

**R.A. budget:
Comparison of the neutron yields
for pure aluminium
evaluated with SaG4n and NeuCBOT**

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Motivation: search for the source of the discrepancy

PU foam 90%, ^{232}Th chain

	Neutron yield, 10e-7 n/decay
NeuCBOT excel sheet	44
NeuCBOT verification	13.5
SaG4n step 0.001 cm, TENDL-2017	1.55
SaG4n step 0.001 cm, JENDLTENDL01	1.12
SaG4n step 0.00001 cm, JENDLTENDL01	1.15

NeuCBOT
verification

a127.0 2.0298391763e-07
b10.0 7.63904831625e-08
b11.0 3.43728585578e-07
c12.0 0.0
c13.0 6.76097319407e-08
ca40.0 0.0
ca42.0 2.97356339983e-10
ca43.0 7.46562610641e-11
ca44.0 1.17012096274e-09
ca46.0 1.37148901918e-12
ca48.0 6.5816654292e-11
h1.0 0.0
h2.0 0.0
mg24.0 8.14992264192e-11
mg25.0 2.92760553935e-09
mg26.0 3.96663594012e-09
n14.0 5.17459024816e-07
n15.0 9.29219124197e-11
o16.0 0.0
o17.0 9.82805555819e-09
o18.0 8.17302569442e-08
si28.0 0.0
si29.0 2.16531947505e-08
si30.0 1.50002316173e-08

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Info: Al, ²³² Th chain	Neutron yield, 10e-7 n/decay	Ratio (Shawn's result/ current)
NeuCBOT Shawn's article: 1702.02465	453	1
NeuCBOT verification, TALYS-1.6	453	1
NeuCBOT verification, TALYS-1.9	227	2.0
NeuCBOT Mendoza's article: 1906.03903	75.5	6.0
SaG4n Mendoza's article: 1906.03903 TENDL-2017	37.9	12.0
SaG4n Mendoza's article: 1906.03903 JENDLTENDL01	33.3	13.6
SaG4n verification, JENDLTENDL01	33.4	13.6