

Kinematics Tables

13C3Hep15N in C13				13C3Hep15N1st in C13			
Q-value 10.67, E = 18.00, Ex = 0.00				Q-value 10.67, E = 18.00, Ex = 5.27			
deg	total energy	E - dE	dE	deg	total energy	E - dE	dE
18.9	2.8101e+01	2.8015e+01	8.6602e-02	18.9	2.2693e+01	2.2590e+01	1.0357e-01
20.9	2.8038e+01	2.7951e+01	8.6766e-02	20.9	2.2636e+01	2.2532e+01	1.0379e-01
23.9	2.7932e+01	2.7845e+01	8.7043e-02	23.9	2.2539e+01	2.2435e+01	1.0416e-01
25.9	2.7854e+01	2.7767e+01	8.7247e-02	25.9	2.2469e+01	2.2364e+01	1.0443e-01
28.9	2.7727e+01	2.7639e+01	8.7584e-02	28.9	2.2353e+01	2.2248e+01	1.0488e-01
30.9	2.7635e+01	2.7547e+01	8.7827e-02	30.9	2.2270e+01	2.2165e+01	1.0521e-01
33.9	2.7488e+01	2.7400e+01	8.8222e-02	33.9	2.2137e+01	2.2031e+01	1.0573e-01
35.9	2.7384e+01	2.7295e+01	8.8503e-02	35.9	2.2043e+01	2.1937e+01	1.0611e-01
38.9	2.7219e+01	2.7130e+01	8.8954e-02	38.9	2.1893e+01	2.1787e+01	1.0671e-01
40.9	2.7103e+01	2.7014e+01	8.9272e-02	40.9	2.1789e+01	2.1682e+01	1.0714e-01
43.9	2.6922e+01	2.6832e+01	8.9777e-02	43.9	2.1625e+01	2.1517e+01	1.0781e-01
45.9	2.6796e+01	2.6706e+01	9.0131e-02	45.9	2.1511e+01	2.1403e+01	1.0829e-01
48.9	2.6600e+01	2.6509e+01	9.0687e-02	48.9	2.1334e+01	2.1225e+01	1.0903e-01
50.9	2.6465e+01	2.6374e+01	9.1075e-02	50.9	2.1213e+01	2.1103e+01	1.0955e-01
55.9	2.6114e+01	2.6022e+01	9.2099e-02	55.9	2.0897e+01	2.0786e+01	1.1093e-01
53.8	2.6264e+01	2.6172e+01	9.1659e-02	53.8	2.1031e+01	2.0921e+01	1.1034e-01
60.9	2.5746e+01	2.5653e+01	9.3201e-02	60.9	2.0566e+01	2.0453e+01	1.1241e-01
65.9	2.5366e+01	2.5272e+01	9.4368e-02	65.9	2.0225e+01	2.0111e+01	1.1398e-01
70.9	2.4977e+01	2.4882e+01	9.5597e-02	70.9	1.9876e+01	1.9760e+01	1.1564e-01
75.9	2.4582e+01	2.4485e+01	9.6880e-02	75.9	1.9522e+01	1.9405e+01	1.1737e-01
80.9	2.4185e+01	2.4087e+01	9.8209e-02	80.9	1.9168e+01	1.9048e+01	1.1917e-01
90.9	2.3396e+01	2.3295e+01	1.0097e-01	90.9	1.8465e+01	1.8343e+01	1.2291e-01
120.9	2.1277e+01	2.1167e+01	1.0928e-01	120.9	1.6594e+01	1.6459e+01	1.3425e-01

13C3Hep15N2nd in C13				13C3Hep15N3rd in C13			
Q-value 10.67, E = 18.00, Ex = 5.30				Q-value 10.67, E = 18.00, Ex = 6.32			
deg	total energy	E - dE	dE	deg	total energy	E - dE	dE
18.9	2.2663e+01	2.2560e+01	1.0368e-01	18.9	2.1605e+01	2.1497e+01	1.0790e-01
20.9	2.2606e+01	2.2502e+01	1.0390e-01	20.9	2.1548e+01	2.1440e+01	1.0813e-01
23.9	2.2510e+01	2.2406e+01	1.0427e-01	23.9	2.1454e+01	2.1346e+01	1.0853e-01
25.9	2.2439e+01	2.2335e+01	1.0455e-01	25.9	2.1385e+01	2.1276e+01	1.0882e-01
28.9	2.2324e+01	2.2219e+01	1.0500e-01	28.9	2.1272e+01	2.1163e+01	1.0930e-01
30.9	2.2241e+01	2.2136e+01	1.0532e-01	30.9	2.1191e+01	2.1082e+01	1.0965e-01
33.9	2.2108e+01	2.2002e+01	1.0585e-01	33.9	2.1061e+01	2.0951e+01	1.1021e-01
35.9	2.2014e+01	2.1907e+01	1.0623e-01	35.9	2.0969e+01	2.0858e+01	1.1061e-01
38.9	2.1864e+01	2.1757e+01	1.0683e-01	38.9	2.0823e+01	2.0712e+01	1.1126e-01
40.9	2.1760e+01	2.1652e+01	1.0726e-01	40.9	2.0721e+01	2.0609e+01	1.1171e-01
43.9	2.1596e+01	2.1488e+01	1.0793e-01	43.9	2.0560e+01	2.0448e+01	1.1243e-01
45.9	2.1482e+01	2.1374e+01	1.0841e-01	45.9	2.0449e+01	2.0336e+01	1.1294e-01
48.9	2.1306e+01	2.1196e+01	1.0916e-01	48.9	2.0277e+01	2.0163e+01	1.1374e-01
50.9	2.1184e+01	2.1074e+01	1.0968e-01	50.9	2.0158e+01	2.0043e+01	1.1430e-01
55.9	2.0868e+01	2.0757e+01	1.1105e-01	55.9	1.9849e+01	1.9734e+01	1.1577e-01
53.8	2.1003e+01	2.0892e+01	1.1046e-01	53.8	1.9981e+01	1.9866e+01	1.1514e-01
60.9	2.0537e+01	2.0425e+01	1.1254e-01	60.9	1.9526e+01	1.9409e+01	1.1735e-01
65.9	2.0196e+01	2.0082e+01	1.1411e-01	65.9	1.9193e+01	1.9074e+01	1.1904e-01
70.9	1.9848e+01	1.9732e+01	1.1577e-01	70.9	1.8853e+01	1.8732e+01	1.2081e-01
75.9	1.9495e+01	1.9377e+01	1.1751e-01	75.9	1.8509e+01	1.8386e+01	1.2267e-01
80.9	1.9140e+01	1.9021e+01	1.1931e-01	80.9	1.8163e+01	1.8039e+01	1.2460e-01
90.9	1.8439e+01	1.8316e+01	1.2306e-01	90.9	1.7480e+01	1.7351e+01	1.2861e-01
120.9	1.6568e+01	1.6434e+01	1.3442e-01	120.9	1.5661e+01	1.5521e+01	1.4080e-01

13C3Hep15N4th in C13				13C3Hep15N5th in C13			
Q-value 10.67, E = 18.00, Ex = 7.16				Q-value 10.67, E = 18.00, Ex = 7.30			
deg	total energy	E - dE	dE	deg	total energy	E - dE	dE
18.9	2.0744e+01	2.0632e+01	1.1161e-01	18.9	2.0593e+01	2.0481e+01	1.1229e-01
20.9	2.0689e+01	2.0577e+01	1.1185e-01	20.9	2.0538e+01	2.0425e+01	1.1254e-01
23.9	2.0596e+01	2.0484e+01	1.1227e-01	23.9	2.0446e+01	2.0333e+01	1.1296e-01
25.9	2.0528e+01	2.0416e+01	1.1258e-01	25.9	2.0378e+01	2.0265e+01	1.1327e-01
28.9	2.0418e+01	2.0305e+01	1.1309e-01	28.9	2.0268e+01	2.0154e+01	1.1378e-01
30.9	2.0338e+01	2.0225e+01	1.1345e-01	30.9	2.0188e+01	2.0074e+01	1.1415e-01
33.9	2.0210e+01	2.0096e+01	1.1405e-01	33.9	2.0061e+01	1.9946e+01	1.1475e-01
35.9	2.0120e+01	2.0005e+01	1.1447e-01	35.9	1.9971e+01	1.9856e+01	1.1518e-01
38.9	1.9976e+01	1.9861e+01	1.1516e-01	38.9	1.9828e+01	1.9712e+01	1.1587e-01
40.9	1.9876e+01	1.9761e+01	1.1564e-01	40.9	1.9728e+01	1.9612e+01	1.1636e-01
43.9	1.9719e+01	1.9603e+01	1.1640e-01	43.9	1.9571e+01	1.9454e+01	1.1713e-01
45.9	1.9610e+01	1.9493e+01	1.1694e-01	45.9	1.9463e+01	1.9345e+01	1.1767e-01
48.9	1.9441e+01	1.9323e+01	1.1778e-01	48.9	1.9294e+01	1.9175e+01	1.1852e-01
50.9	1.9324e+01	1.9206e+01	1.1837e-01	50.9	1.9178e+01	1.9059e+01	1.1912e-01
55.9	1.9022e+01	1.8902e+01	1.1993e-01	55.9	1.8876e+01	1.8756e+01	1.2069e-01
53.8	1.9151e+01	1.9031e+01	1.1926e-01	53.8	1.9005e+01	1.8885e+01	1.2002e-01
60.9	1.8705e+01	1.8583e+01	1.2161e-01	60.9	1.8561e+01	1.8438e+01	1.2239e-01
65.9	1.8379e+01	1.8256e+01	1.2339e-01	65.9	1.8236e+01	1.8112e+01	1.2419e-01
70.9	1.8046e+01	1.7921e+01	1.2527e-01	70.9	1.7904e+01	1.7778e+01	1.2609e-01
75.9	1.7709e+01	1.7582e+01	1.2724e-01	75.9	1.7568e+01	1.7440e+01	1.2807e-01
80.9	1.7371e+01	1.7241e+01	1.2928e-01	80.9	1.7232e+01	1.7101e+01	1.3014e-01
90.9	1.6702e+01	1.6569e+01	1.3353e-01	90.9	1.6566e+01	1.6431e+01	1.3444e-01
120.9	1.4927e+01	1.4780e+01	1.4646e-01	120.9	1.4798e+01	1.4651e+01	1.4751e-01

13C3Hep15N6th in C13				13C3Hed14N in C13			
Q-value 10.67, E = 18.00, Ex = 7.57				Q-value 2.06, E = 18.00, Ex = 0.00			
deg	total energy	E - dE	dE	deg	total energy	E - dE	dE
18.9	2.0317e+01	2.0203e+01	1.1355e-01	18.9	1.9613e+01	1.9408e+01	2.0537e-01
20.9	2.0262e+01	2.0148e+01	1.1381e-01	20.9	1.9533e+01	1.9327e+01	2.0604e-01
23.9	2.0170e+01	2.0056e+01	1.1424e-01	23.9	1.9400e+01	1.9193e+01	2.0717e-01
25.9	2.0103e+01	1.9989e+01	1.1455e-01	25.9	1.9303e+01	1.9095e+01	2.0801e-01
28.9	1.9993e+01	1.9878e+01	1.1508e-01	28.9	1.9144e+01	1.8934e+01	2.0940e-01
30.9	1.9914e+01	1.9799e+01	1.1545e-01	30.9	1.9030e+01	1.8819e+01	2.1040e-01
33.9	1.9788e+01	1.9672e+01	1.1607e-01	33.9	1.8847e+01	1.8635e+01	2.1204e-01
35.9	1.9698e+01	1.9582e+01	1.1650e-01	35.9	1.8718e+01	1.8505e+01	2.1321e-01
38.9	1.9556e+01	1.9439e+01	1.1720e-01	38.9	1.8515e+01	1.8299e+01	2.1508e-01
40.9	1.9457e+01	1.9339e+01	1.1770e-01	40.9	1.8372e+01	1.8156e+01	2.1641e-01
43.9	1.9301e+01	1.9183e+01	1.1849e-01	43.9	1.8150e+01	1.7932e+01	2.1853e-01
45.9	1.9193e+01	1.9074e+01	1.1904e-01	45.9	1.7997e+01	1.7777e+01	2.2002e-01
48.9	1.9026e+01	1.8906e+01	1.1991e-01	48.9	1.7759e+01	1.7537e+01	2.2237e-01
50.9	1.8910e+01	1.8790e+01	1.2051e-01	50.9	1.7596e+01	1.7372e+01	2.2402e-01
55.9	1.8611e+01	1.8489e+01	1.2211e-01	55.9	1.7176e+01	1.6947e+01	2.2839e-01
53.8	1.8739e+01	1.8617e+01	1.2143e-01	53.8	1.7355e+01	1.7128e+01	2.2651e-01
60.9	1.8298e+01	1.8174e+01	1.2384e-01	60.9	1.6739e+01	1.6506e+01	2.3314e-01
65.9	1.7975e+01	1.7849e+01	1.2568e-01	65.9	1.6293e+01	1.6055e+01	2.3821e-01
70.9	1.7645e+01	1.7518e+01	1.2761e-01	70.9	1.5842e+01	1.5598e+01	2.4360e-01
75.9	1.7312e+01	1.7182e+01	1.2964e-01	75.9	1.5389e+01	1.5140e+01	2.4929e-01
80.9	1.6978e+01	1.6846e+01	1.3174e-01	80.9	1.4940e+01	1.4684e+01	2.5523e-01
90.9	1.6317e+01	1.6181e+01	1.3612e-01	90.9	1.4064e+01	1.3797e+01	2.6776e-01
120.9	1.4563e+01	1.4414e+01	1.4946e-01	120.9	1.1832e+01	1.1525e+01	3.0694e-01

13C3Hed14N1st in C13				13C3Hed14N2nd in C13			
Q-value 2.06, E = 18.00, Ex = 2.31				Q-value 2.06, E = 18.00, Ex = 3.95			
deg	total energy	E - dE	dE	deg	total energy	E - dE	dE
18.9	1.7251e+01	1.7023e+01	2.2760e-01	18.9	1.5564e+01	1.5317e+01	2.4706e-01
20.9	1.7175e+01	1.6947e+01	2.2840e-01	20.9	1.5492e+01	1.5244e+01	2.4798e-01
23.9	1.7049e+01	1.6820e+01	2.2975e-01	23.9	1.5371e+01	1.5121e+01	2.4953e-01
25.9	1.6957e+01	1.6726e+01	2.3074e-01	25.9	1.5282e+01	1.5032e+01	2.5068e-01
28.9	1.6806e+01	1.6574e+01	2.3239e-01	28.9	1.5138e+01	1.4886e+01	2.5257e-01
30.9	1.6699e+01	1.6465e+01	2.3359e-01	30.9	1.5035e+01	1.4781e+01	2.5395e-01
33.9	1.6526e+01	1.6290e+01	2.3553e-01	33.9	1.4870e+01	1.4613e+01	2.5619e-01
35.9	1.6404e+01	1.6167e+01	2.3693e-01	35.9	1.4753e+01	1.4495e+01	2.5779e-01
38.9	1.6212e+01	1.5972e+01	2.3917e-01	38.9	1.4569e+01	1.4309e+01	2.6037e-01
40.9	1.6077e+01	1.5837e+01	2.4076e-01	40.9	1.4441e+01	1.4179e+01	2.6221e-01
43.9	1.5868e+01	1.5625e+01	2.4328e-01	43.9	1.4241e+01	1.3976e+01	2.6512e-01
45.9	1.5723e+01	1.5478e+01	2.4507e-01	45.9	1.4103e+01	1.3836e+01	2.6718e-01
48.9	1.5499e+01	1.5251e+01	2.4788e-01	48.9	1.3889e+01	1.3619e+01	2.7043e-01
50.9	1.5346e+01	1.5096e+01	2.4985e-01	50.9	1.3743e+01	1.3470e+01	2.7270e-01
55.9	1.4950e+01	1.4695e+01	2.5509e-01	55.9	1.3367e+01	1.3088e+01	2.7876e-01
53.8	1.5118e+01	1.4866e+01	2.5283e-01	53.8	1.3526e+01	1.3250e+01	2.7615e-01
60.9	1.4541e+01	1.4280e+01	2.6078e-01	60.9	1.2977e+01	1.2692e+01	2.8536e-01
65.9	1.4123e+01	1.3856e+01	2.6688e-01	65.9	1.2581e+01	1.2288e+01	2.9244e-01
70.9	1.3701e+01	1.3427e+01	2.7337e-01	70.9	1.2181e+01	1.1881e+01	2.9999e-01
75.9	1.3278e+01	1.2998e+01	2.8023e-01	75.9	1.1781e+01	1.1473e+01	3.0797e-01
80.9	1.2860e+01	1.2572e+01	2.8741e-01	80.9	1.1386e+01	1.1070e+01	3.1635e-01
90.9	1.2048e+01	1.1745e+01	3.0259e-01	90.9	1.0622e+01	1.0288e+01	3.3409e-01
120.9	9.9953e+00	9.6449e+00	3.5043e-01	120.9	8.7063e+00	8.3159e+00	3.9040e-01

13C3Hed14N3rd in C13				13C3Hed14N4th in C13			
Q-value 2.06, E = 18.00, Ex = 4.92				Q-value 2.06, E = 18.00, Ex = 5.11			
deg	total energy	E - dE	dE	deg	total energy	E - dE	dE
18.9	1.4559e+01	1.4298e+01	2.6052e-01	18.9	1.4359e+01	1.4096e+01	2.6339e-01
20.9	1.4488e+01	1.4227e+01	2.6153e-01	20.9	1.4289e+01	1.4025e+01	2.6441e-01
23.9	1.4370e+01	1.4107e+01	2.6322e-01	23.9	1.4172e+01	1.3906e+01	2.6614e-01
25.9	1.4284e+01	1.4020e+01	2.6448e-01	25.9	1.4087e+01	1.3819e+01	2.6742e-01
28.9	1.4144e+01	1.3878e+01	2.6656e-01	28.9	1.3947e+01	1.3678e+01	2.6953e-01
30.9	1.4044e+01	1.3776e+01	2.6807e-01	30.9	1.3848e+01	1.3576e+01	2.7107e-01
33.9	1.3883e+01	1.3613e+01	2.7052e-01	33.9	1.3688e+01	1.3414e+01	2.7357e-01
35.9	1.3770e+01	1.3498e+01	2.7228e-01	35.9	1.3575e+01	1.3300e+01	2.7537e-01
38.9	1.3591e+01	1.3316e+01	2.7511e-01	38.9	1.3398e+01	1.3119e+01	2.7825e-01
40.9	1.3467e+01	1.3190e+01	2.7712e-01	40.9	1.3274e+01	1.2994e+01	2.8030e-01
43.9	1.3273e+01	1.2992e+01	2.8032e-01	43.9	1.3081e+01	1.2797e+01	2.8357e-01
45.9	1.3139e+01	1.2856e+01	2.8258e-01	45.9	1.2948e+01	1.2662e+01	2.8587e-01
48.9	1.2932e+01	1.2645e+01	2.8615e-01	48.9	1.2742e+01	1.2453e+01	2.8951e-01
50.9	1.2790e+01	1.2501e+01	2.8865e-01	50.9	1.2601e+01	1.2309e+01	2.9206e-01
55.9	1.2425e+01	1.2130e+01	2.9532e-01	55.9	1.2239e+01	1.1940e+01	2.9886e-01
53.8	1.2580e+01	1.2288e+01	2.9245e-01	53.8	1.2393e+01	1.2097e+01	2.9593e-01
60.9	1.2048e+01	1.1746e+01	3.0258e-01	60.9	1.1865e+01	1.1558e+01	3.0627e-01
65.9	1.1665e+01	1.1355e+01	3.1039e-01	65.9	1.1484e+01	1.1170e+01	3.1423e-01
70.9	1.1279e+01	1.0960e+01	3.1872e-01	70.9	1.1101e+01	1.0778e+01	3.2273e-01
75.9	1.0894e+01	1.0566e+01	3.2754e-01	75.9	1.0719e+01	1.0387e+01	3.3174e-01
80.9	1.0514e+01	1.0177e+01	3.3681e-01	80.9	1.0341e+01	1.0000e+01	3.4120e-01
90.9	9.7796e+00	9.4231e+00	3.5647e-01	90.9	9.6133e+00	9.2520e+00	3.6129e-01
120.9	7.9485e+00	7.5293e+00	4.1917e-01	120.9	7.7994e+00	7.3740e+00	4.2541e-01

13C3Hed14N5th in C13				13C3Het13N in C13			
Q-value 2.06, E = 18.00, Ex = 5.69				Q-value -2.24, E = 18.00, Ex = 0.00			
deg	total energy	E - dE	dE	deg	total energy	E - dE	dE
18.9	1.3746e+01	1.3474e+01	2.7265e-01	18.9	1.5316e+01	1.4974e+01	3.4268e-01
20.9	1.3678e+01	1.3404e+01	2.7374e-01	20.9	1.5225e+01	1.4880e+01	3.4429e-01
23.9	1.3563e+01	1.3287e+01	2.7557e-01	23.9	1.5072e+01	1.4725e+01	3.4700e-01
25.9	1.3479e+01	1.3202e+01	2.7693e-01	25.9	1.4960e+01	1.4611e+01	3.4901e-01
28.9	1.3342e+01	1.3063e+01	2.7918e-01	28.9	1.4778e+01	1.4425e+01	3.5234e-01
30.9	1.3244e+01	1.2963e+01	2.8081e-01	30.9	1.4648e+01	1.4293e+01	3.5476e-01
33.9	1.3087e+01	1.2803e+01	2.8346e-01	33.9	1.4440e+01	1.4081e+01	3.5870e-01
35.9	1.2976e+01	1.2691e+01	2.8537e-01	35.9	1.4294e+01	1.3932e+01	3.6154e-01
38.9	1.2802e+01	1.2514e+01	2.8843e-01	38.9	1.4064e+01	1.3698e+01	3.6611e-01
40.9	1.2681e+01	1.2390e+01	2.9061e-01	40.9	1.3904e+01	1.3534e+01	3.6937e-01
43.9	1.2491e+01	1.2197e+01	2.9408e-01	43.9	1.3655e+01	1.3280e+01	3.7456e-01
45.9	1.2361e+01	1.2064e+01	2.9653e-01	45.9	1.3484e+01	1.3105e+01	3.7823e-01
48.9	1.2159e+01	1.1859e+01	3.0040e-01	48.9	1.3220e+01	1.2836e+01	3.8405e-01
50.9	1.2021e+01	1.1718e+01	3.0312e-01	50.9	1.3039e+01	1.2651e+01	3.8814e-01
55.9	1.1666e+01	1.1356e+01	3.1036e-01	55.9	1.2577e+01	1.2178e+01	3.9908e-01
53.8	1.1817e+01	1.1510e+01	3.0724e-01	53.8	1.2773e+01	1.2379e+01	3.9436e-01
60.9	1.1300e+01	1.0982e+01	3.1825e-01	60.9	1.2103e+01	1.1692e+01	4.1105e-01
65.9	1.0928e+01	1.0601e+01	3.2674e-01	65.9	1.1625e+01	1.1201e+01	4.2399e-01
70.9	1.0553e+01	1.0217e+01	3.3581e-01	70.9	1.1146e+01	1.0708e+01	4.3790e-01
75.9	1.0180e+01	9.8347e+00	3.4543e-01	75.9	1.0672e+01	1.0219e+01	4.5272e-01
80.9	9.8120e+00	9.4565e+00	3.5554e-01	80.9	1.0208e+01	9.7392e+00	4.6838e-01
90.9	9.1030e+00	8.7259e+00	3.7704e-01	90.9	9.3234e+00	8.8215e+00	5.0191e-01
120.9	7.3427e+00	6.8968e+00	4.4590e-01	120.9	7.1924e+00	6.5810e+00	6.1138e-01

13C3Het13N1st in C13				13C3Het13N2nd in C13			
Q-value -2.24, E = 18.00, Ex = 2.36				Q-value -2.24, E = 18.00, Ex = 3.50			
deg	total energy	E - dE	dE	deg	total energy	E - dE	dE
18.9	1.2913e+01	1.2522e+01	3.9107e-01	18.9	1.1737e+01	1.1316e+01	4.2089e-01
20.9	1.2827e+01	1.2434e+01	3.9309e-01	20.9	1.1653e+01	1.1230e+01	4.2319e-01
23.9	1.2683e+01	1.2287e+01	3.9651e-01	23.9	1.1515e+01	1.1088e+01	4.2709e-01
25.9	1.2578e+01	1.2179e+01	3.9905e-01	25.9	1.1414e+01	1.0984e+01	4.3000e-01
28.9	1.2408e+01	1.2005e+01	4.0326e-01	28.9	1.1250e+01	1.0815e+01	4.3480e-01
30.9	1.2287e+01	1.1880e+01	4.0633e-01	30.9	1.1132e+01	1.0694e+01	4.3831e-01
33.9	1.2093e+01	1.1681e+01	4.1133e-01	33.9	1.0945e+01	1.0501e+01	4.4403e-01
35.9	1.1956e+01	1.1541e+01	4.1493e-01	35.9	1.0814e+01	1.0366e+01	4.4815e-01
38.9	1.1742e+01	1.1321e+01	4.2074e-01	38.9	1.0608e+01	1.0153e+01	4.5481e-01
40.9	1.1593e+01	1.1168e+01	4.2488e-01	40.9	1.0465e+01	1.0005e+01	4.5956e-01
43.9	1.1362e+01	1.0930e+01	4.3151e-01	43.9	1.0242e+01	9.7753e+00	4.6716e-01
45.9	1.1203e+01	1.0766e+01	4.3620e-01	45.9	1.0090e+01	9.6173e+00	4.7255e-01
48.9	1.0958e+01	1.0514e+01	4.4364e-01	48.9	9.8552e+00	9.3740e+00	4.8112e-01
50.9	1.0791e+01	1.0342e+01	4.4888e-01	50.9	9.6954e+00	9.2083e+00	4.8716e-01
55.9	1.0365e+01	9.9016e+00	4.6295e-01	55.9	9.2875e+00	8.7841e+00	5.0339e-01
53.8	1.0545e+01	1.0088e+01	4.5687e-01	53.8	9.4601e+00	8.9637e+00	4.9637e-01
60.9	9.9288e+00	9.4505e+00	4.7839e-01	60.9	8.8717e+00	8.3505e+00	5.2126e-01
65.9	9.4902e+00	8.9951e+00	4.9517e-01	65.9	8.4542e+00	7.9135e+00	5.4073e-01
70.9	9.0535e+00	8.5402e+00	5.1327e-01	70.9	8.0396e+00	7.4778e+00	5.6180e-01
75.9	8.6234e+00	8.0907e+00	5.3265e-01	75.9	7.6325e+00	7.0481e+00	5.8442e-01
80.9	8.2041e+00	7.6508e+00	5.5322e-01	80.9	7.2368e+00	6.6283e+00	6.0852e-01
90.9	7.4115e+00	6.8139e+00	5.9761e-01	90.9	6.4925e+00	5.8317e+00	6.6078e-01
120.9	5.5394e+00	4.7938e+00	7.4559e-01	120.9	4.7562e+00	3.9184e+00	8.3784e-01

13C3Het13N3rd in C13				13C3Het13N4th in C13			
Q-value -2.24, E = 18.00, Ex = 3.55				Q-value -2.24, E = 18.00, Ex = 6.36			
deg	total energy	E - dE	dE	deg	total energy	E - dE	dE
18.9	1.1690e+01	1.1267e+01	4.2218e-01	18.9	8.6912e+00	8.1617e+00	5.2948e-01
20.9	1.1607e+01	1.1182e+01	4.2450e-01	20.9	8.6162e+00	8.0832e+00	5.3299e-01
23.9	1.1468e+01	1.1040e+01	4.2842e-01	23.9	8.4915e+00	7.9525e+00	5.3893e-01
25.9	1.1367e+01	1.0936e+01	4.3134e-01	25.9	8.4006e+00	7.8572e+00	5.4336e-01
28.9	1.1203e+01	1.0767e+01	4.3617e-01	28.9	8.2533e+00	7.7026e+00	5.5071e-01
30.9	1.1086e+01	1.0647e+01	4.3970e-01	30.9	8.1483e+00	7.5922e+00	5.5610e-01
33.9	1.0900e+01	1.0454e+01	4.4545e-01	33.9	7.9813e+00	7.4164e+00	5.6492e-01
35.9	1.0769e+01	1.0319e+01	4.4960e-01	35.9	7.8642e+00	7.2930e+00	5.7129e-01
38.9	1.0563e+01	1.0106e+01	4.5629e-01	38.9	7.6808e+00	7.0992e+00	5.8163e-01
40.9	1.0420e+01	9.9587e+00	4.6107e-01	40.9	7.5539e+00	6.9648e+00	5.8903e-01
43.9	1.0198e+01	9.7292e+00	4.6872e-01	43.9	7.3573e+00	6.7564e+00	6.0094e-01
45.9	1.0046e+01	9.5714e+00	4.7414e-01	45.9	7.2228e+00	6.6134e+00	6.0942e-01
48.9	9.8113e+00	9.3285e+00	4.8276e-01	48.9	7.0166e+00	6.3937e+00	6.2296e-01
50.9	9.6519e+00	9.1630e+00	4.8884e-01	50.9	6.8768e+00	6.2443e+00	6.3255e-01
55.9	9.2447e+00	8.7395e+00	5.0517e-01	55.9	6.5216e+00	5.8630e+00	6.5854e-01
53.8	9.4170e+00	8.9189e+00	4.9811e-01	53.8	6.6715e+00	6.0243e+00	6.4727e-01
60.9	8.8297e+00	8.3066e+00	5.2315e-01	60.9	6.1627e+00	5.4753e+00	6.8747e-01
65.9	8.4131e+00	7.8703e+00	5.4274e-01	65.9	5.8056e+00	5.0862e+00	7.1940e-01
70.9	7.9994e+00	7.4355e+00	5.6395e-01	70.9	5.4545e+00	4.7001e+00	7.5441e-01
75.9	7.5932e+00	7.0065e+00	5.8672e-01	75.9	5.1135e+00	4.3209e+00	7.9256e-01
80.9	7.1985e+00	6.5875e+00	6.1098e-01	80.9	4.7858e+00	3.9519e+00	8.3386e-01
90.9	6.4561e+00	5.7925e+00	6.6361e-01	90.9	4.1806e+00	3.2548e+00	9.2576e-01
120.9	4.7254e+00	3.8834e+00	8.4203e-01	120.9	2.8334e+00	1.5668e+00	1.2666e+00

13C3Het13N5th in C13				13C3He3He13C in C13			
Q-value -2.24, E = 18.00, Ex = 6.89				Q-value -0.00, E = 18.00, Ex = 0.00			
deg	total energy	E - dE	dE	deg	total energy	E - dE	dE
18.9	8.1180e+00	7.5603e+00	5.5768e-01	18.9	1.7548e+01	1.6289e+01	1.2593e+00
20.9	8.0447e+00	7.4831e+00	5.6153e-01	20.9	1.7451e+01	1.6186e+01	1.2651e+00
23.9	7.9227e+00	7.3546e+00	5.6809e-01	23.9	1.7290e+01	1.6015e+01	1.2747e+00
25.9	7.8339e+00	7.2609e+00	5.7298e-01	25.9	1.7171e+01	1.5889e+01	1.2819e+00
28.9	7.6900e+00	7.1089e+00	5.8110e-01	28.9	1.6979e+01	1.5685e+01	1.2938e+00
30.9	7.5875e+00	7.0004e+00	5.8705e-01	30.9	1.6842e+01	1.5539e+01	1.3025e+00
33.9	7.4245e+00	6.8277e+00	5.9681e-01	33.9	1.6622e+01	1.5305e+01	1.3166e+00
35.9	7.3103e+00	6.7065e+00	6.0387e-01	35.9	1.6467e+01	1.5140e+01	1.3268e+00
38.9	7.1316e+00	6.5162e+00	6.1533e-01	38.9	1.6223e+01	1.4880e+01	1.3432e+00
40.9	7.0079e+00	6.3844e+00	6.2355e-01	40.9	1.6054e+01	1.4699e+01	1.3549e+00
43.9	6.8166e+00	6.1798e+00	6.3679e-01	43.9	1.5789e+01	1.4416e+01	1.3735e+00
45.9	6.6858e+00	6.0396e+00	6.4623e-01	45.9	1.5607e+01	1.4221e+01	1.3867e+00
48.9	6.4855e+00	5.8241e+00	6.6133e-01	48.9	1.5326e+01	1.3918e+01	1.4077e+00
50.9	6.3497e+00	5.6777e+00	6.7204e-01	50.9	1.5134e+01	1.3712e+01	1.4224e+00
55.9	6.0053e+00	5.3042e+00	7.0113e-01	55.9	1.4641e+01	1.3179e+01	1.4620e+00
53.8	6.1506e+00	5.4621e+00	6.8850e-01	53.8	1.4850e+01	1.3405e+01	1.4449e+00
60.9	5.6583e+00	4.9247e+00	7.3362e-01	60.9	1.4135e+01	1.2630e+01	1.5053e+00
65.9	5.3137e+00	4.5441e+00	7.6963e-01	65.9	1.3621e+01	1.2069e+01	1.5524e+00
70.9	4.9759e+00	4.1666e+00	8.0930e-01	70.9	1.3106e+01	1.1503e+01	1.6033e+00
75.9	4.6486e+00	3.7959e+00	8.5273e-01	75.9	1.2594e+01	1.0936e+01	1.6579e+00
80.9	4.3351e+00	3.4351e+00	9.0001e-01	80.9	1.2091e+01	1.0375e+01	1.7160e+00
90.9	3.7591e+00	2.7529e+00	1.0062e+00	90.9	1.1127e+01	9.2847e+00	1.8421e+00
120.9	2.4929e+00	1.0801e+00	1.4128e+00	120.9	8.7564e+00	6.4789e+00	2.2775e+00

13C3He3He13C1st in C13				13C3He3He13C2nd in C13			
Q-value -0.00, E = 18.00, Ex = 3.09				Q-value -0.00, E = 18.00, Ex = 3.68			
deg	total energy	E - dE	dE	deg	total energy	E - dE	dE
18.9	1.4455e+01	1.2977e+01	1.4776e+00	18.9	1.3850e+01	1.2319e+01	1.5310e+00
20.9	1.4365e+01	1.2879e+01	1.4853e+00	20.9	1.3762e+01	1.2222e+01	1.5392e+00
23.9	1.4215e+01	1.2717e+01	1.4983e+00	23.9	1.3614e+01	1.2061e+01	1.5531e+00
25.9	1.4105e+01	1.2597e+01	1.5079e+00	25.9	1.3506e+01	1.1943e+01	1.5635e+00
28.9	1.3928e+01	1.2404e+01	1.5239e+00	28.9	1.3331e+01	1.1751e+01	1.5806e+00
30.9	1.3800e+01	1.2265e+01	1.5356e+00	30.9	1.3206e+01	1.1613e+01	1.5931e+00
33.9	1.3597e+01	1.2042e+01	1.5547e+00	33.9	1.3007e+01	1.1393e+01	1.6136e+00
35.9	1.3454e+01	1.1886e+01	1.5685e+00	35.9	1.2866e+01	1.1238e+01	1.6284e+00
38.9	1.3229e+01	1.1639e+01	1.5908e+00	38.9	1.2645e+01	1.0993e+01	1.6523e+00
40.9	1.3073e+01	1.1466e+01	1.6067e+00	40.9	1.2492e+01	1.0822e+01	1.6694e+00
43.9	1.2830e+01	1.1198e+01	1.6322e+00	43.9	1.2253e+01	1.0556e+01	1.6968e+00
45.9	1.2663e+01	1.1012e+01	1.6504e+00	45.9	1.2089e+01	1.0373e+01	1.7163e+00
48.9	1.2405e+01	1.0726e+01	1.6792e+00	48.9	1.1836e+01	1.0089e+01	1.7474e+00
50.9	1.2229e+01	1.0530e+01	1.6996e+00	50.9	1.1664e+01	9.8943e+00	1.7693e+00
55.9	1.1779e+01	1.0024e+01	1.7546e+00	55.9	1.1222e+01	9.3932e+00	1.8287e+00
53.8	1.1970e+01	1.0239e+01	1.7308e+00	53.8	1.1409e+01	9.6061e+00	1.8030e+00
60.9	1.1320e+01	9.5043e+00	1.8152e+00	60.9	1.0772e+01	8.8780e+00	1.8943e+00
65.9	1.0854e+01	8.9724e+00	1.8819e+00	65.9	1.0317e+01	8.3504e+00	1.9667e+00
70.9	1.0390e+01	8.4348e+00	1.9548e+00	70.9	9.8630e+00	7.8170e+00	2.0461e+00
75.9	9.9304e+00	7.8966e+00	2.0338e+00	75.9	9.4148e+00	7.2823e+00	2.1325e+00
80.9	9.4811e+00	7.3620e+00	2.1192e+00	80.9	8.9767e+00	6.7505e+00	2.2263e+00
90.9	8.6269e+00	6.3180e+00	2.3090e+00	90.9	8.1455e+00	5.7090e+00	2.4365e+00
120.9	6.5645e+00	3.5303e+00	3.0342e+00	120.9	6.1468e+00	2.8739e+00	3.2730e+00

13C3He3He13C3rd in C13				13C3He3He13C4th in C13			
Q-value -0.00, E = 18.00, Ex = 3.85				Q-value -0.00, E = 18.00, Ex = 6.86			
deg	total energy	E - dE	dE	deg	total energy	E - dE	dE
18.9	1.3677e+01	1.2130e+01	1.5471e+00	18.9	1.0554e+01	8.6256e+00	1.9282e+00
20.9	1.3589e+01	1.2034e+01	1.5555e+00	20.9	1.0474e+01	8.5326e+00	1.9411e+00
23.9	1.3443e+01	1.1873e+01	1.5697e+00	23.9	1.0340e+01	8.3772e+00	1.9629e+00
25.9	1.3335e+01	1.1755e+01	1.5802e+00	25.9	1.0243e+01	8.2635e+00	1.9792e+00
28.9	1.3161e+01	1.1564e+01	1.5977e+00	28.9	1.0085e+01	8.0783e+00	2.0064e+00
30.9	1.3037e+01	1.1426e+01	1.6105e+00	30.9	9.9719e+00	7.9455e+00	2.0264e+00
33.9	1.2838e+01	1.1207e+01	1.6314e+00	33.9	9.7922e+00	7.7330e+00	2.0592e+00
35.9	1.2698e+01	1.1052e+01	1.6465e+00	35.9	9.6660e+00	7.5830e+00	2.0830e+00
38.9	1.2479e+01	1.0808e+01	1.6709e+00	38.9	9.4679e+00	7.3461e+00	2.1218e+00
40.9	1.2326e+01	1.0638e+01	1.6883e+00	40.9	9.3306e+00	7.1808e+00	2.1498e+00
43.9	1.2088e+01	1.0372e+01	1.7163e+00	43.9	9.1175e+00	6.9224e+00	2.1951e+00
45.9	1.1925e+01	1.0189e+01	1.7363e+00	45.9	8.9713e+00	6.7438e+00	2.2275e+00
48.9	1.1674e+01	9.9057e+00	1.7680e+00	48.9	8.7467e+00	6.4669e+00	2.2798e+00
50.9	1.1502e+01	9.7117e+00	1.7905e+00	50.9	8.5939e+00	6.2768e+00	2.3172e+00
55.9	1.1063e+01	9.2119e+00	1.8512e+00	55.9	8.2043e+00	5.7843e+00	2.4200e+00
53.8	1.1249e+01	9.4242e+00	1.8249e+00	53.8	8.3691e+00	5.9940e+00	2.3751e+00
60.9	1.0616e+01	8.6979e+00	1.9184e+00	60.9	7.8114e+00	5.2750e+00	2.5363e+00
65.9	1.0164e+01	8.1714e+00	1.9926e+00	65.9	7.4157e+00	4.7461e+00	2.6696e+00
70.9	9.7130e+00	7.6390e+00	2.0740e+00	70.9	7.0239e+00	4.2022e+00	2.8216e+00
75.9	9.2679e+00	7.1051e+00	2.1629e+00	75.9	6.6403e+00	3.6443e+00	2.9960e+00
80.9	8.8331e+00	6.5738e+00	2.2593e+00	80.9	6.2687e+00	3.0710e+00	3.1977e+00
90.9	8.0085e+00	5.5323e+00	2.4762e+00	90.9	5.5729e+00	1.8532e+00	3.7198e+00
120.9	6.0283e+00	2.6768e+00	3.3516e+00				

13C3He3He13C6th in C13				16O3He3He16O in C13			
Q-value -0.00, E = 18.00, Ex = 7.55				Q-value 0.00, E = 18.00, Ex = 0.00			
deg	total energy	E - dE	dE	deg	total energy	E - dE	dE
18.9	9.8272e+00	7.7745e+00	2.0527e+00	18.9	1.7630e+01	1.6376e+01	1.2545e+00
20.9	9.7490e+00	7.6817e+00	2.0673e+00	20.9	1.7551e+01	1.6292e+01	1.2591e+00
23.9	9.6187e+00	7.5267e+00	2.0921e+00	23.9	1.7419e+01	1.6152e+01	1.2669e+00
25.9	9.5238e+00	7.4131e+00	2.1107e+00	25.9	1.7323e+01	1.6050e+01	1.2727e+00
28.9	9.3697e+00	7.2280e+00	2.1417e+00	28.9	1.7165e+01	1.5883e+01	1.2823e+00
30.9	9.2598e+00	7.0953e+00	2.1646e+00	30.9	1.7052e+01	1.5763e+01	1.2893e+00
33.9	9.0849e+00	6.8827e+00	2.2022e+00	33.9	1.6872e+01	1.5571e+01	1.3006e+00
35.9	8.9621e+00	6.7325e+00	2.2296e+00	35.9	1.6744e+01	1.5436e+01	1.3087e+00
38.9	8.7694e+00	6.4951e+00	2.2744e+00	38.9	1.6543e+01	1.5221e+01	1.3218e+00
40.9	8.6359e+00	6.3292e+00	2.3067e+00	40.9	1.6403e+01	1.5072e+01	1.3311e+00
43.9	8.4289e+00	6.0696e+00	2.3593e+00	43.9	1.6184e+01	1.4838e+01	1.3459e+00
45.9	8.2870e+00	5.8898e+00	2.3972e+00	45.9	1.6033e+01	1.4676e+01	1.3563e+00
48.9	8.0691e+00	5.6107e+00	2.4584e+00	48.9	1.5799e+01	1.4426e+01	1.3729e+00
50.9	7.9211e+00	5.4187e+00	2.5024e+00	50.9	1.5638e+01	1.4254e+01	1.3845e+00
55.9	7.5439e+00	4.9196e+00	2.6244e+00	55.9	1.5225e+01	1.3809e+01	1.4154e+00
53.8	7.7034e+00	5.1324e+00	2.5710e+00	53.8	1.5401e+01	1.3998e+01	1.4021e+00
60.9	7.1647e+00	4.4004e+00	2.7643e+00	60.9	1.4799e+01	1.3350e+01	1.4490e+00
65.9	6.7833e+00	3.8558e+00	2.9275e+00	65.9	1.4363e+01	1.2878e+01	1.4854e+00
70.9	6.4066e+00	3.2882e+00	3.1183e+00	70.9	1.3924e+01	1.2399e+01	1.5243e+00
75.9	6.0387e+00	2.6942e+00	3.3445e+00	75.9	1.3484e+01	1.1918e+01	1.5657e+00
80.9	5.6831e+00	2.0643e+00	3.6188e+00	80.9	1.3048e+01	1.1439e+01	1.6093e+00
90.9	5.0203e+00	6.0235e-01	4.4179e+00	90.9	1.2203e+01	1.0501e+01	1.7026e+00
				120.9	1.0062e+01	8.0514e+00	2.0104e+00

13C3Healpha12C in C13				13C3Healpha12C1st in C13			
Q-value 15.63, E = 18.00, Ex = 0.00				Q-value 15.63, E = 18.00, Ex = 4.44			
deg	total energy	E - dE	dE	deg	total energy	E - dE	dE
18.9	3.1623e+01	3.0646e+01	9.7701e-01	18.9	2.7660e+01	2.6571e+01	1.0885e+00
20.9	3.1478e+01	3.0497e+01	9.8065e-01	20.9	2.7522e+01	2.6429e+01	1.0929e+00
23.9	3.1235e+01	3.0248e+01	9.8680e-01	23.9	2.7292e+01	2.6192e+01	1.1003e+00
25.9	3.1057e+01	3.0066e+01	9.9136e-01	25.9	2.7124e+01	2.6018e+01	1.1058e+00
28.9	3.0768e+01	2.9769e+01	9.9888e-01	28.9	2.6850e+01	2.5735e+01	1.1149e+00
30.9	3.0560e+01	2.9556e+01	1.0043e+00	30.9	2.6654e+01	2.5532e+01	1.1215e+00
33.9	3.0229e+01	2.9215e+01	1.0132e+00	33.9	2.6340e+01	2.5208e+01	1.1322e+00
35.9	2.9994e+01	2.8975e+01	1.0196e+00	35.9	2.6119e+01	2.4979e+01	1.1399e+00
38.9	2.9625e+01	2.8595e+01	1.0299e+00	38.9	2.5771e+01	2.4618e+01	1.1523e+00
40.9	2.9367e+01	2.8330e+01	1.0371e+00	40.9	2.5528e+01	2.4367e+01	1.1612e+00
43.9	2.8965e+01	2.7916e+01	1.0487e+00	43.9	2.5149e+01	2.3974e+01	1.1753e+00
45.9	2.8688e+01	2.7631e+01	1.0569e+00	45.9	2.4888e+01	2.3703e+01	1.1852e+00
48.9	2.8258e+01	2.7189e+01	1.0698e+00	48.9	2.4484e+01	2.3283e+01	1.2009e+00
50.9	2.7965e+01	2.6886e+01	1.0789e+00	50.9	2.4208e+01	2.2996e+01	1.2120e+00
55.9	2.7207e+01	2.6104e+01	1.1030e+00	55.9	2.3497e+01	2.2256e+01	1.2414e+00
53.8	2.7529e+01	2.6436e+01	1.0926e+00	53.8	2.3799e+01	2.2570e+01	1.2287e+00
60.9	2.6426e+01	2.5296e+01	1.1293e+00	60.9	2.2766e+01	2.1492e+01	1.2735e+00
65.9	2.5628e+01	2.4471e+01	1.1575e+00	65.9	2.2021e+01	2.0713e+01	1.3082e+00
70.9	2.4823e+01	2.3635e+01	1.1877e+00	70.9	2.1271e+01	1.9925e+01	1.3453e+00
75.9	2.4019e+01	2.2799e+01	1.2196e+00	75.9	2.0523e+01	1.9139e+01	1.3847e+00
80.9	2.3223e+01	2.1970e+01	1.2532e+00	80.9	1.9786e+01	1.8359e+01	1.4264e+00
90.9	2.1683e+01	2.0358e+01	1.3246e+00	90.9	1.8364e+01	1.6849e+01	1.5152e+00
120.9	1.7807e+01	1.6254e+01	1.5536e+00	120.9	1.4824e+01	1.3019e+01	1.8052e+00

13C3Healalpha12C2nd in C13				13C3Healalpha12C3rd in C13			
Q-value 15.63, E = 18.00, Ex = 7.65				Q-value 15.63, E = 18.00, Ex = 9.64			
deg	total energy	E - dE	dE	deg	total energy	E - dE	dE
18.9	2.4753e+01	2.3563e+01	1.1904e+00	18.9	2.2940e+01	2.1674e+01	1.2657e+00
20.9	2.4622e+01	2.3426e+01	1.1955e+00	20.9	2.2812e+01	2.1540e+01	1.2714e+00
23.9	2.4402e+01	2.3198e+01	1.2042e+00	23.9	2.2598e+01	2.1317e+01	1.2811e+00
25.9	2.4241e+01	2.3030e+01	1.2106e+00	25.9	2.2442e+01	2.1154e+01	1.2883e+00
28.9	2.3979e+01	2.2758e+01	1.2213e+00	28.9	2.2189e+01	2.0889e+01	1.3002e+00
30.9	2.3792e+01	2.2563e+01	1.2290e+00	30.9	2.2007e+01	2.0698e+01	1.3088e+00
33.9	2.3493e+01	2.2251e+01	1.2416e+00	33.9	2.1717e+01	2.0394e+01	1.3229e+00
35.9	2.3282e+01	2.2031e+01	1.2507e+00	35.9	2.1513e+01	2.0180e+01	1.3330e+00
38.9	2.2949e+01	2.1684e+01	1.2653e+00	38.9	2.1191e+01	1.9842e+01	1.3494e+00
40.9	2.2718e+01	2.1442e+01	1.2757e+00	40.9	2.0967e+01	1.9606e+01	1.3610e+00
43.9	2.2357e+01	2.1065e+01	1.2922e+00	43.9	2.0618e+01	1.9238e+01	1.3796e+00
45.9	2.2109e+01	2.0805e+01	1.3040e+00	45.9	2.0378e+01	1.8985e+01	1.3927e+00
48.9	2.1725e+01	2.0402e+01	1.3225e+00	48.9	2.0007e+01	1.8593e+01	1.4136e+00
50.9	2.1463e+01	2.0127e+01	1.3356e+00	50.9	1.9754e+01	1.8325e+01	1.4282e+00
55.9	2.0788e+01	1.9418e+01	1.3705e+00	55.9	1.9103e+01	1.7636e+01	1.4675e+00
53.8	2.1074e+01	1.9719e+01	1.3554e+00	53.8	1.9379e+01	1.7928e+01	1.4506e+00
60.9	2.0096e+01	1.8687e+01	1.4085e+00	60.9	1.8436e+01	1.6926e+01	1.5104e+00
65.9	1.9392e+01	1.7942e+01	1.4498e+00	65.9	1.7759e+01	1.6202e+01	1.5571e+00
70.9	1.8685e+01	1.7191e+01	1.4941e+00	70.9	1.7080e+01	1.5473e+01	1.6073e+00
75.9	1.7982e+01	1.6440e+01	1.5414e+00	75.9	1.6406e+01	1.4745e+01	1.6610e+00
80.9	1.7289e+01	1.5698e+01	1.5914e+00	80.9	1.5744e+01	1.4026e+01	1.7180e+00
90.9	1.5960e+01	1.4262e+01	1.6989e+00	90.9	1.4475e+01	1.2634e+01	1.8410e+00
120.9	1.2682e+01	1.0627e+01	2.0558e+00	120.9	1.1369e+01	9.1122e+00	2.2563e+00

13C3Healpha12C4th in C13			
Q-value 15.63, E = 18.00, Ex = 10.30			
deg	total energy	E - dE	dE
18.9	2.2335e+01	2.1041e+01	1.2933e+00
20.9	2.2208e+01	2.0909e+01	1.2992e+00
23.9	2.1997e+01	2.0688e+01	1.3093e+00
25.9	2.1843e+01	2.0526e+01	1.3168e+00
28.9	2.1592e+01	2.0262e+01	1.3291e+00
30.9	2.1412e+01	2.0074e+01	1.3381e+00
33.9	2.1125e+01	1.9772e+01	1.3528e+00
35.9	2.0923e+01	1.9560e+01	1.3633e+00
38.9	2.0605e+01	1.9224e+01	1.3803e+00
40.9	2.0383e+01	1.8991e+01	1.3924e+00
43.9	2.0039e+01	1.8627e+01	1.4118e+00
45.9	1.9801e+01	1.8376e+01	1.4255e+00
48.9	1.9435e+01	1.7987e+01	1.4472e+00
50.9	1.9184e+01	1.7722e+01	1.4625e+00
55.9	1.8542e+01	1.7039e+01	1.5034e+00
53.8	1.8814e+01	1.7329e+01	1.4857e+00
60.9	1.7884e+01	1.6336e+01	1.5482e+00
65.9	1.7216e+01	1.5619e+01	1.5969e+00
70.9	1.6546e+01	1.4897e+01	1.6495e+00
75.9	1.5882e+01	1.4177e+01	1.7057e+00
80.9	1.5230e+01	1.3465e+01	1.7654e+00
90.9	1.3983e+01	1.2088e+01	1.8946e+00
120.9	1.0935e+01	8.6011e+00	2.3336e+00