

Report i4 - Energetically Feasible Aneutronic X + n D\* --> Y + Z Reactions, n = 1 to 12  
Where X = Sr38, Y=Mo42, but rfact=0.85 (Iwamura's Sr --> Mo transmutation)

----- Equations follow for Strontium, Sr, element 38 -----

84Sr38 + 4 D* --> 92Mo42 + 58.704 MeV [9.468 MeV]	(i4_Sr:1)
84Sr38 + 5 D* --> 92Mo42 + 2H1 + 58.704 MeV [-3.892 MeV]	(i4_Sr:2)
84Sr38 + 6 D* --> 92Mo42 + 4He2 + 82.551 MeV [6.185 MeV]	(i4_Sr:3)
84Sr38 + 7 D* --> 92Mo42 + 6Li3 + 84.024 MeV [-6.516 MeV]	(i4_Sr:4)
84Sr38 + 9 D* --> 92Mo42 + 10B5 + 112.332 MeV [-7.756 MeV]	(i4_Sr:5)
84Sr38 + 10 D* --> 92Mo42 + 12C6 + 137.518 MeV [2.066 MeV]	(i4_Sr:6)
84Sr38 + 11 D* --> 92Mo42 + 14N7 + 147.791 MeV [-3.414 MeV]	(i4_Sr:7)
84Sr38 + 12 D* --> 92Mo42 + 16O8 + 168.527 MeV [1.186 MeV]	(i4_Sr:8)
86Sr38 + 4 D* --> 94Mo42 + 56.429 MeV [7.545 MeV]	(i4_Sr:9)
86Sr38 + 5 D* --> 94Mo42 + 2H1 + 56.429 MeV [-5.729 MeV]	(i4_Sr:10)
86Sr38 + 5 D* --> 95Mo42 + 1H1 + 61.574 MeV [-0.584 MeV]	(i4_Sr:11)
86Sr38 + 6 D* --> 94Mo42 + 4He2 + 80.276 MeV [4.433 MeV]	(i4_Sr:12)
86Sr38 + 6 D* --> 95Mo42 + 3He2 + 67.067 MeV [-8.775 MeV]	(i4_Sr:13)
86Sr38 + 7 D* --> 94Mo42 + 6Li3 + 81.749 MeV [-8.183 MeV]	(i4_Sr:14)
86Sr38 + 9 D* --> 94Mo42 + 10B5 + 110.057 MeV [-9.257 MeV]	(i4_Sr:15)
86Sr38 + 10 D* --> 94Mo42 + 12C6 + 135.243 MeV [00.648 MeV]	(i4_Sr:16)
86Sr38 + 11 D* --> 94Mo42 + 14N7 + 145.516 MeV [-4.750 MeV]	(i4_Sr:17)
86Sr38 + 12 D* --> 92Mo42 + 18O8 + 160.692 MeV [-5.629 MeV]	(i4_Sr:18)
86Sr38 + 12 D* --> 94Mo42 + 16O8 + 166.252 MeV [-0.069 MeV]	(i4_Sr:19)
87Sr38 + 4 D* --> 95Mo42 + 55.370 MeV [6.658 MeV]	(i4_Sr:20)
87Sr38 + 5 D* --> 95Mo42 + 2H1 + 55.370 MeV [-6.574 MeV]	(i4_Sr:21)
87Sr38 + 5 D* --> 96Mo42 + 1H1 + 62.300 MeV [00.356 MeV]	(i4_Sr:22)
87Sr38 + 6 D* --> 95Mo42 + 4He2 + 79.216 MeV [3.630 MeV]	(i4_Sr:23)
87Sr38 + 6 D* --> 96Mo42 + 3He2 + 67.793 MeV [-7.793 MeV]	(i4_Sr:24)
87Sr38 + 7 D* --> 94Mo42 + 7Li3 + 80.571 MeV [-9.064 MeV]	(i4_Sr:25)
87Sr38 + 7 D* --> 95Mo42 + 6Li3 + 80.690 MeV [-8.945 MeV]	(i4_Sr:26)
87Sr38 + 8 D* --> 94Mo42 + 9Be4 + 97.267 MeV [-6.818 MeV]	(i4_Sr:27)
87Sr38 + 9 D* --> 94Mo42 + 11B5 + 113.083 MeV [-5.851 MeV]	(i4_Sr:28)
87Sr38 + 9 D* --> 95Mo42 + 10B5 + 108.998 MeV [-9.936 MeV]	(i4_Sr:29)
87Sr38 + 10 D* --> 94Mo42 + 13C6 + 131.762 MeV [-2.413 MeV]	(i4_Sr:30)
87Sr38 + 10 D* --> 95Mo42 + 12C6 + 134.184 MeV [00.010 MeV]	(i4_Sr:31)
87Sr38 + 11 D* --> 94Mo42 + 15N7 + 147.921 MeV [-1.884 MeV]	(i4_Sr:32)
87Sr38 + 11 D* --> 95Mo42 + 14N7 + 144.457 MeV [-5.348 MeV]	(i4_Sr:33)
87Sr38 + 12 D* --> 94Mo42 + 17O8 + 161.967 MeV [-3.853 MeV]	(i4_Sr:34)
87Sr38 + 12 D* --> 95Mo42 + 16O8 + 165.193 MeV [-0.627 MeV]	(i4_Sr:35)
88Sr38 + 4 D* --> 96Mo42 + 53.412 MeV [4.869 MeV]	(i4_Sr:36)
88Sr38 + 5 D* --> 96Mo42 + 2H1 + 53.412 MeV [-8.320 MeV]	(i4_Sr:37)
88Sr38 + 5 D* --> 97Mo42 + 1H1 + 58.008 MeV [-3.724 MeV]	(i4_Sr:38)
88Sr38 + 6 D* --> 96Mo42 + 4He2 + 77.258 MeV [1.925 MeV]	(i4_Sr:39)
88Sr38 + 6 D* --> 97Mo42 + 3He2 + 63.502 MeV [-11.831 MeV]	(i4_Sr:40)
88Sr38 + 7 D* --> 95Mo42 + 7Li3 + 76.828 MeV [-12.513 MeV]	(i4_Sr:41)
88Sr38 + 7 D* --> 96Mo42 + 6Li3 + 78.732 MeV [-10.609 MeV]	(i4_Sr:42)
88Sr38 + 8 D* --> 95Mo42 + 9Be4 + 93.524 MeV [-10.227 MeV]	(i4_Sr:43)
88Sr38 + 9 D* --> 95Mo42 + 11B5 + 109.339 MeV [-9.219 MeV]	(i4_Sr:44)
88Sr38 + 9 D* --> 96Mo42 + 10B5 + 107.040 MeV [-11.519 MeV]	(i4_Sr:45)
88Sr38 + 10 D* --> 95Mo42 + 13C6 + 128.018 MeV [-5.741 MeV]	(i4_Sr:46)
88Sr38 + 10 D* --> 96Mo42 + 12C6 + 132.226 MeV [-1.533 MeV]	(i4_Sr:47)
88Sr38 + 11 D* --> 95Mo42 + 15N7 + 144.177 MeV [-5.172 MeV]	(i4_Sr:48)
88Sr38 + 11 D* --> 96Mo42 + 14N7 + 142.498 MeV [-6.851 MeV]	(i4_Sr:49)
88Sr38 + 12 D* --> 94Mo42 + 18O8 + 158.898 MeV [-6.427 MeV]	(i4_Sr:50)
88Sr38 + 12 D* --> 95Mo42 + 17O8 + 158.223 MeV [-7.102 MeV]	(i4_Sr:51)
88Sr38 + 12 D* --> 96Mo42 + 16O8 + 163.234 MeV [-2.090 MeV]	(i4_Sr:52)

Report i4 - Energetically Feasible Aneutronic  $X + n D^* \rightarrow Y + Z$  Reactions,  $n = 1$  to  $12$   
Where  $X = Sr38$ ,  $Y=Mo42$ , but  $r_{fact}=0.85$  (Iwamura's  $Sr \rightarrow Mo$  transmutation)

Total number of reaction equations: 52

Maximum number of D fused with X: 12

Adjustment factor to compound nucleus radius: 0.85

Energy threshold for including reaction, in eV: 10

Note -  $D^*$  denotes a deflated state hydrogen nucleus, including the electron

Note - the energy in brackets is initial compound nucleus net energy,  
i.e. the fusion energy less the deflated electron energy deficit