Fitting Tables

1 ^{27}Al target

^{27}Al(d, d)^{27}Al Q-value 0.0, E = 10, Ex = 0.00										
		E - dE			dE			Events		
run	deg	energy	channel	error	energy	channel	error	count	error	χ^2/ndf
0140	35.9	9.3624e+00	2114	0.1	3.5781e-01	565.2	0.4	34200	848	1.45984
0139	40.9	9.2818e+00	2092	0.2	3.6009e-01	541.6	0.4	41040	1453	1.16091
0141	45.9	9.1932e+00	2068	0.5	3.6262e-01	578.2	0.6	41720	2528	1.79283
0165	49.1	9.1328e+00	2055	0.1	3.6437e-01	576.6	0.4	30520	761	1.85753
0142	50.9	9.0977e+00	2110	2.4	3.6540e-01	583.4	0.7	3344000	325503	1.01125
0143	55.9	8.9961e+00	2070	5.5	3.6841e-01	592.0	1.0	27060	7444	1.25997
0144	60.9	8.8893e+00	2114	4.8	3.7163e-01	602.7	1.4	2958000	294439	1.59359
0152	65.9	8.7785e+00	1980	0.1	3.7503e-01	594.2	0.7	29400	767	1.58511
0153	70.9	8.6644e+00	1951	0.2	3.7861e-01	600.4	0.8	23590	1297	1.52574
0154	75.9	8.5483e+00	1922	0.1	3.8233e-01	607.6	1.0	20370	1316	0.901168
0155	80.9	8.4309e+00	1891	0.2	3.8617e-01	615.2	1.2	13150	343	1.18469
0156	85.9	8.3133e+00	1860	0.3	3.9011e-01	624.8	1.1	15890	936	0.869374
0157	90.9	8.1964e+00	2068	0.5	3.9411e-01	578.2	0.6	41720	2528	1.79283

^{27}Al(d, d)^{27}Al, 1st excited state Q-value 0.0, E = 10, Ex = 0.84										
		E - dE			dE			Events		
run	deg	energy	channel	error	energy	channel	error	count	error	χ^2/ndf
0140	35.9	8.5065e+00	1909	2.3	3.8369e-01	594.8	16	113.1	60.5	1.0436
0165	49.1	8.2853e+00	1858	0.9	3.9106e-01	629.2	1.1	57.82	19.59	1.1667
0152	65.9	7.9443e+00	1779	0.8	4.0304e-01	645	5.2	672.7	71.2	0.731675
0153	70.9	7.8347e+00	1754	0.6	4.0707e-01	632.1	13.2	810	75.4	0.876526
0154	75.9	7.7231e+00	1723	1.5	4.1126e-01	622.8	5.6	982.1	397.2	1.01421
0155	80.9	7.6104e+00	1695	2.4	4.1559e-01	656.2	7.5	785.1	573.3	1.16165
0156	85.9	7.4975e+00	1665	2.1	4.2002e-01	689.6	9.1	478.3	207.7	1.09359

^{27}Al(d, d)^{27}Al, 2nd excited state Q-value 0.0, E = 10, Ex = 1.01										
		E - dE			dE			Events		
run	deg	energy	channel	error	energy	channel	error	count	error	χ^2/ndf
0140	35.9	8.3324e+00	1867	1.7	3.8946e-01	622.6	2.1	492.9	167	1.0436
0139	40.9	8.2553e+00	1833	1.8	3.9208e-01	577	4.9	9037	833.1	0.968936
0141	45.9	8.1707e+00	1822	3.0	3.9500e-01	632.3	4.5	385.7	89	1.25824
0165	49.1	8.1130e+00	1810	11.4	3.9702e-01	640.8	8.0	874.6	1216.0	1.1667
0152	65.9	7.7748e+00	1739	0.5	4.0931e-01	675.4	4.8	993.4	51.3	0.731675
0153	70.9	7.6661e+00	1713	0.5	4.1344e-01	623.5	3.2	1611	90.5	0.876526
0154	75.9	7.5554e+00	1685	0.7	4.1773e-01	666.8	4.7	1107	94.8	1.01421
0155	80.9	7.4436e+00	1655	1.6	4.2218e-01	681.9	3.1	958.9	99.1	1.16165
0156	85.9	7.3317e+00	1626	1.4	4.2673e-01	694.4	4.3	1358	122.2	1.09359
0157	90.9	7.2205e+00	1604	1.4	4.3135e-01	695.4	3.3	2039	227.6	1.06954

^{27}Al(d, d)^{27}Al, 3rd excited state Q-value 0.0, E = 10, Ex = 0.84										
		E - dE			dE			Events		
run	deg	energy	channel	error	energy	channel	error	count	error	χ^2/ndf
0139	40.9	7.0214e+00	1575	8.6	4.3992e-01	679.3	4.0	164100	56375	1.26536
0141	45.9	6.9416e+00	1522	3.8	4.4346e-01	705.9	1.9	152.2	37.6	0.846703
0165	49.1	6.8873e+00	1525	1.3	4.4590e-01	648	10.9	361.2	98.3	0.954155
0142	50.9	6.8557e+00	1498	6.5	4.4734e-01	722.6	8.0	130.5	57.2	1.5937
0143	55.9	6.7643e+00	1492	13.5	4.5154e-01	721.4	15.5	9496	7895.0	1.08037
0152	65.9	6.5691e+00	1452	0.9	4.6083e-01	754.3	3.1	1599	426.4	0.997886
0153	70.9	6.4669e+00	1427	0.6	4.6586e-01	761.2	3.6	3023	421.3	0.728456
0154	75.9	6.3630e+00	1398	0.9	4.7110e-01	773.4	3.8	2754	600.5	1.2441
0155	80.9	6.2581e+00	1371	0.7	4.7651e-01	778.5	2.6	1660	117.5	1.20944
0156	85.9	6.1531e+00	1342	1.7	4.8207e-01	771.2	11.6	2795	811.6	1.50879
0157	90.9	6.0489e+00	1315	1.5	4.4773e-01	804	3.3	1903	328.8	0.7276

^{27}Al(d, d)^{27}Al, 4th excited state Q-value 0.0, E = 10, Ex = 2.73										
		E - dE			dE			Events		
run	deg	energy	channel	error	energy	channel	error	count	error	χ^2/ndf
0140	35.9	6.5511e+00	1448	2.3	4.6171e-01	740.3	40.5	2196	324.1	1.22693
0139	40.9	6.4803e+00	1431	5.3	4.6519e-01	760	18.5	350.4	391.7	0.974446
0165	49.1	6.3499e+00	1393	2.0	4.7176e-01	781	16.8	694.4	47.2	1.01974
0152	65.9	6.0406e+00	1324	0.8	3.9221e-01	771.1	9.5	1410	376.4	1.24133
0153	70.9	5.9413e+00	1299	0.9	4.9373e-01	837.1	3.5	624.7	183.0	1.0304
0154	75.9	5.8404e+00	1272	1.1	4.9950e-01	817	19.6	642.5	80.1	1.02467
0155	80.9	5.7385e+00	1248	1.6	5.0548e-01	830.3	33.0	448.1	108.7	1.21488
0156	85.9	5.6367e+00	1223	2.1	5.1161e-01	839.1	6.1	370.1	84.1	1.05563

^{27}Al(d, d)^{27}Al, 5th excited state Q-value 0.0, E = 10, Ex = 2.98										
		E - dE			dE			Events		
run	deg	energy	channel	error	energy	channel	error	count	error	χ^2/ndf
0140	35.9	6.2883e+00	1372	1.5	4.7494e-01	776.2	4.1	2730	391.6	1.22693
0141	45.9	6.1420e+00	1331	2.1	4.8267e-01	812.5	5.4	623.8	45.3	0.846703
0165	49.1	6.0898e+00	1325	1.0	4.8549e-01	800.8	6.0	157.7	47.7	1.01974
0142	50.9	6.0595e+00	1309	2.7	4.8715e-01	776.5	32.5	349.2	69.5	1.15937
0152	65.9	5.7848e+00	1258	0.5	5.0274e-01	832.4	9.4	3924	239.3	1.24133
0153	70.9	5.6870e+00	1233	0.4	5.0856e-01	846.4	4.7	2625	158.2	1.0304
0154	75.9	5.5875e+00	1205	0.5	5.1463e-01	940.7	3.1	2144	65.5	1.02467
0155	80.9	5.4872e+00	1179	0.7	5.2091e-01	865.6	4.2	1722	112.0	1.21488
0156	85.9	5.3868e+00	1150	1.2	5.2736e-01	881.6	2.7	2534	302.3	1.05563
0157	90.9	5.2872e+00	1123	1.4	5.3394e-01	891.4	3.3	2195	173.1	1.2804

^{27}Al(d, d)^{27}Al, 7th excited state Q-value 0.0, E = 10, Ex = 3.68										
		E - dE			dE			Events		
run	deg	energy	channel	error	energy	channel	error	count	error	χ^2/ndf
0143	55.9	5.2414e+00	1187	34.6	5.3702e-01	849.8	28.0	164300	112527	1.08037

^{27}Al(d, d)^{27}Al, 8th excited state Q-value 0.0, E = 10, Ex = 3.96										
		E - dE			dE			Events		
run	deg	energy	channel	error	energy	channel	error	count	error	χ^2/ndf
0152	65.9	4.7692e+00	1023	5.0	5.7121e-01	902.2	18.8	107	34.1	0.7881

^{27}Al(d, d)^{27}Al, ?th excited state Q-value 0.0, E = 10, Ex = ?										
		E - dE			dE			Events		
run	deg	energy	channel	error	energy	channel	error	count	error	χ^2/ndf
0157	90.9	—	719.3	8.4	—	1223	3.1	361.5	157.0	1.18789
0153	70.9	—	853.4	2.7	—	1048	8.3	643.5	177.1	1.17741
0154	75.9	—	819.2	3.2	—	1047	7.4	225.9	60.8	0.967338
0155	80.9	—	816.7	3.5	—	1105	6.9	103.2	30.6	0.919412
0152	65.9	—	878.2	1.8	—	1045	4.1	454.4	56.7	0.7881
0155	80.9	—	765	5.0	—	1158	4.8	102.3	36.2	0.919412