	PHOJET TOT (81/14/5)			
PMT cut [p.e]	ε^A	ε^C	ε^{OR}	ε^{AND}
0	1.000000 ± 0.000000	0.999950 ± 0.000050	1.000000 ± 0.000000	0.999950 ± 0.000050
1	0.710950 ± 0.003205	0.713250 ± 0.003198	0.908050 ± 0.002043	0.516150 ± 0.003534
2	0.638800 ± 0.003397	0.637250 ± 0.003400	0.856600 ± 0.002478	0.419450 ± 0.003489
3	0.604950 ± 0.003457	0.605250 ± 0.003456	0.830700 ± 0.002652	0.379500 ± 0.003431
4	0.579650 ± 0.003490	0.580850 ± 0.003489	0.810800 ± 0.002770	0.349700 ± 0.003372
5	0.560400 ± 0.003510	0.562700 ± 0.003508	0.794750 ± 0.002856	0.328350 ± 0.003321
6	0.545100 ± 0.003521	0.546550 ± 0.003520	0.780450 ± 0.002927	0.311200 ± 0.003274
7	0.530950 ± 0.003529	0.532100 ± 0.003528	0.768050 ± 0.002985	0.295000 ± 0.003225
8	0.518200 ± 0.003533	0.518750 ± 0.003533	0.755200 ± 0.003040	0.281750 ± 0.003181
9	0.507100 ± 0.003535	0.507550 ± 0.003535	0.743700 ± 0.003087	0.270950 ± 0.003143
10	0.497850 ± 0.003536	0.497450 ± 0.003535	0.734600 ± 0.003122	0.260700 ± 0.003104
11	0.488250 ± 0.003535	0.486800 ± 0.003534	0.724900 ± 0.003158	0.250150 ± 0.003062
12	0.480350 ± 0.003533	0.478250 ± 0.003532	0.717200 ± 0.003185	0.241400 ± 0.003026
13	0.474350 ± 0.003531	0.471300 ± 0.003530	0.710450 ± 0.003207	0.235200 ± 0.002999
14	0.467400 ± 0.003528	0.464600 ± 0.003527	0.703550 ± 0.003229	0.228450 ± 0.002969
15	0.461050 ± 0.003525	0.459000 ± 0.003524	0.697400 ± 0.003248	0.222650 ± 0.002942
16	0.454950 ± 0.003521	0.453550 ± 0.003520	0.691050 ± 0.003267	0.217450 ± 0.002917
17	0.450100 ± 0.003518	0.448050 ± 0.003516	0.685800 ± 0.003282	0.212350 ± 0.002892
18	0.446150 ± 0.003515	0.443050 ± 0.003513	0.681150 ± 0.003295	0.208050 ± 0.002870
19	0.441550 ± 0.003511	0.438500 ± 0.003509	0.676200 ± 0.003309	0.203850 ± 0.002849
20	0.436400 ± 0.003507	0.434900 ± 0.003505	0.671600 ± 0.003321	0.199700 ± 0.002827
21	0.431000 ± 0.003502	0.430250 ± 0.003501	0.666150 ± 0.003335	0.195100 ± 0.002802
22	0.426050 ± 0.003497	0.426150 ± 0.003497	0.661300 ± 0.003347	0.190900 ± 0.002779
23	0.422200 ± 0.003492	0.421400 ± 0.003492	0.656600 ± 0.003358	0.187000 ± 0.002757
24	0.417400 ± 0.003487	0.416450 ± 0.003486	0.650950 ± 0.003371	0.182900 ± 0.002734
25	0.412900 ± 0.003481	0.411000 ± 0.003479	0.644950 ± 0.003384	0.178950 ± 0.002710
26	0.407450 ± 0.003474	0.406350 ± 0.003473	0.639600 ± 0.003395	0.174200 ± 0.002682
27	0.401800 ± 0.003467	0.400600 ± 0.003465	0.632900 ± 0.003408	0.169500 ± 0.002653
28	0.396050 ± 0.003458	0.394050 ± 0.003455	0.625800 ± 0.003422	0.164300 ± 0.002620
29	0.389700 ± 0.003448	0.386950 ± 0.003444	0.617000 ± 0.003437	0.159650 ± 0.002590
30	0.382300 ± 0.003436	0.381050 ± 0.003434	0.609600 ± 0.003450	0.153750 ± 0.002551
31	0.375300 ± 0.003424	0.374400 ± 0.003422	0.601000 ± 0.003463	0.148700 ± 0.002516
32	0.367400 ± 0.003409	0.367100 ± 0.003408	0.591800 ± 0.003475	0.142700 ± 0.002473
33	0.359600 ± 0.003393	0.359750 ± 0.003394	0.581650 ± 0.003488	0.137700 ± 0.002437
34	0.352600 ± 0.003378	0.352000 ± 0.003377	0.571900 ± 0.003499	0.132700 ± 0.002399

TABLE 1. LUCID efficiency when at least one hit is required on side A (ε^A), on side C (ε^C), either of the sides (ε^{OR}), both sides (ε^{AND}) for pp inelastic collisions and a full ATLAS detector simulation collisions at $\sqrt{s} = 7$ TeV

	PHOJET ND			
PMT cut [p.e]	ε^A	ε^C	ε^{OR}	ε^{AND}
0	0.999900 ± 0.000071	0.999800 ± 0.000100	1.000000 ± 0.000000	0.999700 ± 0.000122
1	0.755900 ± 0.003037	0.757350 ± 0.003031	0.938250 ± 0.001702	0.575000 ± 0.003496
2	0.682350 ± 0.003292	0.687750 ± 0.003277	0.896850 ± 0.002151	0.473250 ± 0.003530
3	0.649550 ± 0.003374	0.655400 ± 0.003360	0.873950 ± 0.002347	0.431000 ± 0.003502
4	0.624300 ± 0.003425	0.626350 ± 0.003421	0.852850 ± 0.002505	0.397800 ± 0.003461
5	0.601550 ± 0.003462	0.604600 ± 0.003457	0.835350 ± 0.002622	0.370800 ± 0.003415
6	0.584000 ± 0.003485	0.587500 ± 0.003481	0.822050 ± 0.002704	0.349450 ± 0.003371
7	0.567650 ± 0.003503	0.571450 ± 0.003499	0.808500 ± 0.002782	0.330600 ± 0.003326
8	0.552400 ± 0.003516	0.556600 ± 0.003513	0.795750 ± 0.002851	0.313250 ± 0.003280
9	0.540650 ± 0.003524	0.545550 ± 0.003521	0.785750 ± 0.002901	0.300450 ± 0.003242
10	0.530000 ± 0.003529	0.535700 ± 0.003527	0.776550 ± 0.002946	0.289150 ± 0.003206
11	0.520750 ± 0.003532	0.525950 ± 0.003531	0.767200 ± 0.002988	0.279500 ± 0.003173
12	0.510150 ± 0.003535	0.518000 ± 0.003533	0.757700 ± 0.003030	0.270450 ± 0.003141
13	0.502400 ± 0.003535	0.510200 ± 0.003535	0.749950 ± 0.003062	0.262650 ± 0.003112
14	0.495350 ± 0.003535	0.504250 ± 0.003535	0.743500 ± 0.003088	0.256100 ± 0.003086
15	0.489250 ± 0.003535	0.497050 ± 0.003535	0.737400 ± 0.003112	0.248900 ± 0.003057
16	0.482850 ± 0.003533	0.490850 ± 0.003535	0.731300 ± 0.003134	0.242400 ± 0.003030
17	0.478200 ± 0.003532	0.485600 ± 0.003534	0.726400 ± 0.003152	0.237400 ± 0.003009
18	0.472650 ± 0.003530	0.479200 ± 0.003532	0.720750 ± 0.003172	0.231100 ± 0.002981
19	0.467200 ± 0.003528	0.474400 ± 0.003531	0.716050 ± 0.003188	0.225550 ± 0.002955
20	0.462250 ± 0.003525	0.468850 ± 0.003529	0.710050 ± 0.003208	0.221050 ± 0.002934
21	0.457500 ± 0.003523	0.465200 ± 0.003527	0.705300 ± 0.003224	0.217400 ± 0.002917
22	0.452950 ± 0.003520	0.459300 ± 0.003524	0.700550 ± 0.003239	0.211700 ± 0.002889
23	0.448350 ± 0.003517	0.454850 ± 0.003521	0.695550 ± 0.003254	0.207650 ± 0.002868
24	0.442400 ± 0.003512	0.449950 ± 0.003518	0.689350 ± 0.003272	0.203000 ± 0.002844
25	0.436850 ± 0.003507	0.444050 ± 0.003513	0.682600 ± 0.003291	0.198300 ± 0.002819
26	0.430700 ± 0.003501	0.437950 ± 0.003508	0.675550 ± 0.003310	0.193100 ± 0.002791
27	0.423900 ± 0.003494	0.432600 ± 0.003503	0.668450 ± 0.003329	0.188050 ± 0.002763
28	0.418100 ± 0.003488	0.426200 ± 0.003497	0.661500 ± 0.003346	0.182800 ± 0.002733
29	0.411750 ± 0.003480	0.418800 ± 0.003489	0.653950 ± 0.003364	0.176600 ± 0.002696
30	0.404300 ± 0.003470	0.411650 ± 0.003480	0.645550 ± 0.003382	0.170400 ± 0.002659
31	0.397750 ± 0.003461	0.403950 ± 0.003470	0.637350 ± 0.003400	0.164350 ± 0.002620
32	0.390300 ± 0.003449	0.395450 ± 0.003457	0.628800 ± 0.003416	0.156950 ± 0.002572
33	0.382200 ± 0.003436	0.388100 ± 0.003446	0.619900 ± 0.003432	0.150400 ± 0.002528
34	0.373800 ± 0.003421	0.380500 ± 0.003433	0.610600 ± 0.003448	0.143700 ± 0.002480

TABLE 1. LUCID efficiency when at least one hit is required on side A (ε^A), on side C (ε^C), either of the sides (ε^{OR}), both sides (ε^{AND}) for pp inelastic collisions and a full ATLAS detector simulation collisions at $\sqrt{s} = 7$ TeV

	PHOJET DD			
PMT cut [p.e]	ε^A	ε^C	ε^{OR}	ε^{AND}
0	1.000000 ± 0.000000	1.000000 ± 0.000000	1.000000 ± 0.000000	1.000000 ± 0.000000
1	0.649250 ± 0.003374	0.645900 ± 0.003382	0.879700 ± 0.002300	0.415450 ± 0.003485
2	0.566650 ± 0.003504	0.562700 ± 0.003508	0.813950 ± 0.002752	0.315400 ± 0.003286
3	0.532750 ± 0.003528	0.531050 ± 0.003529	0.786050 ± 0.002900	0.277750 ± 0.003167
4	0.508650 ± 0.003535	0.506750 ± 0.003535	0.761850 ± 0.003012	0.253550 ± 0.003076
5	0.487250 ± 0.003534	0.486850 ± 0.003534	0.740250 ± 0.003101	0.233850 ± 0.002993
6	0.470150 ± 0.003529	0.470100 ± 0.003529	0.721300 ± 0.003170	0.218950 ± 0.002924
7	0.454950 ± 0.003521	0.455200 ± 0.003521	0.705050 ± 0.003225	0.205100 ± 0.002855
8	0.439800 ± 0.003510	0.442350 ± 0.003512	0.689900 ± 0.003271	0.192250 ± 0.002786
9	0.430100 ± 0.003501	0.430150 ± 0.003501	0.676950 ± 0.003307	0.183300 ± 0.002736
10	0.419800 ± 0.003490	0.419550 ± 0.003489	0.664900 ± 0.003338	0.174450 ± 0.002683
11	0.410250 ± 0.003478	0.410450 ± 0.003478	0.654050 ± 0.003364	0.166650 ± 0.002635
12	0.402000 ± 0.003467	0.403250 ± 0.003469	0.644400 ± 0.003385	0.160850 ± 0.002598
13	0.395050 ± 0.003457	0.395700 ± 0.003458	0.635700 ± 0.003403	0.155050 ± 0.002559
14	0.387600 ± 0.003445	0.389800 ± 0.003449	0.627650 ± 0.003418	0.149750 ± 0.002523
15	0.382100 ± 0.003436	0.383750 ± 0.003439	0.619800 ± 0.003433	0.146050 ± 0.002497
16	0.376500 ± 0.003426	0.378650 ± 0.003430	0.612800 ± 0.003444	0.142350 ± 0.002471
17	0.372000 ± 0.003418	0.373850 ± 0.003421	0.607000 ± 0.003454	0.138850 ± 0.002445
18	0.367600 ± 0.003409	0.368450 ± 0.003411	0.600700 ± 0.003463	0.135350 ± 0.002419
19	0.363500 ± 0.003401	0.363800 ± 0.003402	0.595250 ± 0.003471	0.132050 ± 0.002394
20	0.359400 ± 0.003393	0.359650 ± 0.003393	0.590050 ± 0.003478	0.129000 ± 0.002370
21	0.355000 ± 0.003384	0.356100 ± 0.003386	0.585000 ± 0.003484	0.126100 ± 0.002347
22	0.351350 ± 0.003376	0.351450 ± 0.003376	0.579500 ± 0.003491	0.123300 ± 0.002325
23	0.347200 ± 0.003366	0.347700 ± 0.003368	0.574700 ± 0.003496	0.120200 ± 0.002299
24	0.343000 ± 0.003357	0.343600 ± 0.003358	0.569250 ± 0.003501	0.117350 ± 0.002276
25	0.338750 ± 0.003347	0.338950 ± 0.003347	0.563850 ± 0.003507	0.113850 ± 0.002246
26	0.333400 ± 0.003333	0.334550 ± 0.003336	0.557650 ± 0.003512	0.110300 ± 0.002215
27	0.328100 ± 0.003320	0.329750 ± 0.003324	0.551000 ± 0.003517	0.106850 ± 0.002184
28	0.323450 ± 0.003308	0.324050 ± 0.003309	0.543400 ± 0.003522	0.104100 ± 0.002159
29	0.317400 ± 0.003291	0.318050 ± 0.003293	0.534800 ± 0.003527	0.100650 ± 0.002127
30	0.310850 ± 0.003273	0.312850 ± 0.003279	0.527650 ± 0.003530	0.096050 ± 0.002084
31	0.305150 ± 0.003256	0.306500 ± 0.003260	0.519400 ± 0.003533	0.092250 ± 0.002046
32	0.298600 ± 0.003236	0.299600 ± 0.003239	0.509750 ± 0.003535	0.088450 ± 0.002008
33	0.290800 ± 0.003211	0.293500 ± 0.003220	0.499850 ± 0.003536	0.084450 ± 0.001966
34	0.283250 ± 0.003186	0.286800 ± 0.003198	0.489700 ± 0.003535	0.080350 ± 0.001922

TABLE 1. LUCID efficiency when at least one hit is required on side A (ε^A), on side C (ε^C), either of the sides (ε^{OR}), both sides (ε^{AND}) for pp inelastic collisions and a full ATLAS detector simulation collisions at $\sqrt{s} = 7$ TeV

	PHOJET SD			
PMT cut [p.e]	ε^A	ε^C	ε^{OR}	ε^{AND}
0	0.999950 ± 0.000050	0.999900 ± 0.000071	1.000000 ± 0.000000	0.999850 ± 0.000087
1	0.431950 ± 0.003503	0.427350 ± 0.003498	0.729900 ± 0.003140	0.129400 ± 0.002373
2	0.341850 ± 0.003354	0.339200 ± 0.003348	0.625150 ± 0.003423	0.055900 ± 0.001624
3	0.322900 ± 0.003306	0.319350 ± 0.003297	0.593650 ± 0.003473	0.048600 ± 0.001520
4	0.307500 ± 0.003263	0.305350 ± 0.003257	0.569350 ± 0.003501	0.043500 ± 0.001442
5	0.294600 ± 0.003223	0.292000 ± 0.003215	0.547300 ± 0.003520	0.039300 ± 0.001374
6	0.282900 ± 0.003185	0.281650 ± 0.003181	0.528250 ± 0.003530	0.036300 ± 0.001323
7	0.275300 ± 0.003158	0.272100 ± 0.003147	0.513350 ± 0.003534	0.034050 ± 0.001282
8	0.268100 ± 0.003132	0.265000 ± 0.003121	0.500750 ± 0.003536	0.032350 ± 0.001251
9	0.260950 ± 0.003105	0.258650 ± 0.003096	0.489300 ± 0.003535	0.030300 ± 0.001212
10	0.255300 ± 0.003083	0.252850 ± 0.003073	0.479300 ± 0.003533	0.028850 ± 0.001184
11	0.249600 ± 0.003060	0.248500 ± 0.003056	0.470950 ± 0.003530	0.027150 ± 0.001149
12	0.244950 ± 0.003041	0.244600 ± 0.003039	0.463200 ± 0.003526	0.026350 ± 0.001133
13	0.241300 ± 0.003026	0.239400 ± 0.003017	0.455200 ± 0.003521	0.025500 ± 0.001115
14	0.237900 ± 0.003011	0.235700 ± 0.003001	0.449150 ± 0.003517	0.024450 ± 0.001092
15	0.233900 ± 0.002993	0.232450 ± 0.002987	0.442700 ± 0.003512	0.023650 ± 0.001074
16	0.230350 ± 0.002977	0.229000 ± 0.002971	0.436300 ± 0.003507	0.023050 ± 0.001061
17	0.226650 ± 0.002960	0.226000 ± 0.002957	0.430300 ± 0.003501	0.022350 ± 0.001045
18	0.223650 ± 0.002946	0.222800 ± 0.002942	0.424850 ± 0.003495	0.021600 ± 0.001028
19	0.221250 ± 0.002935	0.220050 ± 0.002929	0.420100 ± 0.003490	0.021200 ± 0.001019
20	0.218100 ± 0.002920	0.217450 ± 0.002917	0.414750 ± 0.003484	0.020800 ± 0.001009
21	0.215150 ± 0.002906	0.215000 ± 0.002905	0.410000 ± 0.003478	0.020150 ± 0.000994
22	0.212900 ± 0.002895	0.211750 ± 0.002889	0.404950 ± 0.003471	0.019700 ± 0.000983
23	0.211000 ± 0.002885	0.209000 ± 0.002875	0.400700 ± 0.003465	0.019300 ± 0.000973
24	0.208100 ± 0.002870	0.205650 ± 0.002858	0.394950 ± 0.003457	0.018800 ± 0.000960
25	0.205850 ± 0.002859	0.203450 ± 0.002847	0.390950 ± 0.003450	0.018350 ± 0.000949
26	0.202950 ± 0.002844	0.201100 ± 0.002834	0.386050 ± 0.003442	0.018000 ± 0.000940
27	0.200150 ± 0.002829	0.198200 ± 0.002819	0.380800 ± 0.003434	0.017550 ± 0.000928
28	0.196550 ± 0.002810	0.194950 ± 0.002801	0.374250 ± 0.003422	0.017250 ± 0.000921
29	0.192900 ± 0.002790	0.191300 ± 0.002781	0.367400 ± 0.003409	0.016800 ± 0.000909
30	0.189000 ± 0.002768	0.188750 ± 0.002767	0.361650 ± 0.003397	0.016100 ± 0.000890
31	0.185300 ± 0.002747	0.185000 ± 0.002746	0.354800 ± 0.003383	0.015500 ± 0.000873
32	0.181050 ± 0.002723	0.181800 ± 0.002727	0.347900 ± 0.003368	0.014950 ± 0.000858
33	0.177800 ± 0.002704	0.177950 ± 0.002704	0.341300 ± 0.003353	0.014450 ± 0.000844
34	0.173800 ± 0.002679	0.173300 ± 0.002676	0.333550 ± 0.003334	0.013550 ± 0.000818

TABLE 1. LUCID efficiency when at least one hit is required on side A (ε^A), on side C (ε^C), either of the sides (ε^{OR}), both sides (ε^{AND}) for pp inelastic collisions and a full ATLAS detector simulation collisions at $\sqrt{s} = 7$ TeV