

Kinematics Tables..ver.3

1 CH₂ target

¹² C(d,p) ¹³ C			
Q-value 2.72, E = 10, Ex = 0.00			
deg	total energy	E - dE	dE
30.9	1.2305e+01	1.2134e+01	1.7138e-01
35.9	1.2188e+01	1.2015e+01	1.7272e-01
40.9	1.2057e+01	1.1883e+01	1.7425e-01
45.9	1.1914e+01	1.1738e+01	1.7595e-01
50.9	1.1760e+01	1.1582e+01	1.7782e-01
55.9	1.1597e+01	1.1417e+01	1.7986e-01
60.9	1.1427e+01	1.1244e+01	1.8204e-01
65.9	1.1250e+01	1.1066e+01	1.8436e-01
70.9	1.1069e+01	1.0883e+01	1.8680e-01
75.9	1.0886e+01	1.0697e+01	1.8936e-01
80.9	1.0702e+01	1.0510e+01	1.9200e-01
85.9	1.0519e+01	1.0324e+01	1.9472e-01
90.9	1.0337e+01	1.0139e+01	1.9749e-01

¹² C(d,p) ¹³ C*, 1st excited state			
Q-value 2.72, E = 10, Ex = 3.09			
deg	total energy	E - dE	dE
30.9	9.1727e+00	8.9551e+00	2.1757e-01
35.9	9.0704e+00	8.8508e+00	2.1956e-01
40.9	8.9562e+00	8.7343e+00	2.2182e-01
45.9	8.8315e+00	8.6071e+00	2.2435e-01
50.9	8.6976e+00	8.4705e+00	2.2714e-01
55.9	8.5561e+00	8.3260e+00	2.3017e-01
60.9	8.4084e+00	8.1750e+00	2.3343e-01
65.9	8.2561e+00	8.0192e+00	2.3691e-01
70.9	8.1005e+00	7.8599e+00	2.4057e-01
75.9	7.9431e+00	7.6987e+00	2.4441e-01
80.9	7.7854e+00	7.5370e+00	2.4840e-01
85.9	7.6286e+00	7.3761e+00	2.5251e-01
90.9	7.4740e+00	7.2173e+00	2.5672e-01

¹² C(d,p) ¹³ C*, 2nd excited state			
Q-value 2.72, E = 10, Ex = 3.68			
deg	total energy	E - dE	dE
30.9	8.5692e+00	8.3393e+00	2.2989e-01
35.9	8.4700e+00	8.2379e+00	2.3206e-01
40.9	8.3593e+00	8.1248e+00	2.3454e-01
45.9	8.2385e+00	8.0012e+00	2.3731e-01
50.9	8.1089e+00	7.8685e+00	2.4037e-01
55.9	7.9719e+00	7.7282e+00	2.4370e-01
60.9	7.8291e+00	7.5818e+00	2.4728e-01
65.9	7.6818e+00	7.4307e+00	2.5110e-01
70.9	7.5315e+00	7.2763e+00	2.5514e-01
75.9	7.3796e+00	7.1202e+00	2.5936e-01
80.9	7.2275e+00	6.9637e+00	2.6376e-01
85.9	7.0763e+00	6.8081e+00	2.6829e-01
90.9	6.9275e+00	6.6545e+00	2.7293e-01

¹² C(d,p) ¹³ C*, 3rd excited state			
Q-value 2.72, E = 10, Ex = 3.85			
deg	total energy	E - dE	dE
30.9	8.3949e+00	8.1612e+00	2.3373e-01
35.9	8.2966e+00	8.0606e+00	2.3597e-01
40.9	8.1870e+00	7.9484e+00	2.3852e-01
45.9	8.0673e+00	7.8259e+00	2.4137e-01
50.9	7.9389e+00	7.6944e+00	2.4452e-01
55.9	7.8033e+00	7.5554e+00	2.4794e-01
60.9	7.6619e+00	7.4103e+00	2.5163e-01
65.9	7.5161e+00	7.2606e+00	2.5556e-01
70.9	7.3674e+00	7.1077e+00	2.5971e-01
75.9	7.2171e+00	6.9530e+00	2.6406e-01
80.9	7.0666e+00	6.7980e+00	2.6859e-01
85.9	6.9172e+00	6.6439e+00	2.7325e-01
90.9	6.7700e+00	6.4920e+00	2.7803e-01

$^{12}\text{C}(\text{d}, \text{p})^{13}\text{C}^*$, 4th excited state			
Q-value 2.72, E = 10, Ex = 6.86			
deg	total energy	E - dE	dE
30.9	5.2693e+00	4.9290e+00	3.4029e-01
35.9	5.1893e+00	4.8448e+00	3.4453e-01
40.9	5.1004e+00	4.7510e+00	3.4937e-01
45.9	5.0037e+00	4.6489e+00	3.5482e-01
50.9	4.9005e+00	4.5396e+00	3.6086e-01
55.9	4.7919e+00	4.4244e+00	3.6747e-01
60.9	4.6792e+00	4.3046e+00	3.7462e-01
65.9	4.5636e+00	4.1813e+00	3.8230e-01
70.9	4.4464e+00	4.0559e+00	3.9048e-01
75.9	4.3286e+00	3.9295e+00	3.9910e-01
80.9	4.2114e+00	3.8033e+00	4.0813e-01
85.9	4.0958e+00	3.6782e+00	4.1752e-01
90.9	3.9826e+00	3.5554e+00	4.2720e-01

$^{12}\text{C}(\text{d}, \text{p})^{13}\text{C}^*$, 6th excited state			
Q-value 2.72, E = 10, Ex = 7.55			
deg	total energy	E - dE	dE
30.9	4.5377e+00	4.1536e+00	3.8408e-01
35.9	4.4627e+00	4.0734e+00	3.8932e-01
40.9	4.3795e+00	3.9842e+00	3.9532e-01
45.9	4.2891e+00	3.8870e+00	4.0209e-01
50.9	4.1927e+00	3.7831e+00	4.0961e-01
55.9	4.0916e+00	3.6737e+00	4.1787e-01
60.9	3.9868e+00	3.5599e+00	4.2684e-01
65.9	3.8795e+00	3.4430e+00	4.3649e-01
70.9	3.7709e+00	3.3241e+00	4.4680e-01
75.9	3.6621e+00	3.2044e+00	4.5772e-01
80.9	3.5541e+00	3.0849e+00	4.6920e-01
85.9	3.4477e+00	2.9665e+00	4.8118e-01
90.9	3.3439e+00	2.8503e+00	4.9361e-01

$^{12}\text{C}(\text{d}, \text{p})^{13}\text{C}^*$, 5th excited state			
Q-value 2.72, E = 10, Ex = 7.49			
deg	total energy	E - dE	dE
30.9	4.6016e+00	4.2219e+00	3.7974e-01
35.9	4.5262e+00	4.1413e+00	3.8487e-01
40.9	4.4424e+00	4.0517e+00	3.9076e-01
45.9	4.3515e+00	3.9541e+00	3.9739e-01
50.9	4.2545e+00	3.8498e+00	4.0475e-01
55.9	4.1527e+00	3.7398e+00	4.1284e-01
60.9	4.0472e+00	3.6255e+00	4.2161e-01
65.9	3.9392e+00	3.5081e+00	4.3106e-01
70.9	3.8298e+00	3.3887e+00	4.4114e-01
75.9	3.7202e+00	3.2684e+00	4.5181e-01
80.9	3.6113e+00	3.1483e+00	4.6303e-01
85.9	3.5041e+00	3.0293e+00	4.7474e-01
90.9	3.3994e+00	2.9125e+00	4.8687e-01

$^{12}\text{C}(\text{d}, \text{p})^{13}\text{C}^*$, 7th excited state			
Q-value 2.72, E = 10, Ex = 7.69			
deg	total energy	E - dE	dE
30.9	4.3882e+00	3.9936e+00	3.9468e-01
35.9	4.3143e+00	3.9141e+00	4.0018e-01
40.9	4.2323e+00	3.8258e+00	4.0649e-01
45.9	4.1433e+00	3.7297e+00	4.1360e-01
50.9	4.0484e+00	3.6269e+00	4.2151e-01
55.9	3.9488e+00	3.5186e+00	4.3020e-01
60.9	3.8457e+00	3.4060e+00	4.3964e-01
65.9	3.7402e+00	3.2904e+00	4.4982e-01
70.9	3.6335e+00	3.1728e+00	4.6069e-01
75.9	3.5266e+00	3.0544e+00	4.7223e-01
80.9	3.4205e+00	2.9361e+00	4.8437e-01
85.9	3.3161e+00	2.8191e+00	4.9706e-01
90.9	3.2143e+00	2.7041e+00	5.1023e-01

$^{12}\text{C}(\text{d}, \text{p})^{13}\text{C}^*$, 8th excited state			
Q-value 2.72, E = 10, Ex = 8.20			
deg	total energy	E - dE	dE
30.9	3.8404e+00	3.4002e+00	4.4014e-01
35.9	3.7705e+00	3.3237e+00	4.4684e-01
40.9	3.6931e+00	3.2386e+00	4.5454e-01
45.9	3.6092e+00	3.1460e+00	4.6325e-01
50.9	3.5199e+00	3.0470e+00	4.7297e-01
55.9	3.4264e+00	2.9427e+00	4.8367e-01
60.9	3.3297e+00	2.8344e+00	4.9536e-01
65.9	3.2310e+00	2.7230e+00	5.0800e-01
70.9	3.1314e+00	2.6098e+00	5.2158e-01
75.9	3.0318e+00	2.4958e+00	5.3605e-01
80.9	2.9333e+00	2.3819e+00	5.5136e-01
85.9	2.8365e+00	2.2691e+00	5.6746e-01
90.9	2.7424e+00	2.1581e+00	5.8427e-01

$^{12}\text{C}(\text{d}, \text{p})^{13}\text{C}^*$, 9th excited state			
Q-value 2.72, E = 10, Ex = 8.86			
deg	total energy	E - dE	dE
30.9	3.1214e+00	2.5984e+00	5.2300e-01
35.9	3.0573e+00	2.5251e+00	5.3226e-01
40.9	2.9865e+00	2.4435e+00	5.4296e-01
45.9	2.9099e+00	2.3547e+00	5.5515e-01
50.9	2.8286e+00	2.2598e+00	5.6883e-01
55.9	2.7437e+00	2.1597e+00	5.8403e-01
60.9	2.6562e+00	2.0555e+00	6.0077e-01
65.9	2.5672e+00	1.9482e+00	6.1907e-01
70.9	2.4777e+00	1.8388e+00	6.3895e-01
75.9	2.3886e+00	1.7282e+00	6.6040e-01
80.9	2.3008e+00	1.6174e+00	6.8344e-01
85.9	2.2150e+00	1.5069e+00	7.0806e-01
90.9	2.1318e+00	1.3976e+00	7.3423e-01

$^{12}\text{C}(\text{d}, \text{p})^{13}\text{C}^*$, 10th excited state			
Q-value 2.72, E = 10, Ex = 9.50			
deg	total energy	E - dE	dE
30.9	2.4089e+00	1.7536e+00	6.5536e-01
35.9	2.3513e+00	1.6813e+00	6.6996e-01
40.9	2.2877e+00	1.6006e+00	6.8706e-01
45.9	2.2192e+00	1.5124e+00	7.0679e-01
50.9	2.1468e+00	1.4174e+00	7.2934e-01
55.9	2.0714e+00	1.3165e+00	7.5490e-01
60.9	1.9942e+00	1.2104e+00	7.8375e-01
65.9	1.9160e+00	1.0998e+00	8.1620e-01
70.9	1.8378e+00	9.8515e-01	8.5266e-01
75.9	1.7604e+00	8.6672e-01	8.9369e-01
80.9	1.6846e+00	7.4454e-01	9.4002e-01
85.9	1.6109e+00	6.1824e-01	9.9268e-01
90.9	1.5400e+00	4.8695e-01	1.0531e+00

$^{12}\text{C}(\text{d}, \text{p})^{13}\text{C}^*$, 11th excited state			
Q-value 2.72, E = 10, Ex = 9.90			
deg	total energy	E - dE	dE
30.9	1.9523e+00	1.1516e+00	8.0070e-01
35.9	1.8992e+00	1.0755e+00	8.2369e-01
40.9	1.8408e+00	9.8955e-01	8.5121e-01
45.9	1.7780e+00	8.9417e-01	8.8386e-01
50.9	1.7119e+00	7.8945e-01	9.2249e-01
55.9	1.6435e+00	6.7519e-01	9.6830e-01
60.9	1.5736e+00	5.5057e-01	1.0231e+00
65.9	1.5033e+00	4.1390e-01	1.0894e+00
70.9	1.4332e+00	2.6320e-01	1.1700e+00
75.9	1.3643e+00	1.1648e-01	1.2478e+00

p(d, p)d			
Q-value -0.00, E = 10, Ex = 0.00			
deg	total energy	E - dE	dE
30.9	6.5458e+00	6.2601e+00	2.8568e-01
35.9	5.8336e+00	5.5201e+00	3.1347e-01
40.9	5.0792e+00	4.7286e+00	3.5055e-01
45.9	4.3056e+00	3.9047e+00	4.0084e-01
50.9	3.5362e+00	3.0650e+00	4.7117e-01
55.9	2.7944e+00	2.2195e+00	5.7484e-01
60.9	2.1028e+00	1.3588e+00	7.4398e-01
65.9	1.4823e+00	3.7051e-01	1.1118e+00

$^{12}\text{C}(\text{d}, \text{d})^{12}\text{C}$			
Q-value 0.00, E = 10, Ex = 0.00			
deg	total energy	E - dE	dE
30.9	9.5339e+00	9.1706e+00	3.6328e-01
35.9	9.3807e+00	9.0128e+00	3.6791e-01
40.9	9.2107e+00	8.8375e+00	3.7321e-01
45.9	9.0260e+00	8.6469e+00	3.7917e-01
50.9	8.8290e+00	8.4432e+00	3.8577e-01
55.9	8.6220e+00	8.2290e+00	3.9299e-01
60.9	8.4074e+00	8.0066e+00	4.0080e-01
65.9	8.1876e+00	7.7785e+00	4.0917e-01
70.9	7.9650e+00	7.5470e+00	4.1807e-01
75.9	7.7417e+00	7.3143e+00	4.2744e-01
80.9	7.5198e+00	7.0826e+00	4.3725e-01
85.9	7.3012e+00	6.8538e+00	4.4742e-01
90.9	7.0876e+00	6.6297e+00	4.5790e-01

$^{12}\text{C}(\text{d}, \text{d})^{12}\text{C}^*$, 1st excited state			
Q-value 0.00, E = 10, Ex = 4.44			
deg	total energy	E - dE	dE
30.9	5.0820e+00	4.4881e+00	5.9389e-01
35.9	4.9642e+00	4.3593e+00	6.0494e-01
40.9	4.8343e+00	4.2166e+00	6.1772e-01
45.9	4.6942e+00	4.0620e+00	6.3222e-01
50.9	4.5460e+00	3.8975e+00	6.4848e-01
55.9	4.3917e+00	3.7251e+00	6.6651e-01
60.9	4.2333e+00	3.5470e+00	6.8629e-01
65.9	4.0728e+00	3.3649e+00	7.0784e-01
70.9	3.9120e+00	3.1809e+00	7.3113e-01
75.9	3.7527e+00	2.9966e+00	7.5613e-01
80.9	3.5963e+00	2.8136e+00	7.8278e-01
85.9	3.4443e+00	2.6333e+00	8.1102e-01
90.9	3.2978e+00	2.4570e+00	8.4076e-01

$^{12}\text{C}(\text{d}, \alpha)^{10}\text{B}$			
Q-value -1.34, E = 10, Ex = 0.00			
deg	total energy	E - dE	dE
30.9	7.8252e+00	4.6467e+00	3.1785e+00
35.9	7.6135e+00	4.3446e+00	3.2689e+00
40.9	7.3808e+00	4.0037e+00	3.3771e+00
45.9	7.1308e+00	3.6255e+00	3.5053e+00
50.9	6.8673e+00	3.2106e+00	3.6567e+00
55.9	6.5944e+00	2.7584e+00	3.8360e+00
60.9	6.3157e+00	2.2660e+00	4.0498e+00
65.9	6.0350e+00	1.7271e+00	4.3079e+00
70.9	5.7556e+00	1.1332e+00	4.6224e+00
75.9	5.4805e+00	5.2663e-01	4.9539e+00
80.9	5.2124e+00	3.1934e-01	4.8931e+00

$^{12}\text{C}(\text{d}, \alpha)^{10}\text{B}^*$, 1st excited state			
Q-value -1.34, E = 10, Ex = 0.72			
deg	total energy	E - dE	dE
30.9	7.1816e+00	3.7035e+00	3.4781e+00
35.9	6.9768e+00	3.3852e+00	3.5915e+00
40.9	6.7518e+00	3.0223e+00	3.7295e+00
45.9	6.5105e+00	2.6138e+00	3.8967e+00
50.9	6.2566e+00	2.1565e+00	4.1001e+00
55.9	5.9940e+00	1.6440e+00	4.3501e+00
60.9	5.7265e+00	1.0678e+00	4.6587e+00
65.9	5.4576e+00	4.8571e-01	4.9719e+00

$^{12}\text{C}(\text{d}, \alpha)^{10}\text{B}^*$, 2nd excited state			
Q-value -1.34, E = 10, Ex = 1.74			
deg	total energy	E - dE	dE
30.9	6.2566e+00	2.1566e+00	4.1001e+00
35.9	6.0620e+00	1.7813e+00	4.2807e+00
40.9	5.8488e+00	1.3384e+00	4.5104e+00
45.9	5.6206e+00	8.2668e-01	4.7939e+00
50.9	5.3812e+00	3.8290e-01	4.9983e+00

$^{12}\text{C}(d, \alpha)^{10}\text{B}^*$, 3rd excited state			
Q-value -1.34, E = 10, Ex = 2.15			
deg	total energy	E - dE	dE
30.9	5.8796e+00	1.4046e+00	4.4750e+00
35.9	5.6893e+00	9.8350e-01	4.7058e+00
40.9	5.4811e+00	5.2767e-01	4.9534e+00
45.9	5.2584e+00	3.2433e-01	4.9341e+00

2 ^{13}C target

$^{13}\text{C}(d, p)^{14}\text{C}$			
Q-value 5.95, E = 10, Ex = 0.00			
deg	total energy	E - dE	dE
25.9	1.5677e+01	1.5537e+01	1.4054e-01
30.9	1.5572e+01	1.5430e+01	1.4132e-01
35.9	1.5450e+01	1.5308e+01	1.4223e-01
40.9	1.5315e+01	1.5172e+01	1.4327e-01
41.8	1.5289e+01	1.5145e+01	1.4347e-01
45.9	1.5166e+01	1.5022e+01	1.4442e-01
46.5	1.5147e+01	1.5003e+01	1.4457e-01
50.9	1.5006e+01	1.4860e+01	1.4569e-01
55.9	1.4836e+01	1.4688e+01	1.4706e-01
60.9	1.4657e+01	1.4508e+01	1.4853e-01
65.9	1.4472e+01	1.4322e+01	1.5008e-01
70.9	1.4282e+01	1.4130e+01	1.5172e-01
75.9	1.4088e+01	1.3935e+01	1.5343e-01
80.9	1.3893e+01	1.3738e+01	1.5519e-01
85.9	1.3698e+01	1.3541e+01	1.5699e-01
90.9	1.3505e+01	1.3346e+01	1.5883e-01

$^{13}\text{C}(d, p)^{14}\text{C}^*$, 1st excited state			
Q-value 5.95, E = 10, Ex = 6.09			
deg	total energy	E - dE	dE
25.9	9.5245e+00	9.3134e+00	2.1105e-01
30.9	9.4406e+00	9.2280e+00	2.1256e-01
35.9	9.3444e+00	9.1301e+00	2.1433e-01
40.9	9.2370e+00	9.0206e+00	2.1635e-01
41.8	9.2165e+00	8.9998e+00	2.1674e-01
45.9	9.1195e+00	8.9009e+00	2.1860e-01
46.5	9.1048e+00	8.8860e+00	2.1889e-01
50.9	8.9934e+00	8.7723e+00	2.2108e-01
55.9	8.8598e+00	8.6360e+00	2.2377e-01
60.9	8.7202e+00	8.4935e+00	2.2666e-01
65.9	8.5759e+00	8.3462e+00	2.2974e-01
70.9	8.4284e+00	8.1954e+00	2.3299e-01
75.9	8.2789e+00	8.0425e+00	2.3638e-01
80.9	8.1289e+00	7.8890e+00	2.3990e-01
85.9	7.9794e+00	7.7359e+00	2.4352e-01
90.9	7.8318e+00	7.5846e+00	2.4721e-01

$^{13}\text{C}(d, p)^{14}\text{C}^*$, 2nd excited state			
Q-value 5.95, E = 10, Ex = 6.59			
deg	total energy	E - dE	dE
25.9	9.0126e+00	8.7919e+00	2.2070e-01
30.9	8.9308e+00	8.7085e+00	2.2233e-01
35.9	8.8370e+00	8.6128e+00	2.2424e-01
40.9	8.7323e+00	8.5059e+00	2.2641e-01
41.8	8.7124e+00	8.4856e+00	2.2683e-01
45.9	8.6179e+00	8.3891e+00	2.2884e-01
46.5	8.6036e+00	8.3745e+00	2.2914e-01
50.9	8.4950e+00	8.2635e+00	2.3151e-01
55.9	8.3650e+00	8.1306e+00	2.3441e-01
60.9	8.2291e+00	7.9916e+00	2.3753e-01
65.9	8.0888e+00	7.8479e+00	2.4085e-01
70.9	7.9454e+00	7.7010e+00	2.4436e-01
75.9	7.8001e+00	7.5521e+00	2.4802e-01
80.9	7.6544e+00	7.4026e+00	2.5183e-01
85.9	7.5094e+00	7.2536e+00	2.5574e-01
90.9	7.3662e+00	7.1065e+00	2.5974e-01

$^{13}\text{C}(\text{d}, \text{p})^{14}\text{C}^*$, 3rd excited state			
Q-value 5.95, E = 10, Ex = 6.73			
deg	total energy	E - dE	dE
25.9	8.8691e+00	8.6455e+00	2.2358e-01
30.9	8.7879e+00	8.5626e+00	2.2525e-01
35.9	8.6948e+00	8.4676e+00	2.2720e-01
40.9	8.5908e+00	8.3614e+00	2.2942e-01
41.8	8.5711e+00	8.3412e+00	2.2985e-01
45.9	8.4773e+00	8.2454e+00	2.3190e-01
46.5	8.4631e+00	8.2308e+00	2.3221e-01
50.9	8.3553e+00	8.1207e+00	2.3463e-01
55.9	8.2263e+00	7.9887e+00	2.3760e-01
60.9	8.0915e+00	7.8507e+00	2.4079e-01
65.9	7.9523e+00	7.7081e+00	2.4419e-01
70.9	7.8100e+00	7.5623e+00	2.4777e-01
75.9	7.6660e+00	7.4145e+00	2.5152e-01
80.9	7.5215e+00	7.2661e+00	2.5541e-01
85.9	7.3777e+00	7.1183e+00	2.5942e-01
90.9	7.2358e+00	6.9723e+00	2.6351e-01

$^{13}\text{C}(\text{d}, \text{p})^{14}\text{C}^*$, 5th excited state			
Q-value 5.95, E = 10, Ex = 7.01			
deg	total energy	E - dE	dE
25.9	8.5816e+00	8.3520e+00	2.2962e-01
30.9	8.5016e+00	8.2702e+00	2.3136e-01
35.9	8.4099e+00	8.1765e+00	2.3340e-01
40.9	8.3075e+00	8.0718e+00	2.3572e-01
41.8	8.2881e+00	8.0519e+00	2.3617e-01
45.9	8.1957e+00	7.9574e+00	2.3831e-01
46.5	8.1817e+00	7.9431e+00	2.3864e-01
50.9	8.0756e+00	7.8345e+00	2.4117e-01
55.9	7.9486e+00	7.7044e+00	2.4428e-01
60.9	7.8160e+00	7.5684e+00	2.4762e-01
65.9	7.6791e+00	7.4279e+00	2.5117e-01
70.9	7.5392e+00	7.2843e+00	2.5493e-01
75.9	7.3977e+00	7.1388e+00	2.5885e-01
80.9	7.2557e+00	6.9927e+00	2.6293e-01
85.9	7.1144e+00	6.8473e+00	2.6713e-01
90.9	6.9751e+00	6.7037e+00	2.7142e-01

$^{13}\text{C}(\text{d}, \text{p})^{14}\text{C}$, 4th excited state			
Q-value 5.95, E = 10, Ex = 6.90			
deg	total energy	E - dE	dE
25.9	8.6946e+00	8.4674e+00	2.2720e-01
30.9	8.6141e+00	8.3852e+00	2.2892e-01
35.9	8.5218e+00	8.2909e+00	2.3092e-01
40.9	8.4189e+00	8.1857e+00	2.3320e-01
41.8	8.3993e+00	8.1657e+00	2.3364e-01
45.9	8.3064e+00	8.0706e+00	2.3575e-01
46.5	8.2923e+00	8.0562e+00	2.3607e-01
50.9	8.1856e+00	7.9470e+00	2.3855e-01
55.9	8.0577e+00	7.8161e+00	2.4160e-01
60.9	7.9243e+00	7.6794e+00	2.4488e-01
65.9	7.7864e+00	7.5381e+00	2.4837e-01
70.9	7.6456e+00	7.3936e+00	2.5206e-01
75.9	7.5031e+00	7.2472e+00	2.5591e-01
80.9	7.3601e+00	7.1002e+00	2.5992e-01
85.9	7.2179e+00	6.9538e+00	2.6404e-01
90.9	7.0775e+00	6.8093e+00	2.6825e-01

$^{13}\text{C}(\text{d}, \text{p})^{14}\text{C}^*$, 6th excited state			
Q-value 5.95, E = 10, Ex = 7.34			
deg	total energy	E - dE	dE
25.9	8.2421e+00	8.0049e+00	2.3723e-01
30.9	8.1636e+00	7.9245e+00	2.3907e-01
35.9	8.0735e+00	7.8323e+00	2.4122e-01
40.9	7.9731e+00	7.7294e+00	2.4367e-01
41.8	7.9540e+00	7.7098e+00	2.4414e-01
45.9	7.8634e+00	7.6169e+00	2.4641e-01
46.5	7.8496e+00	7.6029e+00	2.4676e-01
50.9	7.7456e+00	7.4962e+00	2.4943e-01
55.9	7.6210e+00	7.3683e+00	2.5272e-01
60.9	7.4910e+00	7.2348e+00	2.5625e-01
65.9	7.3568e+00	7.0968e+00	2.6001e-01
70.9	7.2198e+00	6.9558e+00	2.6398e-01
75.9	7.0812e+00	6.8131e+00	2.6814e-01
80.9	6.9422e+00	6.6698e+00	2.7246e-01
85.9	6.8041e+00	6.5271e+00	2.7691e-01
90.9	6.6678e+00	6.3863e+00	2.8146e-01

$^{13}\text{C}(\text{d}, \text{p})^{14}\text{C}^*$, 7th excited state			
Q-value 5.95, E = 10, Ex = 8.31			
deg	total energy	E - dE	dE
25.9	7.2399e+00	6.9766e+00	2.6339e-01
30.9	7.1658e+00	6.9002e+00	2.6558e-01
35.9	7.0809e+00	6.8128e+00	2.6815e-01
40.9	6.9863e+00	6.7152e+00	2.7107e-01
41.8	6.9683e+00	6.6967e+00	2.7164e-01
45.9	6.8830e+00	6.6087e+00	2.7435e-01
46.5	6.8701e+00	6.5953e+00	2.7476e-01
50.9	6.7723e+00	6.4943e+00	2.7796e-01
55.9	6.6553e+00	6.3734e+00	2.8189e-01
60.9	6.5333e+00	6.2472e+00	2.8612e-01
65.9	6.4076e+00	6.1170e+00	2.9064e-01
70.9	6.2794e+00	5.9839e+00	2.9541e-01
75.9	6.1498e+00	5.8494e+00	3.0041e-01
80.9	6.0201e+00	5.7145e+00	3.0562e-01
85.9	5.8914e+00	5.5804e+00	3.1099e-01
90.9	5.7646e+00	5.4481e+00	3.1650e-01

$^{13}\text{C}(\text{d}, \text{p})^{14}\text{C}^*$, 9th excited state			
Q-value 5.95, E = 10, Ex = 9.80			
deg	total energy	E - dE	dE
25.9	5.6845e+00	5.3644e+00	3.2009e-01
30.9	5.6179e+00	5.2947e+00	3.2315e-01
35.9	5.5417e+00	5.2150e+00	3.2672e-01
40.9	5.4570e+00	5.1262e+00	3.3081e-01
41.8	5.4409e+00	5.1093e+00	3.3160e-01
45.9	5.3646e+00	5.0292e+00	3.3540e-01
46.5	5.3531e+00	5.0171e+00	3.3598e-01
50.9	5.2658e+00	4.9254e+00	3.4047e-01
55.9	5.1617e+00	4.8157e+00	3.4601e-01
60.9	5.0534e+00	4.7014e+00	3.5200e-01
65.9	4.9421e+00	4.5837e+00	3.5840e-01
70.9	4.8288e+00	4.4636e+00	3.6519e-01
75.9	4.7147e+00	4.3424e+00	3.7233e-01
80.9	4.6008e+00	4.2211e+00	3.7979e-01
85.9	4.4881e+00	4.1006e+00	3.8752e-01
90.9	4.3775e+00	3.9820e+00	3.9547e-01

$^{13}\text{C}(\text{d}, \text{p})^{14}\text{C}^*$, 8th excited state			
Q-value 5.95, E = 10, Ex = 9.75			
deg	total energy	E - dE	dE
25.9	5.7371e+00	5.4193e+00	3.1772e-01
30.9	5.6702e+00	5.3495e+00	3.2074e-01
35.9	5.5937e+00	5.2695e+00	3.2427e-01
40.9	5.5086e+00	5.1803e+00	3.2831e-01
41.8	5.4925e+00	5.1634e+00	3.2909e-01
45.9	5.4159e+00	5.0831e+00	3.3284e-01
46.5	5.4043e+00	5.0709e+00	3.3341e-01
50.9	5.3167e+00	4.9788e+00	3.3784e-01
55.9	5.2121e+00	4.8688e+00	3.4331e-01
60.9	5.1033e+00	4.7541e+00	3.4921e-01
65.9	4.9914e+00	4.6359e+00	3.5553e-01
70.9	4.8776e+00	4.5154e+00	3.6223e-01
75.9	4.7630e+00	4.3937e+00	3.6927e-01
80.9	4.6485e+00	4.2719e+00	3.7663e-01
85.9	4.5353e+00	4.1510e+00	3.8425e-01
90.9	4.4241e+00	4.0320e+00	3.9208e-01

$^{13}\text{C}(\text{d}, \text{p})^{14}\text{C}^*$, 10th excited state			
Q-value 5.95, E = 10, Ex = 10.4			
deg	total energy	E - dE	dE
25.9	5.0509e+00	4.6988e+00	3.5214e-01
30.9	4.9877e+00	4.6319e+00	3.5575e-01
35.9	4.9154e+00	4.5554e+00	3.5997e-01
40.9	4.8350e+00	4.4702e+00	3.6481e-01
41.8	4.8198e+00	4.4540e+00	3.6574e-01
45.9	4.7476e+00	4.3773e+00	3.7024e-01
46.5	4.7367e+00	4.3657e+00	3.7094e-01
50.9	4.6541e+00	4.2778e+00	3.7626e-01
55.9	4.5557e+00	4.1729e+00	3.8284e-01
60.9	4.4535e+00	4.0635e+00	3.8997e-01
65.9	4.3486e+00	3.9510e+00	3.9761e-01
70.9	4.2420e+00	3.8363e+00	4.0573e-01
75.9	4.1348e+00	3.7205e+00	4.1429e-01
80.9	4.0280e+00	3.6048e+00	4.2325e-01
85.9	3.9225e+00	3.4899e+00	4.3256e-01
90.9	3.8191e+00	3.3769e+00	4.4216e-01

$^{13}\text{C}(\text{d}, \text{p})^{14}\text{C}^*$, 12th excited state			
Q-value 5.95, E = 10, Ex = 10.5			
deg	total energy	E - dE	dE
25.9	4.9448e+00	4.5866e+00	3.5824e-01
30.9	4.8821e+00	4.5202e+00	3.6196e-01
35.9	4.8105e+00	4.4442e+00	3.6631e-01
40.9	4.7309e+00	4.3596e+00	3.7130e-01
41.8	4.7158e+00	4.3436e+00	3.7226e-01
45.9	4.6443e+00	4.2674e+00	3.7690e-01
46.5	4.6335e+00	4.2559e+00	3.7762e-01
50.9	4.5518e+00	4.1687e+00	3.8311e-01
55.9	4.4544e+00	4.0645e+00	3.8991e-01
60.9	4.3532e+00	3.9560e+00	3.9726e-01
65.9	4.2494e+00	3.8443e+00	4.0515e-01
70.9	4.1440e+00	3.7305e+00	4.1354e-01
75.9	4.0380e+00	3.6156e+00	4.2239e-01
80.9	3.9325e+00	3.5008e+00	4.3166e-01
85.9	3.8282e+00	3.3869e+00	4.4129e-01
90.9	3.7260e+00	3.2748e+00	4.5123e-01

$^{13}\text{C}(\text{d}, \text{p})^{14}\text{C}^*$, 14th excited state			
Q-value 5.95, E = 10, Ex = 11.4			
deg	total energy	E - dE	dE
25.9	3.9820e+00	3.5547e+00	4.2725e-01
30.9	3.9249e+00	3.4926e+00	4.3234e-01
35.9	3.8598e+00	3.4215e+00	4.3832e-01
40.9	3.7875e+00	3.3423e+00	4.4519e-01
41.8	3.7738e+00	3.3273e+00	4.4652e-01
45.9	3.7090e+00	3.2561e+00	4.5293e-01
46.5	3.6992e+00	3.2453e+00	4.5392e-01
50.9	3.6253e+00	3.1638e+00	4.6155e-01
55.9	3.5375e+00	3.0665e+00	4.7102e-01
60.9	3.4465e+00	2.9652e+00	4.8132e-01
65.9	3.3534e+00	2.8610e+00	4.9243e-01
70.9	3.2592e+00	2.7549e+00	5.0432e-01
75.9	3.1647e+00	2.6478e+00	5.1694e-01
80.9	3.0710e+00	2.5407e+00	5.3025e-01
85.9	2.9787e+00	2.4345e+00	5.4417e-01
90.9	2.8886e+00	2.3300e+00	5.5865e-01

$^{13}\text{C}(\text{d}, \text{p})^{14}\text{C}^*$, 13th excited state			
Q-value 5.95, E = 10, Ex = 10.7			
deg	total energy	E - dE	dE
25.9	4.7321e+00	4.3609e+00	3.7122e-01
30.9	4.6706e+00	4.2955e+00	3.7518e-01
35.9	4.6004e+00	4.2206e+00	3.7982e-01
40.9	4.5224e+00	4.1372e+00	3.8514e-01
41.8	4.5076e+00	4.1214e+00	3.8616e-01
45.9	4.4375e+00	4.0464e+00	3.9111e-01
46.5	4.4269e+00	4.0350e+00	3.9187e-01
50.9	4.3468e+00	3.9491e+00	3.9774e-01
55.9	4.2514e+00	3.8465e+00	4.0499e-01
60.9	4.1524e+00	3.7396e+00	4.1285e-01
65.9	4.0509e+00	3.6296e+00	4.2129e-01
70.9	3.9479e+00	3.5176e+00	4.3028e-01
75.9	3.8443e+00	3.4046e+00	4.3977e-01
80.9	3.7412e+00	3.2915e+00	4.4972e-01
85.9	3.6395e+00	3.1794e+00	4.6006e-01
90.9	3.5399e+00	3.0692e+00	4.7075e-01

$^{13}\text{C}(\text{d}, \text{p})^{14}\text{C}^*$, 15th excited state			
Q-value 5.95, E = 10, Ex = 11.5			
deg	total energy	E - dE	dE
25.9	3.8740e+00	3.4370e+00	4.3700e-01
30.9	3.8176e+00	3.3753e+00	4.4230e-01
35.9	3.7532e+00	3.3047e+00	4.4853e-01
40.9	3.6818e+00	3.2261e+00	4.5569e-01
41.8	3.6683e+00	3.2112e+00	4.5708e-01
45.9	3.6043e+00	3.1405e+00	4.6378e-01
46.5	3.5946e+00	3.1298e+00	4.6481e-01
50.9	3.5217e+00	3.0489e+00	4.7277e-01
55.9	3.4350e+00	2.9523e+00	4.8267e-01
60.9	3.3452e+00	2.8518e+00	4.9344e-01
65.9	3.2534e+00	2.7483e+00	5.0508e-01
70.9	3.1605e+00	2.6429e+00	5.1753e-01
75.9	3.0674e+00	2.5367e+00	5.3077e-01
80.9	2.9751e+00	2.4303e+00	5.4474e-01
85.9	2.8842e+00	2.3248e+00	5.5938e-01
90.9	2.7956e+00	2.2210e+00	5.7462e-01

$^{13}\text{C}(\text{d}, \text{p})^{14}\text{C}^*$, 16th excited state			
Q-value 5.95, E = 10, Ex = 11.7			
deg	total energy	E - dE	dE
25.9	3.6573e+00	3.1991e+00	4.5822e-01
30.9	3.6022e+00	3.1382e+00	4.6400e-01
35.9	3.5394e+00	3.0686e+00	4.7081e-01
40.9	3.4698e+00	2.9912e+00	4.7864e-01
41.8	3.4566e+00	2.9765e+00	4.8015e-01
45.9	3.3943e+00	2.9068e+00	4.8748e-01
46.5	3.3849e+00	2.8962e+00	4.8861e-01
50.9	3.3138e+00	2.8165e+00	4.9735e-01
55.9	3.2295e+00	2.7212e+00	5.0821e-01
60.9	3.1422e+00	2.6221e+00	5.2007e-01
65.9	3.0530e+00	2.5201e+00	5.3290e-01
70.9	2.9628e+00	2.4161e+00	5.4666e-01
75.9	2.8726e+00	2.3112e+00	5.6133e-01
80.9	2.7831e+00	2.2063e+00	5.7685e-01
85.9	2.6952e+00	2.1020e+00	5.9316e-01
90.9	2.6095e+00	1.9993e+00	6.1020e-01

$^{13}\text{C}(\text{d}, \text{p})^{14}\text{C}^*$, 18th excited state			
Q-value 5.95, E = 10, Ex = 12.6			
deg	total energy	E - dE	dE
25.9	2.6669e+00	2.0682e+00	5.9867e-01
30.9	2.6185e+00	2.0102e+00	6.0836e-01
35.9	2.5636e+00	1.9437e+00	6.1985e-01
40.9	2.5029e+00	1.8697e+00	6.3321e-01
41.8	2.4914e+00	1.8556e+00	6.3581e-01
45.9	2.4372e+00	1.7887e+00	6.4848e-01
46.5	2.4291e+00	1.7786e+00	6.5045e-01
50.9	2.3676e+00	1.7019e+00	6.6574e-01
55.9	2.2949e+00	1.6099e+00	6.8506e-01
60.9	2.2201e+00	1.5136e+00	7.0652e-01
65.9	2.1440e+00	1.4138e+00	7.3023e-01
70.9	2.0676e+00	1.3113e+00	7.5628e-01
75.9	1.9915e+00	1.2067e+00	7.8480e-01
80.9	1.9166e+00	1.1006e+00	8.1594e-01
85.9	1.8434e+00	9.9354e-01	8.4989e-01
90.9	1.7726e+00	8.8577e-01	8.8684e-01

$^{13}\text{C}(\text{d}, \text{p})^{14}\text{C}^*$, 17th excited state			
Q-value 5.95, E = 10, Ex = 11.9			
deg	total energy	E - dE	dE
25.9	3.4395e+00	2.9573e+00	4.8214e-01
30.9	3.3858e+00	2.8973e+00	4.8850e-01
35.9	3.3247e+00	2.8287e+00	4.9599e-01
40.9	3.2569e+00	2.7523e+00	5.0462e-01
41.8	3.2441e+00	2.7378e+00	5.0629e-01
45.9	3.1834e+00	2.6690e+00	5.1439e-01
46.5	3.1743e+00	2.6586e+00	5.1564e-01
50.9	3.1052e+00	2.5799e+00	5.2530e-01
55.9	3.0233e+00	2.4859e+00	5.3734e-01
60.9	2.9386e+00	2.3880e+00	5.5051e-01
65.9	2.8521e+00	2.2873e+00	5.6479e-01
70.9	2.7647e+00	2.1846e+00	5.8017e-01
75.9	2.6774e+00	2.0808e+00	5.9660e-01
80.9	2.5910e+00	1.9769e+00	6.1406e-01
85.9	2.5061e+00	1.8736e+00	6.3247e-01
90.9	2.4235e+00	1.7717e+00	6.5179e-01

$^{13}\text{C}(\text{d}, \text{p})^{14}\text{C}^*$, 19th excited state			
Q-value 5.95, E = 10, Ex = 12.9			
deg	total energy	E - dE	dE
25.9	2.3293e+00	1.6536e+00	6.7574e-01
30.9	2.2835e+00	1.5953e+00	6.8821e-01
35.9	2.2316e+00	1.5285e+00	7.0311e-01
40.9	2.1742e+00	1.4537e+00	7.2057e-01
41.8	2.1634e+00	1.4394e+00	7.2399e-01
45.9	2.1124e+00	1.3716e+00	7.4072e-01
46.5	2.1047e+00	1.3613e+00	7.4333e-01
50.9	2.0469e+00	1.2831e+00	7.6377e-01
55.9	1.9786e+00	1.1887e+00	7.8993e-01
60.9	1.9086e+00	1.0891e+00	8.1949e-01
65.9	1.8375e+00	9.8471e-01	8.5281e-01
70.9	1.7663e+00	8.7595e-01	8.9036e-01
75.9	1.6957e+00	7.6293e-01	9.3277e-01
80.9	1.6264e+00	6.4547e-01	9.8089e-01
85.9	1.5589e+00	5.2299e-01	1.0359e+00
90.9	1.4938e+00	3.9444e-01	1.0993e+00

$^{13}\text{C}(\text{d}, \text{p})^{14}\text{C}^*$, 20th excited state			
Q-value 5.95, E = 10, Ex = 13.5			
deg	total energy	E - dE	dE
25.9	1.6362e+00	6.6257e-01	9.7361e-01
30.9	1.5962e+00	5.9194e-01	1.0043e+00
35.9	1.5511e+00	5.0816e-01	1.0429e+00
40.9	1.5015e+00	4.1022e-01	1.0912e+00
41.8	1.4921e+00	3.9098e-01	1.1011e+00
45.9	1.4482e+00	2.9675e-01	1.1515e+00
46.5	1.4416e+00	2.8207e-01	1.1596e+00
50.9	1.3922e+00	1.7063e-01	1.2216e+00
55.9	1.3343e+00	8.6464e-02	1.2478e+00

$^{13}\text{C}(\text{d}, \text{d})^{13}\text{C}^*$, 1st excited state			
Q-value 0.00, E = 10, Ex = 3.09			
deg	total energy	E - dE	dE
25.9	6.6028e+00	6.1188e+00	4.8392e-01
30.9	6.4973e+00	6.0073e+00	4.9003e-01
35.9	6.3772e+00	5.8800e+00	4.9722e-01
40.9	6.2442e+00	5.7387e+00	5.0546e-01
41.8	6.2190e+00	5.7119e+00	5.0706e-01
45.9	6.1000e+00	5.5852e+00	5.1477e-01
46.5	6.0821e+00	5.5661e+00	5.1595e-01
50.9	5.9466e+00	5.4215e+00	5.2511e-01
55.9	5.7860e+00	5.2495e+00	5.3647e-01
60.9	5.6201e+00	5.0712e+00	5.4882e-01
65.9	5.4507e+00	4.8886e+00	5.6212e-01
70.9	5.2799e+00	4.7035e+00	5.7634e-01
75.9	5.1092e+00	4.5178e+00	5.9140e-01
80.9	4.9403e+00	4.3330e+00	6.0725e-01
85.9	4.7746e+00	4.1508e+00	6.2380e-01
90.9	4.6135e+00	3.9725e+00	6.4096e-01

$^{13}\text{C}(\text{d}, \text{d})^{13}\text{C}$			
Q-value 0.00, E = 10, Ex = 0.00			
deg	total energy	E - dE	dE
25.9	9.6933e+00	9.3347e+00	3.5859e-01
30.9	9.5692e+00	9.2069e+00	3.6223e-01
35.9	9.4273e+00	9.0609e+00	3.6649e-01
40.9	9.2697e+00	8.8983e+00	3.7135e-01
41.8	9.2398e+00	8.8675e+00	3.7229e-01
45.9	9.0982e+00	8.7214e+00	3.7682e-01
46.5	9.0768e+00	8.6993e+00	3.7751e-01
50.9	8.9149e+00	8.5321e+00	3.8286e-01
55.9	8.7221e+00	8.3327e+00	3.8946e-01
60.9	8.5219e+00	8.1254e+00	3.9658e-01
65.9	8.3165e+00	7.9123e+00	4.0421e-01
70.9	8.1080e+00	7.6957e+00	4.1230e-01
75.9	7.8984e+00	7.4776e+00	4.2081e-01
80.9	7.6897e+00	7.2600e+00	4.2970e-01
85.9	7.4836e+00	7.0447e+00	4.3890e-01
90.9	7.2817e+00	6.8334e+00	4.4836e-01

$^{13}\text{C}(\text{d}, \text{d})^{13}\text{C}^*$, 2nd excited state			
Q-value 0.00, E = 10, Ex = 3.68			
deg	total energy	E - dE	dE
25.9	6.0003e+00	5.4789e+00	5.2144e-01
30.9	5.8990e+00	5.3706e+00	5.2842e-01
35.9	5.7836e+00	5.2470e+00	5.3664e-01
40.9	5.6560e+00	5.1099e+00	5.4609e-01
41.8	5.6318e+00	5.0839e+00	5.4792e-01
45.9	5.5178e+00	4.9611e+00	5.5676e-01
46.5	5.5006e+00	4.9425e+00	5.5813e-01
50.9	5.3710e+00	4.8024e+00	5.6865e-01
55.9	5.2175e+00	4.6357e+00	5.8174e-01
60.9	5.0591e+00	4.4631e+00	5.9600e-01
65.9	4.8978e+00	4.2863e+00	6.1140e-01
70.9	4.7352e+00	4.1073e+00	6.2790e-01
75.9	4.5731e+00	3.9277e+00	6.4543e-01
80.9	4.4131e+00	3.7491e+00	6.6394e-01
85.9	4.2564e+00	3.5730e+00	6.8332e-01
90.9	4.1042e+00	3.4008e+00	7.0349e-01

$^{13}\text{C}(\text{d}, \text{d})^{13}\text{C}^*$, 3rd excited state			
Q-value 0.00, E = 10, Ex = 3.85			
deg	total energy	E - dE	dE
25.9	5.8257e+00	5.2921e+00	5.3361e-01
30.9	5.7256e+00	5.1847e+00	5.4089e-01
35.9	5.6117e+00	5.0622e+00	5.4946e-01
40.9	5.4857e+00	4.9263e+00	5.5932e-01
41.8	5.4618e+00	4.9006e+00	5.6123e-01
45.9	5.3493e+00	4.7788e+00	5.7046e-01
46.5	5.3323e+00	4.7604e+00	5.7189e-01
50.9	5.2044e+00	4.6216e+00	5.8288e-01
55.9	5.0530e+00	4.4564e+00	5.9657e-01
60.9	4.8969e+00	4.2854e+00	6.1149e-01
65.9	4.7379e+00	4.1103e+00	6.2761e-01
70.9	4.5779e+00	3.9330e+00	6.4490e-01
75.9	4.4184e+00	3.7551e+00	6.6330e-01
80.9	4.2610e+00	3.5782e+00	6.8273e-01
85.9	4.1069e+00	3.4038e+00	7.0312e-01
90.9	3.9575e+00	3.2332e+00	7.2435e-01

$^{13}\text{C}(\text{d}, \text{d})^{13}\text{C}^*$, 4th excited state			
Q-value 0.00, E = 10, Ex = 6.86			
deg	total energy	E - dE	dE
25.9	2.6106e+00	1.5820e+00	1.0286e+00
30.9	2.5370e+00	1.4814e+00	1.0556e+00
35.9	2.4541e+00	1.3656e+00	1.0885e+00
40.9	2.3633e+00	1.2356e+00	1.1278e+00
41.8	2.3463e+00	1.2107e+00	1.1356e+00
45.9	2.2664e+00	1.0921e+00	1.1742e+00
46.5	2.2544e+00	1.0741e+00	1.1803e+00
50.9	2.1648e+00	9.3601e-01	1.2288e+00
55.9	2.0603e+00	7.6777e-01	1.2925e+00
60.9	1.9544e+00	5.8848e-01	1.3660e+00
65.9	1.8486e+00	4.0309e-01	1.4456e+00
70.9	1.7443e+00	2.3909e-01	1.5052e+00
75.9	1.6426e+00	1.6798e-01	1.4746e+00

$^{13}\text{C}(\text{d}, \text{t})^{12}\text{C}$			
Q-value 1.31, E = 10, Ex = 0.00			
deg	total energy	E - dE	dE
25.9	1.0761e+01	1.0312e+01	4.4939e-01
30.9	1.0597e+01	1.0143e+01	4.5469e-01
35.9	1.0411e+01	9.9500e+00	4.6091e-01
40.9	1.0204e+01	9.7361e+00	4.6803e-01
41.8	1.0165e+01	9.6956e+00	4.6941e-01
45.9	9.9799e+00	9.5038e+00	4.7604e-01
46.5	9.9519e+00	9.4749e+00	4.7706e-01
50.9	9.7410e+00	9.2561e+00	4.8493e-01
55.9	9.4906e+00	8.9960e+00	4.9466e-01
60.9	9.2316e+00	8.7264e+00	5.0520e-01
65.9	8.9670e+00	8.4505e+00	5.1652e-01
70.9	8.6996e+00	8.1710e+00	5.2856e-01
75.9	8.4320e+00	7.8907e+00	5.4127e-01
80.9	8.1668e+00	7.6123e+00	5.5458e-01
85.9	7.9063e+00	7.3379e+00	5.6840e-01
90.9	7.6525e+00	7.0699e+00	5.8267e-01

$^{13}\text{C}(\text{d}, \text{t})^{12}\text{C}^*$, 1st excited state			
Q-value 1.31, E = 10, Ex = 4.44			
deg	total energy	E - dE	dE
25.9	6.5371e+00	5.8805e+00	6.5668e-01
30.9	6.4036e+00	5.7366e+00	6.6705e-01
35.9	6.2522e+00	5.5729e+00	6.7929e-01
40.9	6.0851e+00	5.3917e+00	6.9341e-01
41.8	6.0536e+00	5.3574e+00	6.9615e-01
45.9	5.9050e+00	5.1956e+00	7.0943e-01
46.5	5.8827e+00	5.1712e+00	7.1148e-01
50.9	5.7146e+00	4.9873e+00	7.2735e-01
55.9	5.5165e+00	4.7693e+00	7.4717e-01
60.9	5.3133e+00	4.5444e+00	7.6887e-01
65.9	5.1075e+00	4.3150e+00	7.9244e-01
70.9	4.9016e+00	4.0837e+00	8.1783e-01
75.9	4.6976e+00	3.8527e+00	8.4497e-01
80.9	4.4977e+00	3.6239e+00	8.7379e-01
85.9	4.3035e+00	3.3993e+00	9.0417e-01
90.9	4.1164e+00	3.1804e+00	9.3598e-01

$^{13}\text{C}(\text{d}, \text{t})^{12}\text{C}^*$, 2nd excited state			
Q-value 1.31, E = 10, Ex = 7.65			
deg	total energy	E - dE	dE
25.9	3.2740e+00	2.1513e+00	1.1227e+00
30.9	3.1704e+00	2.0178e+00	1.1525e+00
35.9	3.0538e+00	1.8653e+00	1.1885e+00
40.9	2.9266e+00	1.6954e+00	1.2313e+00
41.8	2.9028e+00	1.6631e+00	1.2397e+00
45.9	2.7913e+00	1.5101e+00	1.2812e+00
46.5	2.7746e+00	1.4869e+00	1.2877e+00
50.9	2.6501e+00	1.3111e+00	1.3390e+00
55.9	2.5055e+00	1.1006e+00	1.4050e+00
60.9	2.3599e+00	8.8114e-01	1.4787e+00
65.9	2.2152e+00	6.5846e-01	1.5567e+00
70.9	2.0734e+00	4.4949e-01	1.6239e+00
75.9	1.9362e+00	3.0121e-01	1.6350e+00
80.9	1.8049e+00	2.4868e-01	1.5562e+00

$^{13}\text{C}(\text{d}, \alpha)^{11}\text{B}^*$, 1st excited state			
Q-value 5.17, E = 10, Ex = 2.12			
deg	total energy	E - dE	dE
25.9	1.1946e+01	9.7862e+00	2.1602e+00
30.9	1.1745e+01	9.5530e+00	2.1918e+00
35.9	1.1515e+01	9.2862e+00	2.2292e+00
40.9	1.1261e+01	8.9890e+00	2.2724e+00
41.8	1.1213e+01	8.9326e+00	2.2808e+00
45.9	1.0986e+01	8.6650e+00	2.3215e+00
46.5	1.0952e+01	8.6244e+00	2.3278e+00
50.9	1.0694e+01	8.3177e+00	2.3767e+00
55.9	1.0389e+01	7.9509e+00	2.4380e+00
60.9	1.0074e+01	7.5683e+00	2.5054e+00
65.9	9.7527e+00	7.1735e+00	2.5792e+00
70.9	9.4292e+00	6.7700e+00	2.6592e+00
75.9	9.1067e+00	6.3610e+00	2.7457e+00
80.9	8.7881e+00	5.9496e+00	2.8385e+00
85.9	8.4763e+00	5.5385e+00	2.9378e+00
90.9	8.1736e+00	5.1302e+00	3.0434e+00

$^{13}\text{C}(\text{d}, \alpha)^{11}\text{B}$			
Q-value 5.17, E = 10, Ex = 0.00			
deg	total energy	E - dE	dE
25.9	1.3776e+01	1.1860e+01	1.9163e+00
30.9	1.3562e+01	1.1621e+01	1.9414e+00
35.9	1.3318e+01	1.1347e+01	1.9710e+00
40.9	1.3048e+01	1.1043e+01	2.0051e+00
41.8	1.2997e+01	1.0985e+01	2.0118e+00
45.9	1.2755e+01	1.0711e+01	2.0437e+00
46.5	1.2719e+01	1.0670e+01	2.0487e+00
50.9	1.2443e+01	1.0356e+01	2.0869e+00
55.9	1.2116e+01	9.9820e+00	2.1344e+00
60.9	1.1779e+01	9.5921e+00	2.1865e+00
65.9	1.1434e+01	9.1908e+00	2.2429e+00
70.9	1.1085e+01	8.7817e+00	2.3036e+00
75.9	1.0737e+01	8.3685e+00	2.3685e+00
80.9	1.0392e+01	7.9546e+00	2.4373e+00
85.9	1.0053e+01	7.5433e+00	2.5100e+00
90.9	9.7235e+00	7.1373e+00	2.5861e+00

$^{13}\text{C}(\text{d}, \alpha)^{11}\text{B}^*$, 2nd excited state			
Q-value 5.17, E = 10, Ex = 4.44			
deg	total energy	E - dE	dE
25.9	9.9139e+00	7.3725e+00	2.5415e+00
30.9	9.7270e+00	7.1417e+00	2.5853e+00
35.9	9.5147e+00	6.8772e+00	2.6375e+00
40.9	9.2802e+00	6.5819e+00	2.6983e+00
41.8	9.2359e+00	6.5257e+00	2.7102e+00
45.9	9.0269e+00	6.2587e+00	2.7682e+00
46.5	8.9954e+00	6.2182e+00	2.7772e+00
50.9	8.7585e+00	5.9109e+00	2.8476e+00
55.9	8.4786e+00	5.5416e+00	2.9370e+00
60.9	8.1908e+00	5.1537e+00	3.0371e+00
65.9	7.8986e+00	4.7499e+00	3.1487e+00
70.9	7.6053e+00	4.3327e+00	3.2726e+00
75.9	7.3140e+00	3.9039e+00	3.4100e+00
80.9	7.0274e+00	3.4649e+00	3.5625e+00
85.9	6.7480e+00	3.0161e+00	3.7320e+00
90.9	6.4780e+00	2.5571e+00	3.9209e+00

$^{13}\text{C}(d, \alpha)^{11}\text{B}^*$, 3rd excited state			
Q-value 5.17, E = 10, Ex = 5.02			
deg	total energy	E - dE	dE
25.9	9.3995e+00	6.7326e+00	2.6669e+00
30.9	9.2165e+00	6.5011e+00	2.7154e+00
35.9	9.0088e+00	6.2354e+00	2.7734e+00
40.9	8.7795e+00	5.9383e+00	2.8412e+00
41.8	8.7362e+00	5.8817e+00	2.8545e+00
45.9	8.5320e+00	5.6126e+00	2.9194e+00
46.5	8.5013e+00	5.5718e+00	2.9295e+00
50.9	8.2700e+00	5.2613e+00	3.0087e+00
55.9	7.9970e+00	4.8871e+00	3.1099e+00
60.9	7.7165e+00	4.4925e+00	3.2241e+00
65.9	7.4321e+00	4.0797e+00	3.3524e+00
70.9	7.1469e+00	3.6503e+00	3.4966e+00
75.9	6.8640e+00	3.2052e+00	3.6588e+00
80.9	6.5860e+00	2.7441e+00	3.8419e+00
85.9	6.3154e+00	2.2654e+00	4.0500e+00
90.9	6.0543e+00	1.7658e+00	4.2885e+00

$^{13}\text{C}(d, \alpha)^{11}\text{B}^*$, 4th excited state			
Q-value 5.17, E = 10, Ex = 6.74			
deg	total energy	E - dE	dE
25.9	7.8549e+00	4.6885e+00	3.1664e+00
30.9	7.6844e+00	4.4465e+00	3.2379e+00
35.9	7.4911e+00	4.1665e+00	3.3246e+00
40.9	7.2783e+00	3.8503e+00	3.4280e+00
41.8	7.2382e+00	3.7897e+00	3.4485e+00
45.9	7.0493e+00	3.4991e+00	3.5502e+00
46.5	7.0208e+00	3.4546e+00	3.5662e+00
50.9	6.8074e+00	3.1135e+00	3.6940e+00
55.9	6.5562e+00	2.6930e+00	3.8632e+00
60.9	6.2992e+00	2.2355e+00	4.0637e+00
65.9	6.0394e+00	1.7360e+00	4.3034e+00
70.9	5.7801e+00	1.1878e+00	4.5923e+00
75.9	5.5240e+00	6.1321e-01	4.9108e+00
80.9	5.2735e+00	3.2707e-01	4.9465e+00

$^{13}\text{C}(d, \alpha)^{11}\text{B}^*$, 5th excited state			
Q-value 5.17, E = 10, Ex = 6.79			
deg	total energy	E - dE	dE
25.9	7.8095e+00	4.6245e+00	3.1850e+00
30.9	7.6393e+00	4.3818e+00	3.2575e+00
35.9	7.4466e+00	4.1010e+00	3.3455e+00
40.9	7.2343e+00	3.7837e+00	3.4506e+00
41.8	7.1942e+00	3.7228e+00	3.4714e+00
45.9	7.0058e+00	3.4309e+00	3.5748e+00
46.5	6.9774e+00	3.3863e+00	3.5912e+00
50.9	6.7645e+00	3.0433e+00	3.7213e+00
55.9	6.5140e+00	2.6200e+00	3.8941e+00
60.9	6.2577e+00	2.1585e+00	4.0991e+00
65.9	5.9987e+00	1.6535e+00	4.3452e+00
70.9	5.7402e+00	1.0986e+00	4.6416e+00
75.9	5.4849e+00	5.3492e-01	4.9500e+00
80.9	5.2353e+00	3.2132e-01	4.9140e+00

$^{13}\text{C}(d, \alpha)^{11}\text{B}^*$, 6th excited state			
Q-value 5.17, E = 10, Ex = 7.29			
deg	total energy	E - dE	dE
25.9	7.3537e+00	3.9634e+00	3.3903e+00
30.9	7.1875e+00	3.7125e+00	3.4750e+00
35.9	6.9992e+00	3.4206e+00	3.5786e+00
40.9	6.7921e+00	3.0884e+00	3.7037e+00
41.8	6.7530e+00	3.0243e+00	3.7287e+00
45.9	6.5693e+00	2.7155e+00	3.8538e+00
46.5	6.5417e+00	2.6680e+00	3.8737e+00
50.9	6.3344e+00	2.3002e+00	4.0342e+00
55.9	6.0908e+00	1.8384e+00	4.2524e+00
60.9	5.8418e+00	1.3232e+00	4.5186e+00
65.9	5.5906e+00	7.5888e-01	4.8317e+00
70.9	5.3403e+00	3.5166e-01	4.9886e+00

$^{13}\text{C}(d, \alpha)^{11}\text{B}^*$, 7th excited state			
Q-value 5.17, E = 10, Ex = 7.98			
deg	total energy	E - dE	dE
25.9	6.7189e+00	2.9678e+00	3.7510e+00
30.9	6.5582e+00	2.6964e+00	3.8618e+00
35.9	6.3765e+00	2.3765e+00	4.0000e+00
40.9	6.1768e+00	2.0055e+00	4.1713e+00
41.8	6.1392e+00	1.9330e+00	4.2062e+00
45.9	5.9624e+00	1.5788e+00	4.3836e+00
46.5	5.9358e+00	1.5235e+00	4.4123e+00
50.9	5.7366e+00	1.0905e+00	4.6461e+00
55.9	5.5029e+00	5.6997e-01	4.9329e+00
60.9	5.2645e+00	3.2535e-01	4.9392e+00

$^{13}\text{C}(d, \alpha)^{11}\text{B}^*$, 8th excited state			
Q-value 5.17, E = 10, Ex = 8.56			
deg	total energy	E - dE	dE
25.9	6.1792e+00	2.0101e+00	4.1691e+00
30.9	6.0234e+00	1.7037e+00	4.3197e+00
35.9	5.8474e+00	1.3354e+00	4.5120e+00
40.9	5.6543e+00	9.0358e-01	4.7507e+00
41.8	5.6179e+00	8.2071e-01	4.7972e+00
45.9	5.4472e+00	4.6844e-01	4.9788e+00
46.5	5.4216e+00	4.3008e-01	4.9915e+00
50.9	5.2295e+00	3.2074e-01	4.9088e+00

3 ^{14}N target

$^{14}\text{N}(d, p)^{15}\text{N}$			
Q-value 8.61, E = 10, Ex = 0.00			
deg	total energy	E - dE	dE
30.9	1.8242e+01	1.8118e+01	1.2403e-01
35.9	1.8120e+01	1.7995e+01	1.2472e-01
40.9	1.7983e+01	1.7858e+01	1.2550e-01
45.9	1.7833e+01	1.7707e+01	1.2638e-01
50.9	1.7671e+01	1.7544e+01	1.2733e-01
55.9	1.7499e+01	1.7371e+01	1.2837e-01
60.9	1.7318e+01	1.7189e+01	1.2947e-01
65.9	1.7130e+01	1.7000e+01	1.3064e-01
70.9	1.6937e+01	1.6805e+01	1.3187e-01
75.9	1.6740e+01	1.6607e+01	1.3315e-01
80.9	1.6541e+01	1.6407e+01	1.3447e-01
85.9	1.6342e+01	1.6206e+01	1.3582e-01
90.9	1.6144e+01	1.6007e+01	1.3719e-01

$^{14}\text{N}(d, p)^{15}\text{N}^*$, 1st excited state			
Q-value 8.61, E = 10, Ex = 5.27			
deg	total energy	E - dE	dE
30.9	1.2981e+01	1.2817e+01	1.6406e-01
35.9	1.2877e+01	1.2712e+01	1.6514e-01
40.9	1.2761e+01	1.2594e+01	1.6637e-01
45.9	1.2633e+01	1.2465e+01	1.6774e-01
50.9	1.2496e+01	1.2326e+01	1.6924e-01
55.9	1.2350e+01	1.2179e+01	1.7087e-01
60.9	1.2197e+01	1.2024e+01	1.7262e-01
65.9	1.2038e+01	1.1864e+01	1.7447e-01
70.9	1.1876e+01	1.1699e+01	1.7641e-01
75.9	1.1710e+01	1.1532e+01	1.7844e-01
80.9	1.1543e+01	1.1363e+01	1.8054e-01
85.9	1.1377e+01	1.1194e+01	1.8269e-01
90.9	1.1211e+01	1.1026e+01	1.8488e-01

$^{14}\text{N}(\text{d}, \text{p})^{15}\text{N}^*$, 2nd excited state			
Q-value 8.61, E = 10, Ex = 5.30			
deg	total energy	E - dE	dE
30.9	1.2951e+01	1.2786e+01	1.6437e-01
35.9	1.2847e+01	1.2681e+01	1.6545e-01
40.9	1.2731e+01	1.2564e+01	1.6669e-01
45.9	1.2603e+01	1.2435e+01	1.6806e-01
50.9	1.2466e+01	1.2297e+01	1.6957e-01
55.9	1.2320e+01	1.2149e+01	1.7120e-01
60.9	1.2168e+01	1.1995e+01	1.7296e-01
65.9	1.2009e+01	1.1834e+01	1.7481e-01
70.9	1.1847e+01	1.1670e+01	1.7677e-01
75.9	1.1681e+01	1.1503e+01	1.7880e-01
80.9	1.1515e+01	1.1334e+01	1.8090e-01
85.9	1.1348e+01	1.1165e+01	1.8306e-01
90.9	1.1183e+01	1.0998e+01	1.8526e-01

$^{14}\text{N}(\text{d}, \text{p})^{15}\text{N}^*$, 4th excited state			
Q-value 8.61, E = 10, Ex = 7.16			
deg	total energy	E - dE	dE
30.9	1.1077e+01	1.0891e+01	1.8670e-01
35.9	1.0981e+01	1.0793e+01	1.8803e-01
40.9	1.0873e+01	1.0683e+01	1.8955e-01
45.9	1.0754e+01	1.0563e+01	1.9124e-01
50.9	1.0627e+01	1.0434e+01	1.9310e-01
55.9	1.0492e+01	1.0297e+01	1.9512e-01
60.9	1.0350e+01	1.0153e+01	1.9728e-01
65.9	1.0204e+01	1.0004e+01	1.9958e-01
70.9	1.0054e+01	9.8518e+00	2.0199e-01
75.9	9.9013e+00	9.6968e+00	2.0451e-01
80.9	9.7478e+00	9.5407e+00	2.0712e-01
85.9	9.5945e+00	9.3847e+00	2.0980e-01
90.9	9.4427e+00	9.2302e+00	2.1252e-01

$^{14}\text{N}(\text{d}, \text{p})^{15}\text{N}^*$, 3rd excited state			
Q-value 8.61, E = 10, Ex = 6.32			
deg	total energy	E - dE	dE
30.9	1.1925e+01	1.1749e+01	1.7582e-01
35.9	1.1825e+01	1.1648e+01	1.7703e-01
40.9	1.1713e+01	1.1535e+01	1.7841e-01
45.9	1.1590e+01	1.1411e+01	1.7994e-01
50.9	1.1459e+01	1.1277e+01	1.8163e-01
55.9	1.1319e+01	1.1135e+01	1.8345e-01
60.9	1.1172e+01	1.0986e+01	1.8541e-01
65.9	1.1020e+01	1.0832e+01	1.8749e-01
70.9	1.0864e+01	1.0674e+01	1.8967e-01
75.9	1.0706e+01	1.0514e+01	1.9195e-01
80.9	1.0546e+01	1.0352e+01	1.9431e-01
85.9	1.0387e+01	1.0190e+01	1.9672e-01
90.9	1.0229e+01	1.0030e+01	1.9918e-01

$^{14}\text{N}(\text{d}, \text{p})^{15}\text{N}^*$, 5th excited state			
Q-value 8.61, E = 10, Ex = 7.30			
deg	total energy	E - dE	dE
30.9	1.0936e+01	1.0747e+01	1.8866e-01
35.9	1.0840e+01	1.0650e+01	1.9002e-01
40.9	1.0732e+01	1.0541e+01	1.9156e-01
45.9	1.0615e+01	1.0421e+01	1.9328e-01
50.9	1.0488e+01	1.0293e+01	1.9517e-01
55.9	1.0354e+01	1.0157e+01	1.9723e-01
60.9	1.0213e+01	1.0014e+01	1.9943e-01
65.9	1.0068e+01	9.8661e+00	2.0176e-01
70.9	9.9187e+00	9.7145e+00	2.0422e-01
75.9	9.7672e+00	9.5604e+00	2.0679e-01
80.9	9.6147e+00	9.4053e+00	2.0944e-01
85.9	9.4625e+00	9.2503e+00	2.1216e-01
90.9	9.3117e+00	9.0968e+00	2.1494e-01

$^{14}\text{N}(\text{d}, \text{p})^{15}\text{N}^*$, 6th excited state			
Q-value 8.61, E = 10, Ex = 7.57			
deg	total energy	E - dE	dE
30.9	1.0663e+01	1.0470e+01	1.9258e-01
35.9	1.0568e+01	1.0374e+01	1.9398e-01
40.9	1.0462e+01	1.0266e+01	1.9558e-01
45.9	1.0345e+01	1.0148e+01	1.9736e-01
50.9	1.0220e+01	1.0021e+01	1.9932e-01
55.9	1.0088e+01	9.8864e+00	2.0144e-01
60.9	9.9491e+00	9.7453e+00	2.0372e-01
65.9	9.8053e+00	9.5992e+00	2.0613e-01
70.9	9.6580e+00	9.4493e+00	2.0868e-01
75.9	9.5085e+00	9.2971e+00	2.1133e-01
80.9	9.3580e+00	9.1439e+00	2.1408e-01
85.9	9.2078e+00	8.9909e+00	2.1690e-01
90.9	9.0591e+00	8.8393e+00	2.1978e-01

$^{14}\text{N}(\text{d}, \text{p})^{15}\text{N}^*$, 8th excited state			
Q-value 8.61, E = 10, Ex = 8.57			
deg	total energy	E - dE	dE
30.9	9.6487e+00	9.4399e+00	2.0884e-01
35.9	9.5581e+00	9.3477e+00	2.1044e-01
40.9	9.4568e+00	9.2446e+00	2.1227e-01
45.9	9.3460e+00	9.1317e+00	2.1430e-01
50.9	9.2268e+00	9.0103e+00	2.1654e-01
55.9	9.1005e+00	8.8815e+00	2.1897e-01
60.9	8.9683e+00	8.7468e+00	2.2158e-01
65.9	8.8316e+00	8.6072e+00	2.2435e-01
70.9	8.6916e+00	8.4643e+00	2.2727e-01
75.9	8.5495e+00	8.3192e+00	2.3031e-01
80.9	8.4067e+00	8.1732e+00	2.3347e-01
85.9	8.2643e+00	8.0276e+00	2.3671e-01
90.9	8.1234e+00	7.8834e+00	2.4002e-01

$^{14}\text{N}(\text{d}, \text{p})^{15}\text{N}^*$, 7th excited state			
Q-value 8.61, E = 10, Ex = 8.31			
deg	total energy	E - dE	dE
30.9	9.9128e+00	9.7084e+00	2.0432e-01
35.9	9.8210e+00	9.6151e+00	2.0587e-01
40.9	9.7185e+00	9.5108e+00	2.0763e-01
45.9	9.6062e+00	9.3966e+00	2.0959e-01
50.9	9.4855e+00	9.2737e+00	2.1175e-01
55.9	9.3575e+00	9.1434e+00	2.1409e-01
60.9	9.2236e+00	9.0070e+00	2.1660e-01
65.9	9.0850e+00	8.8657e+00	2.1927e-01
70.9	8.9430e+00	8.7209e+00	2.2209e-01
75.9	8.7990e+00	8.5740e+00	2.2502e-01
80.9	8.6541e+00	8.4261e+00	2.2806e-01
85.9	8.5096e+00	8.2785e+00	2.3119e-01
90.9	8.3667e+00	8.1323e+00	2.3437e-01

$^{14}\text{N}(\text{d}, \text{p})^{15}\text{N}^*$, 9th excited state			
Q-value 8.61, E = 10, Ex = 9.05			
deg	total energy	E - dE	dE
30.9	9.1605e+00	8.9427e+00	2.1781e-01
35.9	9.0720e+00	8.8525e+00	2.1953e-01
40.9	8.9732e+00	8.7517e+00	2.2148e-01
45.9	8.8650e+00	8.6414e+00	2.2366e-01
50.9	8.7487e+00	8.5227e+00	2.2607e-01
55.9	8.6256e+00	8.3969e+00	2.2867e-01
60.9	8.4967e+00	8.2652e+00	2.3147e-01
65.9	8.3635e+00	8.1290e+00	2.3445e-01
70.9	8.2271e+00	7.9895e+00	2.3758e-01
75.9	8.0888e+00	7.8479e+00	2.4085e-01
80.9	7.9498e+00	7.7056e+00	2.4425e-01
85.9	7.8113e+00	7.5636e+00	2.4774e-01
90.9	7.6743e+00	7.4231e+00	2.5130e-01

$^{14}\text{N}(\text{d}, \text{p})^{15}\text{N}^*$, 10th excited state			
Q-value 8.61, E = 10, Ex = 9.15			
deg	total energy	E - dE	dE
30.9	9.0587e+00	8.8389e+00	2.1979e-01
35.9	8.9706e+00	8.7491e+00	2.2153e-01
40.9	8.8723e+00	8.6488e+00	2.2352e-01
45.9	8.7647e+00	8.5390e+00	2.2573e-01
50.9	8.6490e+00	8.4209e+00	2.2817e-01
55.9	8.5265e+00	8.2957e+00	2.3082e-01
60.9	8.3984e+00	8.1647e+00	2.3366e-01
65.9	8.2659e+00	8.0292e+00	2.3668e-01
70.9	8.1303e+00	7.8904e+00	2.3986e-01
75.9	7.9928e+00	7.7496e+00	2.4319e-01
80.9	7.8546e+00	7.6080e+00	2.4663e-01
85.9	7.7169e+00	7.4667e+00	2.5018e-01
90.9	7.5808e+00	7.3270e+00	2.5380e-01

$^{14}\text{N}(\text{d}, \text{p})^{15}\text{N}^*$, 13th excited state			
Q-value 8.61, E = 10, Ex = 9.76			
deg	total energy	E - dE	dE
30.9	8.4362e+00	8.2034e+00	2.3281e-01
35.9	8.3510e+00	8.1163e+00	2.3473e-01
40.9	8.2559e+00	8.0189e+00	2.3691e-01
45.9	8.1518e+00	7.9125e+00	2.3935e-01
50.9	8.0400e+00	7.7980e+00	2.4203e-01
55.9	7.9216e+00	7.6767e+00	2.4495e-01
60.9	7.7979e+00	7.5498e+00	2.4808e-01
65.9	7.6700e+00	7.4186e+00	2.5141e-01
70.9	7.5392e+00	7.2843e+00	2.5493e-01
75.9	7.4067e+00	7.1481e+00	2.5860e-01
80.9	7.2736e+00	7.0112e+00	2.6241e-01
85.9	7.1411e+00	6.8747e+00	2.6633e-01
90.9	7.0101e+00	6.7398e+00	2.7033e-01

$^{14}\text{N}(\text{d}, \text{p})^{15}\text{N}^*$, 12th excited state			
Q-value 8.61, E = 10, Ex = 9.22			
deg	total energy	E - dE	dE
30.9	8.9873e+00	8.7661e+00	2.2120e-01
35.9	8.8996e+00	8.6767e+00	2.2296e-01
40.9	8.8016e+00	8.5767e+00	2.2497e-01
45.9	8.6944e+00	8.4672e+00	2.2721e-01
50.9	8.5792e+00	8.3495e+00	2.2967e-01
55.9	8.4572e+00	8.2248e+00	2.3234e-01
60.9	8.3295e+00	8.0943e+00	2.3522e-01
65.9	8.1975e+00	7.9593e+00	2.3827e-01
70.9	8.0625e+00	7.8210e+00	2.4149e-01
75.9	7.9255e+00	7.6807e+00	2.4485e-01
80.9	7.7880e+00	7.5396e+00	2.4834e-01
85.9	7.6508e+00	7.3989e+00	2.5192e-01
90.9	7.5153e+00	7.2597e+00	2.5558e-01

$^{14}\text{N}(\text{d}, \text{p})^{15}\text{N}^*$, 14th excited state			
Q-value 8.61, E = 10, Ex = 9.83			
deg	total energy	E - dE	dE
30.9	8.3647e+00	8.1303e+00	2.3442e-01
35.9	8.2798e+00	8.0434e+00	2.3636e-01
40.9	8.1850e+00	7.9464e+00	2.3857e-01
45.9	8.0814e+00	7.8403e+00	2.4103e-01
50.9	7.9700e+00	7.7263e+00	2.4375e-01
55.9	7.8521e+00	7.6054e+00	2.4670e-01
60.9	7.7289e+00	7.4790e+00	2.4987e-01
65.9	7.6016e+00	7.3483e+00	2.5324e-01
70.9	7.4713e+00	7.2145e+00	2.5679e-01
75.9	7.3394e+00	7.0789e+00	2.6051e-01
80.9	7.2069e+00	6.9425e+00	2.6436e-01
85.9	7.0750e+00	6.8066e+00	2.6833e-01
90.9	6.9446e+00	6.6723e+00	2.7238e-01

$^{14}\text{N}(\text{d}, \text{p})^{15}\text{N}^*$, 15th excited state			
Q-value 8.61, E = 10, Ex = 9.93			
deg	total energy	E - dE	dE
30.9	8.2624e+00	8.0256e+00	2.3676e-01
35.9	8.1780e+00	7.9393e+00	2.3873e-01
40.9	8.0837e+00	7.8428e+00	2.4098e-01
45.9	7.9807e+00	7.7372e+00	2.4348e-01
50.9	7.8700e+00	7.6238e+00	2.4624e-01
55.9	7.7528e+00	7.5036e+00	2.4924e-01
60.9	7.6303e+00	7.3779e+00	2.5247e-01
65.9	7.5038e+00	7.2479e+00	2.5590e-01
70.9	7.3743e+00	7.1148e+00	2.5951e-01
75.9	7.2432e+00	6.9799e+00	2.6329e-01
80.9	7.1116e+00	6.8444e+00	2.6722e-01
85.9	6.9805e+00	6.7093e+00	2.7125e-01
90.9	6.8511e+00	6.5757e+00	2.7538e-01

$^{14}\text{N}(\text{d}, \text{p})^{15}\text{N}^*$, 17th excited state			
Q-value 8.61, E = 10, Ex = 10.4			
deg	total energy	E - dE	dE
30.9	7.7809e+00	7.5324e+00	2.4852e-01
35.9	7.6988e+00	7.4482e+00	2.5065e-01
40.9	7.6071e+00	7.3540e+00	2.5309e-01
45.9	7.5069e+00	7.2511e+00	2.5581e-01
50.9	7.3994e+00	7.1406e+00	2.5880e-01
55.9	7.2855e+00	7.0234e+00	2.6206e-01
60.9	7.1666e+00	6.9010e+00	2.6556e-01
65.9	7.0437e+00	6.7745e+00	2.6929e-01
70.9	6.9182e+00	6.6450e+00	2.7322e-01
75.9	6.7911e+00	6.5138e+00	2.7733e-01
80.9	6.6636e+00	6.3820e+00	2.8160e-01
85.9	6.5367e+00	6.2507e+00	2.8600e-01
90.9	6.4114e+00	6.1209e+00	2.9050e-01

$^{14}\text{N}(\text{d}, \text{p})^{15}\text{N}^*$, 16th excited state			
Q-value 8.61, E = 10, Ex = 10.1			
deg	total energy	E - dE	dE
30.9	8.0884e+00	7.8475e+00	2.4086e-01
35.9	8.0048e+00	7.7619e+00	2.4289e-01
40.9	7.9115e+00	7.6663e+00	2.4520e-01
45.9	7.8095e+00	7.5617e+00	2.4778e-01
50.9	7.6999e+00	7.4493e+00	2.5063e-01
55.9	7.5839e+00	7.3302e+00	2.5371e-01
60.9	7.4627e+00	7.2056e+00	2.5703e-01
65.9	7.3374e+00	7.0769e+00	2.6056e-01
70.9	7.2094e+00	6.9451e+00	2.6429e-01
75.9	7.0798e+00	6.8116e+00	2.6818e-01
80.9	6.9496e+00	6.6774e+00	2.7223e-01
85.9	6.8200e+00	6.5436e+00	2.7639e-01
90.9	6.6921e+00	6.4114e+00	2.8064e-01

$^{14}\text{N}(\text{d}, \text{p})^{15}\text{N}^*$, 18th excited state			
Q-value 8.61, E = 10, Ex = 10.5			
deg	total energy	E - dE	dE
30.9	7.6783e+00	7.4271e+00	2.5119e-01
35.9	7.5967e+00	7.3433e+00	2.5337e-01
40.9	7.5056e+00	7.2497e+00	2.5585e-01
45.9	7.4060e+00	7.1474e+00	2.5862e-01
50.9	7.2991e+00	7.0374e+00	2.6167e-01
55.9	7.1860e+00	6.9210e+00	2.6498e-01
60.9	7.0678e+00	6.7992e+00	2.6855e-01
65.9	6.9458e+00	6.6734e+00	2.7235e-01
70.9	6.8211e+00	6.5447e+00	2.7635e-01
75.9	6.6949e+00	6.4143e+00	2.8054e-01
80.9	6.5682e+00	6.2833e+00	2.8489e-01
85.9	6.4422e+00	6.1529e+00	2.8937e-01
90.9	6.3179e+00	6.0239e+00	2.9396e-01

$^{14}\text{N}(\text{d}, \text{p})^{15}\text{N}^*$, 19th excited state			
Q-value 8.61, E = 10, Ex = 10.7			
deg	total energy	E - dE	dE
30.9	7.4729e+00	7.2161e+00	2.5675e-01
35.9	7.3922e+00	7.1332e+00	2.5901e-01
40.9	7.3023e+00	7.0407e+00	2.6158e-01
45.9	7.2040e+00	6.9395e+00	2.6445e-01
50.9	7.0984e+00	6.8308e+00	2.6762e-01
55.9	6.9867e+00	6.7157e+00	2.7106e-01
60.9	6.8701e+00	6.5954e+00	2.7476e-01
65.9	6.7498e+00	6.4711e+00	2.7870e-01
70.9	6.6268e+00	6.3439e+00	2.8286e-01
75.9	6.5023e+00	6.2151e+00	2.8722e-01
80.9	6.3775e+00	6.0857e+00	2.9174e-01
85.9	6.2533e+00	5.9569e+00	2.9640e-01
90.9	6.1308e+00	5.8296e+00	3.0116e-01

$^{14}\text{N}(\text{d}, \text{d})^{14}\text{N}^*$, 1st excited state			
Q-value -0.00, E = 10, Ex = 2.31			
deg	total energy	E - dE	dE
30.9	7.3107e+00	6.8637e+00	4.4697e-01
35.9	7.1934e+00	6.7407e+00	4.5265e-01
40.9	7.0631e+00	6.6040e+00	4.5914e-01
45.9	6.9216e+00	6.4552e+00	4.6644e-01
50.9	6.7707e+00	6.2961e+00	4.7453e-01
55.9	6.6121e+00	6.1287e+00	4.8339e-01
60.9	6.4477e+00	5.9547e+00	4.9297e-01
65.9	6.2793e+00	5.7760e+00	5.0326e-01
70.9	6.1087e+00	5.5945e+00	5.1419e-01
75.9	5.9376e+00	5.4119e+00	5.2573e-01
80.9	5.7676e+00	5.2298e+00	5.3780e-01
85.9	5.6001e+00	5.0498e+00	5.5035e-01
90.9	5.4364e+00	4.8731e+00	5.6328e-01

$^{14}\text{N}(\text{d}, \text{d})^{14}\text{N}$			
Q-value -0.00, E = 10, Ex = 0.00			
deg	total energy	E - dE	dE
30.9	9.5994e+00	9.2380e+00	3.6133e-01
35.9	9.4673e+00	9.1020e+00	3.6528e-01
40.9	9.3202e+00	8.9505e+00	3.6978e-01
45.9	9.1601e+00	8.7853e+00	3.7482e-01
50.9	8.9888e+00	8.6085e+00	3.8039e-01
55.9	8.8084e+00	8.4219e+00	3.8647e-01
60.9	8.6207e+00	8.2277e+00	3.9303e-01
65.9	8.4278e+00	8.0278e+00	4.0004e-01
70.9	8.2317e+00	7.8242e+00	4.0746e-01
75.9	8.0342e+00	7.6190e+00	4.1525e-01
80.9	7.8372e+00	7.4138e+00	4.2338e-01
85.9	7.6423e+00	7.2105e+00	4.3178e-01
90.9	7.4510e+00	7.0106e+00	4.4040e-01

$^{14}\text{N}(\text{d}, \text{d})^{14}\text{N}^*$, 2nd excited state			
Q-value -0.00, E = 10, Ex = 3.95			
deg	total energy	E - dE	dE
30.9	5.6545e+00	5.1083e+00	5.4620e-01
35.9	5.5494e+00	4.9951e+00	5.5428e-01
40.9	5.4329e+00	4.8693e+00	5.6357e-01
45.9	5.3067e+00	4.7327e+00	5.7405e-01
50.9	5.1725e+00	4.5868e+00	5.8571e-01
55.9	5.0319e+00	4.4334e+00	5.9853e-01
60.9	4.8868e+00	4.2743e+00	6.1248e-01
65.9	4.7387e+00	4.1111e+00	6.2754e-01
70.9	4.5893e+00	3.9456e+00	6.4364e-01
75.9	4.4400e+00	3.7793e+00	6.6073e-01
80.9	4.2924e+00	3.6136e+00	6.7875e-01
85.9	4.1476e+00	3.4500e+00	6.9760e-01
90.9	4.0068e+00	3.2896e+00	7.1718e-01

$^{14}\text{N}(\text{d}, \text{d})^{14}\text{N}^*$, 3rd excited state			
Q-value -0.00, E = 10, Ex = 4.92			
deg	total energy	E - dE	dE
30.9	4.6563e+00	4.0200e+00	6.3630e-01
35.9	4.5593e+00	3.9123e+00	6.4698e-01
40.9	4.4521e+00	3.7928e+00	6.5931e-01
45.9	4.3362e+00	3.6630e+00	6.7327e-01
50.9	4.2133e+00	3.5244e+00	6.8889e-01
55.9	4.0849e+00	3.3787e+00	7.0615e-01
60.9	3.9527e+00	3.2277e+00	7.2506e-01
65.9	3.8183e+00	3.0727e+00	7.4558e-01
70.9	3.6832e+00	2.9155e+00	7.6770e-01
75.9	3.5487e+00	2.7574e+00	7.9137e-01
80.9	3.4162e+00	2.5997e+00	8.1653e-01
85.9	3.2868e+00	2.4437e+00	8.4310e-01
90.9	3.1615e+00	2.2905e+00	8.7098e-01

$^{14}\text{N}(\text{d}, \text{d})^{14}\text{N}^*$, 5th excited state			
Q-value -0.00, E = 10, Ex = 5.69			
deg	total energy	E - dE	dE
30.9	3.8495e+00	3.1088e+00	7.4070e-01
35.9	3.7597e+00	3.0047e+00	7.5498e-01
40.9	3.6607e+00	2.8892e+00	7.7154e-01
45.9	3.5539e+00	2.7635e+00	7.9042e-01
50.9	3.4410e+00	2.6293e+00	8.1168e-01
55.9	3.3234e+00	2.4880e+00	8.3537e-01
60.9	3.2028e+00	2.3412e+00	8.6155e-01
65.9	3.0805e+00	2.1903e+00	8.9028e-01
70.9	2.9581e+00	2.0365e+00	9.2160e-01
75.9	2.8369e+00	1.8813e+00	9.5557e-01
80.9	2.7179e+00	1.7257e+00	9.9221e-01
85.9	2.6023e+00	1.5707e+00	1.0315e+00
90.9	2.4909e+00	1.4172e+00	1.0736e+00

$^{14}\text{N}(\text{d}, \text{d})^{14}\text{N}^*$, 4th excited state			
Q-value -0.00, E = 10, Ex = 5.11			
deg	total energy	E - dE	dE
30.9	4.4586e+00	3.8000e+00	6.5855e-01
35.9	4.3633e+00	3.6934e+00	6.6995e-01
40.9	4.2581e+00	3.5750e+00	6.8310e-01
45.9	4.1443e+00	3.4463e+00	6.9803e-01
50.9	4.0237e+00	3.3090e+00	7.1475e-01
55.9	3.8979e+00	3.1647e+00	7.3326e-01
60.9	3.7685e+00	3.0149e+00	7.5356e-01
65.9	3.6369e+00	2.8613e+00	7.7564e-01
70.9	3.5048e+00	2.7053e+00	7.9949e-01
75.9	3.3735e+00	2.5484e+00	8.2507e-01
80.9	3.2442e+00	2.3919e+00	8.5233e-01
85.9	3.1180e+00	2.2368e+00	8.8121e-01
90.9	2.9960e+00	2.0844e+00	9.1162e-01

$^{14}\text{N}(\text{d}, \text{d})^{14}\text{N}^*$, 6th excited state			
Q-value -0.00, E = 10, Ex = 5.83			
deg	total energy	E - dE	dE
30.9	3.7010e+00	2.9363e+00	7.6469e-01
35.9	3.6126e+00	2.8327e+00	7.7990e-01
40.9	3.5152e+00	2.7177e+00	7.9755e-01
45.9	3.4102e+00	2.5925e+00	8.1771e-01
50.9	3.2992e+00	2.4588e+00	8.4046e-01
55.9	3.1837e+00	2.3179e+00	8.6587e-01
60.9	3.0653e+00	2.1713e+00	8.9402e-01
65.9	2.9455e+00	2.0205e+00	9.2500e-01
70.9	2.8256e+00	1.8667e+00	9.5889e-01
75.9	2.7069e+00	1.7112e+00	9.9578e-01
80.9	2.5906e+00	1.5549e+00	1.0357e+00
85.9	2.4777e+00	1.3988e+00	1.0789e+00
90.9	2.3689e+00	1.2437e+00	1.1252e+00

$^{14}\text{N}(\text{d}, \text{d})^{14}\text{N}^*$, 7th excited state			
Q-value -0.00, E = 10, Ex = 6.20			
deg	total energy	E - dE	dE
30.9	3.3054e+00	2.4662e+00	8.3916e-01
35.9	3.2209e+00	2.3634e+00	8.5749e-01
40.9	3.1278e+00	2.2489e+00	8.7888e-01
45.9	3.0277e+00	2.1243e+00	9.0346e-01
50.9	2.9221e+00	1.9907e+00	9.3138e-01
55.9	2.8124e+00	1.8496e+00	9.6281e-01
60.9	2.7003e+00	1.7023e+00	9.9796e-01
65.9	2.5870e+00	1.5500e+00	1.0371e+00
70.9	2.4740e+00	1.3937e+00	1.0804e+00
75.9	2.3625e+00	1.2343e+00	1.1282e+00
80.9	2.2535e+00	1.0727e+00	1.1808e+00
85.9	2.1480e+00	9.0955e-01	1.2385e+00
90.9	2.0468e+00	7.4543e-01	1.3014e+00

$^{14}\text{N}(\text{d}, \text{d})^{14}\text{N}^*$, 8th excited state			
Q-value -0.00, E = 10, Ex = 6.45			
deg	total energy	E - dE	dE
30.9	3.0350e+00	2.1334e+00	9.0162e-01
35.9	2.9532e+00	2.0303e+00	9.2293e-01
40.9	2.8633e+00	1.9154e+00	9.4789e-01
45.9	2.7667e+00	1.7900e+00	9.7675e-01
50.9	2.6649e+00	1.6552e+00	1.0097e+00
55.9	2.5595e+00	1.5123e+00	1.0472e+00
60.9	2.4518e+00	1.3623e+00	1.0895e+00
65.9	2.3432e+00	1.2062e+00	1.1370e+00
70.9	2.2352e+00	1.0449e+00	1.1903e+00
75.9	2.1288e+00	8.7899e-01	1.2498e+00
80.9	2.0251e+00	7.0919e-01	1.3159e+00
85.9	1.9250e+00	5.3723e-01	1.3878e+00
90.9	1.8292e+00	3.6956e-01	1.4597e+00

$^{14}\text{N}(\text{d}, \text{d})^{14}\text{N}^*$, 9th excited state			
Q-value -0.00, E = 10, Ex = 7.03			
deg	total energy	E - dE	dE
30.9	2.3952e+00	1.2816e+00	1.1136e+00
35.9	2.3204e+00	1.1727e+00	1.1477e+00
40.9	2.2384e+00	1.0498e+00	1.1886e+00
45.9	2.1507e+00	9.1380e-01	1.2369e+00
50.9	2.0587e+00	7.6516e-01	1.2936e+00
55.9	1.9639e+00	6.0488e-01	1.3590e+00
60.9	1.8676e+00	4.3634e-01	1.4313e+00
65.9	1.7713e+00	2.7592e-01	1.4953e+00
70.9	1.6760e+00	1.7975e-01	1.4962e+00

$^{14}\text{N}(\text{d}, \text{t})^{13}\text{N}$			
Q-value -4.30, E = 10, Ex = 0.00			
deg	total energy	E - dE	dE
30.9	5.2938e+00	4.5228e+00	7.7102e-01
35.9	5.1640e+00	4.3782e+00	7.8580e-01
40.9	5.0208e+00	4.2179e+00	8.0289e-01
45.9	4.8667e+00	4.0443e+00	8.2232e-01
50.9	4.7038e+00	3.8597e+00	8.4412e-01
55.9	4.5345e+00	3.6662e+00	8.6830e-01
60.9	4.3611e+00	3.4662e+00	8.9489e-01
65.9	4.1858e+00	3.2619e+00	9.2387e-01
70.9	4.0105e+00	3.0553e+00	9.5524e-01
75.9	3.8373e+00	2.8483e+00	9.8895e-01
80.9	3.6677e+00	2.6427e+00	1.0249e+00
85.9	3.5032e+00	2.4400e+00	1.0631e+00
90.9	3.3450e+00	2.2416e+00	1.1034e+00

$^{14}\text{N}(\text{d}, \text{t})^{13}\text{N}^*$, 1st excited state			
Q-value -4.30, E = 10, Ex = 2.36			
deg	total energy	E - dE	dE
30.9	2.8721e+00	1.6214e+00	1.2508e+00
35.9	2.7687e+00	1.4786e+00	1.2900e+00
40.9	2.6557e+00	1.3192e+00	1.3366e+00
45.9	2.5354e+00	1.1447e+00	1.3907e+00
50.9	2.4098e+00	9.5717e-01	1.4526e+00
55.9	2.2811e+00	7.6008e-01	1.5210e+00
60.9	2.1513e+00	5.6137e-01	1.5899e+00
65.9	2.0222e+00	3.8420e-01	1.6380e+00
70.9	1.8956e+00	2.7647e-01	1.6191e+00

$^{14}\text{N}(\text{d}, ^3\text{He})^{13}\text{C}$			
Q-value -2.06, E = 10, Ex = 0.00			
deg	total energy	E - dE	dE
30.9	7.4727e+00	4.8265e+00	2.6462e+00
35.9	7.3233e+00	4.6230e+00	2.7002e+00
40.9	7.1580e+00	4.3943e+00	2.7637e+00
45.9	6.9792e+00	4.1421e+00	2.8371e+00
50.9	6.7893e+00	3.8681e+00	2.9212e+00
55.9	6.5908e+00	3.5738e+00	3.0170e+00
60.9	6.3862e+00	3.2604e+00	3.1257e+00
65.9	6.1779e+00	2.9288e+00	3.2490e+00
70.9	5.9681e+00	2.5790e+00	3.3891e+00
75.9	5.7592e+00	2.2101e+00	3.5491e+00
80.9	5.5530e+00	1.8194e+00	3.7336e+00
85.9	5.3513e+00	1.4022e+00	3.9491e+00
90.9	5.1556e+00	9.5101e-01	4.2046e+00

$^{14}\text{N}(\text{d}, \alpha)^{12}\text{C}^*$, 1st excited state			
Q-value 13.57, E = 10, Ex = 4.44			
deg	total energy	E - dE	dE
30.9	1.7068e+01	1.5461e+01	1.6066e+00
35.9	1.6817e+01	1.5191e+01	1.6261e+00
40.9	1.6539e+01	1.4891e+01	1.6484e+00
45.9	1.6236e+01	1.4563e+01	1.6734e+00
50.9	1.5913e+01	1.4212e+01	1.7013e+00
55.9	1.5572e+01	1.3841e+01	1.7317e+00
60.9	1.5219e+01	1.3454e+01	1.7647e+00
65.9	1.4856e+01	1.3056e+01	1.8001e+00
70.9	1.4487e+01	1.2649e+01	1.8379e+00
75.9	1.4117e+01	1.2239e+01	1.8777e+00
80.9	1.3748e+01	1.1828e+01	1.9195e+00
85.9	1.3383e+01	1.1420e+01	1.9630e+00
90.9	1.3026e+01	1.1018e+01	2.0080e+00

$^{14}\text{N}(\text{d}, \alpha)^{12}\text{C}$			
Q-value 13.57, E = 10, Ex = 0.00			
deg	total energy	E - dE	dE
30.9	2.0812e+01	1.9444e+01	1.3678e+00
35.9	2.0539e+01	1.9156e+01	1.3825e+00
40.9	2.0235e+01	1.8835e+01	1.3993e+00
45.9	1.9903e+01	1.8485e+01	1.4181e+00
50.9	1.9548e+01	1.8109e+01	1.4389e+00
55.9	1.9174e+01	1.7712e+01	1.4616e+00
60.9	1.8784e+01	1.7298e+01	1.4861e+00
65.9	1.8384e+01	1.6871e+01	1.5124e+00
70.9	1.7976e+01	1.6436e+01	1.5402e+00
75.9	1.7565e+01	1.5995e+01	1.5694e+00
80.9	1.7154e+01	1.5554e+01	1.6000e+00
85.9	1.6748e+01	1.5116e+01	1.6316e+00
90.9	1.6348e+01	1.4684e+01	1.6641e+00

$^{14}\text{N}(\text{d}, \alpha)^{12}\text{C}^*$, 2nd excited state			
Q-value 13.57, E = 10, Ex = 7.65			
deg	total energy	E - dE	dE
30.9	1.4327e+01	1.2472e+01	1.8548e+00
35.9	1.4095e+01	1.2215e+01	1.8801e+00
40.9	1.3838e+01	1.1929e+01	1.9091e+00
45.9	1.3558e+01	1.1616e+01	1.9419e+00
50.9	1.3260e+01	1.1281e+01	1.9783e+00
55.9	1.2946e+01	1.0928e+01	2.0183e+00
60.9	1.2621e+01	1.0560e+01	2.0620e+00
65.9	1.2289e+01	1.0180e+01	2.1090e+00
70.9	1.1952e+01	9.7927e+00	2.1594e+00
75.9	1.1614e+01	9.4013e+00	2.2129e+00
80.9	1.1279e+01	9.0092e+00	2.2694e+00
85.9	1.0948e+01	8.6195e+00	2.3286e+00
90.9	1.0625e+01	8.2349e+00	2.3902e+00

$^{14}\text{N}(d, \alpha)^{12}\text{C}^*$, 3rd excited state			
Q-value 13.57, E = 10, Ex = 9.64			
deg	total energy	E - dE	dE
30.9	1.2610e+01	1.0546e+01	2.0636e+00
35.9	1.2390e+01	1.0296e+01	2.0944e+00
40.9	1.2146e+01	1.0016e+01	2.1300e+00
45.9	1.1882e+01	9.7120e+00	2.1702e+00
50.9	1.1601e+01	9.3857e+00	2.2151e+00
55.9	1.1306e+01	9.0410e+00	2.2647e+00
60.9	1.1000e+01	8.6814e+00	2.3190e+00
65.9	1.0688e+01	8.3105e+00	2.3779e+00
70.9	1.0373e+01	7.9317e+00	2.4412e+00
75.9	1.0057e+01	7.5483e+00	2.5091e+00
80.9	9.7444e+00	7.1632e+00	2.5811e+00
85.9	9.4368e+00	6.7795e+00	2.6573e+00
90.9	9.1371e+00	6.3998e+00	2.7372e+00

$^{14}\text{N}(d, \alpha)^{12}\text{C}^*$, 5th excited state			
Q-value 13.57, E = 10, Ex = 10.8			
deg	total energy	E - dE	dE
30.9	1.1600e+01	9.3847e+00	2.2153e+00
35.9	1.1388e+01	9.1374e+00	2.2506e+00
40.9	1.1153e+01	8.8617e+00	2.2915e+00
45.9	1.0899e+01	8.5607e+00	2.3378e+00
50.9	1.0628e+01	8.2379e+00	2.3897e+00
55.9	1.0344e+01	7.8966e+00	2.4473e+00
60.9	1.0051e+01	7.5401e+00	2.5105e+00
65.9	9.7514e+00	7.1719e+00	2.5795e+00
70.9	9.4492e+00	6.7951e+00	2.6541e+00
75.9	9.1473e+00	6.4129e+00	2.7344e+00
80.9	8.8484e+00	6.0281e+00	2.8204e+00
85.9	8.5552e+00	5.6433e+00	2.9118e+00
90.9	8.2698e+00	5.2610e+00	3.0088e+00

$^{14}\text{N}(d, \alpha)^{12}\text{C}^*$, 4th excited state			
Q-value 13.57, E = 10, Ex = 10.3			
deg	total energy	E - dE	dE
30.9	1.2036e+01	9.8894e+00	2.1466e+00
35.9	1.1821e+01	9.6408e+00	2.1798e+00
40.9	1.1582e+01	9.3638e+00	2.2182e+00
45.9	1.1323e+01	9.0615e+00	2.2617e+00
50.9	1.1048e+01	8.7374e+00	2.3104e+00
55.9	1.0759e+01	8.3948e+00	2.3642e+00
60.9	1.0461e+01	8.0373e+00	2.4232e+00
65.9	1.0156e+01	7.6682e+00	2.4874e+00
70.9	9.8477e+00	7.2910e+00	2.5568e+00
75.9	9.5398e+00	6.9086e+00	2.6312e+00
80.9	9.2348e+00	6.5243e+00	2.7105e+00
85.9	8.9353e+00	6.1406e+00	2.7947e+00
90.9	8.6436e+00	5.7602e+00	2.8834e+00

$^{14}\text{N}(d, \alpha)^{12}\text{C}^*$, 6th excited state			
Q-value 13.57, E = 10, Ex = 11.2			
deg	total energy	E - dE	dE
30.9	1.1250e+01	8.9758e+00	2.2744e+00
35.9	1.1041e+01	8.7293e+00	2.3116e+00
40.9	1.0809e+01	8.4545e+00	2.3546e+00
45.9	1.0558e+01	8.1544e+00	2.4036e+00
50.9	1.0291e+01	7.8324e+00	2.4584e+00
55.9	1.0011e+01	7.4917e+00	2.5194e+00
60.9	9.7222e+00	7.1358e+00	2.5864e+00
65.9	9.4274e+00	6.7678e+00	2.6597e+00
70.9	9.1300e+00	6.3909e+00	2.7392e+00
75.9	8.8330e+00	6.0081e+00	2.8250e+00
80.9	8.5392e+00	5.6221e+00	2.9171e+00
85.9	8.2510e+00	5.2356e+00	3.0155e+00
90.9	7.9708e+00	4.8507e+00	3.1201e+00

$^{14}\text{N}(\text{d}, \alpha)^{12}\text{C}^*$, 7th excited state			
Q-value 13.57, E = 10, Ex = 11.8			
deg	total energy	E - dE	dE
30.9	1.0724e+01	8.3528e+00	2.3710e+00
35.9	1.0519e+01	8.1073e+00	2.4114e+00
40.9	1.0292e+01	7.8334e+00	2.4583e+00
45.9	1.0046e+01	7.5341e+00	2.5116e+00
50.9	9.7843e+00	7.2127e+00	2.5716e+00
55.9	9.5108e+00	6.8724e+00	2.6384e+00
60.9	9.2285e+00	6.5163e+00	2.7122e+00
65.9	8.9407e+00	6.1476e+00	2.7931e+00
70.9	8.6506e+00	5.7694e+00	2.8812e+00
75.9	8.3611e+00	5.3843e+00	2.9768e+00
80.9	8.0750e+00	4.9949e+00	3.0801e+00
85.9	7.7946e+00	4.6035e+00	3.1911e+00
90.9	7.5223e+00	4.2121e+00	3.3102e+00

$^{14}\text{N}(\text{d}, \alpha)^{12}\text{C}^*$, 9th excited state			
Q-value 13.57, E = 10, Ex = 13.4			
deg	total energy	E - dE	dE
30.9	9.3086e+00	6.6178e+00	2.6908e+00
35.9	9.1152e+00	6.3719e+00	2.7433e+00
40.9	8.9014e+00	6.0968e+00	2.8046e+00
45.9	8.6703e+00	5.7952e+00	2.8750e+00
50.9	8.4250e+00	5.4700e+00	2.9550e+00
55.9	8.1689e+00	5.1238e+00	3.0451e+00
60.9	7.9052e+00	4.7592e+00	3.1460e+00
65.9	7.6371e+00	4.3786e+00	3.2585e+00
70.9	7.3675e+00	3.9839e+00	3.3836e+00
75.9	7.0992e+00	3.5767e+00	3.5225e+00
80.9	6.8348e+00	3.1580e+00	3.6768e+00
85.9	6.5766e+00	2.7279e+00	3.8487e+00
90.9	6.3265e+00	2.2857e+00	4.0408e+00

$^{14}\text{N}(\text{d}, \alpha)^{12}\text{C}^*$, 8th excited state			
Q-value 13.57, E = 10, Ex = 12.7			
deg	total energy	E - dE	dE
30.9	9.9299e+00	7.3922e+00	2.5378e+00
35.9	9.7313e+00	7.1471e+00	2.5843e+00
40.9	9.5116e+00	6.8734e+00	2.6382e+00
45.9	9.2739e+00	6.5739e+00	2.7000e+00
50.9	9.0214e+00	6.2516e+00	2.7698e+00
55.9	8.7575e+00	5.9096e+00	2.8479e+00
60.9	8.4855e+00	5.5507e+00	2.9348e+00
65.9	8.2085e+00	5.1778e+00	3.0307e+00
70.9	7.9297e+00	4.7935e+00	3.1363e+00
75.9	7.6519e+00	4.3999e+00	3.2520e+00
80.9	7.3778e+00	3.9993e+00	3.3785e+00
85.9	7.1097e+00	3.5929e+00	3.5168e+00
90.9	6.8496e+00	3.1820e+00	3.6676e+00

$^{14}\text{N}(\text{d}, \alpha)^{12}\text{C}^*$, 10th excited state			
Q-value 13.57, E = 10, Ex = 14.1			
deg	total energy	E - dE	dE
30.9	8.6833e+00	5.8123e+00	2.8709e+00
35.9	8.4953e+00	5.5638e+00	2.9315e+00
40.9	8.2877e+00	5.2852e+00	3.0024e+00
45.9	8.0634e+00	4.9790e+00	3.0844e+00
50.9	7.8257e+00	4.6474e+00	3.1783e+00
55.9	7.5777e+00	4.2928e+00	3.2849e+00
60.9	7.3227e+00	3.9170e+00	3.4057e+00
65.9	7.0637e+00	3.5216e+00	3.5421e+00
70.9	6.8037e+00	3.1074e+00	3.6963e+00
75.9	6.5453e+00	2.6741e+00	3.8712e+00
80.9	6.2911e+00	2.2205e+00	4.0705e+00
85.9	6.0431e+00	1.7435e+00	4.2997e+00
90.9	5.8034e+00	1.2394e+00	4.5641e+00

$^{14}\text{N}(d, \alpha)^{12}\text{C}^*$, 11th excited state			
Q-value 13.57, E = 10, Ex = 15.1			
deg	total energy	E - dE	dE
30.9	7.7821e+00	4.5858e+00	3.1963e+00
35.9	7.6023e+00	4.3284e+00	3.2739e+00
40.9	7.4039e+00	4.0381e+00	3.3659e+00
45.9	7.1900e+00	3.7163e+00	3.4737e+00
50.9	6.9636e+00	3.3644e+00	3.5992e+00
55.9	6.7278e+00	2.9827e+00	3.7451e+00
60.9	6.4859e+00	2.5709e+00	3.9150e+00
65.9	6.2407e+00	2.1267e+00	4.1140e+00
70.9	5.9951e+00	1.6461e+00	4.3490e+00
75.9	5.7516e+00	1.1243e+00	4.6273e+00
80.9	5.5127e+00	5.8988e-01	4.9228e+00
85.9	5.2804e+00	3.2856e-01	4.9518e+00

$^{14}\text{N}(d, \alpha)^{12}\text{C}^*$, 12th excited state			
Q-value 13.57, E = 10, Ex = 15.4			
deg	total energy	E - dE	dE
30.9	7.5097e+00	4.1938e+00	3.3160e+00
35.9	7.3325e+00	3.9316e+00	3.4008e+00
40.9	7.1370e+00	3.6351e+00	3.5019e+00
45.9	6.9263e+00	3.3051e+00	3.6212e+00
50.9	6.7034e+00	2.9421e+00	3.7613e+00
55.9	6.4715e+00	2.5456e+00	3.9259e+00
60.9	6.2336e+00	2.1135e+00	4.1202e+00
65.9	5.9928e+00	1.6414e+00	4.3514e+00
70.9	5.7517e+00	1.1244e+00	4.6273e+00
75.9	5.5129e+00	5.9030e-01	4.9226e+00
80.9	5.2788e+00	3.2821e-01	4.9506e+00

$^{14}\text{N}(d, \alpha)^{12}\text{C}^*$, 13th excited state			
Q-value 13.57, E = 10, Ex = 16.1			
deg	total energy	E - dE	dE
30.9	6.8699e+00	3.2147e+00	3.6552e+00
35.9	6.6988e+00	2.9344e+00	3.7644e+00
40.9	6.5103e+00	2.6135e+00	3.8968e+00
45.9	6.3074e+00	2.2506e+00	4.0567e+00
50.9	6.0931e+00	1.8428e+00	4.2502e+00
55.9	5.8704e+00	1.3850e+00	4.4854e+00
60.9	5.6425e+00	8.7668e-01	4.7658e+00
65.9	5.4121e+00	4.1754e-01	4.9946e+00

$^{14}\text{N}(d, \alpha)^{12}\text{C}^*$, 14th excited state			
Q-value 13.57, E = 10, Ex = 16.6			
deg	total energy	E - dE	dE
30.9	6.4088e+00	2.4345e+00	3.9743e+00
35.9	6.2423e+00	2.1297e+00	4.1126e+00
40.9	6.0590e+00	1.7753e+00	4.2838e+00
45.9	5.8619e+00	1.3667e+00	4.4952e+00
50.9	5.6540e+00	9.0299e-01	4.7510e+00
55.9	5.4383e+00	4.5448e-01	4.9839e+00
60.9	5.2178e+00	3.1973e-01	4.8981e+00

4 ^{27}Al target

$^{27}\text{Al}(d, p)^{28}\text{Al}$			
Q-value 5.50, E = 10, Ex = 0.00			
deg	total energy	E - dE	dE
35.9	1.5250e+01	1.5106e+01	1.4377e-01
40.9	1.5182e+01	1.5038e+01	1.4429e-01
45.9	1.5108e+01	1.4963e+01	1.4488e-01
49.1	1.5057e+01	1.4911e+01	1.4528e-01
50.9	1.5027e+01	1.4881e+01	1.4552e-01
55.9	1.4940e+01	1.4794e+01	1.4621e-01
60.9	1.4849e+01	1.4702e+01	1.4695e-01
65.9	1.4754e+01	1.4607e+01	1.4772e-01
70.9	1.4656e+01	1.4508e+01	1.4853e-01
75.9	1.4556e+01	1.4406e+01	1.4937e-01
80.9	1.4454e+01	1.4304e+01	1.5024e-01
85.9	1.4351e+01	1.4200e+01	1.5112e-01
90.9	1.4249e+01	1.4097e+01	1.5201e-01
100.9	1.4047e+01	1.3893e+01	1.5380e-01
110.9	1.3854e+01	1.3699e+01	1.5554e-01
120.9	1.3677e+01	1.3520e+01	1.5720e-01
130.9	1.3519e+01	1.3360e+01	1.5870e-01
140.9	1.3385e+01	1.3225e+01	1.6000e-01

$^{27}\text{Al}(d, p)^{28}\text{Al}$, 1st excited state			
Q-value 5.50, E = 10, Ex = 0.03			
deg	total energy	E - dE	dE
35.9	1.5220e+01	1.5076e+01	1.4400e-01
40.9	1.5152e+01	1.5008e+01	1.4453e-01
45.9	1.5078e+01	1.4933e+01	1.4511e-01
49.1	1.5027e+01	1.4881e+01	1.4552e-01
50.9	1.4997e+01	1.4851e+01	1.4576e-01
55.9	1.4911e+01	1.4764e+01	1.4645e-01
60.9	1.4820e+01	1.4673e+01	1.4719e-01
65.9	1.4725e+01	1.4577e+01	1.4796e-01
70.9	1.4627e+01	1.4478e+01	1.4878e-01
75.9	1.4527e+01	1.4377e+01	1.4962e-01
80.9	1.4425e+01	1.4274e+01	1.5049e-01
85.9	1.4322e+01	1.4171e+01	1.5137e-01
90.9	1.4220e+01	1.4067e+01	1.5226e-01
100.9	1.4018e+01	1.3864e+01	1.5406e-01
110.9	1.3826e+01	1.3670e+01	1.5581e-01
120.9	1.3648e+01	1.3491e+01	1.5746e-01
130.9	1.3491e+01	1.3332e+01	1.5897e-01
140.9	1.3357e+01	1.3196e+01	1.6027e-01

$^{27}\text{Al}(d, p)^{28}\text{Al}$, 2nd excited state			
Q-value 5.50, E = 10, Ex = 0.97			
deg	total energy	E - dE	dE
35.9	1.4282e+01	1.4130e+01	1.5172e-01
40.9	1.4216e+01	1.4064e+01	1.5229e-01
45.9	1.4144e+01	1.3991e+01	1.5293e-01
49.1	1.4095e+01	1.3941e+01	1.5337e-01
50.9	1.4066e+01	1.3912e+01	1.5363e-01
55.9	1.3982e+01	1.3828e+01	1.5438e-01
60.9	1.3894e+01	1.3739e+01	1.5518e-01
65.9	1.3802e+01	1.3646e+01	1.5603e-01
70.9	1.3707e+01	1.3550e+01	1.5691e-01
75.9	1.3610e+01	1.3452e+01	1.5783e-01
80.9	1.3511e+01	1.3353e+01	1.5877e-01
85.9	1.3412e+01	1.3252e+01	1.5973e-01
90.9	1.3313e+01	1.3152e+01	1.6070e-01
100.9	1.3118e+01	1.2955e+01	1.6265e-01
110.9	1.2932e+01	1.2767e+01	1.6456e-01
120.9	1.2761e+01	1.2594e+01	1.6637e-01
130.9	1.2608e+01	1.2440e+01	1.6801e-01
140.9	1.2479e+01	1.2309e+01	1.6943e-01

$^{27}\text{Al}(d, p)^{28}\text{Al}$, 3rd excited state			
Q-value 5.50, E = 10, Ex = 1.01			
deg	total energy	E - dE	dE
35.9	1.4242e+01	1.4090e+01	1.5207e-01
40.9	1.4177e+01	1.4024e+01	1.5264e-01
45.9	1.4104e+01	1.3951e+01	1.5328e-01
49.1	1.4055e+01	1.3901e+01	1.5372e-01
50.9	1.4026e+01	1.3872e+01	1.5398e-01
55.9	1.3943e+01	1.3788e+01	1.5474e-01
60.9	1.3855e+01	1.3699e+01	1.5554e-01
65.9	1.3763e+01	1.3606e+01	1.5639e-01
70.9	1.3668e+01	1.3511e+01	1.5728e-01
75.9	1.3571e+01	1.3413e+01	1.5820e-01
80.9	1.3473e+01	1.3313e+01	1.5914e-01
85.9	1.3373e+01	1.3213e+01	1.6011e-01
90.9	1.3274e+01	1.3113e+01	1.6109e-01
100.9	1.3080e+01	1.2917e+01	1.6304e-01
110.9	1.2894e+01	1.2729e+01	1.6496e-01
120.9	1.2723e+01	1.2556e+01	1.6677e-01
130.9	1.2571e+01	1.2402e+01	1.6842e-01
140.9	1.2441e+01	1.2272e+01	1.6984e-01

$^{27}\text{Al}(d, p)^{28}\text{Al}$, 4th excited state			
Q-value 5.50, E = 10, Ex = 1.37			
deg	total energy	E - dE	dE
35.9	1.3883e+01	1.3727e+01	1.5529e-01
40.9	1.3818e+01	1.3662e+01	1.5588e-01
45.9	1.3746e+01	1.3590e+01	1.5654e-01
49.1	1.3698e+01	1.3541e+01	1.5700e-01
50.9	1.3669e+01	1.3512e+01	1.5727e-01
55.9	1.3587e+01	1.3429e+01	1.5805e-01
60.9	1.3500e+01	1.3341e+01	1.5888e-01
65.9	1.3409e+01	1.3250e+01	1.5976e-01
70.9	1.3316e+01	1.3155e+01	1.6068e-01
75.9	1.3220e+01	1.3058e+01	1.6163e-01
80.9	1.3123e+01	1.2960e+01	1.6261e-01
85.9	1.3025e+01	1.2861e+01	1.6360e-01
90.9	1.2927e+01	1.2762e+01	1.6461e-01
100.9	1.2735e+01	1.2568e+01	1.6664e-01
110.9	1.2552e+01	1.2383e+01	1.6862e-01
120.9	1.2383e+01	1.2212e+01	1.7050e-01
130.9	1.2233e+01	1.2061e+01	1.7220e-01
140.9	1.2105e+01	1.1932e+01	1.7368e-01

$^{27}\text{Al}(d, p)^{28}\text{Al}$, 5th excited state			
Q-value 5.50, E = 10, Ex = 1.62			
deg	total energy	E - dE	dE
35.9	1.3633e+01	1.3475e+01	1.5761e-01
40.9	1.3569e+01	1.3410e+01	1.5822e-01
45.9	1.3498e+01	1.3339e+01	1.5890e-01
49.1	1.3450e+01	1.3290e+01	1.5937e-01
50.9	1.3421e+01	1.3262e+01	1.5964e-01
55.9	1.3340e+01	1.3179e+01	1.6044e-01
60.9	1.3254e+01	1.3092e+01	1.6129e-01
65.9	1.3164e+01	1.3002e+01	1.6219e-01
70.9	1.3071e+01	1.2908e+01	1.6313e-01
75.9	1.2976e+01	1.2812e+01	1.6411e-01
80.9	1.2880e+01	1.2715e+01	1.6511e-01
85.9	1.2783e+01	1.2617e+01	1.6613e-01
90.9	1.2686e+01	1.2519e+01	1.6717e-01
100.9	1.2496e+01	1.2326e+01	1.6924e-01
110.9	1.2314e+01	1.2143e+01	1.7127e-01
120.9	1.2147e+01	1.1974e+01	1.7319e-01
130.9	1.1998e+01	1.1824e+01	1.7494e-01
140.9	1.1872e+01	1.1696e+01	1.7645e-01

$^{27}\text{Al}(d, p)^{28}\text{Al}$, 6th excited state			
Q-value 5.50, E = 10, Ex = 2.14			
deg	total energy	E - dE	dE
35.9	1.3113e+01	1.2950e+01	1.6270e-01
40.9	1.3050e+01	1.2887e+01	1.6335e-01
45.9	1.2981e+01	1.2817e+01	1.6406e-01
49.1	1.2933e+01	1.2769e+01	1.6455e-01
50.9	1.2905e+01	1.2741e+01	1.6484e-01
55.9	1.2825e+01	1.2660e+01	1.6568e-01
60.9	1.2741e+01	1.2574e+01	1.6658e-01
65.9	1.2653e+01	1.2485e+01	1.6752e-01
70.9	1.2562e+01	1.2393e+01	1.6851e-01
75.9	1.2469e+01	1.2299e+01	1.6954e-01
80.9	1.2374e+01	1.2204e+01	1.7059e-01
85.9	1.2279e+01	1.2108e+01	1.7167e-01
90.9	1.2184e+01	1.2012e+01	1.7276e-01
100.9	1.1998e+01	1.1823e+01	1.7495e-01
110.9	1.1820e+01	1.1643e+01	1.7709e-01
120.9	1.1656e+01	1.1477e+01	1.7911e-01
130.9	1.1511e+01	1.1330e+01	1.8095e-01
140.9	1.1387e+01	1.1205e+01	1.8255e-01

$^{27}\text{Al}(d, p)^{28}\text{Al}$, 7th excited state			
Q-value 5.50, E = 10, Ex = 2.20			
deg	total energy	E - dE	dE
35.9	1.3053e+01	1.2890e+01	1.6332e-01
40.9	1.2990e+01	1.2826e+01	1.6396e-01
45.9	1.2921e+01	1.2756e+01	1.6468e-01
49.1	1.2874e+01	1.2708e+01	1.6517e-01
50.9	1.2846e+01	1.2680e+01	1.6546e-01
55.9	1.2766e+01	1.2600e+01	1.6631e-01
60.9	1.2682e+01	1.2514e+01	1.6721e-01
65.9	1.2594e+01	1.2426e+01	1.6816e-01
70.9	1.2503e+01	1.2334e+01	1.6916e-01
75.9	1.2410e+01	1.2240e+01	1.7019e-01
80.9	1.2316e+01	1.2145e+01	1.7125e-01
85.9	1.2221e+01	1.2049e+01	1.7234e-01
90.9	1.2126e+01	1.1953e+01	1.7343e-01
100.9	1.1940e+01	1.1765e+01	1.7563e-01
110.9	1.1763e+01	1.1585e+01	1.7779e-01
120.9	1.1600e+01	1.1420e+01	1.7982e-01
130.9	1.1455e+01	1.1273e+01	1.8168e-01
140.9	1.1332e+01	1.1148e+01	1.8328e-01

$^{27}\text{Al}(d, d)^{27}\text{Al}$			
Q-value 0.00, E = 10, Ex = 0.00			
deg	total energy	E - dE	dE
35.9	9.7203e+00	9.3624e+00	3.5781e-01
40.9	9.6418e+00	9.2818e+00	3.6009e-01
45.9	9.5558e+00	9.1932e+00	3.6262e-01
49.1	9.4972e+00	9.1328e+00	3.6437e-01
50.9	9.4631e+00	9.0977e+00	3.6540e-01
55.9	9.3645e+00	8.9961e+00	3.6841e-01
60.9	9.2610e+00	8.8893e+00	3.7163e-01
65.9	9.1535e+00	8.7785e+00	3.7503e-01
70.9	9.0431e+00	8.6644e+00	3.7861e-01
75.9	8.9306e+00	8.5483e+00	3.8233e-01
80.9	8.8171e+00	8.4309e+00	3.8617e-01
85.9	8.7034e+00	8.3133e+00	3.9011e-01
90.9	8.5905e+00	8.1964e+00	3.9411e-01
100.9	8.3704e+00	7.9682e+00	4.0218e-01
110.9	8.1630e+00	7.7529e+00	4.1013e-01
120.9	7.9737e+00	7.5560e+00	4.1771e-01
130.9	7.8071e+00	7.3824e+00	4.2465e-01
140.9	7.6668e+00	7.2361e+00	4.3070e-01

$^{27}\text{Al}(d, d)^{27}\text{Al}$, 1st excited state			
Q-value 0.00, E = 10, Ex = 0.84			
deg	total energy	E - dE	dE
35.9	8.8902e+00	8.5065e+00	3.8369e-01
40.9	8.8150e+00	8.4287e+00	3.8625e-01
45.9	8.7326e+00	8.3435e+00	3.8909e-01
49.1	8.6764e+00	8.2853e+00	3.9106e-01
50.9	8.6437e+00	8.2515e+00	3.9221e-01
55.9	8.5493e+00	8.1537e+00	3.9559e-01
60.9	8.4502e+00	8.0510e+00	3.9921e-01
65.9	8.3474e+00	7.9443e+00	4.0304e-01
70.9	8.2418e+00	7.8347e+00	4.0707e-01
75.9	8.1344e+00	7.7231e+00	4.1126e-01
80.9	8.0260e+00	7.6104e+00	4.1559e-01
85.9	7.9175e+00	7.4975e+00	4.2002e-01
90.9	7.8098e+00	7.3853e+00	4.2453e-01
100.9	7.6001e+00	7.1665e+00	4.3364e-01
110.9	7.4027e+00	6.9601e+00	4.4263e-01
120.9	7.2228e+00	6.7716e+00	4.5121e-01
130.9	7.0646e+00	6.6055e+00	4.5907e-01
140.9	6.9315e+00	6.4656e+00	4.6592e-01

$^{27}\text{Al}(d, d)^{27}\text{Al}$, 2nd excited state			
Q-value 0.00, E = 10, Ex = 1.01			
deg	total energy	E - dE	dE
35.9	8.7219e+00	8.3324e+00	3.8946e-01
40.9	8.6474e+00	8.2553e+00	3.9208e-01
45.9	8.5657e+00	8.1707e+00	3.9500e-01
49.1	8.5100e+00	8.1130e+00	3.9702e-01
50.9	8.4776e+00	8.0794e+00	3.9820e-01
55.9	8.3841e+00	7.9824e+00	4.0167e-01
60.9	8.2859e+00	7.8806e+00	4.0538e-01
65.9	8.1841e+00	7.7748e+00	4.0931e-01
70.9	8.0795e+00	7.6661e+00	4.1344e-01
75.9	7.9731e+00	7.5554e+00	4.1773e-01
80.9	7.8658e+00	7.4436e+00	4.2218e-01
85.9	7.7584e+00	7.3317e+00	4.2673e-01
90.9	7.6518e+00	7.2205e+00	4.3135e-01
100.9	7.4443e+00	7.0036e+00	4.4071e-01
110.9	7.2490e+00	6.7990e+00	4.4994e-01
120.9	7.0710e+00	6.6123e+00	4.5874e-01
130.9	6.9146e+00	6.4477e+00	4.6681e-01
140.9	6.7830e+00	6.3091e+00	4.7386e-01

$^{27}\text{Al}(d, d)^{27}\text{Al}$, 3rd excited state			
Q-value 0.00, E = 10, Ex = 2.21			
deg	total energy	E - dE	dE
35.9	7.5308e+00	7.0941e+00	4.3675e-01
40.9	7.4613e+00	7.0214e+00	4.3992e-01
45.9	7.3851e+00	6.9416e+00	4.4346e-01
49.1	7.3332e+00	6.8873e+00	4.4590e-01
50.9	7.3030e+00	6.8557e+00	4.4734e-01
55.9	7.2159e+00	6.7643e+00	4.5154e-01
60.9	7.1246e+00	6.6685e+00	4.5605e-01
65.9	7.0299e+00	6.5691e+00	4.6083e-01
70.9	6.9328e+00	6.4669e+00	4.6586e-01
75.9	6.8341e+00	6.3630e+00	4.7110e-01
80.9	6.7346e+00	6.2581e+00	4.7651e-01
85.9	6.6352e+00	6.1531e+00	4.8207e-01
90.9	6.5366e+00	6.0489e+00	4.8773e-01
100.9	6.3450e+00	5.8458e+00	4.9918e-01
110.9	6.1651e+00	5.6546e+00	5.1052e-01
120.9	6.0016e+00	5.4802e+00	5.2135e-01
130.9	5.8581e+00	5.3268e+00	5.3130e-01
140.9	5.7376e+00	5.1976e+00	5.4000e-01

$^{27}\text{Al}(d, d)^{27}\text{Al}$, 4th excited state			
Q-value 0.00, E = 10, Ex = 2.73			
deg	total energy	E - dE	dE
35.9	7.0128e+00	6.5511e+00	4.6171e-01
40.9	6.9455e+00	6.4803e+00	4.6519e-01
45.9	6.8718e+00	6.4028e+00	4.6908e-01
49.1	6.8217e+00	6.3499e+00	4.7176e-01
50.9	6.7925e+00	6.3192e+00	4.7334e-01
55.9	6.7083e+00	6.2303e+00	4.7797e-01
60.9	6.6201e+00	6.1372e+00	4.8293e-01
65.9	6.5288e+00	6.0406e+00	4.8819e-01
70.9	6.4351e+00	5.9413e+00	4.9373e-01
75.9	6.3399e+00	5.8404e+00	4.9950e-01
80.9	6.2440e+00	5.7385e+00	5.0548e-01
85.9	6.1483e+00	5.6367e+00	5.1161e-01
90.9	6.0534e+00	5.5356e+00	5.1786e-01
100.9	5.8691e+00	5.3386e+00	5.3052e-01
110.9	5.6964e+00	5.1533e+00	5.4306e-01
120.9	5.5394e+00	4.9843e+00	5.5506e-01
130.9	5.4019e+00	4.8358e+00	5.6611e-01
140.9	5.2865e+00	4.7108e+00	5.7577e-01

$^{27}\text{Al}(d, d)^{27}\text{Al}$, 5th excited state			
Q-value 0.00, E = 10, Ex = 2.98			
deg	total energy	E - dE	dE
35.9	6.7632e+00	6.2883e+00	4.7494e-01
40.9	6.6971e+00	6.2185e+00	4.7859e-01
45.9	6.6246e+00	6.1420e+00	4.8267e-01
49.1	6.5753e+00	6.0898e+00	4.8549e-01
50.9	6.5467e+00	6.0595e+00	4.8715e-01
55.9	6.4640e+00	5.9720e+00	4.9200e-01
60.9	6.3773e+00	5.8801e+00	4.9721e-01
65.9	6.2876e+00	5.7848e+00	5.0274e-01
70.9	6.1956e+00	5.6870e+00	5.0856e-01
75.9	6.1021e+00	5.5875e+00	5.1463e-01
80.9	6.0081e+00	5.4872e+00	5.2091e-01
85.9	5.9141e+00	5.3868e+00	5.2736e-01
90.9	5.8211e+00	5.2872e+00	5.3394e-01
100.9	5.6405e+00	5.0932e+00	5.4726e-01
110.9	5.4712e+00	4.9107e+00	5.6048e-01
120.9	5.3175e+00	4.7444e+00	5.7313e-01
130.9	5.1829e+00	4.5981e+00	5.8478e-01
140.9	5.0701e+00	4.4751e+00	5.9498e-01

$^{27}\text{Al}(d, d)^{27}\text{Al}$, 7th excited state			
Q-value 0.00, E = 10, Ex = 3.68			
deg	total energy	E - dE	dE
35.9	6.0626e+00	5.5454e+00	5.1725e-01
40.9	5.9997e+00	5.4783e+00	5.2147e-01
45.9	5.9309e+00	5.4047e+00	5.2619e-01
49.1	5.8841e+00	5.3546e+00	5.2946e-01
50.9	5.8569e+00	5.3255e+00	5.3138e-01
55.9	5.7784e+00	5.2414e+00	5.3702e-01
60.9	5.6963e+00	5.1532e+00	5.4306e-01
65.9	5.6113e+00	5.0618e+00	5.4949e-01
70.9	5.5243e+00	4.9680e+00	5.5626e-01
75.9	5.4359e+00	4.8726e+00	5.6333e-01
80.9	5.3471e+00	4.7764e+00	5.7065e-01
85.9	5.2584e+00	4.6802e+00	5.7818e-01
90.9	5.1707e+00	4.5848e+00	5.8587e-01
100.9	5.0006e+00	4.3991e+00	6.0148e-01
110.9	4.8415e+00	4.2246e+00	6.1699e-01
120.9	4.6974e+00	4.0655e+00	6.3189e-01
130.9	4.5714e+00	3.9258e+00	6.4563e-01
140.9	4.4659e+00	3.8082e+00	6.5769e-01

$^{27}\text{Al}(d, d)^{27}\text{Al}$, 8th excited state			
Q-value 0.00, E = 10, Ex = 3.96			
deg	total energy	E - dE	dE
35.9	5.7815e+00	5.2447e+00	5.3679e-01
40.9	5.7200e+00	5.1787e+00	5.4130e-01
45.9	5.6527e+00	5.1064e+00	5.4634e-01
49.1	5.6069e+00	5.0571e+00	5.4982e-01
50.9	5.5803e+00	5.0285e+00	5.5187e-01
55.9	5.5036e+00	4.9458e+00	5.5789e-01
60.9	5.4234e+00	4.8591e+00	5.6434e-01
65.9	5.3404e+00	4.7692e+00	5.7121e-01
70.9	5.2554e+00	4.6769e+00	5.7844e-01
75.9	5.1692e+00	4.5832e+00	5.8601e-01
80.9	5.0825e+00	4.4886e+00	5.9384e-01
85.9	4.9960e+00	4.3941e+00	6.0191e-01
90.9	4.9105e+00	4.3004e+00	6.1015e-01
100.9	4.7449e+00	4.1180e+00	6.2689e-01
110.9	4.5901e+00	3.9465e+00	6.4355e-01
120.9	4.4499e+00	3.7904e+00	6.5956e-01
130.9	4.3275e+00	3.6531e+00	6.7436e-01
140.9	4.2251e+00	3.5377e+00	6.8736e-01

$^{27}\text{Al}(d, d)^{27}\text{Al}$, 9th excited state			
Q-value 0.00, E = 10, Ex = 4.05			
deg	total energy	E - dE	dE
35.9	5.6910e+00	5.1476e+00	5.4346e-01
40.9	5.6300e+00	5.0819e+00	5.4806e-01
45.9	5.5632e+00	5.0100e+00	5.5321e-01
49.1	5.5177e+00	4.9610e+00	5.5677e-01
50.9	5.4913e+00	4.9325e+00	5.5886e-01
55.9	5.4152e+00	4.8502e+00	5.6501e-01
60.9	5.3356e+00	4.7640e+00	5.7161e-01
65.9	5.2532e+00	4.6746e+00	5.7863e-01
70.9	5.1689e+00	4.5829e+00	5.8603e-01
75.9	5.0834e+00	4.4896e+00	5.9376e-01
80.9	4.9974e+00	4.3956e+00	6.0178e-01
85.9	4.9117e+00	4.3017e+00	6.1003e-01
90.9	4.8269e+00	4.2085e+00	6.1846e-01
100.9	4.6627e+00	4.0271e+00	6.3560e-01
110.9	4.5093e+00	3.8566e+00	6.5266e-01
120.9	4.3704e+00	3.7014e+00	6.6908e-01
130.9	4.2492e+00	3.5649e+00	6.8424e-01
140.9	4.1478e+00	3.4502e+00	6.9757e-01

$^{27}\text{Al}(d,t)^{26}\text{Al}$			
Q-value -6.80, E = 10, Ex = 0.00			
deg	total energy	E - dE	dE
35.9	2.9156e+00	1.6805e+00	1.2351e+00
40.9	2.8592e+00	1.6036e+00	1.2555e+00
45.9	2.7979e+00	1.5192e+00	1.2787e+00
49.1	2.7565e+00	1.4616e+00	1.2949e+00
50.9	2.7326e+00	1.4281e+00	1.3045e+00
55.9	2.6640e+00	1.3311e+00	1.3330e+00
60.9	2.5931e+00	1.2290e+00	1.3641e+00
65.9	2.5207e+00	1.1229e+00	1.3977e+00
70.9	2.4473e+00	1.0138e+00	1.4336e+00
75.9	2.3740e+00	9.0266e-01	1.4713e+00
80.9	2.3012e+00	7.9099e-01	1.5102e+00
85.9	2.2296e+00	6.8061e-01	1.5490e+00
90.9	2.1598e+00	5.7414e-01	1.5857e+00
100.9	2.0275e+00	3.9048e-01	1.6370e+00
110.9	1.9074e+00	2.8272e-01	1.6247e+00
120.9	1.8017e+00	2.4818e-01	1.5535e+00

$^{27}\text{Al}(d,t)^{26}\text{Al}$, 1st excited state			
Q-value -6.80, E = 10, Ex = 0.23			
deg	total energy	E - dE	dE
35.9	2.6787e+00	1.3520e+00	1.3268e+00
40.9	2.6242e+00	1.2740e+00	1.3502e+00
45.9	2.5652e+00	1.1884e+00	1.3768e+00
49.1	2.5254e+00	1.1299e+00	1.3955e+00
50.9	2.5024e+00	1.0959e+00	1.4065e+00
55.9	2.4365e+00	9.9744e-01	1.4390e+00
60.9	2.3684e+00	8.9420e-01	1.4742e+00
65.9	2.2989e+00	7.8750e-01	1.5114e+00
70.9	2.2287e+00	6.7922e-01	1.5495e+00
75.9	2.1585e+00	5.7218e-01	1.5863e+00
80.9	2.0890e+00	4.7093e-01	1.6181e+00
85.9	2.0208e+00	3.8248e-01	1.6383e+00
90.9	1.9543e+00	3.1532e-01	1.6390e+00
100.9	1.8287e+00	2.5321e-01	1.5755e+00

$^{27}\text{Al}(d,t)^{26}\text{Al}$, 2nd excited state			
Q-value -6.80, E = 10, Ex = 0.42			
deg	total energy	E - dE	dE
35.9	2.4818e+00	1.0653e+00	1.4165e+00
40.9	2.4291e+00	9.8625e-01	1.4428e+00
45.9	2.3720e+00	8.9961e-01	1.4723e+00
49.1	2.3335e+00	8.4068e-01	1.4928e+00
50.9	2.3112e+00	8.0650e-01	1.5047e+00
55.9	2.2477e+00	7.0845e-01	1.5392e+00
60.9	2.1820e+00	6.0773e-01	1.5743e+00
65.9	2.1151e+00	5.0803e-01	1.6070e+00
70.9	2.0476e+00	4.1538e-01	1.6322e+00
75.9	1.9801e+00	3.3867e-01	1.6415e+00
80.9	1.9135e+00	2.8624e-01	1.6272e+00
85.9	1.8481e+00	2.5814e-01	1.5900e+00

$^{27}\text{Al}(d,^3\text{He})^{26}\text{Mg}$			
Q-value -2.78, E = 10, Ex = 0.00			
deg	total energy	E - dE	dE
35.9	6.9221e+00	4.0604e+00	2.8617e+00
40.9	6.8390e+00	3.9405e+00	2.8985e+00
45.9	6.7483e+00	3.8080e+00	2.9403e+00
49.1	6.6866e+00	3.7169e+00	2.9697e+00
50.9	6.6508e+00	3.6637e+00	2.9871e+00
55.9	6.5477e+00	3.5086e+00	3.0390e+00
60.9	6.4399e+00	3.3439e+00	3.0961e+00
65.9	6.3287e+00	3.1703e+00	3.1584e+00
70.9	6.2150e+00	2.9890e+00	3.2260e+00
75.9	6.1000e+00	2.8010e+00	3.2990e+00
80.9	5.9845e+00	2.6070e+00	3.3775e+00
85.9	5.8697e+00	2.4080e+00	3.4617e+00
90.9	5.7563e+00	2.2048e+00	3.5515e+00
100.9	5.5374e+00	1.7886e+00	3.7488e+00
110.9	5.3337e+00	1.3638e+00	3.9699e+00
120.9	5.1501e+00	9.3755e-01	4.2126e+00
130.9	4.9904e+00	5.3464e-01	4.4557e+00
140.9	4.8572e+00	2.8077e-01	4.5764e+00

$^{27}\text{Al}(d, ^3\text{He})^{26}\text{Mg}$, 1st excited state			
Q-value -2.78, E = 10, Ex = 1.81			
deg	total energy	E - dE	dE
35.9	5.1421e+00	9.1788e-01	4.2242e+00
40.9	5.0695e+00	7.3579e-01	4.3338e+00
45.9	4.9904e+00	5.3474e-01	4.4557e+00
49.1	4.9367e+00	4.0839e-01	4.5283e+00
50.9	4.9056e+00	3.4691e-01	4.5587e+00
55.9	4.8161e+00	2.5370e-01	4.5624e+00
60.9	4.7229e+00	2.3901e-01	4.4839e+00
65.9	4.6269e+00	2.3783e-01	4.3891e+00

$^{27}\text{Al}(d, \alpha)^{25}\text{Mg}$, 1st excited state			
Q-value 6.71, E = 10, Ex = 0.59			
deg	total energy	E - dE	dE
35.9	1.5150e+01	1.3378e+01	1.7713e+00
40.9	1.5011e+01	1.3226e+01	1.7848e+00
45.9	1.4858e+01	1.3058e+01	1.7999e+00
49.1	1.4755e+01	1.2944e+01	1.8103e+00
50.9	1.4694e+01	1.2878e+01	1.8165e+00
55.9	1.4520e+01	1.2686e+01	1.8345e+00
60.9	1.4337e+01	1.2484e+01	1.8538e+00
65.9	1.4148e+01	1.2274e+01	1.8743e+00
70.9	1.3954e+01	1.2058e+01	1.8959e+00
75.9	1.3756e+01	1.1838e+01	1.9185e+00
80.9	1.3557e+01	1.1615e+01	1.9420e+00
85.9	1.3358e+01	1.1392e+01	1.9661e+00
90.9	1.3161e+01	1.1171e+01	1.9907e+00
100.9	1.2778e+01	1.0737e+01	2.0407e+00
110.9	1.2418e+01	1.0327e+01	2.0905e+00
120.9	1.2090e+01	9.9521e+00	2.1383e+00
130.9	1.1803e+01	9.6206e+00	2.1826e+00
140.9	1.1562e+01	9.3405e+00	2.2215e+00

$^{27}\text{Al}(d, \alpha)^{25}\text{Mg}$			
Q-value 6.71, E = 10, Ex = 0.00			
deg	total energy	E - dE	dE
35.9	1.5693e+01	1.3972e+01	1.7208e+00
40.9	1.5552e+01	1.3818e+01	1.7336e+00
45.9	1.5397e+01	1.3649e+01	1.7479e+00
49.1	1.5291e+01	1.3533e+01	1.7578e+00
50.9	1.5230e+01	1.3466e+01	1.7637e+00
55.9	1.5053e+01	1.3272e+01	1.7807e+00
60.9	1.4867e+01	1.3068e+01	1.7991e+00
65.9	1.4674e+01	1.2856e+01	1.8185e+00
70.9	1.4476e+01	1.2637e+01	1.8390e+00
75.9	1.4275e+01	1.2415e+01	1.8604e+00
80.9	1.4073e+01	1.2190e+01	1.8826e+00
85.9	1.3870e+01	1.1965e+01	1.9054e+00
90.9	1.3669e+01	1.1740e+01	1.9287e+00
100.9	1.3278e+01	1.1302e+01	1.9760e+00
110.9	1.2911e+01	1.0888e+01	2.0230e+00
120.9	1.2577e+01	1.0509e+01	2.0681e+00
130.9	1.2284e+01	1.0174e+01	2.1098e+00
140.9	1.2037e+01	9.8909e+00	2.1464e+00

$^{27}\text{Al}(d, \alpha)^{25}\text{Mg}$, 2nd excited state			
Q-value 6.71, E = 10, Ex = 0.97			
deg	total energy	E - dE	dE
35.9	1.4799e+01	1.2994e+01	1.8058e+00
40.9	1.4662e+01	1.2842e+01	1.8198e+00
45.9	1.4511e+01	1.2676e+01	1.8354e+00
49.1	1.4409e+01	1.2562e+01	1.8462e+00
50.9	1.4349e+01	1.2496e+01	1.8525e+00
55.9	1.4177e+01	1.2306e+01	1.8712e+00
60.9	1.3996e+01	1.2105e+01	1.8912e+00
65.9	1.3809e+01	1.1897e+01	1.9124e+00
70.9	1.3617e+01	1.1682e+01	1.9348e+00
75.9	1.3422e+01	1.1464e+01	1.9583e+00
80.9	1.3225e+01	1.1243e+01	1.9826e+00
85.9	1.3029e+01	1.1021e+01	2.0076e+00
90.9	1.2834e+01	1.0801e+01	2.0331e+00
100.9	1.2456e+01	1.0371e+01	2.0851e+00
110.9	1.2100e+01	9.9635e+00	2.1369e+00
120.9	1.1777e+01	9.5907e+00	2.1867e+00
130.9	1.1494e+01	9.2613e+00	2.2328e+00
140.9	1.1256e+01	8.9829e+00	2.2733e+00

$^{27}\text{Al}(d, \alpha)^{25}\text{Mg}$, 3rd excited state				$^{27}\text{Al}(d, \alpha)^{25}\text{Mg}$, 5th excited state			
Q-value 6.71, E = 10, Ex = 1.61				Q-value 6.71, E = 10, Ex = 2.56			
deg	total energy	E - dE	dE	deg	total energy	E - dE	dE
35.9	1.4209e+01	1.2341e+01	1.8676e+00	35.9	1.3331e+01	1.1361e+01	1.9695e+00
40.9	1.4074e+01	1.2192e+01	1.8825e+00	40.9	1.3200e+01	1.1214e+01	1.9858e+00
45.9	1.3926e+01	1.2027e+01	1.8990e+00	45.9	1.3056e+01	1.1052e+01	2.0041e+00
49.1	1.3826e+01	1.1915e+01	1.9105e+00	49.1	1.2959e+01	1.0942e+01	2.0167e+00
50.9	1.3767e+01	1.1850e+01	1.9173e+00	50.9	1.2902e+01	1.0878e+01	2.0242e+00
55.9	1.3598e+01	1.1661e+01	1.9371e+00	55.9	1.2738e+01	1.0692e+01	2.0460e+00
60.9	1.3421e+01	1.1463e+01	1.9584e+00	60.9	1.2567e+01	1.0497e+01	2.0695e+00
65.9	1.3238e+01	1.1257e+01	1.9810e+00	65.9	1.2389e+01	1.0294e+01	2.0946e+00
70.9	1.3050e+01	1.1045e+01	2.0049e+00	70.9	1.2207e+01	1.0086e+01	2.1210e+00
75.9	1.2859e+01	1.0829e+01	2.0299e+00	75.9	1.2022e+01	9.8731e+00	2.1487e+00
80.9	1.2666e+01	1.0610e+01	2.0558e+00	80.9	1.1836e+01	9.6582e+00	2.1775e+00
85.9	1.2474e+01	1.0391e+01	2.0825e+00	85.9	1.1650e+01	9.4426e+00	2.2071e+00
90.9	1.2283e+01	1.0174e+01	2.1098e+00	90.9	1.1466e+01	9.2282e+00	2.2375e+00
100.9	1.1913e+01	9.7477e+00	2.1654e+00	100.9	1.1108e+01	8.8087e+00	2.2995e+00
110.9	1.1566e+01	9.3450e+00	2.2208e+00	110.9	1.0773e+01	8.4118e+00	2.3615e+00
120.9	1.1250e+01	8.9761e+00	2.2743e+00	120.9	1.0469e+01	8.0478e+00	2.4214e+00
130.9	1.0974e+01	8.6500e+00	2.3239e+00	130.9	1.0203e+01	7.7259e+00	2.4772e+00
140.9	1.0742e+01	8.3744e+00	2.3675e+00	140.9	9.9799e+00	7.4535e+00	2.5264e+00

$^{27}\text{Al}(d, \alpha)^{25}\text{Mg}$, 4th excited state				$^{27}\text{Al}(d, \alpha)^{25}\text{Mg}$, 6th excited state			
Q-value 6.71, E = 10, Ex = 1.96				Q-value 6.71, E = 10, Ex = 2.74			
deg	total energy	E - dE	dE	deg	total energy	E - dE	dE
35.9	1.3886e+01	1.1982e+01	1.9037e+00	35.9	1.3164e+01	1.1174e+01	1.9903e+00
40.9	1.3752e+01	1.1833e+01	1.9190e+00	40.9	1.3034e+01	1.1027e+01	2.0070e+00
45.9	1.3606e+01	1.1670e+01	1.9362e+00	45.9	1.2891e+01	1.0866e+01	2.0256e+00
49.1	1.3506e+01	1.1558e+01	1.9481e+00	49.1	1.2794e+01	1.0756e+01	2.0385e+00
50.9	1.3448e+01	1.1493e+01	1.9551e+00	50.9	1.2738e+01	1.0692e+01	2.0461e+00
55.9	1.3281e+01	1.1306e+01	1.9756e+00	55.9	1.2575e+01	1.0507e+01	2.0684e+00
60.9	1.3106e+01	1.1109e+01	1.9976e+00	60.9	1.2405e+01	1.0312e+01	2.0924e+00
65.9	1.2925e+01	1.0904e+01	2.0211e+00	65.9	1.2228e+01	1.0110e+01	2.1179e+00
70.9	1.2739e+01	1.0693e+01	2.0459e+00	70.9	1.2047e+01	9.9021e+00	2.1449e+00
75.9	1.2550e+01	1.0479e+01	2.0718e+00	75.9	1.1863e+01	9.6901e+00	2.1732e+00
80.9	1.2360e+01	1.0262e+01	2.0987e+00	80.9	1.1678e+01	9.4757e+00	2.2025e+00
85.9	1.2170e+01	1.0044e+01	2.1264e+00	85.9	1.1494e+01	9.2608e+00	2.2328e+00
90.9	1.1982e+01	9.8273e+00	2.1548e+00	90.9	1.1311e+01	9.0469e+00	2.2639e+00
100.9	1.1617e+01	9.4040e+00	2.2125e+00	100.9	1.0956e+01	8.6286e+00	2.3272e+00
110.9	1.1274e+01	9.0035e+00	2.2703e+00	110.9	1.0623e+01	8.2326e+00	2.3906e+00
120.9	1.0962e+01	8.6365e+00	2.3259e+00	120.9	1.0321e+01	7.8694e+00	2.4520e+00
130.9	1.0690e+01	8.3121e+00	2.3776e+00	130.9	1.0057e+01	7.5481e+00	2.5091e+00
140.9	1.0461e+01	8.0378e+00	2.4232e+00	140.9	9.8358e+00	7.2762e+00	2.5595e+00

$^{27}\text{Al}(d, \alpha)^{25}\text{Mg}$, 8th excited state				$^{27}\text{Al}(d, \alpha)^{25}\text{Mg}$, 12th excited state			
Q-value 6.71, E = 10, Ex = 3.41				Q-value 6.71, E = 10, Ex = 4.06			
deg	total energy	E - dE	dE	deg	total energy	E - dE	dE
35.9	1.2543e+01	1.0470e+01	2.0728e+00	35.9	1.1940e+01	9.7783e+00	2.1613e+00
40.9	1.2416e+01	1.0325e+01	2.0908e+00	40.9	1.1815e+01	9.6344e+00	2.1807e+00
45.9	1.2276e+01	1.0166e+01	2.1108e+00	45.9	1.1679e+01	9.4765e+00	2.2024e+00
49.1	1.2182e+01	1.0057e+01	2.1248e+00	49.1	1.1586e+01	9.3688e+00	2.2175e+00
50.9	1.2126e+01	9.9935e+00	2.1329e+00	50.9	1.1532e+01	9.3061e+00	2.2264e+00
55.9	1.1967e+01	9.8104e+00	2.1570e+00	55.9	1.1377e+01	9.1247e+00	2.2525e+00
60.9	1.1801e+01	9.6179e+00	2.1830e+00	60.9	1.1215e+01	8.9340e+00	2.2806e+00
65.9	1.1629e+01	9.4179e+00	2.2106e+00	65.9	1.1046e+01	8.7358e+00	2.3106e+00
70.9	1.1452e+01	9.2121e+00	2.2398e+00	70.9	1.0874e+01	8.5318e+00	2.3424e+00
75.9	1.1273e+01	9.0022e+00	2.2704e+00	75.9	1.0699e+01	8.3236e+00	2.3757e+00
80.9	1.1092e+01	8.7899e+00	2.3023e+00	80.9	1.0524e+01	8.1131e+00	2.4105e+00
85.9	1.0912e+01	8.5770e+00	2.3352e+00	85.9	1.0348e+01	7.9018e+00	2.4464e+00
90.9	1.0734e+01	8.3651e+00	2.3690e+00	90.9	1.0175e+01	7.6914e+00	2.4833e+00
100.9	1.0388e+01	7.9504e+00	2.4380e+00	100.9	9.8383e+00	7.2793e+00	2.5590e+00
110.9	1.0065e+01	7.5575e+00	2.5074e+00	110.9	9.5237e+00	6.8886e+00	2.6352e+00
120.9	9.7715e+00	7.1969e+00	2.5747e+00	120.9	9.2388e+00	6.5294e+00	2.7094e+00
130.9	9.5149e+00	6.8775e+00	2.6374e+00	130.9	8.9897e+00	6.2108e+00	2.7789e+00
140.9	9.2999e+00	6.6069e+00	2.6930e+00	140.9	8.7812e+00	5.9405e+00	2.8407e+00

$^{27}\text{Al}(d, \alpha)^{25}\text{Mg}$, 10th excited state				$^{27}\text{Al}(d, \alpha)^{25}\text{Mg}$, 13th excited state			
Q-value 6.71, E = 10, Ex = 3.91				Q-value 6.71, E = 10, Ex = 4.28			
deg	total energy	E - dE	dE	deg	total energy	E - dE	dE
35.9	1.2079e+01	9.9389e+00	2.1401e+00	35.9	1.1735e+01	9.5416e+00	2.1934e+00
40.9	1.1954e+01	9.7947e+00	2.1591e+00	40.9	1.1612e+01	9.3982e+00	2.2134e+00
45.9	1.1817e+01	9.6365e+00	2.1804e+00	45.9	1.1476e+01	9.2408e+00	2.2357e+00
49.1	1.1724e+01	9.5285e+00	2.1952e+00	49.1	1.1385e+01	9.1334e+00	2.2512e+00
50.9	1.1670e+01	9.4657e+00	2.2039e+00	50.9	1.1331e+01	9.0709e+00	2.2603e+00
55.9	1.1513e+01	9.2839e+00	2.2295e+00	55.9	1.1177e+01	8.8900e+00	2.2872e+00
60.9	1.1350e+01	9.0929e+00	2.2571e+00	60.9	1.1016e+01	8.6999e+00	2.3161e+00
65.9	1.1181e+01	8.8943e+00	2.2865e+00	65.9	1.0849e+01	8.5022e+00	2.3471e+00
70.9	1.1008e+01	8.6898e+00	2.3177e+00	70.9	1.0678e+01	8.2987e+00	2.3798e+00
75.9	1.0832e+01	8.4813e+00	2.3504e+00	75.9	1.0505e+01	8.0911e+00	2.4142e+00
80.9	1.0655e+01	8.2704e+00	2.3844e+00	80.9	1.0331e+01	7.8810e+00	2.4500e+00
85.9	1.0478e+01	8.0588e+00	2.4196e+00	85.9	1.0157e+01	7.6702e+00	2.4871e+00
90.9	1.0304e+01	7.8481e+00	2.4557e+00	90.9	9.9853e+00	7.4602e+00	2.5252e+00
100.9	9.9652e+00	7.4355e+00	2.5297e+00	100.9	9.6522e+00	7.0488e+00	2.6034e+00
110.9	9.6486e+00	7.0443e+00	2.6043e+00	110.9	9.3407e+00	6.6584e+00	2.6823e+00
120.9	9.3617e+00	6.6849e+00	2.6768e+00	120.9	9.0586e+00	6.2994e+00	2.7592e+00
130.9	9.1108e+00	6.3662e+00	2.7445e+00	130.9	8.8121e+00	5.9808e+00	2.8313e+00
140.9	8.9008e+00	6.0960e+00	2.8048e+00	140.9	8.6058e+00	5.7104e+00	2.8955e+00

$^{27}\text{Al}(d, \alpha)^{25}\text{Mg}$, 14th excited state				$^{27}\text{Al}(d, \alpha)^{25}\text{Mg}$, 16th excited state			
Q-value 6.71, E = 10, Ex = 4.36				Q-value 6.71, E = 10, Ex = 5.01			
deg	total energy	E - dE	dE	deg	total energy	E - dE	dE
35.9	1.1661e+01	9.4553e+00	2.2054e+00	35.9	1.1055e+01	8.7463e+00	2.3090e+00
40.9	1.1538e+01	9.3120e+00	2.2255e+00	40.9	1.0935e+01	8.6042e+00	2.3310e+00
45.9	1.1403e+01	9.1548e+00	2.2481e+00	45.9	1.0804e+01	8.4482e+00	2.3556e+00
49.1	1.1311e+01	9.0474e+00	2.2638e+00	49.1	1.0714e+01	8.3417e+00	2.3728e+00
50.9	1.1258e+01	8.9850e+00	2.2730e+00	50.9	1.0663e+01	8.2797e+00	2.3829e+00
55.9	1.1104e+01	8.8043e+00	2.3001e+00	55.9	1.0513e+01	8.1003e+00	2.4126e+00
60.9	1.0944e+01	8.6144e+00	2.3294e+00	60.9	1.0356e+01	7.9117e+00	2.4447e+00
65.9	1.0778e+01	8.4169e+00	2.3607e+00	65.9	1.0195e+01	7.7155e+00	2.4790e+00
70.9	1.0607e+01	8.2135e+00	2.3938e+00	70.9	1.0029e+01	7.5134e+00	2.5154e+00
75.9	1.0435e+01	8.0061e+00	2.4285e+00	75.9	9.8608e+00	7.3070e+00	2.5537e+00
80.9	1.0261e+01	7.7962e+00	2.4648e+00	80.9	9.6919e+00	7.0982e+00	2.5937e+00
85.9	1.0088e+01	7.5855e+00	2.5023e+00	85.9	9.5236e+00	6.8883e+00	2.6352e+00
90.9	9.9165e+00	7.3756e+00	2.5409e+00	90.9	9.3571e+00	6.6792e+00	2.6780e+00
100.9	9.5845e+00	6.9645e+00	2.6200e+00	100.9	9.0348e+00	6.2688e+00	2.7660e+00
110.9	9.2742e+00	6.5742e+00	2.6999e+00	110.9	8.7338e+00	5.8786e+00	2.8552e+00
120.9	8.9931e+00	6.2153e+00	2.7779e+00	120.9	8.4615e+00	5.5188e+00	2.9427e+00
130.9	8.7476e+00	5.8966e+00	2.8510e+00	130.9	8.2238e+00	5.1986e+00	3.0252e+00
140.9	8.5421e+00	5.6260e+00	2.9161e+00	140.9	8.0251e+00	4.9260e+00	3.0991e+00

$^{27}\text{Al}(d, \alpha)^{25}\text{Mg}$, 15th excited state			
Q-value 6.71, E = 10, Ex = 4.71			
deg	total energy	E - dE	dE
35.9	1.1335e+01	9.0752e+00	2.2597e+00
40.9	1.1213e+01	8.9326e+00	2.2808e+00
45.9	1.1080e+01	8.7760e+00	2.3045e+00
49.1	1.0990e+01	8.6691e+00	2.3209e+00
50.9	1.0938e+01	8.6070e+00	2.3306e+00
55.9	1.0786e+01	8.4270e+00	2.3590e+00
60.9	1.0628e+01	8.2378e+00	2.3898e+00
65.9	1.0464e+01	8.0411e+00	2.4226e+00
70.9	1.0296e+01	7.8385e+00	2.4574e+00
75.9	1.0126e+01	7.6317e+00	2.4940e+00
80.9	9.9546e+00	7.4224e+00	2.5322e+00
85.9	9.7840e+00	7.2123e+00	2.5717e+00
90.9	9.6153e+00	7.0029e+00	2.6124e+00
100.9	9.2885e+00	6.5924e+00	2.6961e+00
110.9	8.9831e+00	6.2024e+00	2.7808e+00
120.9	8.7068e+00	5.8432e+00	2.8636e+00
130.9	8.4654e+00	5.5240e+00	2.9414e+00
140.9	8.2635e+00	5.2526e+00	3.0110e+00