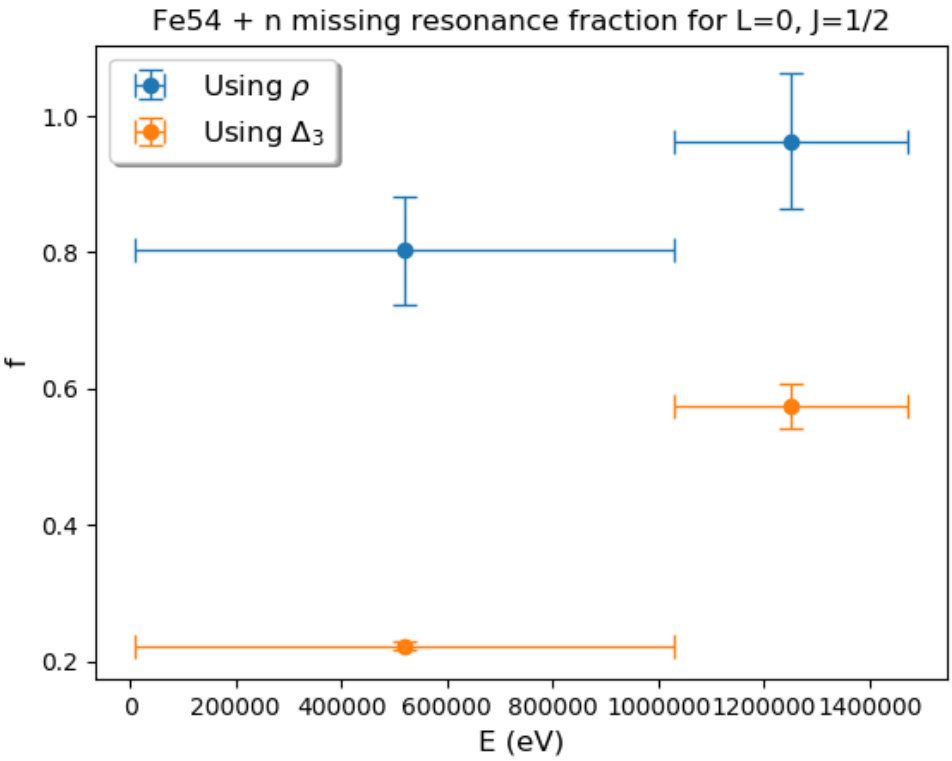

Fe54 + n nearest neighbor spacing distribution for L=0, J=1/2
Wigner's Surmise
Poisson (k=0)
ENDF
Frequency
$D/\overline{D}$


Fe54 + n level-level spacing correlation for L=0, J=1/2
ENDF
GOE prediction
Uncorrelated
Picket fence (100% correlated)
ρ
E (eV)

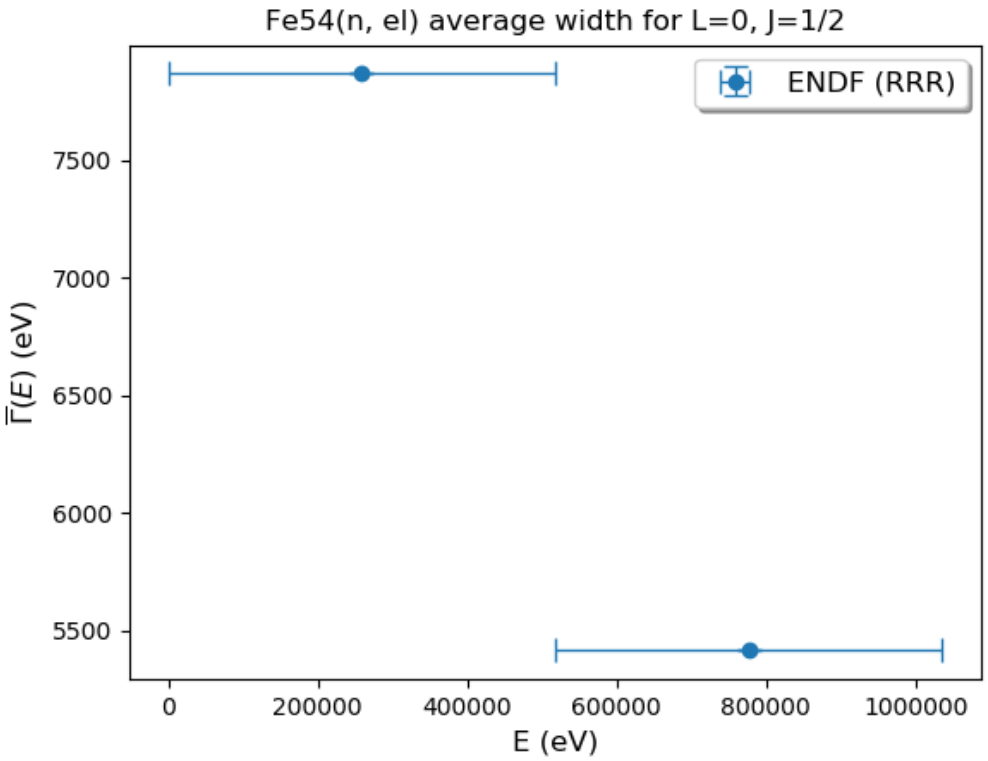


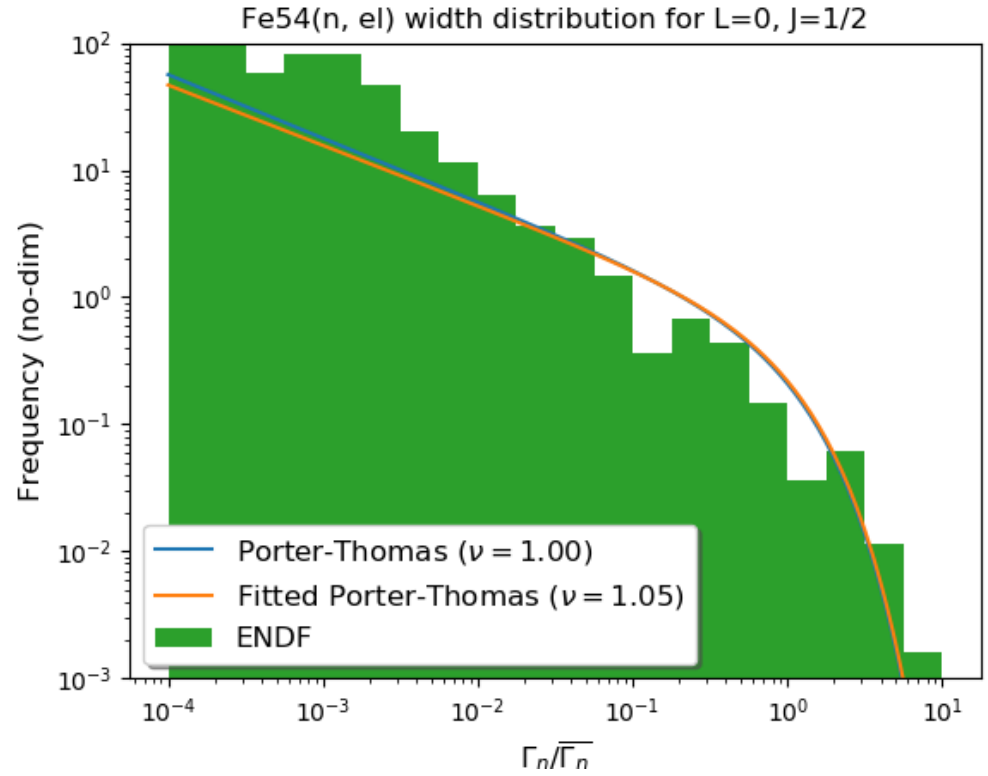


Assessment of fraction of missing levels



Details for channel n + Fe54 (j=0.5,l=0,s=0.5)

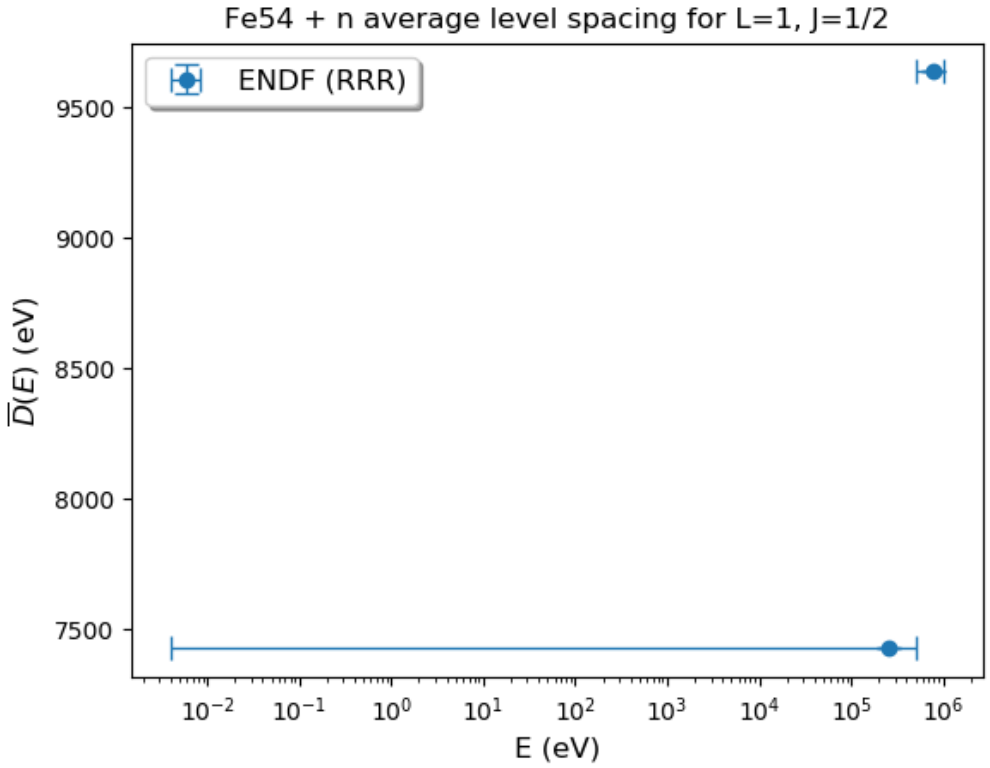


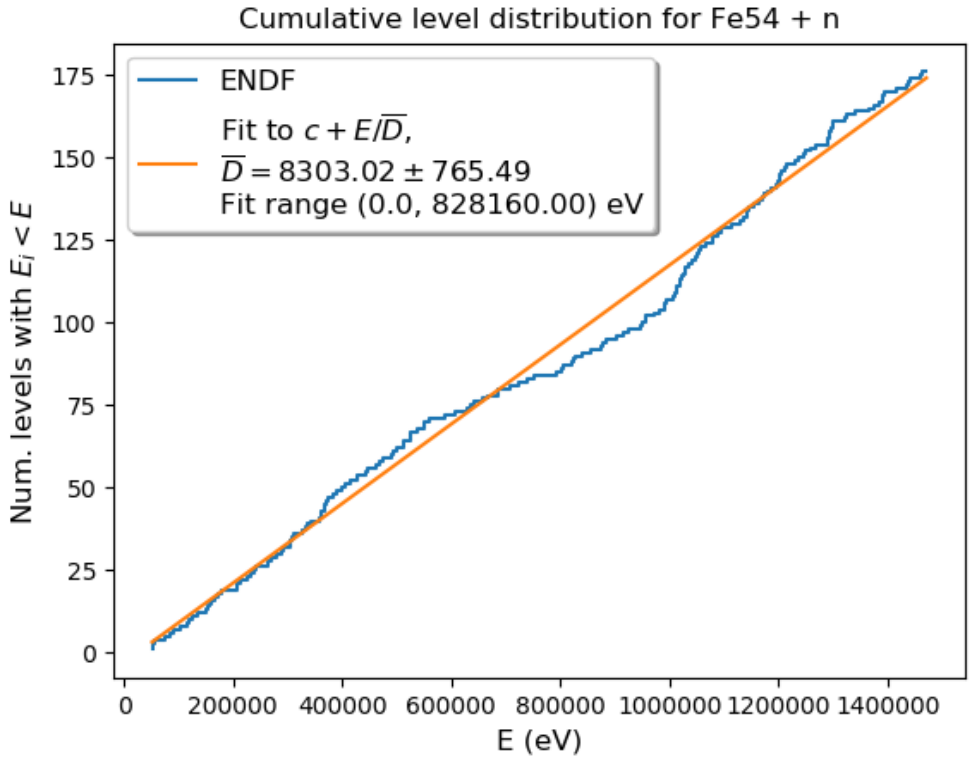


Spin Group L=1, J=1/2

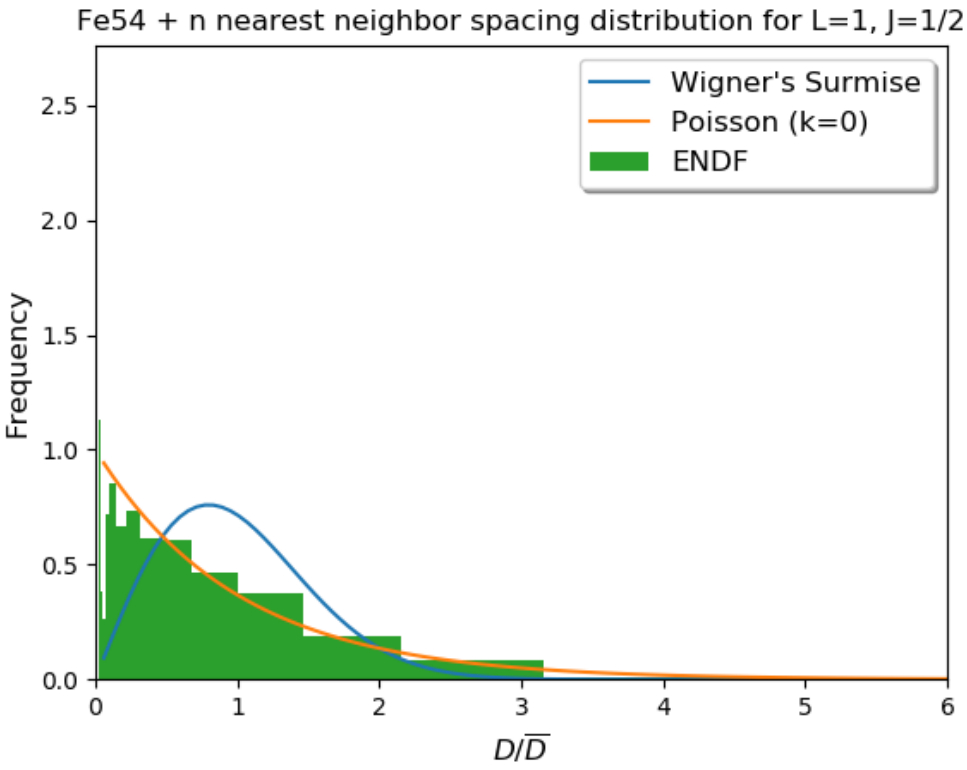
Level analysis

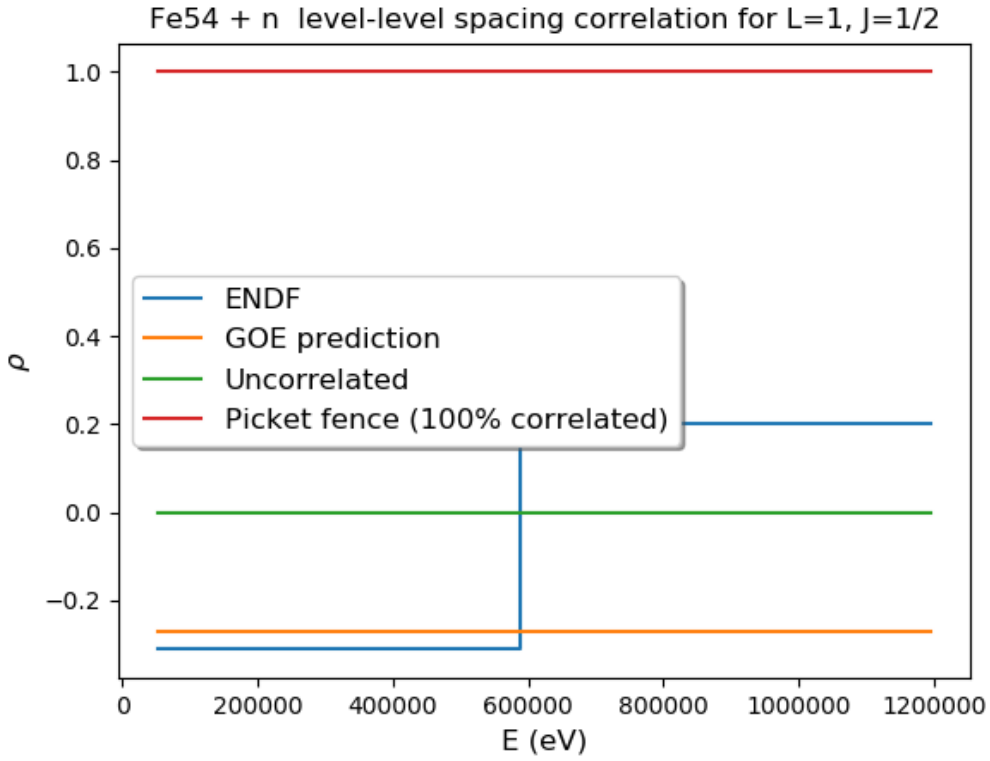
Secular variation of levels

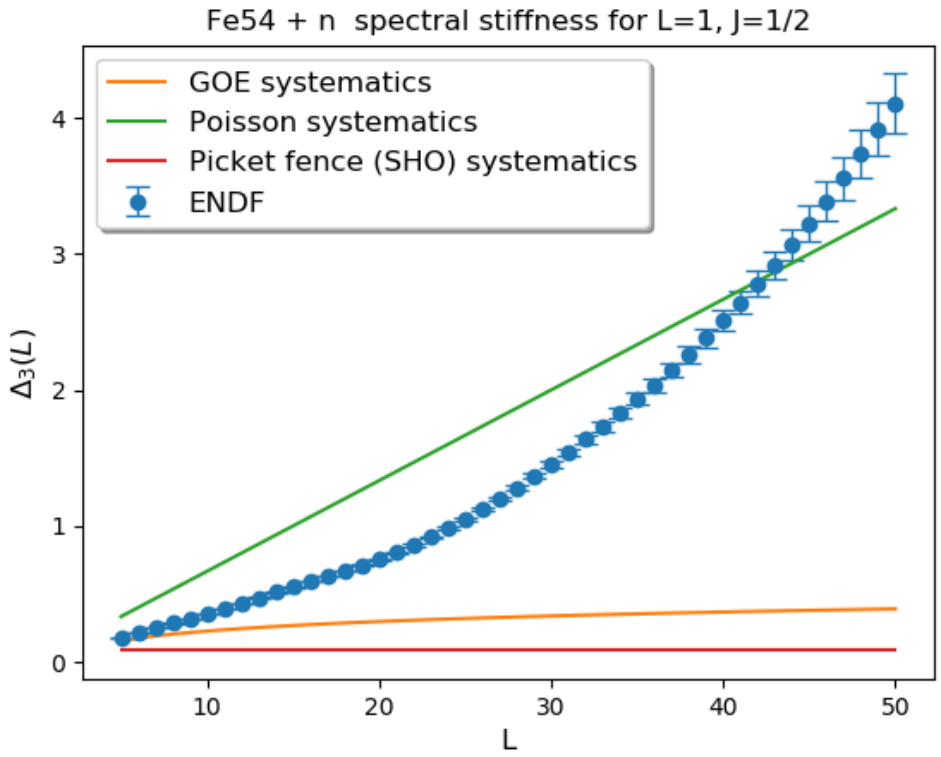


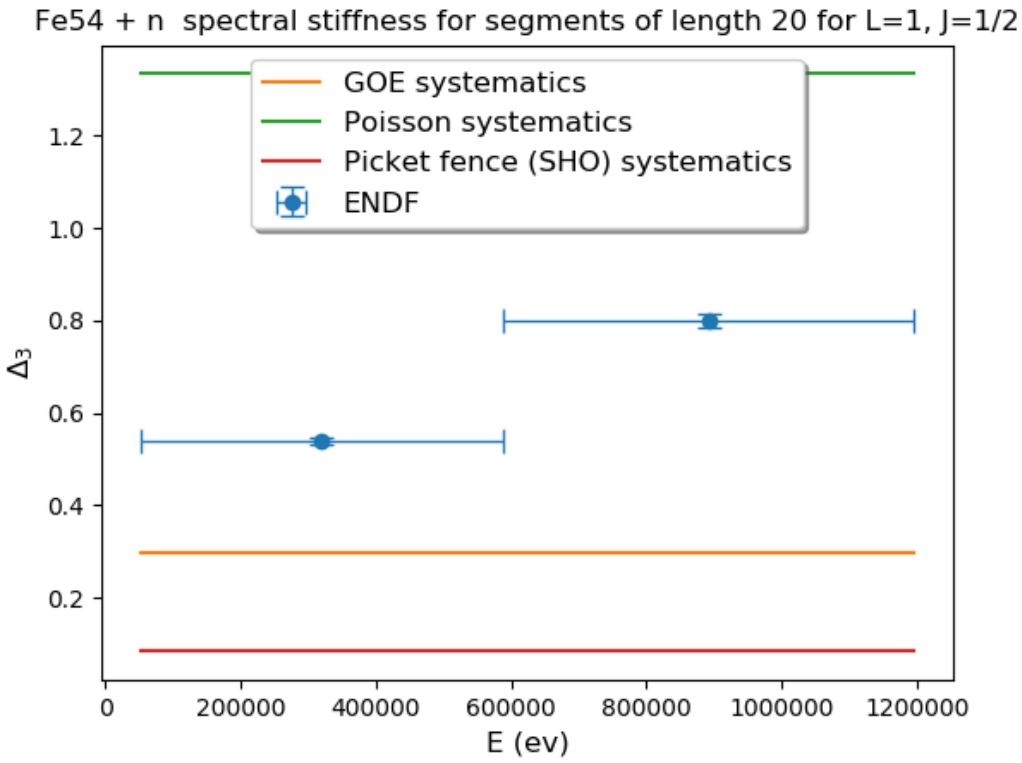


Local fluctuations in levels

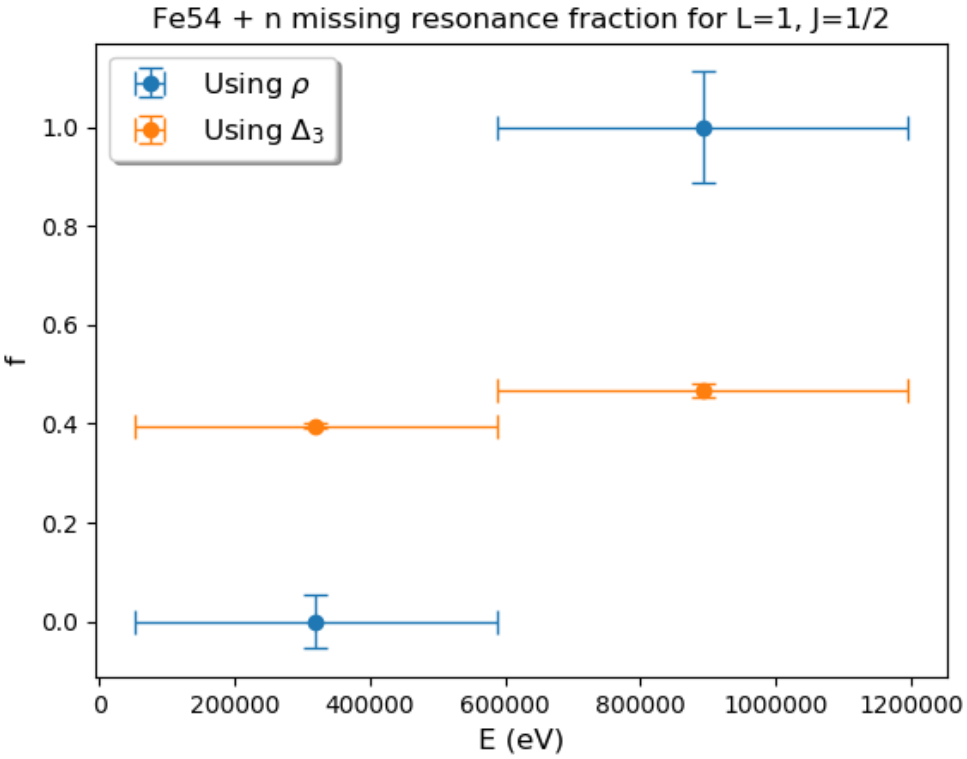

Fe54 + n nearest neighbor spacing distribution for L=1, J=1/2
Wigner's Surmise
Poisson (k=0)
ENDF
Frequency
$D/\overline{D}$


Fe54 + n level-level spacing correlation for L=1, J=1/2
ENDF
GOE prediction
Uncorrelated
Picket fence (100% correlated)
ρ
E (eV)

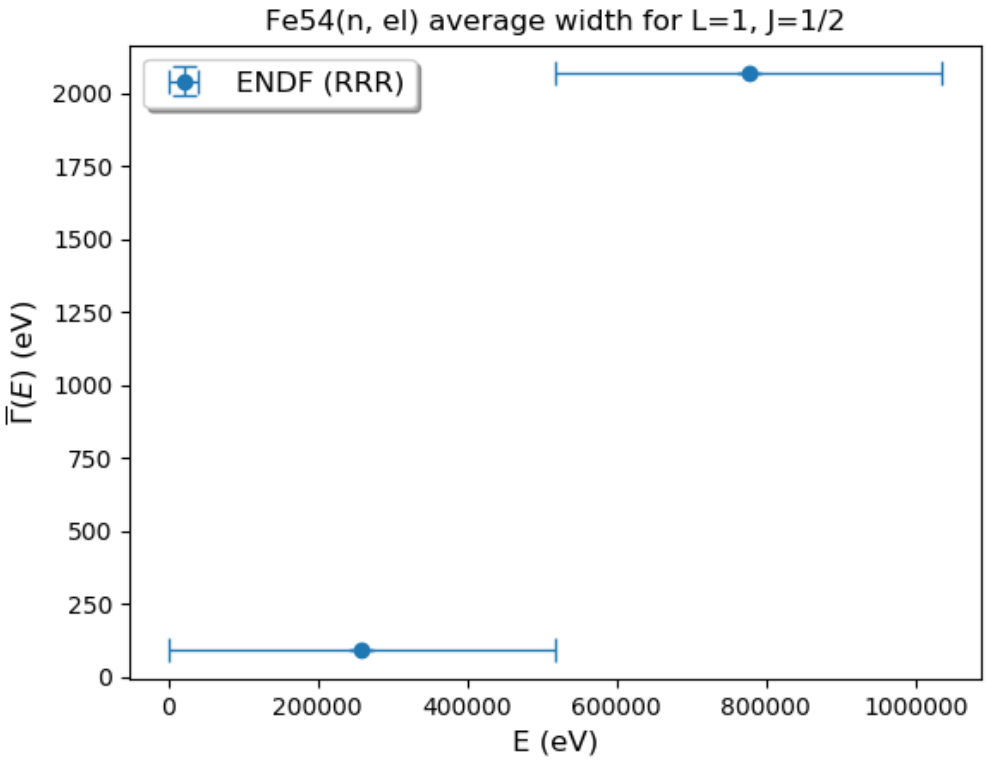


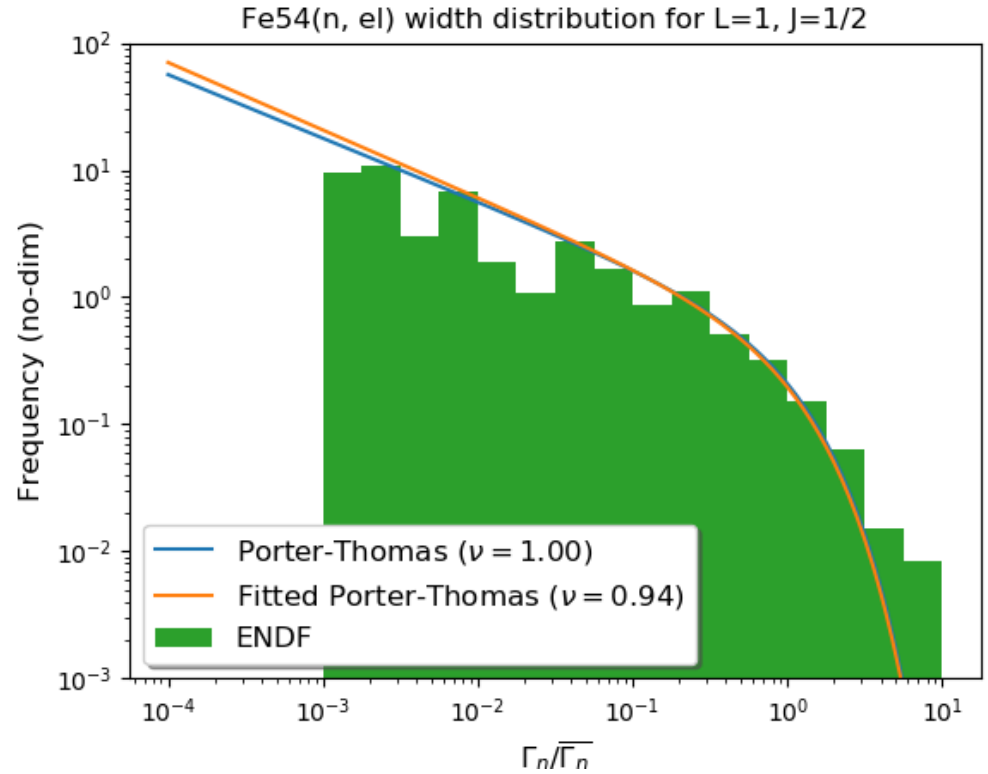


Assessment of fraction of missing levels



Details for channel n + Fe54 (j=0.5,l=1,s=0.5)

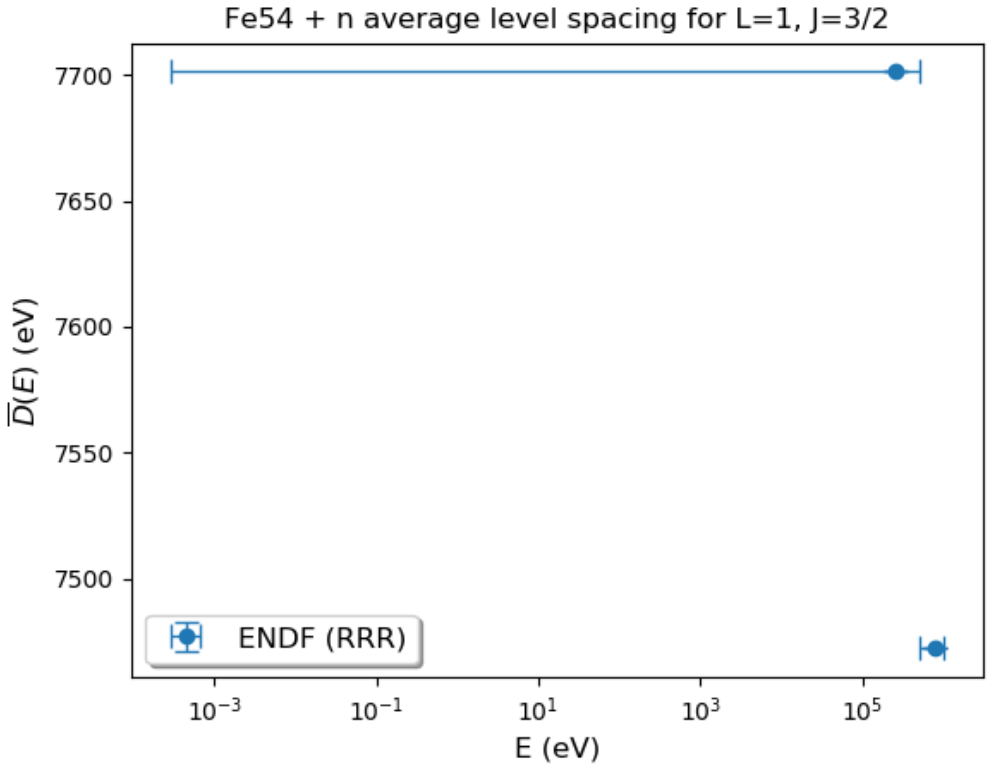


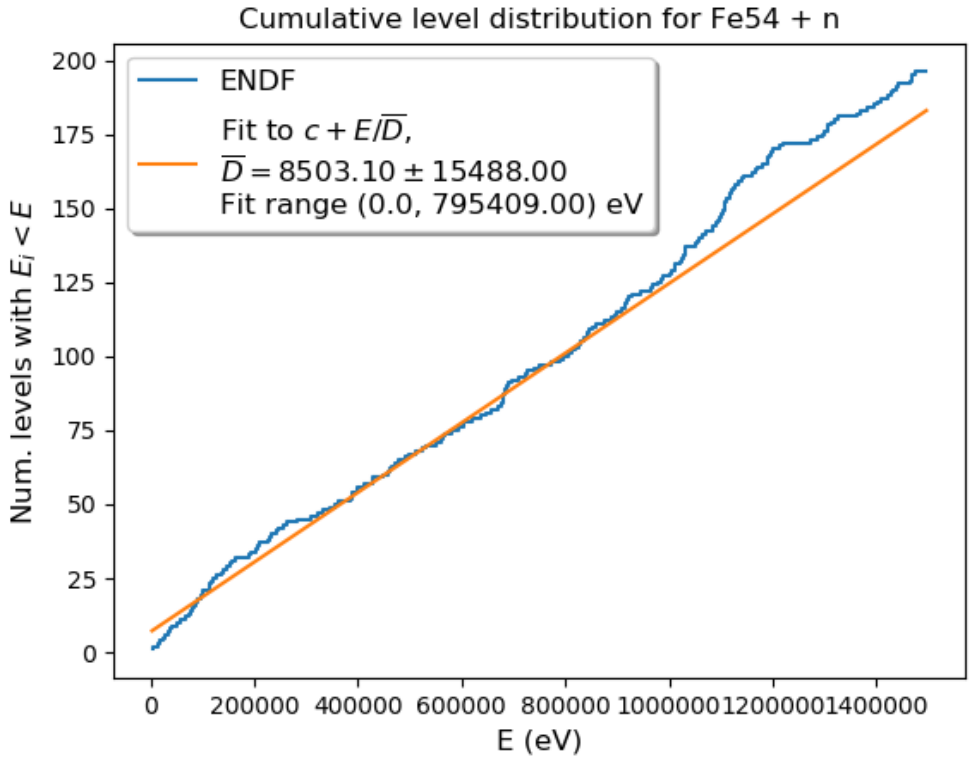


Spin Group L=1, J=3/2

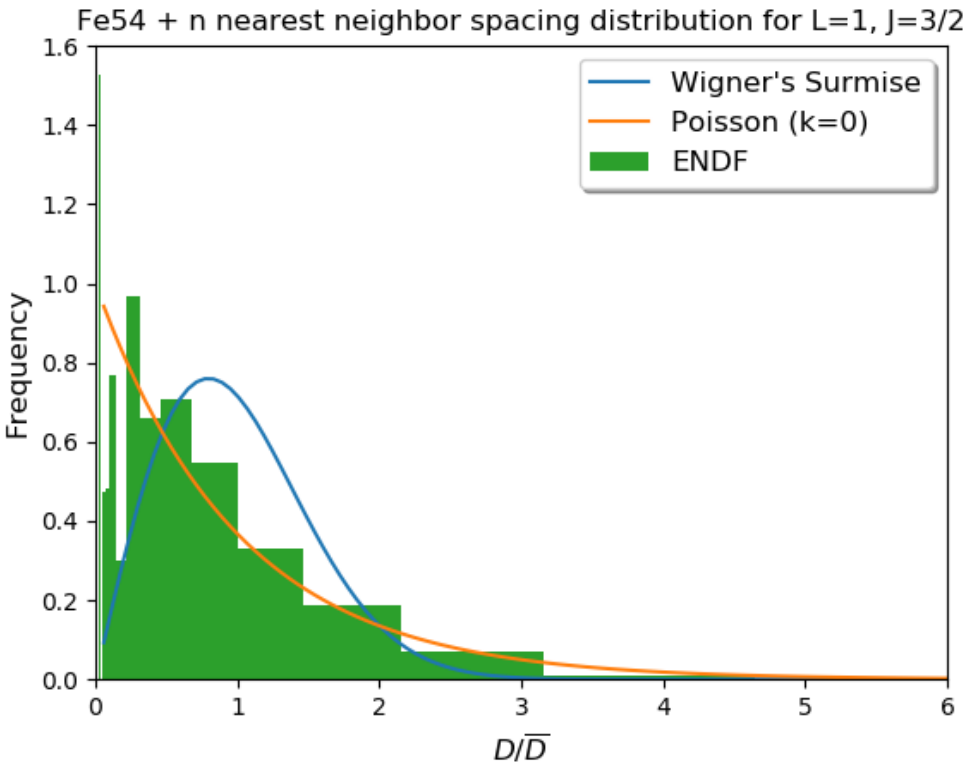
Level analysis

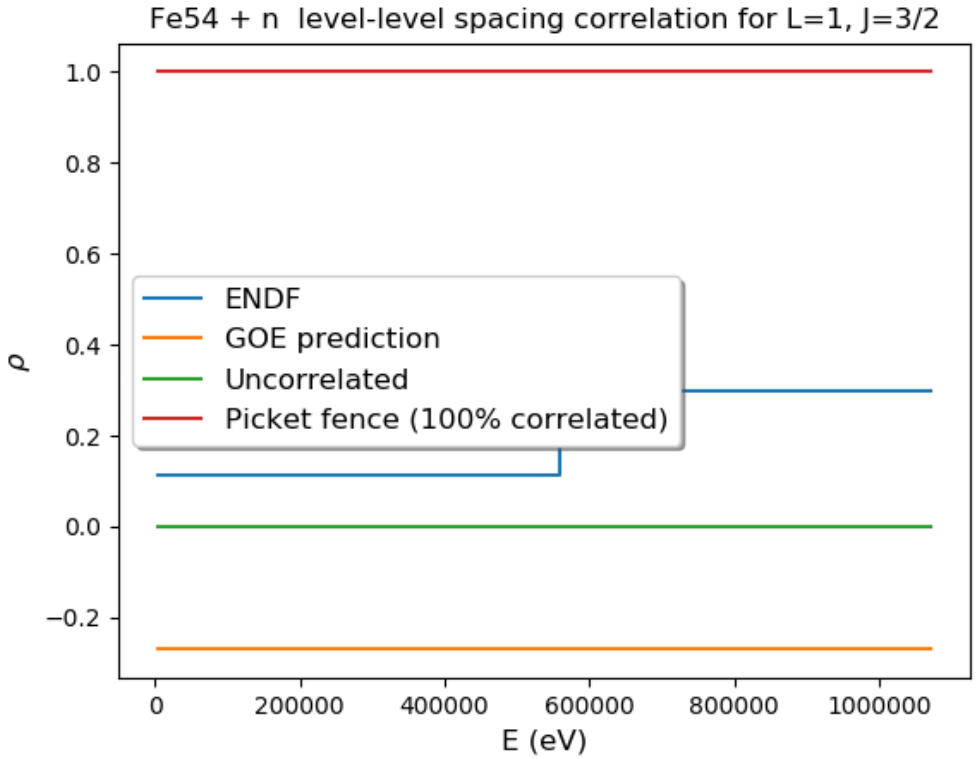
Secular variation of levels

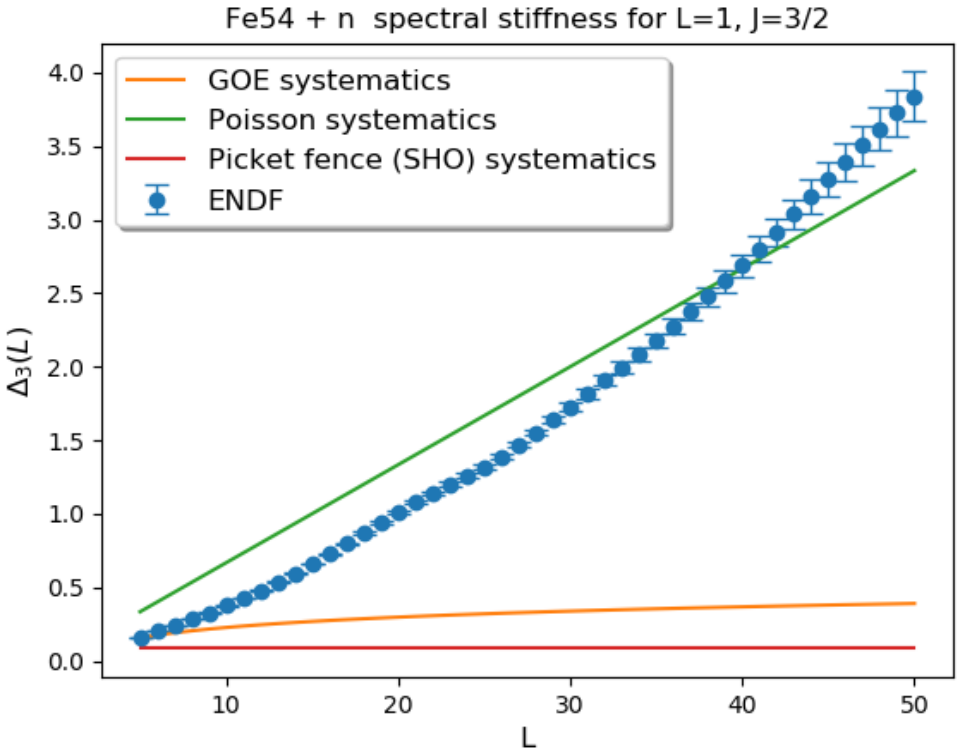


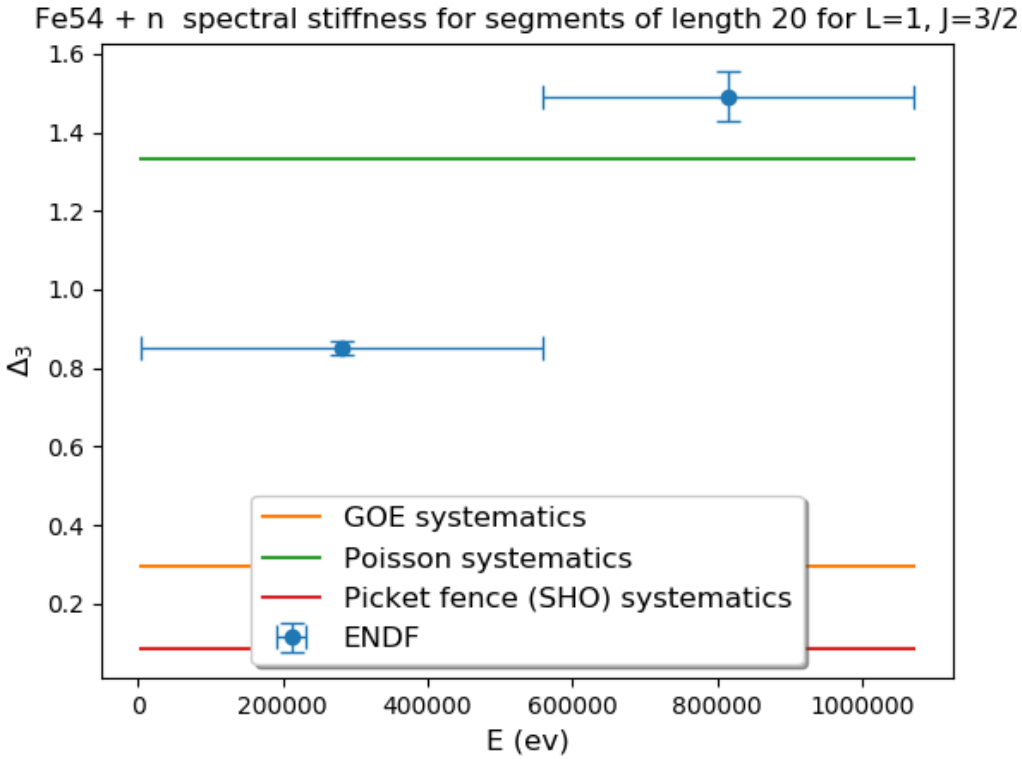


Local fluctuations in levels

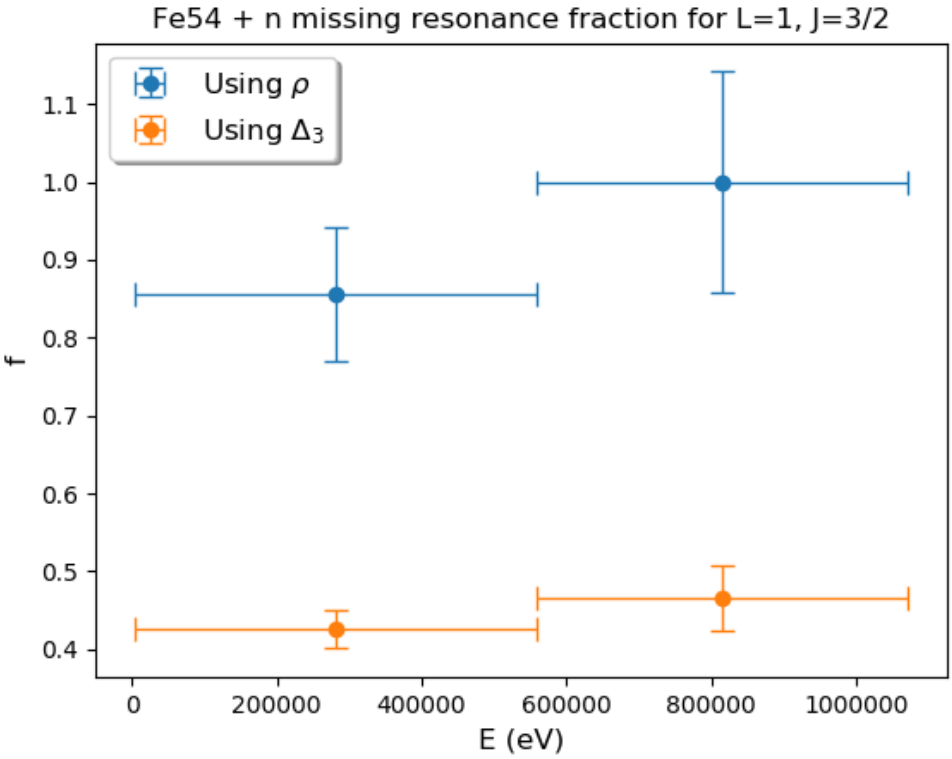

Fe54 + n nearest neighbor spacing distribution for L=1, J=3/2
Wigner's Surmise
Poisson (k=0)
ENDF
Frequency
$D/\overline{D}$


Fe54 + n level-level spacing correlation for L=1, J=3/2
ENDF
GOE prediction
Uncorrelated
Picket fence (100% correlated)
ρ
E (eV)

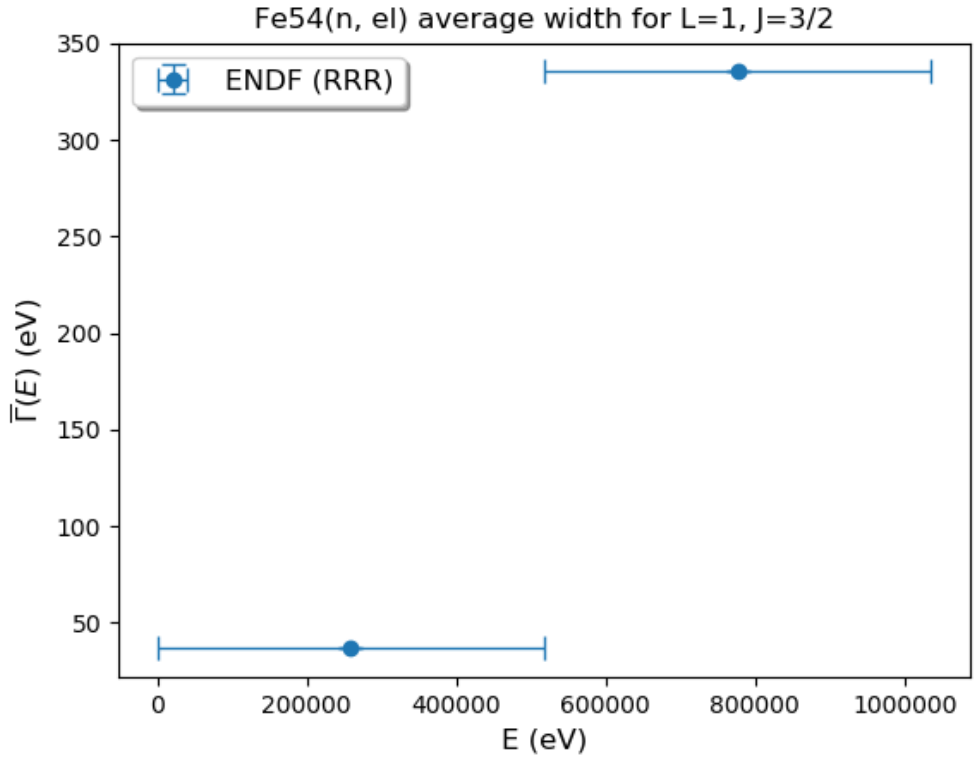


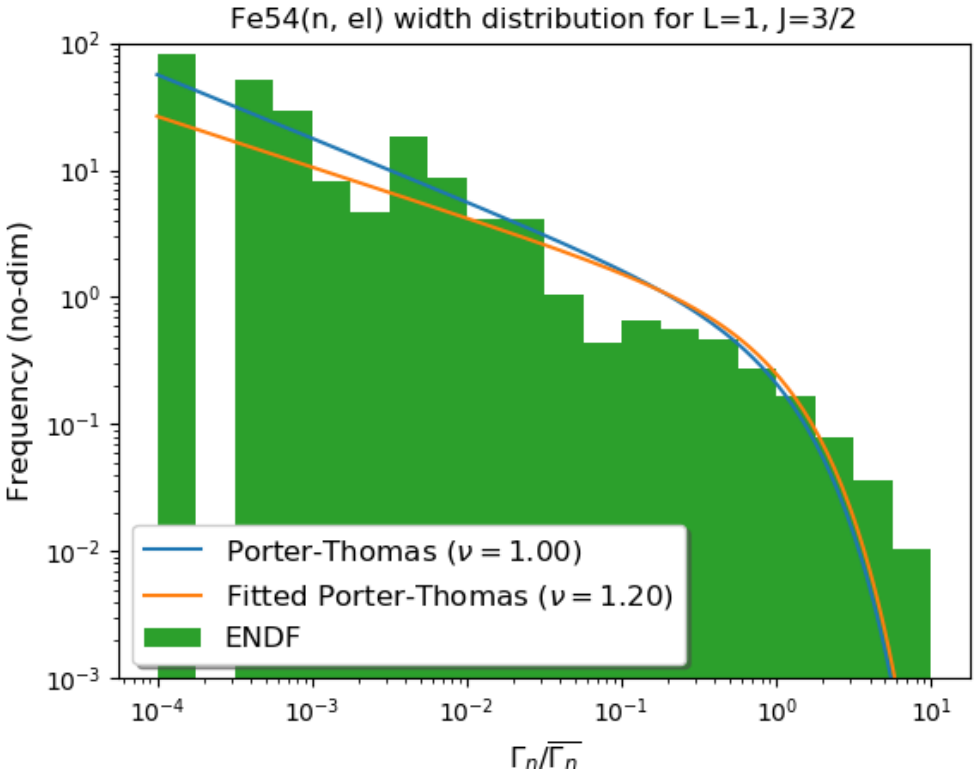


Assessment of fraction of missing levels



Details for channel n + Fe54 (j=1.5,l=1,s=0.5)

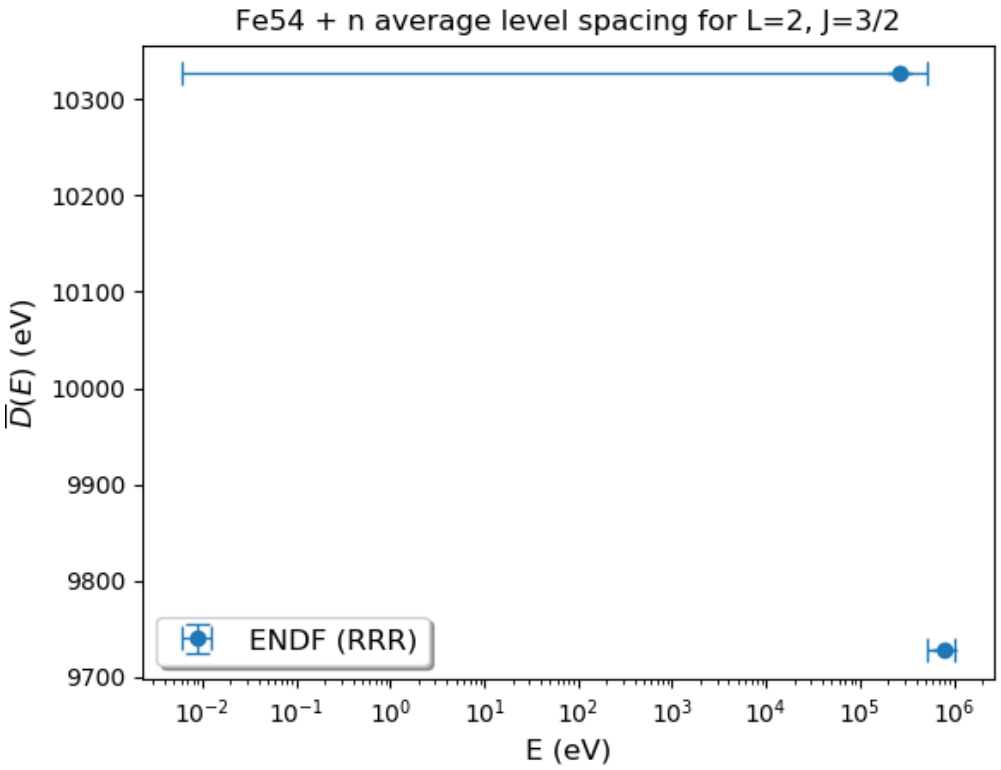


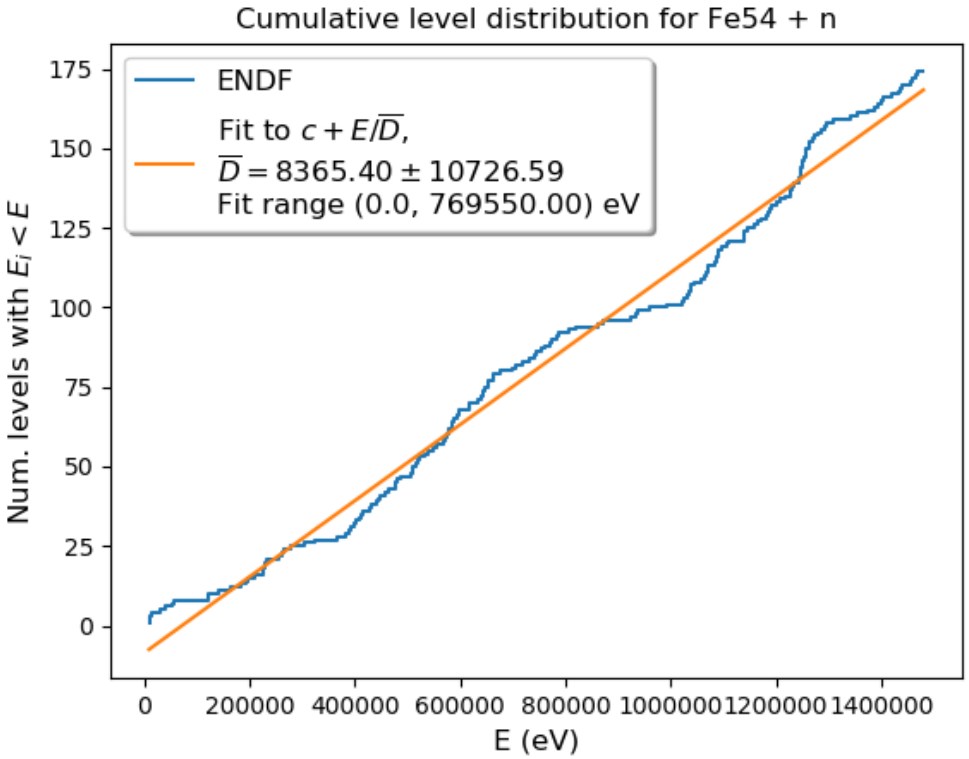


Spin Group L=2, J=3/2

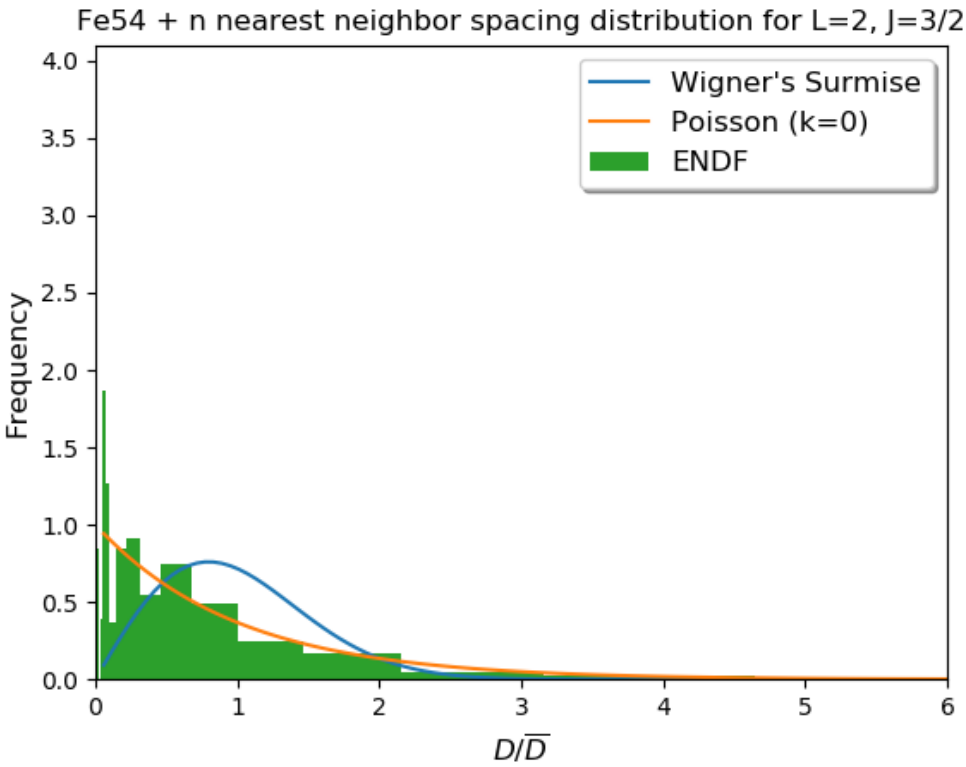
Level analysis

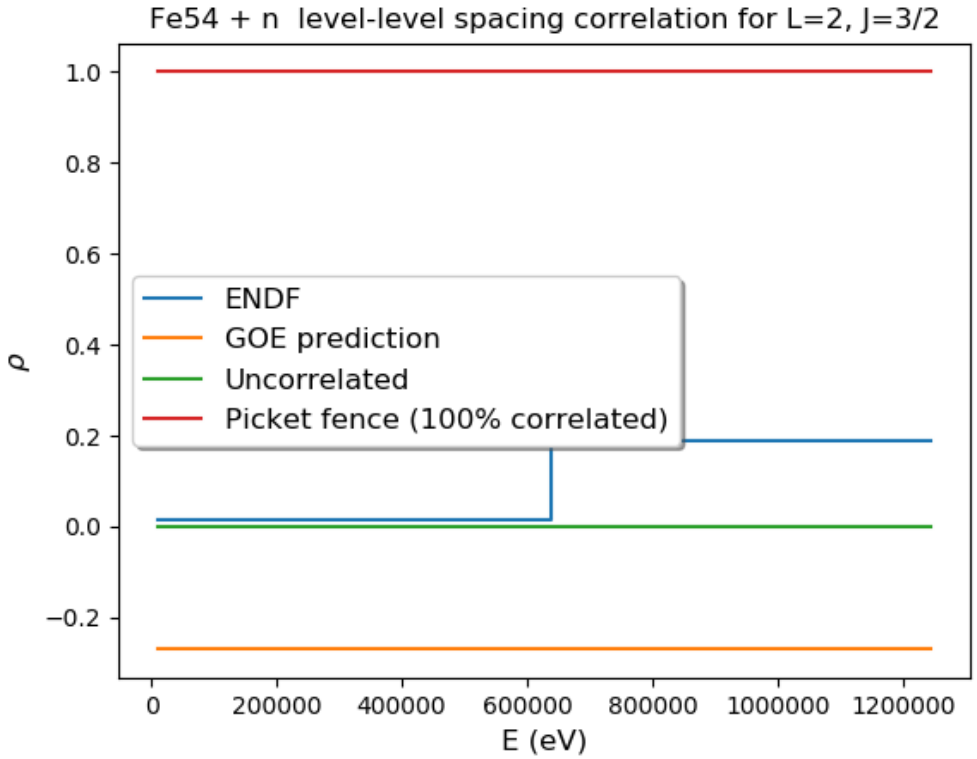
Secular variation of levels

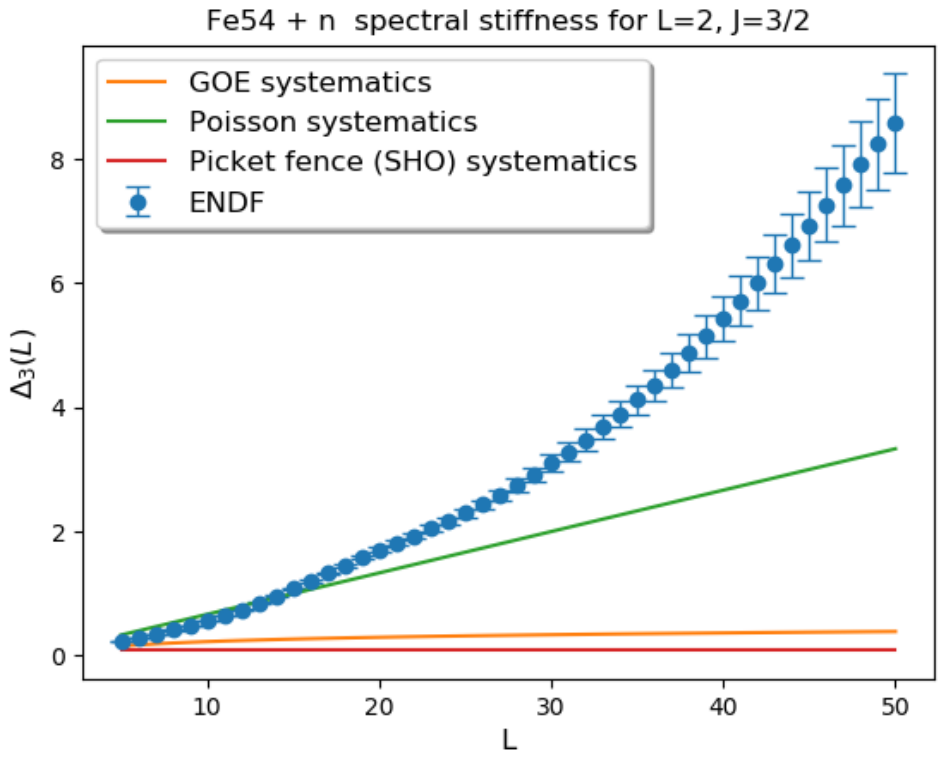


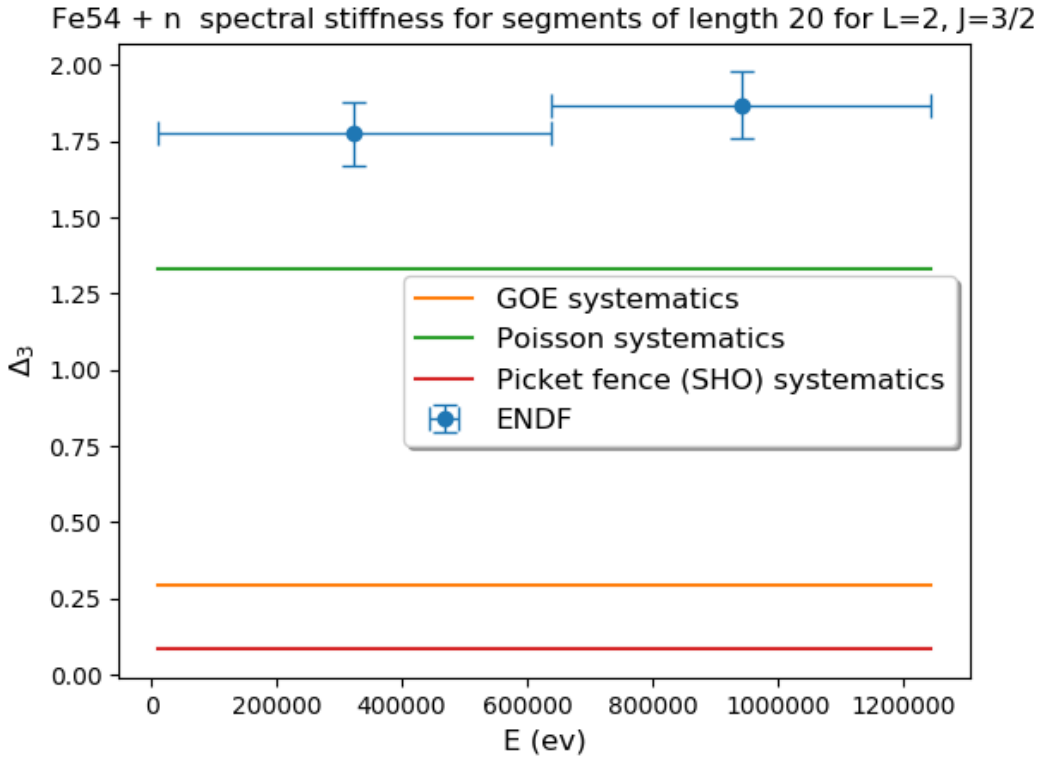


Local fluctuations in levels

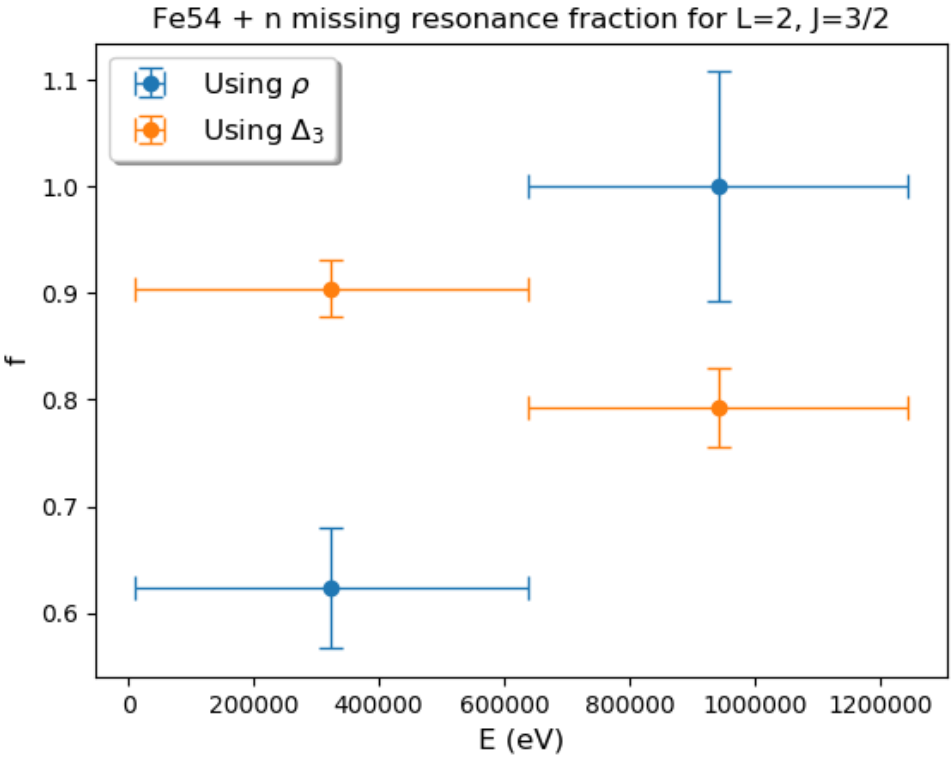

Fe54 + n nearest neighbor spacing distribution for L=2, J=3/2
Wigner's Surmise
Poisson (k=0)
ENDF
Frequency
$D/\overline{D}$


Fe54 + n level-level spacing correlation for L=2, J=3/2
ENDF
GOE prediction
Uncorrelated
Picket fence (100% correlated)
ρ
E (eV)

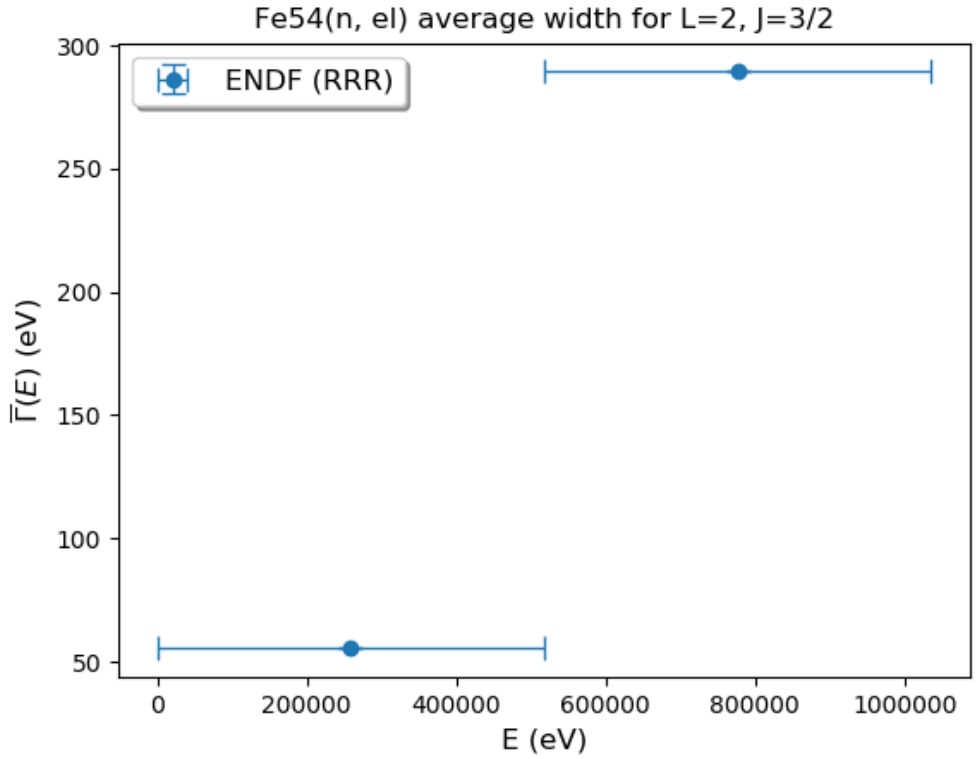


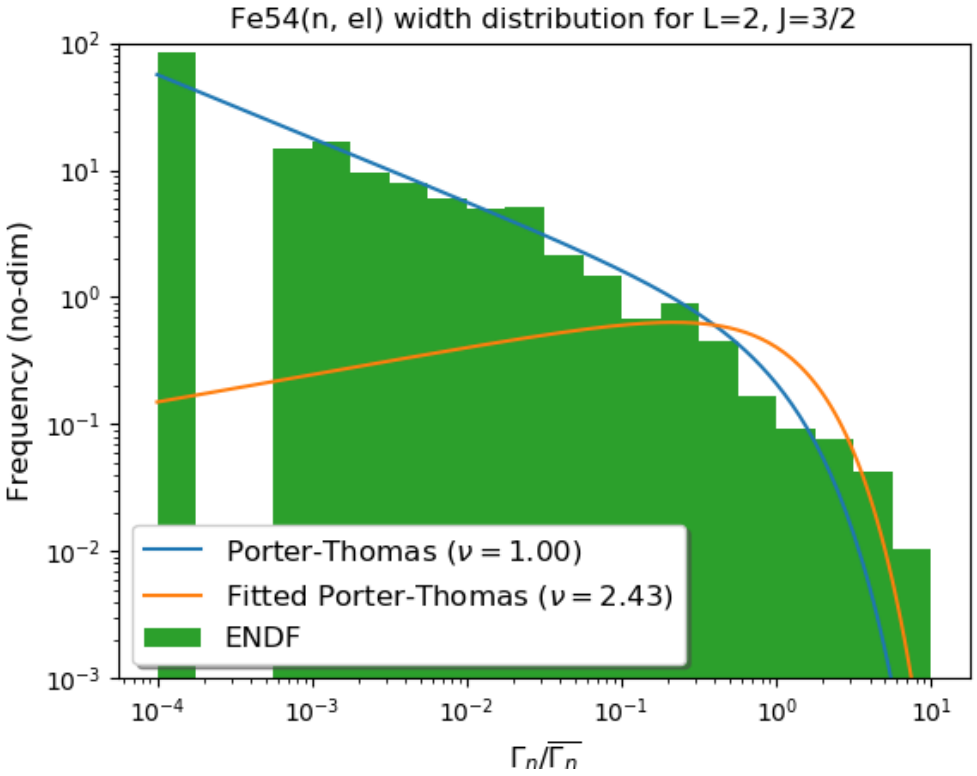


Assessment of fraction of missing levels



Details for channel n + Fe54 (j=1.5,l=2,s=0.5)

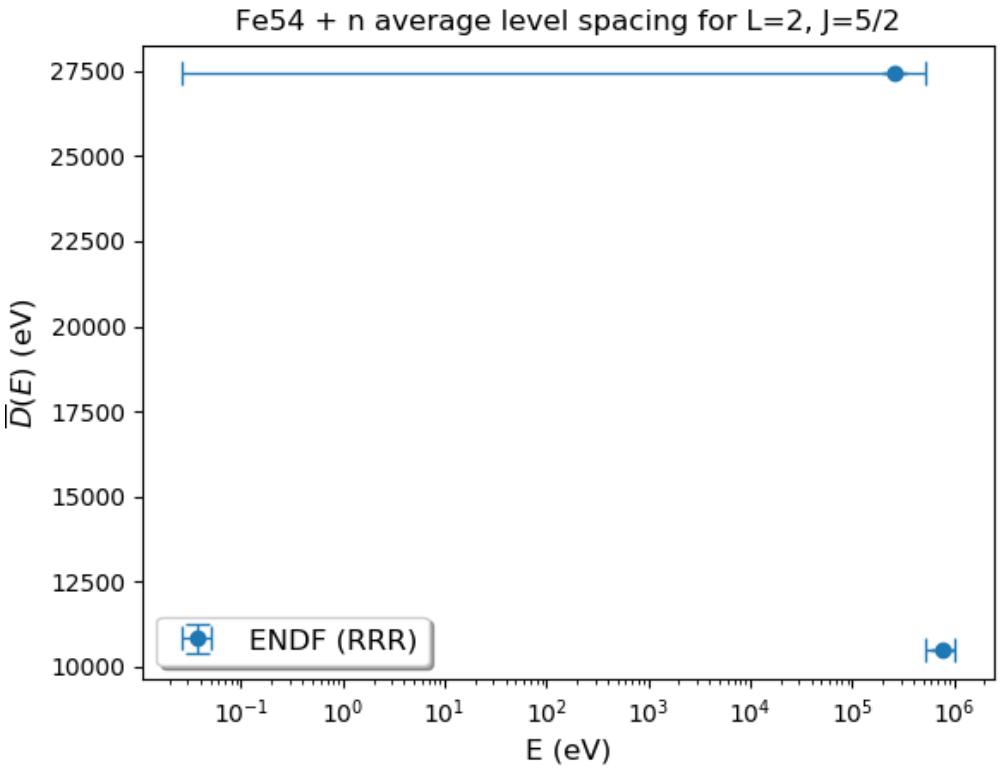


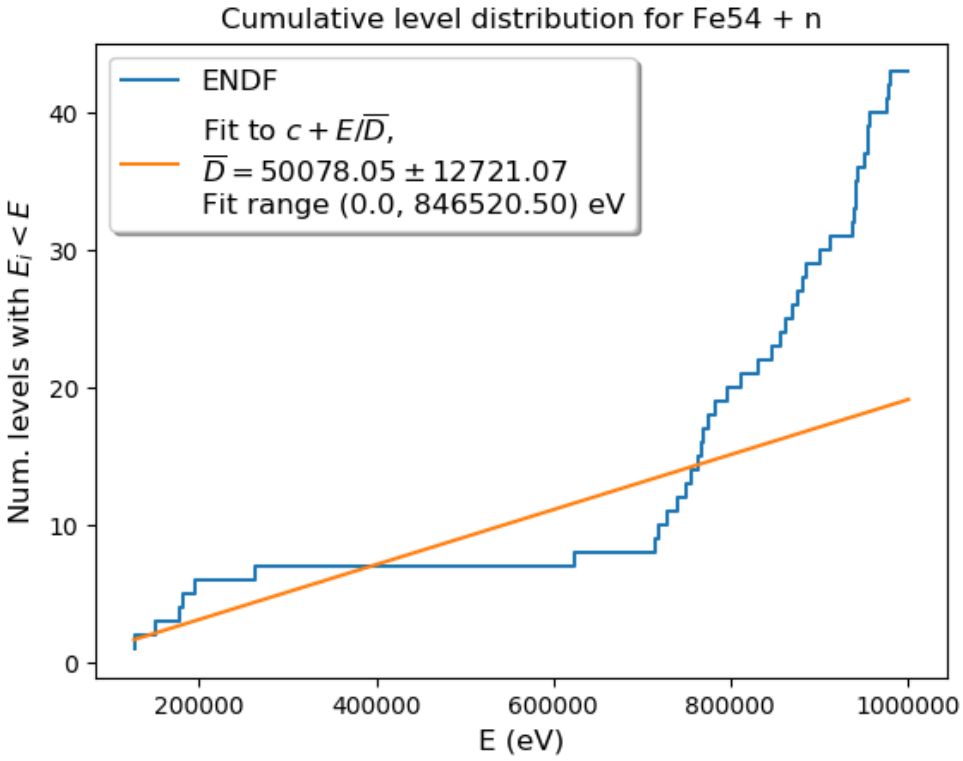


Spin Group L=2, J=5/2

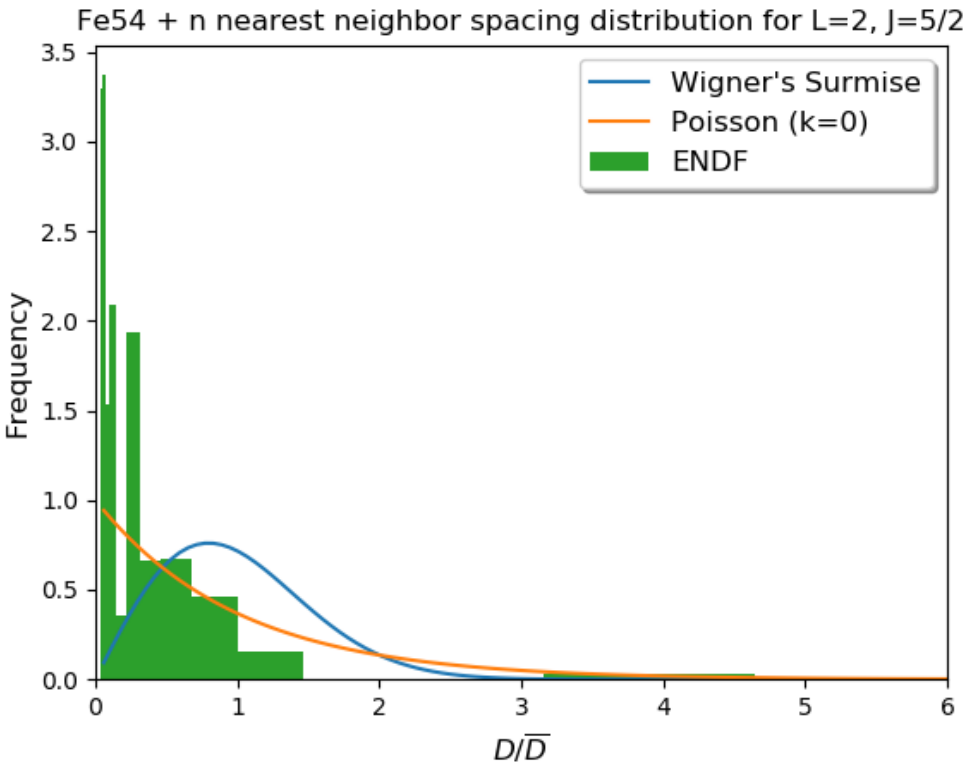
Level analysis

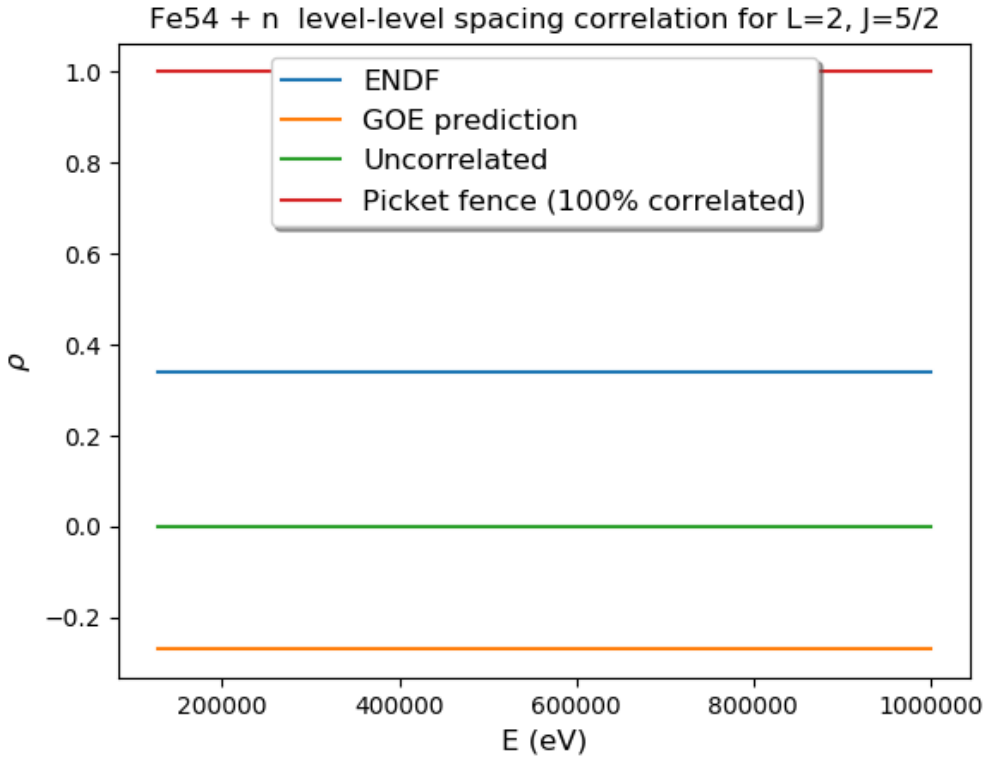
Secular variation of levels

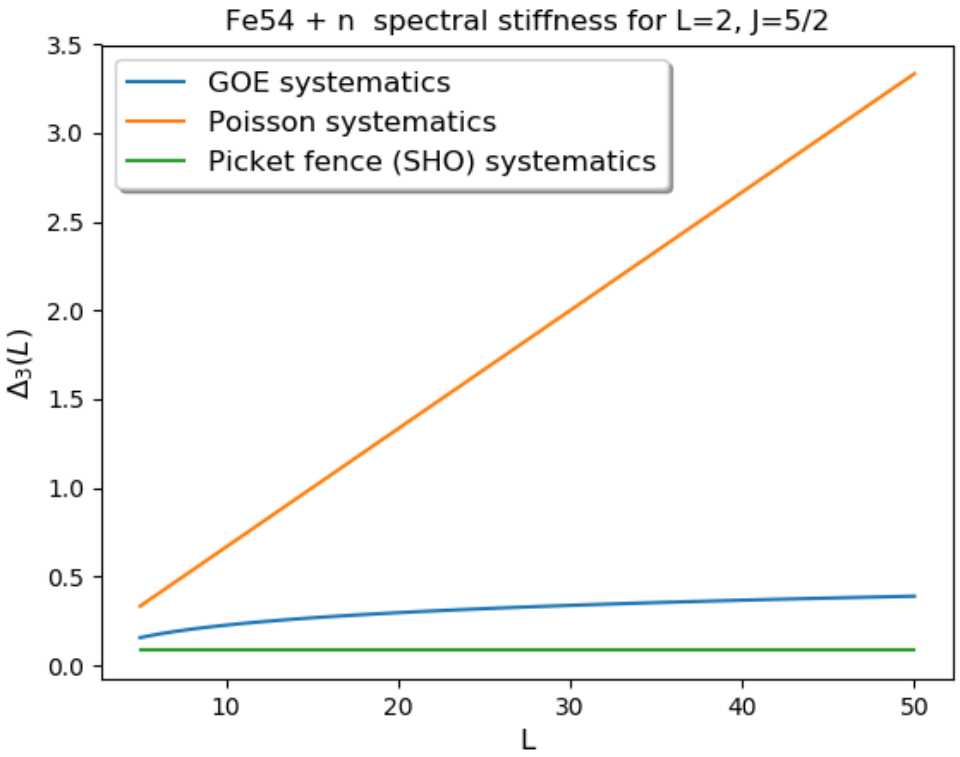




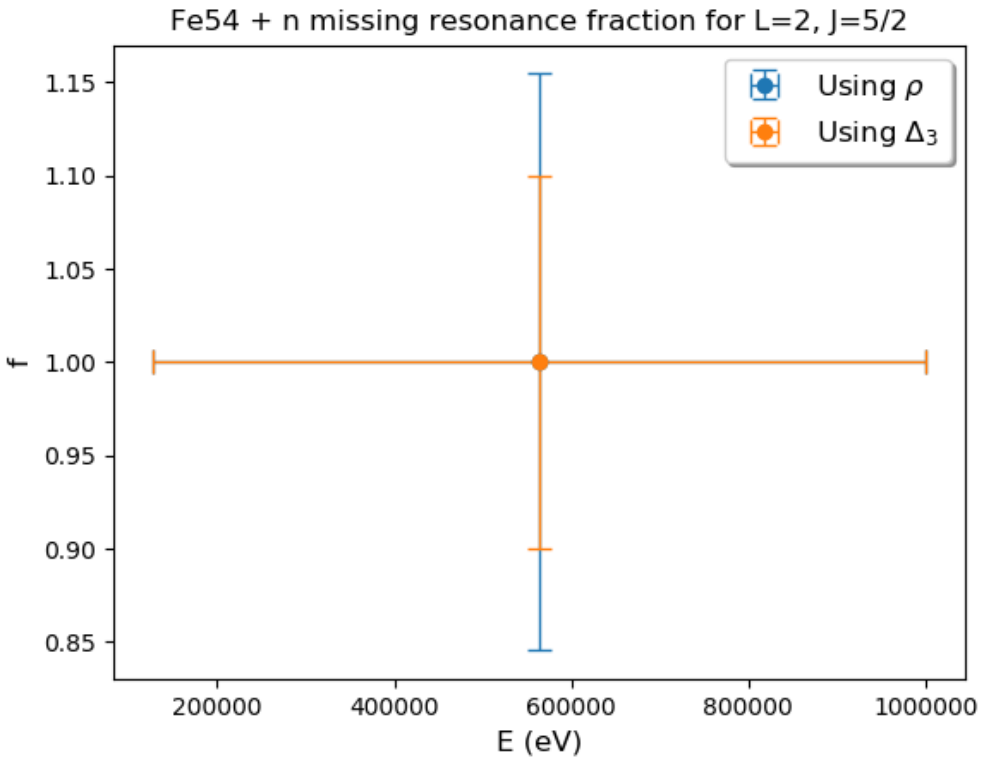
Local fluctuations in levels


Fe54 + n nearest neighbor spacing distribution for L=2, J=5/2
Wigner's Surmise
Poisson (k=0)
ENDF
Frequency
$D/\overline{D}$

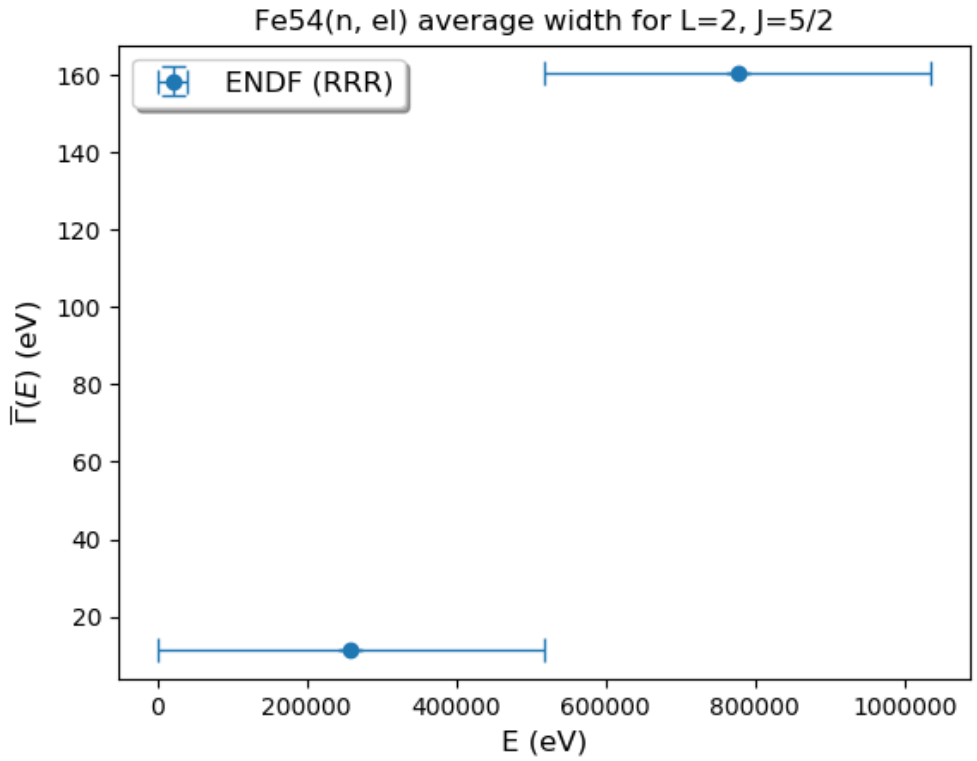

Fe54 + n level-level spacing correlation for L=2, J=5/2
ENDF
GOE prediction
Uncorrelated
Picket fence (100% correlated)
ρ
E (eV)

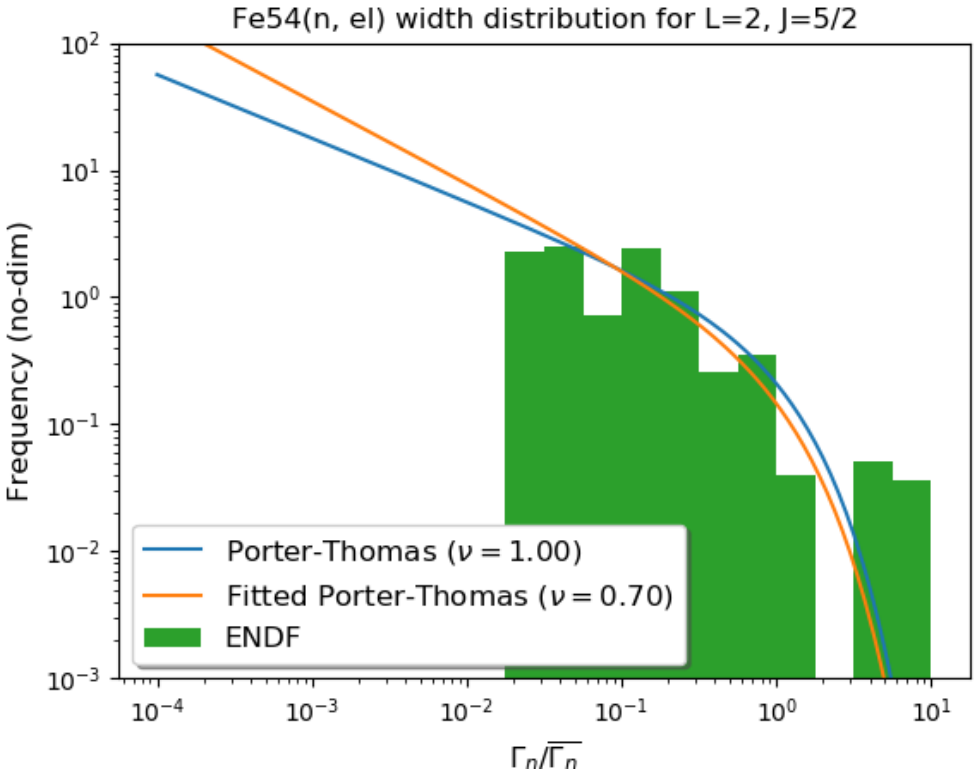


Assessment of fraction of missing levels



Details for channel n + Fe54 (j=2.5,l=2,s=0.5)


Fe54(n, el) average width for L=2, J=5/2
ENDF (RRR)
160
140
120
100
80
60
40
20
$\overline{\Gamma}(E)$ (eV)
0
200000
400000
600000
800000
1000000
E (eV)


Fe54(n, el) width distribution for L=2, J=5/2
10^{2}
10^{1}
10^{0}
10^{-1}
10^{-2}
10^{-3}
Frequency (no-dim)
Porter-Thomas ($\nu = 1.00$)
Fitted Porter-Thomas ($\nu = 0.70$)
ENDF
10^{-4}
10^{-3}
10^{-2}
10^{-1}
10^{0}
10^{1}
$\Gamma_n/\overline{\Gamma_n}$