

Supplementary data for Nucleon-Alpha Scattering

Table 1: Experimental and simulated values of SPS for $p_{1/2}$ and $p_{3/2}$ for $n\alpha$ -system.

$E_{lab.}(\text{MeV})$	$p_{1/2}$		$p_{3/2}$	
	$\delta_{\ell}^{Expt.}(\text{degrees})$	$\delta_{\ell}^{Sim.}(\text{degrees})$	$\delta_{\ell}^{Expt.}(\text{degrees})$	$\delta_{\ell}^{Sim.}(\text{degrees})$
	[Satchler et al.]	[Our]	[Satchler et al.]	[Our]
0.3	0.8	0.8	4	4.0
0.6	2.3	2.3	16.3	16.3
0.8	3.7	3.7	32.8	32.8
1	5.2	5.2	57.2	57.2
1.2	7	7.0	82	82.0
1.4	8.9	8.9	99.1	99.1
1.6	11.1	11.1	109.2	109.2
1.8	13.3	13.4	115.2	115.2
2	15.8	15.8	118.9	118.9
2.2	18.3	18.3	121.2	121.2
2.4	20.8	20.9	122.6	122.6
3	28.7	28.7	124.2	124.3
4	40.6	40.6	123.4	123.5
5	49.4	49.4	121.3	121.3
6	55.1	55.1	118.7	118.8
7	58.5	58.5	116.1	116.2
8	60.2	60.2	113.6	113.6
10	60.9	60.9	108.7	108.7
12	59.6	59.6	104.1	104.1
15	55.9	55.9	98	97.9
18	51.5	51.5	92.5	92.2
	Overall MAPE	0.25	Overall MAPE	0.11

Table 2: Experimental and simulated values of SPS for $p_{1/2}$ and $p_{3/2}$ for $p\alpha$ system.

$E_{lab.}(\text{MeV})$	$p_{1/2}$		$p_{3/2}$	
	$\delta_{\ell}^{Expt.}(\text{degrees})$	$\delta_{\ell}^{Sim.}(\text{degrees})$	$\delta_{\ell}^{Expt.}(\text{degrees})$	$\delta_{\ell}^{Sim.}(\text{degrees})$
	[Satchler et al.]	[Our]	[Satchler et al.]	[Our]
0.94	1.6	1.7	5.8	5.9
1.14	2.5	2.5	9.6	9.6
1.35	3.5	3.5	15.4	15.2
1.56	4.8	4.7	23.3	23.1
1.76	6.1	6.0	33.6	33.5
1.97	7.6	7.5	46.4	46.4
2.18	9.3	9.2	60.5	60.8
2.59	13	13.0	84.3	84.7
3	17.1	17.1	98.9	99.1
3.2	19.3	19.3	103.4	103.4
3.5	22.5	22.6	108.2	107.9
4	28.1	28.2	112.6	112.0
4.5	33.5	33.6	114.7	114.0
5	38.4	38.5	115.7	114.7
6.02	46.7	46.7	115.7	114.6
7	52.2	52.2	114.4	113.5
7.97	55.8	55.6	112.8	112.0
9.95	59.1	58.9	108.9	108.6
11.16	59.4	59.2	106.5	106.6
14.32	57.5	57.5	100.3	101.2
17.45	53.6	54.0	94.7	96.3
	Overall MAPE	0.71	Overall MAPE	0.60