KERNFORSCHUNGSZENTRUM KARLSRUHE

Dezember 1963 KFK 188

Institut für Angewandte Kernphysik

Berechnung des Photobruches zylindrischer NaJ (Tl)-Detektoren für kollimierte Gammastrahlung nach der Monte-Carlo-Methode

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1. Einleitung

Mit der Berechnung des Photobruches von Szintillationsdetektoren haben sich in der Vergangenheit eine große Anzahl von Autoren beschäftigt [1 - 9]. In keiner dieser Veröffentlichungen wird aber der Einfluß der Kollimation der einfallenden Strahlung auf den Photobruch untersucht. Eine ältere Arbeit des Autors [10] befaßt sich mit dem Problem, doch konnten bei der Publikation der Resultate die Werte für kollimierte Strahlung aus Platzgründen nicht veröffentlicht werden. Da jedoch vielerorts Interesse dafür zu bestehen scheint, soll die Veröffentlichung der Ergebnisse an dieser Stelle nachgeholt werden.

2. Rechenmethode

Die Berechnung des Photobruches ist nach der Monte-Carlo-Methode durchgeführt worden und zwar für zylindrische NaJ(Tl)-Kristalle mit Abmessungen zwischen 3" Ø x 2" und 5" Ø x 6" und punktförmige, in verschiedenen Abständen von der Detektorstirnfläche auf der Kristallachse angeordnete Quellen mit Energien zwischen 0,2 und 10 MeV.

Compton-Effekt und Paarbildung wurden in Strenge durchgerechnet, Bremsstrahlungs- und Elektronenverluste aber nicht berücksichtigt - auch nicht in Form nachträglicher Korrekturen - , weil die dadurch bedingten Fehler selbst für die kleinsten Kristalle und höchsten Energien wesentlich kleiner sind als die statistischen Fehler.

Auf die Durchführung der Rechnung soll nur so weit eingegangen werden, wie es zum Verständnis der Ergebnisse und zum Vergleich mit anderen Rechnungen oder mit Messungen des Photobruches erforderlich ist. Eine ausführliche Darstellung findet man in Ref. (10) und (11).

Das Prinzip der Monte-Carlo-Methode besteht darin, eine große Zahl N einzelner Photonen der Energie E_γ auf ihrem Weg durch den Kristall zu verfolgen. Physikalische Größen, die einer statistischen Verteilungsfunktion gehorchen, werden dabei unter Berücksichtigung dieser Verteilung "gewürfelt".

Ist n_T die Anzahl Photonen, die mindestens einmal eine Wechselwirkung mit dem Szintillationskristall eingehen (Photoeffekt, Compton-Effekt oder Paarbildung) und so ein Signal am Detektorausgang hervorrufen, und n_p die Zahl jener Photonen, die ihre

gesamte Energie* innerhalb des Kristalls verlieren, so ist der Photobruch $P = \frac{n_P}{n_T}$. Da zur Verkürzung der Rechenzeit Kristalle mit gleichem Radius, aber verschiedener Dicke zu einem "Satz" von 4 Kristallen zusammengefaßt worden sind, wird n_P und n_T und darum auch P noch mit einem Index i(i = 1 ... 4) gekennzeichnet, und ein weiterer Index ß(ß = 1 ... 10) gibt den Öffnungswinkel eines Kollimators an, der es dem Quant gerade noch gestattet, die Stirnfläche des Kristalls zu treffen (vgl. Abb. 1).

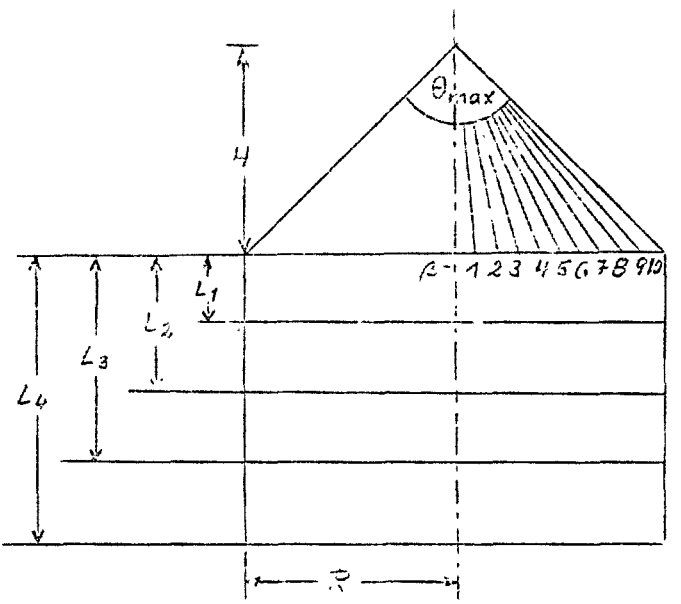

Abb. 1

Bezeichnung der Geometrie-Parameter

Infolge des endlichen Auflösungsvermögens des Detektorsystems kann ein γ-Quant auch dann noch zum Photopeak des Impulshöhenspektrums beitragen, wenn es etwas weniger als seine ganze Energie im Kristall verliert, etwa $E_\gamma - E_G$. Die Wahl dieser Grenzenergie E_G ist nich kritisch. Es erschien sinnvoll, für E_G ein Gesetz der Form $E_G = C \cdot \sqrt{E_\gamma}$ anzunehmen, wobei die Konstante C durch $(E_G/E_\gamma)_{E_\gamma = 662\ KeV} = 10\%$ bestimmt ist. Für Energien über 2 MeV wurde E_G aus den von Koch und Foote[12] durchgeführten Messungen des Auflösungsvermögens ermittelt.

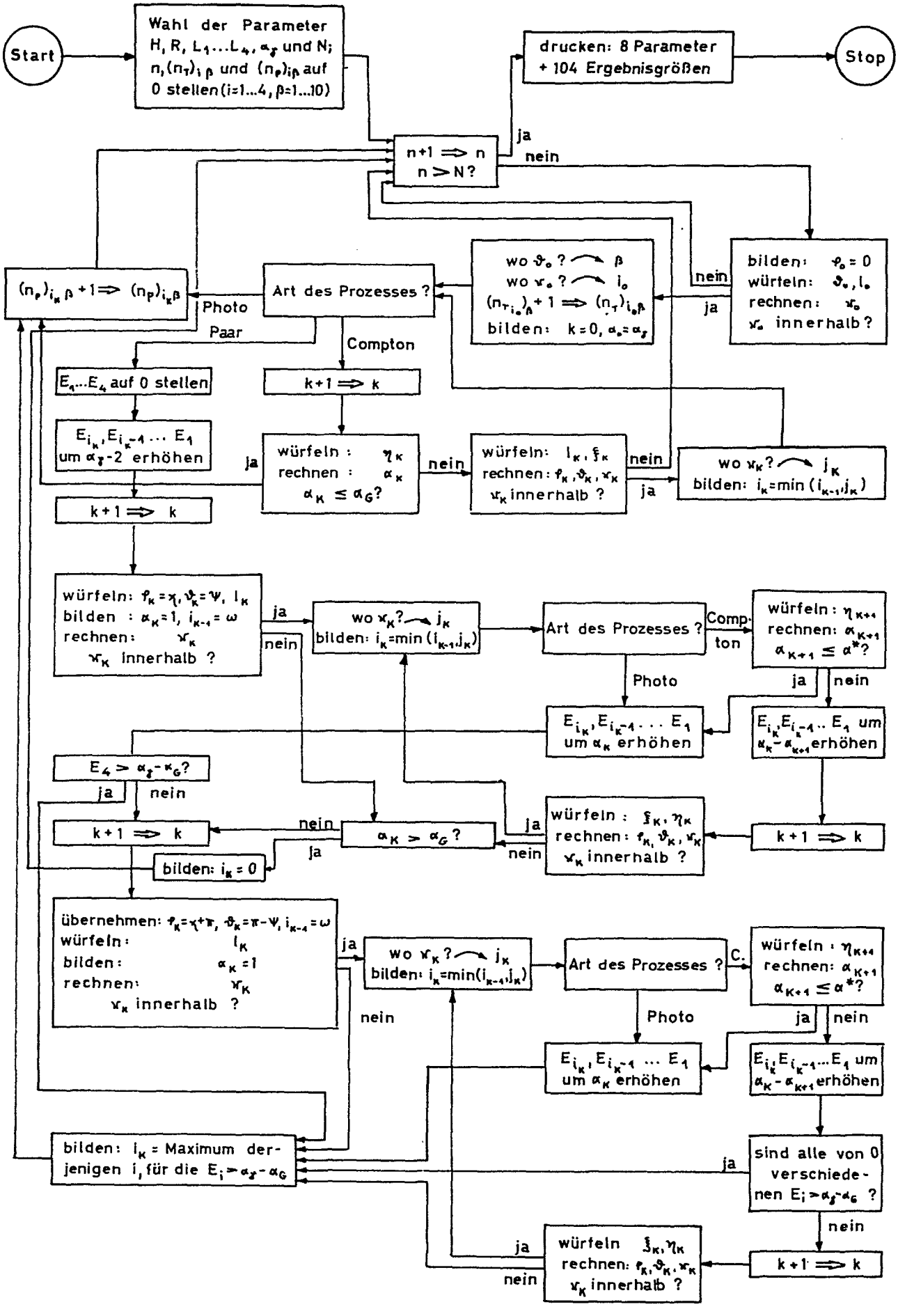

Abb. 2.
Strukturdiagramm. Erklärung der Symbole im Text.

Das Auswürfeln der Monte-Carlo-Geschichten läßt sich anhand des in Abb. 2 wiedergegebenen Strukturdiagrammes verfolgen und soll nicht im einzelnen beschrieben werden. Die Bedeutung der Geometrieparameter ist aus Abb. 1 ersichtlich. n ist die Zahl der schon durchgerechneten Monte-Carlo-Geschichten, l die freie Weglänge des Photons zwischen zwei aufeinanderfolgenden Ereignissen, φ, ϑ und w bedeuten Azimutal- und Polarwinkel der Fortpflanzungsrichtung und Ort der darauffolgenden Wechselwirkung im kristalleigenen Koordinatensystem, und η und ξ stellen Streuwinkel und Azimut beim Compton-Effekt dar. α ist die Energie des γ-Quants in Einheiten von $m_o c^2$; da die mittlere freie Weglänge von γ-Quanten der Energie 50 keV oder darunter in NaJ(Tl) 3×10^{-2} cm oder weniger beträgt, wurden Photonen mit $\alpha < \alpha^* \equiv 0{,}1$ als vollkommen absorbiert betrachtet. Der Index k gibt an, wieviele Wechselwirkungen das gerade behandelte Quant im Kristall schon hervorgerufen hat. Bei der Paarbildung macht die Trennung der an die einzelnen Kristalle eines Satzes abgegebenen Energiebeträge Schwierigkeiten. Es werden deshalb vier Größen $E_1 \ldots E_4$ eingeführt, die die Energiebeträge "sammeln", die nur im größten, in den beiden größten, in den drei größten und schließlich in allen 4 Kristallen abgegeben werden.

3. Ergebnisse

Die Ergebnisse der Rechnung sind in den im Anhang wiedergegebenen Tabellen aufgeführt. Die Energieabhängigkeit des Photobruches zeigt das bekannte Minimum bei etwa 3 MeV[10]. Da das der Rechnung zugrundegelegte Energieauflösungsvermögen der Detektoren bei 6,6 MeV den Betrag von 511 keV überschreitet, tragen oberhalb dieser Energie auch solche Ereignisse noch zum Photopeak bei, bei denen ein Vernichtungsquant aus dem Kristall entweicht; die P-Werte steigen deshalb oberhalb 6,6 MeV sprunghaft an.

Der Einfluß des Kollimators wirkt sich im allgemeinen in einer Vergrößerung des Photobruchs aus. Für sehr flache Kristalle kann es bei nicht zu großen Quellabständen und γ-Energien um 2 MeV aber

vorkommen, daß der Photobruch mit kleiner werdendem Öffnungswinkel zunächst ansteigt, bei $\Theta \approx 0{,}4\ \Theta_{max}$ ein Maximum durchläuft und dann wieder sinkt. Dieser Effekt läßt sich dadurch erklären, daß die mittlere Dicke der durchstrahlten Kristallschicht mit wachsender Kollimatoröffnung erst größer wird und dann infolge der Randeffekte wieder abfällt. Da bei 1,5 MeV der Compton-Effekt 95% aller stattfindenden Prozesse ausmacht und kleine Streuwinkel bevorzugt auftreten, wirkt sich eine größere Schichtdicke infolge häufigerer Mehrfachstreuungen in einer Erhöhung des Photobruchs aus.

W.F. Miller et al.[6] haben Berechnungen des Photobruchs eines 4 x 4"-Kristalls für eine von W.E. Kreger[13] verwendete Meßanordnung durchgeführt, der in den vorliegenden Rechnungen eine Kollimation von etwa $0{,}3\ \Theta_{max}$ entspricht. Die verschiedenen Ergebnisse sind in Abb. 3 zusammengestellt und zeigen gute Übereinstimmung.

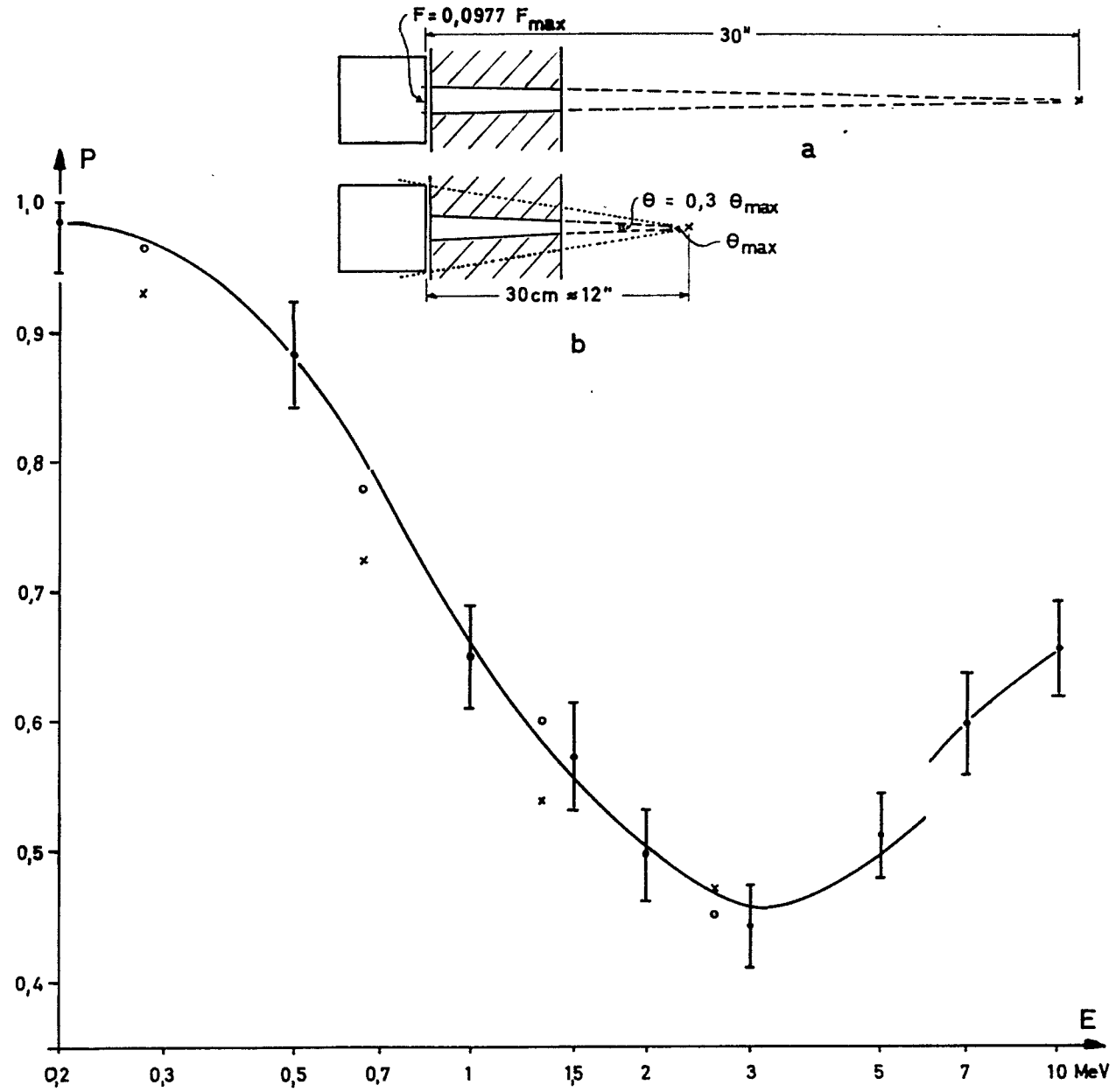

Abb. 3.
Photobruch eines 4 x 4" - Kristalls für kollimierte Strahlung der Öffnung $\theta = 0{,}3\ \theta_{max}$.

× × × W.E.KREGER[13] (experimentell, Geometrie a)

• ○ ○ W.F.MILLER et al.[6] (Monte-Carlo, Geometrie a)

• • • vorliegende Arbeit (Monte-Carlo, Geometrie b)

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Tabellenanhang

Bedeutung der Parameter:

$D = 2\ R$	Kristalldurchmesser
L	Kristalldicke
H	Abstand der Quelle von der Stirnfläche
E_γ	Energie der einfallenden Gammastrahlung
$i = \theta/\theta_{max}$	Öffnung des Kollimators

Übersicht über die Tabellen:

Tabellen	D	H	E	Seite
1 bis 9	3 "	15 cm	0,2 bis 10 MeV	10 - 12
10 bis 18	3 "	30 cm	"	13 - 15
19 bis 27	4 "	7 1/2 cm	"	16 - 18
28 bis 36	4 "	15 cm	"	19 - 21
37 bis 45	4 "	30 cm	"	22 - 24
46 bis 54	5 "	15 cm	"	25 - 27
55 bis 63	5 "	30 cm	"	28 - 30

Tabelle 1: D=3", H=15 cm, E_γ = 0,2 MeV

i	L = 2"	L = 3"	L = 4"	L = 5 1/2"
1	1.0000 ± 0.1195	1.0000 ± 0.1195	1.0000 ± 0.1195	1.0000 ± 0.1195
2	0.9886 ± 0.0613	0.9924 ± 0.0613	0.9924 ± 0.0613	0.9924 ± 0.0613
3	0.9859 ± 0.0417	0.9894 ± 0.0417	0.9894 ± 0.0417	0.9894 ± 0.0417
4	0.9857 ± 0.0318	0.9887 ± 0.0318	0.9887 ± 0.0318	0.9887 ± 0.0318
5	0.9845 ± 0.0258	0.9865 ± 0.0258	0.9865 ± 0.0258	0.9865 ± 0.0258
6	0.9821 ± 0.0215	0.9836 ± 0.0215	0.9836 ± 0.0215	0.9836 ± 0.0215
7	0.9796 ± 0.0184	0.9814 ± 0.0184	0.9814 ± 0.0184	0.9814 ± 0.0184
8	0.9771 ± 0.0158	0.9785 ± 0.0158	0.9785 ± 0.0158	0.9785 ± 0.0158
9	0.9688 ± 0.0142	0.9699 ± 0.0142	0.9701 ± 0.0142	0.9701 ± 0.0142
10	0.9597 ± 0.0133	0.9606 ± 0.0133	0.9608 ± 0.0133	0.9608 ± 0.0133

Tabelle 2: D=3", H=15 cm, E_γ = 0,5 MeV

i	L = 2"	L = 3"	L = 4"	L = 5 1/2"
1	0.8163 ± 0.1291	0.9057 ± 0.1307	0.8750 ± 0.1250	0.9123 ± 0.1265
2	0.7316 ± 0.0621	0.8095 ± 0.0621	0.8214 ± 0.0606	0.8407 ± 0.0610
3	0.7299 ± 0.0404	0.8111 ± 0.0402	0.8289 ± 0.0395	0.8404 ± 0.0395
4	0.7262 ± 0.0303	0.7962 ± 0.0299	0.8106 ± 0.0293	0.8269 ± 0.0293
5	0.7263 ± 0.0243	0.7846 ± 0.0237	0.7963 ± 0.0233	0.8119 ± 0.0232
6	0.7069 ± 0.0199	0.7569 ± 0.0195	0.7717 ± 0.0192	0.7856 ± 0.0191
7	0.6960 ± 0.0169	0.7426 ± 0.0165	0.7560 ± 0.0163	0.7687 ± 0.0163
8	0.6825 ± 0.0148	0.7248 ± 0.0145	0.7403 ± 0.0144	0.7515 ± 0.0144
9	0.6640 ± 0.0134	0.7051 ± 0.0132	0.7204 ± 0.0132	0.7308 ± 0.0132
10	0.6528 ± 0.0128	0.6933 ± 0.0127	0.7083 ± 0.0126	0.7184 ± 0.0127

Tabelle 3: D=3", H=15 cm, E_γ = 1,0 MeV

i	L = 2"	L = 3"	L = 4"	L = 5 1/2"
1	0.5000 ± 0.1021	0.5536 ± 0.0994	0.6000 ± 0.1000	0.6250 ± 0.0988
2	0.5134 ± 0.0524	0.5605 ± 0.0501	0.5975 ± 0.0498	0.6236 ± 0.0487
3	0.4833 ± 0.0352	0.5459 ± 0.0345	0.5768 ± 0.0339	0.6089 ± 0.0335
4	0.4649 ± 0.0264	0.5424 ± 0.0262	0.5766 ± 0.0259	0.6037 ± 0.0256
5	0.4709 ± 0.0214	0.5313 ± 0.0208	0.5681 ± 0.0206	0.5886 ± 0.0202
6	0.4553 ± 0.0174	0.5224 ± 0.0171	0.5597 ± 0.0169	0.5785 ± 0.0167
7	0.4474 ± 0.0149	0.5108 ± 0.0145	0.5482 ± 0.0145	0.5685 ± 0.0145
8	0.4385 ± 0.0130	0.4973 ± 0.0129	0.5329 ± 0.0129	0.5517 ± 0.0129
9	0.4268 ± 0.0119	0.4844 ± 0.0118	0.5184 ± 0.0119	0.5360 ± 0.0119
10	0.4193 ± 0.0114	0.4759 ± 0.0115	0.5091 ± 0.0116	0.5262 ± 0.0116

Tabelle 4: D = 3", H = 15 cm, E_γ = 1,5 MeV

i	L = 2"	L = 3"	L = 4"	L = 5 1/2"
1	0.2703 ± 0.0855	0.3469 ± 0.0841	0.4259 ± 0.0888	0.4407 ± 0.0864
2	0.3904 ± 0.0517	0.4381 ± 0.0475	0.4813 ± 0.0474	0.4958 ± 0.0458
3	0.3636 ± 0.0332	0.4343 ± 0.0319	0.4797 ± 0.0320	0.4981 ± 0.0310
4	0.3879 ± 0.0263	0.4431 ± 0.0248	0.4780 ± 0.0245	0.5097 ± 0.0241
5	0.3911 ± 0.0211	0.4392 ± 0.0198	0.4753 ± 0.0196	0.5004 ± 0.0192
6	0.3838 ± 0.0174	0.4276 ± 0.0163	0.4667 ± 0.0162	0.4910 ± 0.0159
7	0.3741 ± 0.0147	0.4186 ± 0.0138	0.4552 ± 0.0138	0.4811 ± 0.0138
8	0.3646 ± 0.0128	0.4140 ± 0.0123	0.4469 ± 0.0124	0.4714 ± 0.0124
9	0.3528 ± 0.0116	0.4035 ± 0.0114	0.4354 ± 0.0115	0.4580 ± 0.0115
10	0.3491 ± 0.0113	0.3991 ± 0.0111	0.4304 ± 0.0112	0.4524 ± 0.0113

Tabelle 5: D = 3", H = 15 cm, E_γ = 2,0 MeV

i	L = 2"	L = 3"	L = 4"	L = 5 1/2"
1	0.3030 ± 0.0958	0.3400 ± 0.0825	0.3962 ± 0.0865	0.4035 ± 0.0841
2	0.3667 ± 0.0553	0.4217 ± 0.0504	0.4444 ± 0.0485	0.4515 ± 0.0468
3	0.3145 ± 0.0314	0.3942 ± 0.0308	0.4374 ± 0.0305	0.4664 ± 0.0299
4	0.3459 ± 0.0256	0.4130 ± 0.0244	0.4515 ± 0.0240	0.4769 ± 0.0235
5	0.3465 ± 0.0204	0.4116 ± 0.0195	0.4424 ± 0.0190	0.4646 ± 0.0186
6	0.3468 ± 0.0171	0.3964 ± 0.0160	0.4270 ± 0.0157	0.4473 ± 0.0154
7	0.3404 ± 0.0145	0.3817 ± 0.0135	0.4115 ± 0.0134	0.4330 ± 0.0133
8	0.3261 ± 0.0125	0.3719 ± 0.0120	0.4001 ± 0.0120	0.4209 ± 0.0120
9	0.3179 ± 0.0114	0.3645 ± 0.0111	0.3916 ± 0.0112	0.4117 ± 0.0112
10	0.3114 ± 0.0110	0.3585 ± 0.0108	0.3855 ± 0.0109	0.4052 ± 0.0109

Tabelle 6: D = 3", H = 15 cm, E_γ = 3,0 MeV

i	L = 2"	L = 3"	L = 4"	L = 5 1/2"
1	0.3103 ± 0.1034	0.4186 ± 0.0987	0.3396 ± 0.0801	0.4068 ± 0.0830
2	0.2857 ± 0.0476	0.3916 ± 0.0486	0.3814 ± 0.0443	0.4194 ± 0.0440
3	0.2586 ± 0.0299	0.3429 ± 0.0300	0.3683 ± 0.0287	0.4091 ± 0.0284
4	0.2870 ± 0.0250	0.3480 ± 0.0238	0.3719 ± 0.0228	0.4069 ± 0.0224
5	0.2991 ± 0.0200	0.3514 ± 0.0190	0.3683 ± 0.0180	0.3970 ± 0.0176
6	0.3014 ± 0.0167	0.3461 ± 0.0157	0.3585 ± 0.0148	0.3865 ± 0.0146
7	0.3060 ± 0.0145	0.3384 ± 0.0134	0.3525 ± 0.0128	0.3795 ± 0.0127
8	0.2919 ± 0.0125	0.3256 ± 0.0118	0.3421 ± 0.0115	0.3678 ± 0.0115
9	0.2823 ± 0.0113	0.3176 ± 0.0109	0.3337 ± 0.0107	0.3591 ± 0.0108
10	0.2748 ± 0.0109	0.3106 ± 0.0106	0.3283 ± 0.0104	0.3530 ± 0.0105

Tabelle 7: D = 3", H = 15 cm, E_γ = 5,0 MeV

i	L = 2"	L = 3"	L = 4"	L = 5 1/2"
1	0.4118 ± 0.1100	0.4444 ± 0.0994	0.3889 ± 0.0849	0.4063 ± 0.0797
2	0.3097 ± 0.0524	0.3333 ± 0.0462	0.3462 ± 0.0436	0.3868 ± 0.0427
3	0.3320 ± 0.0369	0.3535 ± 0.0327	0.3712 ± 0.0306	0.4052 ± 0.0297
4	0.3761 ± 0.0294	0.3965 ± 0.0263	0.4125 ± 0.0245	0.4347 ± 0.0234
5	0.3601 ± 0.0229	0.3830 ± 0.0206	0.4002 ± 0.0193	0.4146 ± 0.0182
6	0.3516 ± 0.0187	0.3651 ± 0.0166	0.3782 ± 0.0157	0.3944 ± 0.0150
7	0.3417 ± 0.0157	0.3562 ± 0.0140	0.3729 ± 0.0134	0.3898 ± 0.0130
8	0.3240 ± 0.0133	0.3415 ± 0.0123	0.3599 ± 0.0119	0.3765 ± 0.0117
9	0.3156 ± 0.0121	0.3355 ± 0.0114	0.3544 ± 0.0112	0.3706 ± 0.0110
10	0.3144 ± 0.0119	0.3342 ± 0.0111	0.3529 ± 0.0109	0.3694 ± 0.0108

Tabelle 8: D = 3", H = 15 cm, E_γ = 7,0 MeV

i	L = 2"	L = 3"	L = 4"	L = 5 1/2"
1	0.4737 ± 0.1116	0.4898 ± 0.1000	0.4386 ± 0.0877	0.4677 ± 0.0869
2	0.4769 ± 0.0606	0.5119 ± 0.0552	0.5128 ± 0.0513	0.5256 ± 0.0494
3	0.4431 ± 0.0417	0.4779 ± 0.0375	0.4815 ± 0.0345	0.5022 ± 0.0333
4	0.4539 ± 0.0332	0.4891 ± 0.0299	0.4932 ± 0.0274	0.5074 ± 0.0261
5	0.4435 ± 0.0257	0.4754 ± 0.0231	0.4896 ± 0.0216	0.4921 ± 0.0203
6	0.4434 ± 0.0212	0.4621 ± 0.0188	0.4721 ± 0.0176	0.4772 ± 0.0167
7	0.4278 ± 0.0175	0.4464 ± 0.0156	0.4593 ± 0.0149	0.4678 ± 0.0144
8	0.4108 ± 0.0149	0.4304 ± 0.0136	0.4459 ± 0.0132	0.4564 ± 0.0129
9	0.3998 ± 0.0135	0.4222 ± 0.0126	0.4372 ± 0.0123	0.4480 ± 0.0120
10	0.3984 ± 0.0131	0.4205 ± 0.0123	0.4352 ± 0.0120	0.4463 ± 0.0118

Tabelle 9: D = 3", H = 15 cm, E_γ = 10,0 MeV

i	L = 2"	L = 3"	L = 4"	L = 5 1/2"
1	0.5294 ± 0.1248	0.5476 ± 0.1142	0.5098 ± 0.1000	0.5614 ± 0.0992
2	0.5342 ± 0.0605	0.5568 ± 0.0562	0.5784 ± 0.0532	0.5789 ± 0.0504
3	0.4772 ± 0.0409	0.5027 ± 0.0367	0.5227 ± 0.0345	0.5427 ± 0.0332
4	0.4936 ± 0.0325	0.5073 ± 0.0286	0.5260 ± 0.0268	0.5222 ± 0.0250
5	0.4798 ± 0.0259	0.4958 ± 0.0228	0.5142 ± 0.0214	0.5102 ± 0.0200
6	0.4627 ± 0.0209	0.4754 ± 0.0184	0.4854 ± 0.0172	0.4838 ± 0.0162
7	0.4575 ± 0.0178	0.4611 ± 0.0156	0.4718 ± 0.0147	0.4751 ± 0.0141
8	0.4361 ± 0.0151	0.4441 ± 0.0136	0.4581 ± 0.0131	0.4635 ± 0.0127
9	0.4212 ± 0.0138	0.4339 ± 0.0127	0.4487 ± 0.0123	0.4548 ± 0.0119
10	0.4165 ± 0.0134	0.4302 ± 0.0124	0.4454 ± 0.0120	0.4515 ± 0.0117

Tabelle 10: D = 3", H = 30 cm, E_γ = 0,2 MeV

i	L = 2"	L = 3"	L = 4"	L = 5 1/2"
1	1.0000 ± 0.1204	1.0000 ± 0.1204	1.0000 ± 0.1204	1.0000 ± 0.1204
2	0.9847 ± 0.0614	0.9886 ± 0.0614	0.9886 ± 0.0614	0.9886 ± 0.0614
3	0.9825 ± 0.0414	0.9843 ± 0.0414	0.9843 ± 0.0414	0.9843 ± 0.0414
4	0.9823 ± 0.0320	0.9844 ± 0.0320	0.9845 ± 0.0319	0.9845 ± 0.0319
5	0.9817 ± 0.0258	0.9831 ± 0.0258	0.9831 ± 0.0258	0.9831 ± 0.0258
6	0.9805 ± 0.0216	0.9814 ± 0.0216	0.9815 ± 0.0216	0.9815 ± 0.0216
7	0.9791 ± 0.0185	0.9802 ± 0.0185	0.9802 ± 0.0185	0.9802 ± 0.0185
8	0.9746 ± 0.0159	0.9757 ± 0.0159	0.9757 ± 0.0159	0.9757 ± 0.0159
9	0.9678 ± 0.0142	0.9689 ± 0.0142	0.9691 ± 0.0142	0.9691 ± 0.0142
10	0.9565 ± 0.0130	0.9574 ± 0.0130	0.9576 ± 0.0130	0.9576 ± 0.0130

Tabelle 11: D = 3", H = 30 cm, E_γ = 0,5 MeV

i	L = 2"	L = 3"	L = 4"	L = 5 1/2"
1	0.7826 ± 0.1304	0.9434 ± 0.1334	0.8947 ± 0.1253	0.9298 ± 0.1277
2	0.7514 ± 0.0637	0.8373 ± 0.0633	0.8482 ± 0.0615	0.8578 ± 0.0617
3	0.7368 ± 0.0402	0.8230 ± 0.0400	0.8416 ± 0.0394	0.8522 ± 0.0394
4	0.7325 ± 0.0305	0.8113 ± 0.0303	0.8275 ± 0.0297	0.8405 ± 0.0297
5	0.7157 ± 0.0244	0.7868 ± 0.0242	0.8041 ± 0.0237	0.8182 ± 0.0236
6	0.7118 ± 0.0201	0.7671 ± 0.0198	0.7863 ± 0.0195	0.7983 ± 0.0194
7	0.7011 ± 0.0170	0.7553 ± 0.0167	0.7769 ± 0.0165	0.7858 ± 0.0164
8	0.6911 ± 0.0149	0.7394 ± 0.0145	0.7607 ± 0.0144	0.7706 ± 0.0143
9	0.6687 ± 0.0131	0.7147 ± 0.0128	0.7353 ± 0.0127	0.7441 ± 0.0127
10	0.6484 ± 0.0122	0.6937 ± 0.0121	0.7135 ± 0.0120	0.7218 ± 0.0120

Tabelle 12: D = 3", H = 30 cm, E_γ = 1,0 MeV

i	L = 2"	L = 3"	L = 4"	L = 5 1/2"
1	0.4792 ± 0.0999	0.5192 ± 0.0999	0.5818 ± 0.1029	0.6316 ± 0.1053
2	0.5460 ± 0.0560	0.5813 ± 0.0535	0.6136 ± 0.0528	0.6446 ± 0.0516
3	0.5278 ± 0.0383	0.5657 ± 0.0364	0.5936 ± 0.0355	0.6294 ± 0.0351
4	0.4968 ± 0.0281	0.5594 ± 0.0273	0.6007 ± 0.0270	0.6280 ± 0.0266
5	0.4887 ± 0.0224	0.5403 ± 0.0214	0.5878 ± 0.0213	0.6089 ± 0.0210
6	0.4795 ± 0.0181	0.5380 ± 0.0175	0.5803 ± 0.0174	0.5986 ± 0.0171
7	0.4671 ± 0.0153	0.5293 ± 0.0148	0.5677 ± 0.0147	0.5849 ± 0.0144
8	0.4576 ± 0.0134	0.5095 ± 0.0128	0.5430 ± 0.0127	0.5600 ± 0.0125
9	0.4344 ± 0.0116	0.4867 ± 0.0113	0.5197 ± 0.0113	0.5364 ± 0.0112
10	0.4209 ± 0.0109	0.4726 ± 0.0107	0.5048 ± 0.0107	0.5212 ± 0.0107

Tabelle 13: D = 3", H = 30 cm, E_γ = 1,5 MeV

i	L = 2"	L = 3"	L = 4"	L = 5 1/2"
1	0.2778 ± 0.0878	0.3265 ± 0.0816	0.3704 ± 0.0828	0.4286 ± 0.0875
2	0.4071 ± 0.0539	0.4570 ± 0.0496	0.4764 ± 0.0474	0.5217 ± 0.0476
3	0.3714 ± 0.0343	0.4265 ± 0.0323	0.4644 ± 0.0317	0.5078 ± 0.0316
4	0.3736 ± 0.0264	0.4337 ± 0.0249	0.4734 ± 0.0245	0.5185 ± 0.0245
5	0.3767 ± 0.0209	0.4378 ± 0.0199	0.4756 ± 0.0196	0.5100 ± 0.0195
6	0.3769 ± 0.0173	0.4274 ± 0.0164	0.4622 ± 0.0161	0.4946 ± 0.0160
7	0.3701 ± 0.0147	0.4145 ± 0.0139	0.4509 ± 0.0136	0.4779 ± 0.0134
8	0.3602 ± 0.0127	0.4014 ± 0.0119	0.4316 ± 0.0117	0.4609 ± 0.0117
9	0.3428 ± 0.0110	0.3836 ± 0.0105	0.4135 ± 0.0105	0.4409 ± 0.0105
10	0.3328 ± 0.0104	0.3739 ± 0.0100	0.4033 ± 0.0100	0.4299 ± 0.0100

Tabelle 14: D = 3", H = 30 cm, E_γ = 2,0 MeV

i	L = 2"	L = 3"	L = 4"	L = 5 1/2"
1	0.3235 ± 0.0975	0.3654 ± 0.0838	0.4259 ± 0.0888	0.4561 ± 0.0895
2	0.3459 ± 0.0510	0.4231 ± 0.0482	0.4387 ± 0.0455	0.4626 ± 0.0451
3	0.3094 ± 0.0317	0.3831 ± 0.0309	0.4200 ± 0.0299	0.4595 ± 0.0298
4	0.3308 ± 0.0252	0.4017 ± 0.0242	0.4412 ± 0.0238	0.4780 ± 0.0235
5	0.3466 ± 0.0204	0.4087 ± 0.0195	0.4438 ± 0.0191	0.4696 ± 0.0187
6	0.3556 ± 0.0173	0.3973 ± 0.0161	0.4301 ± 0.0158	0.4497 ± 0.0154
7	0.3494 ± 0.0148	0.3857 ± 0.0136	0.4194 ± 0.0134	0.4428 ± 0.0131
8	0.3357 ± 0.0127	0.3713 ± 0.0117	0.3997 ± 0.0115	0.4245 ± 0.0114
9	0.3116 ± 0.0109	0.3511 ± 0.0104	0.3798 ± 0.0103	0.4051 ± 0.0102
10	0.3009 ± 0.0103	0.3419 ± 0.0099	0.3704 ± 0.0099	0.3952 ± 0.0098

Tabelle 15: D = 3", H = 30 cm, E_γ = 3,0 MeV

i	L = 2"	L = 3"	L = 4"	L = 5 1/2"
1	0.2188 ± 0.0827	0.3469 ± 0.0841	0.3636 ± 0.0813	0.3793 ± 0.0809
2	0.2681 ± 0.0441	0.3616 ± 0.0452	0.3854 ± 0.0434	0.4273 ± 0.0434
3	0.2824 ± 0.0306	0.3523 ± 0.0302	0.3884 ± 0.0294	0.4317 ± 0.0292
4	0.3160 ± 0.0256	0.3626 ± 0.0241	0.3958 ± 0.0234	0.4363 ± 0.0231
5	0.3267 ± 0.0209	0.3626 ± 0.0194	0.3898 ± 0.0186	0.4229 ± 0.0183
6	0.3277 ± 0.0175	0.3627 ± 0.0161	0.3829 ± 0.0154	0.4084 ± 0.0150
7	0.3202 ± 0.0149	0.3470 ± 0.0135	0.3695 ± 0.0130	0.3936 ± 0.0126
8	0.3026 ± 0.0127	0.3275 ± 0.0116	0.3488 ± 0.0111	0.3722 ± 0.0109
9	0.2812 ± 0.0109	0.3081 ± 0.0101	0.3310 ± 0.0099	0.3563 ± 0.0099
10	0.2729 ± 0.0103	0.3002 ± 0.0097	0.3237 ± 0.0095	0.3484 ± 0.0095

Tabelle 16: D = 3", H = 30 cm, E_γ = 5,0 MeV

i	L = 2"	L = 3"	L = 4"	L = 5 1/2"
1	0.4688 ± 0.1210	0.5227 ± 0.1090	0.5400 ± 0.1039	0.5593 ± 0.0974
2	0.3360 ± 0.0518	0.4061 ± 0.0496	0.4385 ± 0.0484	0.4692 ± 0.0472
3	0.3571 ± 0.0366	0.4029 ± 0.0339	0.4201 ± 0.0321	0.4486 ± 0.0307
4	0.3792 ± 0.0293	0.4174 ± 0.0269	0.4440 ± 0.0256	0.4681 ± 0.0244
5	0.3607 ± 0.0226	0.3952 ± 0.0207	0.4168 ± 0.0196	0.4374 ± 0.0187
6	0.3574 ± 0.0189	0.3820 ± 0.0170	0.4016 ± 0.0162	0.4190 ± 0.0154
7	0.3505 ± 0.0160	0.3759 ± 0.0144	0.3884 ± 0.0136	0.4047 ± 0.0129
8	0.3298 ± 0.0135	0.3538 ± 0.0122	0.3658 ± 0.0116	0.3835 ± 0.0111
9	0.3134 ± 0.0118	0.3380 ± 0.0109	0.3513 ± 0.0104	0.3702 ± 0.0102
10	0.3038 ± 0.0111	0.3296 ± 0.0104	0.3436 ± 0.0100	0.3625 ± 0.0098

Tabelle 17: D = 3", H = 30 cm, E_γ = 7,0 MeV

i	L = 2"	L = 3"	L = 4"	L = 5 1/2"
1	0.5625 ± 0.1326	0.5610 ± 0.1170	0.5106 ± 0.1042	0.5098 ± 0.1000
2	0.4886 ± 0.0611	0.5031 ± 0.0556	0.5137 ± 0.0530	0.5320 ± 0.0512
3	0.4737 ± 0.0422	0.4886 ± 0.0374	0.5038 ± 0.0355	0.5255 ± 0.0341
4	0.4839 ± 0.0334	0.5062 ± 0.0298	0.5173 ± 0.0279	0.5302 ± 0.0264
5	0.4719 ± 0.0261	0.5044 ± 0.0235	0.5189 ± 0.0221	0.5235 ± 0.0208
6	0.4579 ± 0.0216	0.4869 ± 0.0194	0.4980 ± 0.0182	0.4991 ± 0.0169
7	0.4444 ± 0.0180	0.4676 ± 0.0161	0.4734 ± 0.0150	0.4763 ± 0.0140
8	0.4343 ± 0.0155	0.4509 ± 0.0138	0.4546 ± 0.0128	0.4623 ± 0.0122
9	0.4185 ± 0.0136	0.4379 ± 0.0123	0.4444 ± 0.0117	0.4537 ± 0.0112
10	0.4133 ± 0.0129	0.4334 ± 0.0118	0.4406 ± 0.0113	0.4499 ± 0.0109

Tabelle 18: D = 3", H = 30 cm, E_γ = 10,0 MeV

i	L = 2"	L = 3"	L = 4"	L = 5 1/2"
1	0.6061 ± 0.1355	0.5682 ± 0.1136	0.5600 ± 0.1058	0.5556 ± 0.1014
2	0.5135 ± 0.0589	0.5455 ± 0.0540	0.5634 ± 0.0514	0.5579 ± 0.0489
3	0.4917 ± 0.0404	0.5245 ± 0.0368	0.5452 ± 0.0347	0.5533 ± 0.0334
4	0.5099 ± 0.0317	0.5252 ± 0.0288	0.5344 ± 0.0269	0.5337 ± 0.0254
5	0.4973 ± 0.0261	0.5223 ± 0.0235	0.5303 ± 0.0219	0.5302 ± 0.0207
6	0.4820 ± 0.0214	0.4982 ± 0.0190	0.5081 ± 0.0178	0.5075 ± 0.0168
7	0.4844 ± 0.0183	0.4937 ± 0.0162	0.4986 ± 0.0150	0.4962 ± 0.0141
8	0.4666 ± 0.0157	0.4712 ± 0.0137	0.4760 ± 0.0128	0.4780 ± 0.0122
9	0.4439 ± 0.0137	0.4547 ± 0.0123	0.4615 ± 0.0116	0.4653 ± 0.0112
10	0.4314 ± 0.0129	0.4450 ± 0.0118	0.4530 ± 0.0112	0.4575 ± 0.0108

Tabelle 19: D = 4", H = 7 1/2 cm, E_γ = 0,2 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	1.0000 ± 0.1204	1.0000 ± 0.1204	1.0000 ± 0.1204	1.0000 ± 0.1204
2	0.9923 ± 0.0618	0.9923 ± 0.0618	0.9923 ± 0.0618	0.9923 ± 0.0618
3	0.9860 ± 0.0416	0.9860 ± 0.0416	0.9860 ± 0.0416	0.9860 ± 0.0416
4	0.9821 ± 0.0313	0.9821 ± 0.0312	0.9821 ± 0.0312	0.9821 ± 0.0312
5	0.9825 ± 0.0253	0.9825 ± 0.0252	0.9825 ± 0.0252	0.9825 ± 0.0252
6	0.9813 ± 0.0212	0.9813 ± 0.0212	0.9813 ± 0.0212	0.9813 ± 0.0212
7	0.9799 ± 0.0181	0.9799 ± 0.0181	0.9799 ± 0.0181	0.9799 ± 0.0181
8	0.9794 ± 0.0158	0.9794 ± 0.0158	0.9794 ± 0.0158	0.9794 ± 0.0158
9	0.9737 ± 0.0143	0.9737 ± 0.0143	0.9737 ± 0.0143	0.9737 ± 0.0143
10	0.9680 ± 0.0136	0.9680 ± 0.0136	0.9680 ± 0.0136	0.9680 ± 0.0136

Tabelle 20: D = 4", H = 7 1/2 cm, E_γ = 0,5 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.9057 ± 0.1307	0.8772 ± 0.1241	0.8983 ± 0.1234	0.9167 ± 0.1236
2	0.8696 ± 0.0615	0.8857 ± 0.0601	0.8911 ± 0.0599	0.8956 ± 0.0600
3	0.8361 ± 0.0392	0.8700 ± 0.0388	0.8765 ± 0.0388	0.8842 ± 0.0388
4	0.8289 ± 0.0296	0.8529 ± 0.0292	0.8619 ± 0.0292	0.8695 ± 0.0292
5	0.8191 ± 0.0238	0.8360 ± 0.0234	0.8488 ± 0.0235	0.8571 ± 0.0235
6	0.8077 ± 0.0199	0.8253 ± 0.0197	0.8375 ± 0.0198	0.8458 ± 0.0199
7	0.7966 ± 0.0173	0.8160 ± 0.0172	0.8279 ± 0.0173	0.8347 ± 0.0173
8	0.7876 ± 0.0155	0.8074 ± 0.0156	0.8182 ± 0.0156	0.8241 ± 0.0157
9	0.7761 ± 0.0144	0.7949 ± 0.0144	0.8049 ± 0.0145	0.8103 ± 0.0145
10	0.7672 ± 0.0140	0.7858 ± 0.0140	0.7959 ± 0.0141	0.8011 ± 0.0141

Tabelle 21: D = 4", H = 7 1/2 cm, E_γ = 1,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.6066 ± 0.0997	0.6667 ± 0.1005	0.7273 ± 0.1050	0.7101 ± 0.1014
2	0.6393 ± 0.0540	0.6835 ± 0.0537	0.7102 ± 0.0538	0.7237 ± 0.0531
3	0.6403 ± 0.0370	0.6751 ± 0.0362	0.6974 ± 0.0359	0.7166 ± 0.0357
4	0.6367 ± 0.0284	0.6709 ± 0.0277	0.6949 ± 0.0275	0.7046 ± 0.0273
5	0.6206 ± 0.0225	0.6504 ± 0.0219	0.6705 ± 0.0218	0.6808 ± 0.0218
6	0.6030 ± 0.0183	0.6413 ± 0.0183	0.6655 ± 0.0183	0.6750 ± 0.0183
7	0.5933 ± 0.0160	0.6310 ± 0.0161	0.6516 ± 0.0162	0.6616 ± 0.0162
8	0.5830 ± 0.0145	0.6190 ± 0.0146	0.6377 ± 0.0147	0.6467 ± 0.0147
9	0.5659 ± 0.0135	0.6013 ± 0.0136	0.6199 ± 0.0137	0.6290 ± 0.0138
10	0.5594 ± 0.0132	0.5939 ± 0.0133	0.6125 ± 0.0134	0.6214 ± 0.0134

Tabelle 22: D = 4", H = 7½ cm, E_γ = 1,5 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.4694 ± 0.0979	0.5424 ± 0.0959	0.5574 ± 0.0956	0.6452 ± 0.1020
2	0.5344 ± 0.0532	0.5794 ± 0.0520	0.6089 ± 0.0520	0.6466 ± 0.0528
3	0.5398 ± 0.0346	0.5837 ± 0.0341	0.6108 ± 0.0337	0.6349 ± 0.0338
4	0.5273 ± 0.0262	0.5701 ± 0.0259	0.5895 ± 0.0254	0.6112 ± 0.0254
5	0.5071 ± 0.0206	0.5612 ± 0.0207	0.5830 ± 0.0206	0.6015 ± 0.0206
6	0.4884 ± 0.0171	0.5432 ± 0.0174	0.5653 ± 0.0174	0.5842 ± 0.0175
7	0.4873 ± 0.0151	0.5351 ± 0.0154	0.5575 ± 0.0155	0.5750 ± 0.0156
8	0.4835 ± 0.0139	0.5291 ± 0.0142	0.5496 ± 0.0143	0.5651 ± 0.0144
9	0.4710 ± 0.0131	0.5160 ± 0.0134	0.5361 ± 0.0135	0.5508 ± 0.0136
10	0.4660 ± 0.0128	0.5098 ± 0.0131	0.5294 ± 0.0132	0.5438 ± 0.0133

Tabelle 23: D = 4", H = 7½ cm, E_γ = 2,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.4706 ± 0.0961	0.5690 ± 0.0990	0.5902 ± 0.0984	0.6406 ± 0.1000
2	0.4973 ± 0.0521	0.5377 ± 0.0504	0.5676 ± 0.0506	0.5913 ± 0.0507
3	0.4952 ± 0.0345	0.5367 ± 0.0335	0.5695 ± 0.0334	0.5914 ± 0.0332
4	0.4993 ± 0.0266	0.5317 ± 0.0257	0.5597 ± 0.0255	0.5659 ± 0.0249
5	0.4821 ± 0.0210	0.5130 ± 0.0204	0.5375 ± 0.0203	0.5487 ± 0.0201
6	0.4538 ± 0.0171	0.4932 ± 0.0171	0.5184 ± 0.0171	0.5300 ± 0.0171
7	0.4434 ± 0.0150	0.4858 ± 0.0152	0.5078 ± 0.0153	0.5206 ± 0.0153
8	0.4392 ± 0.0138	0.4796 ± 0.0140	0.5012 ± 0.0141	0.5140 ± 0.0141
9	0.4256 ± 0.0129	0.4657 ± 0.0132	0.4859 ± 0.0133	0.4979 ± 0.0133
10	0.4216 ± 0.0127	0.4615 ± 0.0129	0.4812 ± 0.0130	0.4929 ± 0.0131

Tabelle 24: D = 4", H = 7½ cm, E_γ = 3,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.5306 ± 0.1041	0.5172 ± 0.0944	0.5846 ± 0.0948	0.5588 ± 0.0907
2	0.4743 ± 0.0521	0.4783 ± 0.0481	0.5244 ± 0.0483	0.5168 ± 0.0466
3	0.4615 ± 0.0344	0.4736 ± 0.0323	0.5210 ± 0.0323	0.5341 ± 0.0318
4	0.4384 ± 0.0260	0.4603 ± 0.0245	0.4941 ± 0.0242	0.5056 ± 0.0238
5	0.4322 ± 0.0205	0.4532 ± 0.0195	0.4803 ± 0.0193	0.4944 ± 0.0192
6	0.4170 ± 0.0169	0.4414 ± 0.0165	0.4676 ± 0.0165	0.4814 ± 0.0165
7	0.3995 ± 0.0148	0.4303 ± 0.0146	0.4555 ± 0.0147	0.4685 ± 0.0147
8	0.3894 ± 0.0134	0.4213 ± 0.0134	0.4446 ± 0.0135	0.4569 ± 0.0135
9	0.3788 ± 0.0126	0.4121 ± 0.0135	0.4352 ± 0.0135	0.4467 ± 0.0135
10	0.3745 ± 0.0124	0.4090 ± 0.0125	0.4315 ± 0.0126	0.4428 ± 0.0126

Tabelle 25: D = 4", H = 7 1/2 cm, E_γ = 5,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.5250 ± 0.1146	0.5208 ± 0.1042	0.5818 ± 0.1029	0.5862 ± 0.1005
2	0.4709 ± 0.0523	0.5000 ± 0.0505	0.5364 ± 0.0494	0.5517 ± 0.0488
3	0.4809 ± 0.0362	0.5321 ± 0.0356	0.5603 ± 0.0344	0.5658 ± 0.0333
4	0.4774 ± 0.0277	0.5131 ± 0.0266	0.5305 ± 0.0257	0.5348 ± 0.0249
5	0.4545 ± 0.0217	0.4853 ± 0.0208	0.4992 ± 0.0203	0.5090 ± 0.0200
6	0.4449 ± 0.0181	0.4724 ± 0.0176	0.4867 ± 0.0174	0.4976 ± 0.0172
7	0.4351 ± 0.0158	0.4670 ± 0.0157	0.4829 ± 0.0156	0.4944 ± 0.0155
8	0.4214 ± 0.0143	0.4514 ± 0.0143	0.4657 ± 0.0142	0.4768 ± 0.0142
9	0.4107 ± 0.0134	0.4394 ± 0.0134	0.4545 ± 0.0134	0.4650 ± 0.0134
10	0.4057 ± 0.0131	0.4347 ± 0.0131	0.4494 ± 0.0131	0.4597 ± 0.0131

Tabelle 26: D = 4", H = 7 1/2 cm, E_γ = 7,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.5814 ± 0.1163	0.5385 ± 0.1018	0.5789 ± 0.1008	0.6034 ± 0.1020
2	0.6243 ± 0.0601	0.6188 ± 0.0553	0.6389 ± 0.0544	0.6591 ± 0.0547
3	0.5963 ± 0.0399	0.6133 ± 0.0375	0.6247 ± 0.0362	0.6371 ± 0.0358
4	0.5811 ± 0.0305	0.5935 ± 0.0285	0.5983 ± 0.0273	0.6050 ± 0.0268
5	0.5711 ± 0.0244	0.5813 ± 0.0228	0.5838 ± 0.0220	0.5936 ± 0.0218
6	0.5471 ± 0.0198	0.5597 ± 0.0190	0.5670 ± 0.0185	0.5788 ± 0.0185
7	0.5324 ± 0.0172	0.5498 ± 0.0168	0.5600 ± 0.0165	0.5711 ± 0.0165
8	0.5189 ± 0.0157	0.5370 ± 0.0153	0.5480 ± 0.0152	0.5591 ± 0.0152
9	0.5094 ± 0.0148	0.5277 ± 0.0145	0.5400 ± 0.0144	0.5510 ± 0.0145
10	0.5050 ± 0.0144	0.5234 ± 0.0142	0.5362 ± 0.0141	0.5469 ± 0.0142

Tabelle 27: D = 4", H = 7 1/2 cm, E_γ = 10,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.6170 ± 0.1146	0.5926 ± 0.1048	0.6250 ± 0.1056	0.6441 ± 0.1045
2	0.5896 ± 0.0584	0.6142 ± 0.0558	0.6190 ± 0.0543	0.6227 ± 0.0532
3	0.6168 ± 0.0396	0.6440 ± 0.0376	0.6591 ± 0.0369	0.6569 ± 0.0358
4	0.6191 ± 0.0307	0.6369 ± 0.0287	0.6366 ± 0.0277	0.6319 ± 0.0268
5	0.6119 ± 0.0244	0.6225 ± 0.0229	0.6205 ± 0.0222	0.6218 ± 0.0218
6	0.5887 ± 0.0202	0.6007 ± 0.0193	0.6026 ± 0.0189	0.6070 ± 0.0187
7	0.5683 ± 0.0175	0.5837 ± 0.0170	0.5887 ± 0.0168	0.5930 ± 0.0166
8	0.5489 ± 0.0158	0.5634 ± 0.0154	0.5695 ± 0.0153	0.5745 ± 0.0152
9	0.5392 ± 0.0149	0.5534 ± 0.0146	0.5600 ± 0.0145	0.5648 ± 0.0144
10	0.5320 ± 0.0145	0.5466 ± 0.0143	0.5546 ± 0.0142	0.5593 ± 0.0141

Tabelle 28: D = 4", H = 15 cm, E_γ=0,2 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	1.0000 ± 0.1187	1.0000 ± 0.1187	1.0000 ± 0.1187	1.0000 ± 0.1187
2	0.9887 ± 0.0611	0.9887 ± 0.0611	0.9887 ± 0.0611	0.9887 ± 0.0611
3	0.9858 ± 0.0418	0.9858 ± 0.0418	0.9858 ± 0.0418	0.9858 ± 0.0418
4	0.9866 ± 0.0319	0.9866 ± 0.0319	0.9866 ± 0.0319	0.9866 ± 0.0319
5	0.9838 ± 0.0258	0.9838 ± 0.0258	0.9838 ± 0.0258	0.9838 ± 0.0258
6	0.9831 ± 0.0215	0.9831 ± 0.0215	0.9831 ± 0.0215	0.9831 ± 0.0215
7	0.9819 ± 0.0183	0.9819 ± 0.0183	0.9819 ± 0.0183	0.9819 ± 0.0183
8	0.9794 ± 0.0158	0.9794 ± 0.0158	0.9794 ± 0.0158	0.9794 ± 0.0158
9	0.9744 ± 0.0142	0.9744 ± 0.0142	0.9744 ± 0.0142	0.9744 ± 0.0142
10	0.9666 ± 0.0133	0.9666 ± 0.0133	0.9666 ± 0.0133	0.9666 ± 0.0133

Tabelle 29: D = 4", H = 15 cm, E_γ= 0,5 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.9412 ± 0.1358	0.9091 ± 0.1286	0.9286 ± 0.1288	0.9474 ± 0.1289
2	0.8868 ± 0.0647	0.9067 ± 0.0635	0.9123 ± 0.0633	0.9170 ± 0.0633
3	0.8623 ± 0.0415	0.8935 ± 0.0412	0.9002 ± 0.0412	0.9043 ± 0.0412
4	0.8492 ± 0.0308	0.8741 ± 0.0304	0.8857 ± 0.0303	0.8882 ± 0.0303
5	0.8319 ± 0.0245	0.8573 ± 0.0242	0.8683 ± 0.0242	0.8721 ± 0.0242
6	0.8131 ± 0.0202	0.8389 ± 0.0201	0.8509 ± 0.0200	0.8553 ± 0.0200
7	0.7985 ± 0.0171	0.8233 ± 0.0170	0.8365 ± 0.0170	0.8412 ± 0.0170
8	0.7748 ± 0.0150	0.8002 ± 0.0150	0.8119 ± 0.0150	0.8157 ± 0.0150
9	0.7557 ± 0.0137	0.7801 ± 0.0137	0.7912 ± 0.0137	0.7947 ± 0.0137
10	0.7425 ± 0.0131	0.7662 ± 0.0131	0.7769 ± 0.0131	0.7802 ± 0.0131

Tabelle 30: D = 4", H = 15 cm, E_γ= 1,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.6102 ± 0.1017	0.6471 ± 0.0975	0.7000 ± 0.1000	0.6849 ± 0.0969
2	0.6150 ± 0.0522	0.6400 ± 0.0506	0.6768 ± 0.0507	0.6886 ± 0.0502
3	0.6181 ± 0.0361	0.6515 ± 0.0351	0.6882 ± 0.0351	0.7038 ± 0.0350
4	0.6165 ± 0.0279	0.6560 ± 0.0274	0.6872 ± 0.0273	0.7020 ± 0.0271
5	0.6143 ± 0.0225	0.6582 ± 0.0222	0.6806 ± 0.0220	0.6884 ± 0.0218
6	0.6041 ± 0.0184	0.6521 ± 0.0183	0.6722 ± 0.0181	0.6814 ± 0.0180
7	0.5887 ± 0.0156	0.6345 ± 0.0156	0.6559 ± 0.0156	0.6655 ± 0.0155
8	0.5706 ± 0.0137	0.6152 ± 0.0138	0.6351 ± 0.0138	0.6444 ± 0.0138
9	0.5555 ± 0.0126	0.5969 ± 0.0128	0.6158 ± 0.0128	0.6255 ± 0.0128
10	0.5467 ± 0.0122	0.5879 ± 0.0124	0.6061 ± 0.0124	0.6158 ± 0.0124

Tabelle 31: D = 4" , H = 15 cm, E_γ = 1,5 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.4400 ± 0.0938	0.5455 ± 0.0996	0.5614 ± 0.0992	0.6102 ± 0.1017
2	0.4928 ± 0.0488	0.5670 ± 0.0503	0.6052 ± 0.0510	0.6286 ± 0.0507
3	0.4941 ± 0.0340	0.5647 ± 0.0349	0.5988 ± 0.0349	0.6140 ± 0.0346
4	0.4892 ± 0.0257	0.5475 ± 0.0260	0.5896 ± 0.0261	0.6047 ± 0.0259
5	0.4850 ± 0.0207	0.5454 ± 0.0209	0.5816 ± 0.0209	0.5939 ± 0.0208
6	0.4822 ± 0.0171	0.5429 ± 0.0173	0.5717 ± 0.0172	0.5860 ± 0.0172
7	0.4727 ± 0.0146	0.5257 ± 0.0148	0.5550 ± 0.0148	0.5707 ± 0.0149
8	0.4658 ± 0.0130	0.5159 ± 0.0132	0.5435 ± 0.0133	0.5573 ± 0.0133
9	0.4531 ± 0.0120	0.5000 ± 0.0122	0.5266 ± 0.0124	0.5401 ± 0.0124
10	0.4463 ± 0.0117	0.4917 ± 0.0119	0.5177 ± 0.0120	0.5308 ± 0.0121

Tabelle 32: D = 4", H = 15 cm, E_γ = 2,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.4318 ± 0.0991	0.5106 ± 0.1042	0.5200 ± 0.1020	0.5490 ± 0.1038
2	0.4917 ± 0.0521	0.5337 ± 0.0507	0.5648 ± 0.0511	0.5893 ± 0.0513
3	0.4684 ± 0.0344	0.5175 ± 0.0337	0.5688 ± 0.0342	0.6008 ± 0.0345
4	0.4597 ± 0.0257	0.5140 ± 0.0255	0.5474 ± 0.0255	0.5691 ± 0.0254
5	0.4578 ± 0.0206	0.5062 ± 0.0204	0.5320 ± 0.0203	0.5487 ± 0.0201
6	0.4417 ± 0.0170	0.4889 ± 0.0169	0.5139 ± 0.0167	0.5320 ± 0.0167
7	0.4289 ± 0.0144	0.4762 ± 0.0144	0.5029 ± 0.0145	0.5212 ± 0.0145
8	0.4234 ± 0.0128	0.4661 ± 0.0129	0.4909 ± 0.0130	0.5084 ± 0.0130
9	0.4106 ± 0.0118	0.4526 ± 0.0120	0.4777 ± 0.0121	0.4936 ± 0.0122
10	0.4063 ± 0.0115	0.4472 ± 0.0117	0.4716 ± 0.0118	0.4873 ± 0.0119

Tabelle 33: D = 4" , H = 15 cm, E_γ = 3,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.5349 ± 0.1115	0.5098 ± 0.0999	0.5455 ± 0.0996	0.5357 ± 0.0978
2	0.4702 ± 0.0529	0.4772 ± 0.0492	0.5071 ± 0.0490	0.5045 ± 0.0479
3	0.4229 ± 0.0335	0.4442 ± 0.0318	0.4886 ± 0.0318	0.5127 ± 0.0316
4	0.4295 ± 0.0261	0.4531 ± 0.0248	0.4832 ± 0.0245	0.5077 ± 0.0245
5	0.4447 ± 0.0212	0.4668 ± 0.0202	0.4924 ± 0.0199	0.5134 ± 0.0198
6	0.4225 ± 0.0173	0.4455 ± 0.0165	0.4670 ± 0.0162	0.4870 ± 0.0162
7	0.3958 ± 0.0143	0.4246 ± 0.0139	0.4503 ± 0.0139	0.4688 ± 0.0140
8	0.3814 ± 0.0126	0.4151 ± 0.0125	0.4394 ± 0.0125	0.4572 ± 0.0126
9	0.3720 ± 0.0118	0.4059 ± 0.0117	0.4291 ± 0.0117	0.4456 ± 0.0118
10	0.3637 ± 0.0113	0.3978 ± 0.0113	0.4207 ± 0.0114	0.4368 ± 0.0115

Tabelle 34: D = 4", H = 15 cm, E_γ = 5,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.6279 ± 0.1208	0.6531 ± 0.1154	0.6607 ± 0.1086	0.6500 ± 0.1041
2	0.4699 ± 0.0532	0.4946 ± 0.0516	0.5291 ± 0.0507	0.5413 ± 0.0498
3	0.4626 ± 0.0365	0.4862 ± 0.0349	0.5305 ± 0.0346	0.5412 ± 0.0338
4	0.4764 ± 0.0284	0.4971 ± 0.0269	0.5275 ± 0.0263	0.5361 ± 0.0256
5	0.4672 ± 0.0226	0.4897 ± 0.0214	0.5068 ± 0.0207	0.5139 ± 0.0202
6	0.4502 ± 0.0186	0.4670 ± 0.0176	0.4853 ± 0.0170	0.4972 ± 0.0168
7	0.4302 ± 0.0153	0.4487 ± 0.0147	0.4703 ± 0.0145	0.4828 ± 0.0144
8	0.4066 ± 0.0132	0.4308 ± 0.0129	0.4529 ± 0.0129	0.4660 ± 0.0129
9	0.3936 ± 0.0122	0.4179 ± 0.0120	0.4400 ± 0.0120	0.4524 ± 0.0120
10	0.3918 ± 0.0119	0.4161 ± 0.0118	0.4378 ± 0.0118	0.4498 ± 0.0118

Tabelle 35: D = 4", H = 15 cm, E_γ = 7,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.6053 ± 0.1262	0.5957 ± 0.1126	0.6154 ± 0.1088	0.6667 ± 0.1111
2	0.5848 ± 0.0585	0.5960 ± 0.0549	0.6140 ± 0.0534	0.6339 ± 0.0532
3	0.5616 ± 0.0392	0.5812 ± 0.0370	0.6000 ± 0.0361	0.6221 ± 0.0360
4	0.5508 ± 0.0308	0.5698 ± 0.0285	0.5742 ± 0.0272	0.5883 ± 0.0268
5	0.5501 ± 0.0246	0.5726 ± 0.0230	0.5700 ± 0.0218	0.5795 ± 0.0214
6	0.5310 ± 0.0200	0.5523 ± 0.0188	0.5496 ± 0.0179	0.5621 ± 0.0177
7	0.5166 ± 0.0168	0.5415 ± 0.0160	0.5451 ± 0.0155	0.5574 ± 0.0154
8	0.5045 ± 0.0148	0.5312 ± 0.0143	0.5373 ± 0.0140	0.5495 ± 0.0139
9	0.4923 ± 0.0136	0.5193 ± 0.0133	0.5261 ± 0.0131	0.5379 ± 0.0130
10	0.4885 ± 0.0133	0.5148 ± 0.0130	0.5215 ± 0.0127	0.5330 ± 0.0127

Tabelle 36: D = 4", H = 15 cm, E_γ = 10,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.5385 ± 0.1175	0.6042 ± 0.1122	0.6226 ± 0.1084	0.6491 ± 0.1067
2	0.5952 ± 0.0595	0.6462 ± 0.0576	0.6425 ± 0.0557	0.6438 ± 0.0542
3	0.6097 ± 0.0394	0.6520 ± 0.0379	0.6646 ± 0.0372	0.6660 ± 0.0364
4	0.6162 ± 0.0310	0.6494 ± 0.0294	0.6453 ± 0.0282	0.6397 ± 0.0272
5	0.6096 ± 0.0249	0.6376 ± 0.0236	0.6317 ± 0.0225	0.6275 ± 0.0218
6	0.5932 ± 0.0205	0.6105 ± 0.0193	0.6036 ± 0.0184	0.6044 ± 0.0180
7	0.5707 ± 0.0173	0.5886 ± 0.0164	0.5882 ± 0.0159	0.5910 ± 0.0157
8	0.5407 ± 0.0150	0.5624 ± 0.0145	0.5660 ± 0.0142	0.5706 ± 0.0140
9	0.5264 ± 0.0138	0.5485 ± 0.0135	0.5530 ± 0.0132	0.5578 ± 0.0131
10	0.5183 ± 0.0134	0.5409 ± 0.0131	0.5458 ± 0.0129	0.5506 ± 0.0128

Tabelle 37: D = 4", H = 30 cm, E_γ = 0,2 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	1.0000 ± 0.1179	1.0000 ± 0.1179	1.0000 ± 0.1179	1.0000 ± 0.1179
2	0.9887 ± 0.0609	0.9887 ± 0.0610	0.9887 ± 0.0610	0.9887 ± 0.0610
3	0.9844 ± 0.0413	0.9845 ± 0.0412	0.9845 ± 0.0412	0.9845 ± 0.0412
4	0.9855 ± 0.0320	0.9855 ± 0.0320	0.9855 ± 0.0320	0.9855 ± 0.0320
5	0.9837 ± 0.0259	0.9837 ± 0.0259	0.9837 ± 0.0259	0.9837 ± 0.0259
6	0.9834 ± 0.0216	0.9834 ± 0.0216	0.9834 ± 0.0216	0.9834 ± 0.0216
7	0.9823 ± 0.0185	0.9823 ± 0.0185	0.9823 ± 0.0185	0.9823 ± 0.0185
8	0.9796 ± 0.0159	0.9796 ± 0.0159	0.9796 ± 0.0159	0.9796 ± 0.0159
9	0.9735 ± 0.0142	0.9737 ± 0.0142	0.9737 ± 0.0142	0.9737 ± 0.0142
10	0.9633 ± 0.0130	0.9635 ± 0.0130	0.9635 ± 0.0130	0.9635 ± 0.0130

Tabelle 38: D = 4", H = 30 cm, E_γ = 0,5 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.9464 ± 0.1300	0.9500 ± 0.1258	0.9836 ± 0.1270	1.0000 ± 0.1270
2	0.8710 ± 0.0634	0.9013 ± 0.0622	0.9234 ± 0.0627	0.9280 ± 0.0627
3	0.8521 ± 0.0410	0.8825 ± 0.0406	0.9019 ± 0.0409	0.9059 ± 0.0409
4	0.8500 ± 0.0311	0.8750 ± 0.0306	0.8956 ± 0.0307	0.8971 ± 0.0307
5	0.8309 ± 0.0248	0.8585 ± 0.0245	0.8763 ± 0.0245	0.8798 ± 0.0245
6	0.8161 ± 0.0205	0.8462 ± 0.0203	0.8623 ± 0.0203	0.8673 ± 0.0203
7	0.8040 ± 0.0173	0.8333 ± 0.0171	0.8454 ± 0.0171	0.8502 ± 0.0171
8	0.7836 ± 0.0149	0.8112 ± 0.0148	0.8246 ± 0.0148	0.8287 ± 0.0148
9	0.7579 ± 0.0132	0.7839 ± 0.0131	0.7959 ± 0.0132	0.8004 ± 0.0132
10	0.7366 ± 0.0124	0.7618 ± 0.0124	0.7733 ± 0.0124	0.7776 ± 0.0124

Tabelle 39: D = 4", H = 30 cm, E_γ = 1,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.6200 ± 0.1136	0.6786 ± 0.1101	0.7368 ± 0.1137	0.7167 ± 0.1093
2	0.6355 ± 0.0560	0.6666 ± 0.0541	0.7025 ± 0.0539	0.7131 ± 0.0533
3	0.6125 ± 0.0377	0.6515 ± 0.0368	0.6961 ± 0.0369	0.7069 ± 0.0368
4	0.6115 ± 0.0289	0.6531 ± 0.0283	0.6965 ± 0.0285	0.7063 ± 0.0283
5	0.6070 ± 0.0227	0.6528 ± 0.0224	0.6852 ± 0.0224	0.6966 ± 0.0227
6	0.5930 ± 0.0185	0.6401 ± 0.0184	0.6648 ± 0.0183	0.6763 ± 0.0182
7	0.5857 ± 0.0157	0.6296 ± 0.0156	0.6508 ± 0.0155	0.6622 ± 0.0154
8	0.5665 ± 0.0136	0.6061 ± 0.0134	0.6256 ± 0.0134	0.6381 ± 0.0134
9	0.5427 ± 0.0120	0.5822 ± 0.0120	0.6014 ± 0.0120	0.6137 ± 0.0120
10	0.5260 ± 0.0114	0.5653 ± 0.0114	0.5839 ± 0.0114	0.5959 ± 0.0114

Tabelle 40: D = 4", H = 30 cm, E_γ = 1,5 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.4082 ± 0.0913	0.4727 ± 0.0927	0.5273 ± 0.0979	0.5818 ± 0.1029
2	0.5459 ± 0.0543	0.5854 ± 0.0534	0.6101 ± 0.0529	0.6460 ± 0.0535
3	0.5105 ± 0.0366	0.5718 ± 0.0367	0.6017 ± 0.0361	0.6279 ± 0.0361
4	0.4905 ± 0.0268	0.5506 ± 0.0269	0.5961 ± 0.0270	0.6241 ± 0.0270
5	0.4954 ± 0.0214	0.5510 ± 0.0214	0.5914 ± 0.0215	0.6119 ± 0.0214
6	0.4913 ± 0.0175	0.5448 ± 0.0175	0.5791 ± 0.0174	0.5998 ± 0.0174
7	0.4764 ± 0.0148	0.5262 ± 0.0147	0.5567 ± 0.0147	0.5764 ± 0.0146
8	0.4565 ± 0.0127	0.5003 ± 0.0126	0.5314 ± 0.0127	0.5527 ± 0.0127
9	0.4400 ± 0.0113	0.4832 ± 0.0113	0.5135 ± 0.0114	0.5324 ± 0.0114
10	0.4300 ± 0.0108	0.4721 ± 0.0108	0.5015 ± 0.0109	0.5201 ± 0.0110

Tabelle 41: D = 4", H = 30 cm, E_γ = 2,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.3750 ± 0.0884	0.4706 ± 0.0961	0.5000 ± 0.0945	0.5088 ± 0.0945
2	0.5167 ± 0.0536	0.5291 ± 0.0507	0.5487 ± 0.0493	0.5714 ± 0.0497
3	0.4675 ± 0.0348	0.4978 ± 0.0334	0.5491 ± 0.0335	0.5723 ± 0.0337
4	0.4485 ± 0.0261	0.5040 ± 0.0259	0.5426 ± 0.0257	0.5643 ± 0.0257
5	0.4515 ± 0.0210	0.4966 ± 0.0207	0.5298 ± 0.0205	0.5477 ± 0.0204
6	0.4332 ± 0.0170	0.4778 ± 0.0168	0.5093 ± 0.0167	0.5242 ± 0.0165
7	0.4215 ± 0.0144	0.4710 ± 0.0143	0.5010 ± 0.0142	0.5134 ± 0.0140
8	0.5279 ± 0.0125	0.4515 ± 0.0123	0.4806 ± 0.0123	0.4950 ± 0.0122
9	0.3922 ± 0.0110	0.4336 ± 0.0110	0.4625 ± 0.0111	0.4768 ± 0.0111
10	0.3828 ± 0.0105	0.4234 ± 0.0106	0.4520 ± 0.0106	0.4661 ± 0.0106

Tabelle 42: D = 4", H = 30 cm, E_γ = 3,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.5238 ± 0.1117	0.5000 ± 0.1021	0.5600 ± 0.1058	0.5472 ± 0.1016
2	0.4438 ± 0.0512	0.4508 ± 0.0483	0.4854 ± 0.0485	0.5023 ± 0.0481
3	0.4301 ± 0.0340	0.4437 ± 0.0319	0.4895 ± 0.0321	0.5215 ± 0.0319
4	0.4122 ± 0.0258	0.4391 ± 0.0247	0.4837 ± 0.0247	0.5082 ± 0.0245
5	0.4228 ± 0.0210	0.4450 ± 0.0199	0.4826 ± 0.0198	0.5030 ± 0.0196
6	0.4132 ± 0.0171	0.4340 ± 0.0163	0.4648 ± 0.0161	0.4837 ± 0.0160
7	0.3911 ± 0.0143	0.4143 ± 0.0136	0.4437 ± 0.0135	0.4613 ± 0.0133
8	0.3776 ± 0.0124	0.4001 ± 0.0118	0.4283 ± 0.0118	0.4467 ± 0.0118
9	0.3512 ± 0.0108	0.3774 ± 0.0105	0.4052 ± 0.0105	0.4231 ± 0.0106
10	0.3418 ± 0.0103	0.3681 ± 0.0101	0.3952 ± 0.0101	0.4133 ± 0.0102

Tabelle 43: D = 4", H = 30 cm, E_γ=5,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.5870 ± 0.1130	0.6154 ± 0.1088	0.6316 ± 0.1053	0.6333 ± 0.1027
2	0.4490 ± 0.0479	0.4955 ± 0.0472	0.5203 ± 0.0460	0.5385 ± 0.0455
3	0.4684 ± 0.0351	0.5127 ± 0.0344	0.5400 ± 0.0333	0.5630 ± 0.0328
4	0.4803 ± 0.0281	0.5162 ± 0.0270	0.5450 ± 0.0263	0.5570 ± 0.0256
5	0.4725 ± 0.0224	0.5064 ± 0.0215	0.5283 ± 0.0208	0.5412 ± 0.0204
6	0.4547 ± 0.0185	0.4861 ± 0.0177	0.5017 ± 0.0170	0.5160 ± 0.0167
7	0.4379 ± 0.0155	0.4614 ± 0.0148	0.4746 ± 0.0142	0.4897 ± 0.0139
8	0.4209 ± 0.0132	0.4432 ± 0.0127	0.4580 ± 0.0123	0.4717 ± 0.0121
9	0.4001 ± 0.0117	0.4244 ± 0.0114	0.4411 ± 0.0112	0.4545 ± 0.0111
10	0.3909 ± 0.0112	0.4154 ± 0.0109	0.4319 ± 0.0107	0.4454 ± 0.0107

Tabelle 44: D = 4", H = 30 cm, E_γ= 7,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.6923 ± 0.1332	0.6458 ± 0.1160	0.6226 ± 0.1084	0.6607 ± 0.1086
2	0.5928 ± 0.0596	0.6114 ± 0.0563	0.6000 ± 0.0528	0.6311 ± 0.0530
3	0.5859 ± 0.0424	0.5979 ± 0.0395	0.6061 ± 0.0376	0.6294 ± 0.0372
4	0.5855 ± 0.0330	0.5905 ± 0.0301	0.5970 ± 0.0286	0.6068 ± 0.0277
5	0.5713 ± 0.0257	0.5881 ± 0.0238	0.5895 ± 0.0225	0.5998 ± 0.0220
6	0.5678 ± 0.0211	0.5787 ± 0.0195	0.5805 ± 0.0185	0.5876 ± 0.0180
7	0.5563 ± 0.0176	0.5595 ± 0.0162	0.5613 ± 0.0154	0.5684 ± 0.0150
8	0.5321 ± 0.0150	0.5361 ± 0.0139	0.5411 ± 0.0134	0.5489 ± 0.0132
9	0.5114 ± 0.0133	0.5191 ± 0.0126	0.5272 ± 0.0122	0.5355 ± 0.0120
10	0.5052 ± 0.0128	0.5135 ± 0.0121	0.5218 ± 0.0118	0.5301 ± 0.0117

Tabelle 45: D = 4", H = 30 cm, E_γ = 10,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.6744 ± 0.1252	0.7255 ± 0.1193	0.7091 ± 0.1135	0.7167 ± 0.1093
2	0.6000 ± 0.0562	0.6495 ± 0.0551	0.6504 ± 0.0536	0.6556 ± 0.0522
3	0.6209 ± 0.0394	0.6558 ± 0.0377	0.6680 ± 0.0368	0.6648 ± 0.0356
4	0.6238 ± 0.0309	0.6494 ± 0.0294	0.6486 ± 0.0282	0.6417 ± 0.0270
5	0.6137 ± 0.0250	0.6376 ± 0.0237	0.6337 ± 0.0227	0.6305 ± 0.0219
6	0.6011 ± 0.0206	0.6165 ± 0.0194	0.6156 ± 0.0186	0.6136 ± 0.0180
7	0.5825 ± 0.0174	0.5936 ± 0.0163	0.5921 ± 0.0156	0.5913 ± 0.0152
8	0.5569 ± 0.0149	0.5660 ± 0.0140	0.5677 ± 0.0135	0.5687 ± 0.0132
9	0.5357 ± 0.0132	0.5474 ± 0.0126	0.5516 ± 0.0123	0.5538 ± 0.0121
10	0.5228 ± 0.0126	0.5354 ± 0.0121	0.5403 ± 0.0118	0.5431 ± 0.0116

Tabelle 46: D = 5", H = 15 cm, E_γ = 0,2 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	1.0000 ± 0.1195	1.0000 ± 0.1195	1.0000 ± 0.1195	1.0000 ± 0.1195
2	0.9885 ± 0.0617	0.9885 ± 0.0617	0.9885 ± 0.0617	0.9885 ± 0.0617
3	0.9860 ± 0.0415	0.9860 ± 0.0415	0.9860 ± 0.0415	0.9860 ± 0.0415
4	0.9858 ± 0.0316	0.9858 ± 0.0316	0.9858 ± 0.0316	0.9858 ± 0.0316
5	0.9827 ± 0.0255	0.9827 ± 0.0255	0.9827 ± 0.0255	0.9827 ± 0.0255
6	0.9819 ± 0.0214	0.9819 ± 0.0214	0.9819 ± 0.0214	0.9819 ± 0.0214
7	0.9822 ± 0.0183	0.9822 ± 0.0183	0.9822 ± 0.0183	0.9822 ± 0.0183
8	0.9822 ± 0.0158	0.9822 ± 0.0158	0.9822 ± 0.0158	0.9822 ± 0.0158
9	0.9775 ± 0.0142	0.9775 ± 0.0142	0.9775 ± 0.0142	0.9775 ± 0.0142
10	0.9711 ± 0.0133	0.9711 ± 0.0133	0.9711 ± 0.0133	0.9711 ± 0.0133

Tabelle 47: D = 5", H = 15 cm, E_γ = 0,5 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.9200 ± 0.1356	0.9245 ± 0.1321	0.9455 ± 0.1311	0.9643 ± 0.1312
2	0.8727 ± 0.0630	0.9188 ± 0.0627	0.9370 ± 0.0627	0.9414 ± 0.0628
3	0.8647 ± 0.0412	0.9049 ± 0.0411	0.9210 ± 0.0411	0.9250 ± 0.0411
4	0.8620 ± 0.0311	0.8917 ± 0.0308	0.9115 ± 0.0308	0.9162 ± 0.0308
5	0.8495 ± 0.0249	0.8786 ± 0.0247	0.8967 ± 0.0247	0.9042 ± 0.0247
6	0.8404 ± 0.0208	0.8704 ± 0.0206	0.8879 ± 0.0206	0.8949 ± 0.0206
7	0.8340 ± 0.0176	0.8632 ± 0.0175	0.8806 ± 0.0175	0.8871 ± 0.0176
8	0.8141 ± 0.0154	0.8455 ± 0.0154	0.8611 ± 0.0154	0.8664 ± 0.0154
9	0.7959 ± 0.0139	0.8252 ± 0.0139	0.8397 ± 0.0140	0.8443 ± 0.0140
10	0.7826 ± 0.0133	0.8112 ± 0.0134	0.8254 ± 0.0134	0.8296 ± 0.0134

Tabelle 48: D = 5", H = 15 cm, E_γ = 1,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.6984 ± 0.1053	0.7463 ± 0.1055	0.8000 ± 0.1069	0.7917 ± 0.1049
2	0.6979 ± 0.0545	0.7248 ± 0.0530	0.7658 ± 0.0534	0.7778 ± 0.0528
3	0.6767 ± 0.0381	0.7083 ± 0.0369	0.7555 ± 0.0371	0.7686 ± 0.0368
4	0.6662 ± 0.0289	0.7092 ± 0.0284	0.7522 ± 0.0285	0.7666 ± 0.0284
5	0.6650 ± 0.0232	0.7100 ± 0.0230	0.7436 ± 0.0229	0.7560 ± 0.0228
6	0.6453 ± 0.0189	0.6926 ± 0.0188	0.7281 ± 0.0188	0.7418 ± 0.0188
7	0.6321 ± 0.0161	0.6788 ± 0.0161	0.7135 ± 0.0162	0.7261 ± 0.0162
8	0.6127 ± 0.0141	0.6611 ± 0.0142	0.6925 ± 0.0143	0.7047 ± 0.0144
9	0.5976 ± 0.0130	0.6423 ± 0.0131	0.6728 ± 0.0133	0.6848 ± 0.0133
10	0.5914 ± 0.0125	0.6362 ± 0.0127	0.6655 ± 0.0128	0.6775 ± 0.0129

Tabelle 49: D = 5", H = 15 cm, E_γ = 1,5 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.4898 ± 0.1000	0.6316 ± 0.1053	0.6833 ± 0.1067	0.7333 ± 0.1106
2	0.5385 ± 0.0509	0.6261 ± 0.0522	0.6559 ± 0.0515	0.6992 ± 0.0523
3	0.5356 ± 0.0351	0.6221 ± 0.0360	0.6602 ± 0.0357	0.6865 ± 0.0357
4	0.5367 ± 0.0268	0.6195 ± 0.0275	0.6588 ± 0.0273	0.6837 ± 0.0273
5	0.5355 ± 0.0215	0.6196 ± 0.0221	0.6534 ± 0.0220	0.6714 ± 0.0218
6	0.5276 ± 0.0177	0.6040 ± 0.0180	0.6402 ± 0.0180	0.6603 ± 0.0180
7	0.5161 ± 0.0151	0.5847 ± 0.0153	0.6214 ± 0.0154	0.6432 ± 0.0155
8	0.5057 ± 0.0134	0.5723 ± 0.0137	0.6084 ± 0.0139	0.6284 ± 0.0140
9	0.4927 ± 0.0124	0.5566 ± 0.0128	0.5913 ± 0.0129	0.6108 ± 0.0130
10	0.4867 ± 0.0120	0.5484 ± 0.0124	0.5828 ± 0.0126	0.6019 ± 0.0127

Tabelle 50: D = 5", H = 15 cm, E_γ = 2,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.3864 ± 0.0937	0.5106 ± 0.1042	0.5472 ± 0.1016	0.5741 ± 0.1031
2	0.4884 ± 0.0533	0.5330 ± 0.0520	0.5869 ± 0.0525	0.6144 ± 0.0525
3	0.4987 ± 0.0359	0.5508 ± 0.0353	0.6079 ± 0.0355	0.6386 ± 0.0358
4	0.4897 ± 0.0268	0.5563 ± 0.0268	0.6026 ± 0.0268	0.6226 ± 0.0266
5	0.4986 ± 0.0215	0.5502 ± 0.0213	0.5890 ± 0.0213	0.6083 ± 0.0211
6	0.4882 ± 0.0176	0.5422 ± 0.0175	0.5822 ± 0.0176	0.6054 ± 0.0176
7	0.4611 ± 0.0147	0.5182 ± 0.0148	0.5572 ± 0.0150	0.5807 ± 0.0151
8	0.4516 ± 0.0131	0.5053 ± 0.0133	0.5434 ± 0.0135	0.5662 ± 0.0136
9	0.4391 ± 0.0121	0.4917 ± 0.0124	0.5296 ± 0.0126	0.5503 ± 0.0127
10	0.4345 ± 0.0118	0.4858 ± 0.0121	0.5224 ± 0.0123	0.5425 ± 0.0124

Tabelle 51: D = 5", H = 15 cm, E_γ = 3,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.5581 ± 0.1139	0.5400 ± 0.1039	0.5962 ± 0.1071	0.5926 ± 0.1048
2	0.5109 ± 0.0527	0.5187 ± 0.0492	0.5498 ± 0.0488	0.5726 ± 0.0487
3	0.4768 ± 0.0351	0.5033 ± 0.0334	0.5416 ± 0.0331	0.5777 ± 0.0333
4	0.4607 ± 0.0264	0.5098 ± 0.0257	0.5388 ± 0.0254	0.5695 ± 0.0254
5	0.4631 ± 0.0213	0.5021 ± 0.0206	0.5286 ± 0.0203	0.5585 ± 0.0204
6	0.4512 ± 0.0176	0.4875 ± 0.0170	0.5105 ± 0.0168	0.5386 ± 0.0169
7	0.4338 ± 0.0149	0.4738 ± 0.0146	0.4991 ± 0.0146	0.5247 ± 0.0147
8	0.4186 ± 0.0131	0.4599 ± 0.0130	0.4854 ± 0.0131	0.5087 ± 0.0132
9	0.4031 ± 0.0120	0.4456 ± 0.0121	0.4712 ± 0.0122	0.4928 ± 0.0123
10	0.3984 ± 0.0117	0.4407 ± 0.0118	0.4658 ± 0.0119	0.4866 ± 0.0120

Tabelle 52: D = 5", H = 15 cm, E_γ=5,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.6585 ± 0.1267	0.7273 ± 0.1286	0.7091 ± 0.1135	0.7143 ± 0.1129
2	0.5257 ± 0.0548	0.5879 ± 0.0544	0.6087 ± 0.0514	0.6344 ± 0.0516
3	0.5055 ± 0.0374	0.5529 ± 0.0365	0.5860 ± 0.0353	0.6072 ± 0.0349
4	0.5261 ± 0.0293	0.5666 ± 0.0282	0.5927 ± 0.0273	0.6012 ± 0.0267
5	0.5186 ± 0.0235	0.5618 ± 0.0226	0.5797 ± 0.0219	0.5889 ± 0.0214
6	0.5059 ± 0.0193	0.5381 ± 0.0185	0.5561 ± 0.0179	0.5692 ± 0.0177
7	0.4791 ± 0.0160	0.5103 ± 0.0155	0.5336 ± 0.0153	0.5466 ± 0.0152
8	0.4569 ± 0.0140	0.4900 ± 0.0137	0.5137 ± 0.0136	0.5282 ± 0.0136
9	0.4445 ± 0.0129	0.4783 ± 0.0127	0.5026 ± 0.0127	0.5164 ± 0.0127
10	0.4401 ± 0.0125	0.4738 ± 0.0124	0.4980 ± 0.0124	0.5115 ± 0.0124

Tabelle 53: D = 5", H = 15 cm, E_γ= 7,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.6512 ± 0.1231	0.6667 ± 0.1143	0.6724 ± 0.1077	0.7119 ± 0.1098
2	0.6629 ± 0.0615	0.6897 ± 0.0583	0.6968 ± 0.0562	0.7099 ± 0.0554
3	0.6218 ± 0.0417	0.6563 ± 0.0397	0.6711 ± 0.0384	0.6918 ± 0.0381
4	0.6057 ± 0.0317	0.6429 ± 0.0300	0.6520 ± 0.0287	0.6667 ± 0.0282
5	0.6115 ± 0.0255	0.6432 ± 0.0241	0.6464 ± 0.0229	0.6593 ± 0.0225
6	0.5872 ± 0.0209	0.6123 ± 0.0197	0.6187 ± 0.0188	0.6298 ± 0.0186
7	0.5642 ± 0.0173	0.5897 ± 0.0165	0.6015 ± 0.0161	0.6133 ± 0.0159
8	0.5497 ± 0.0152	0.5765 ± 0.0147	0.5895 ± 0.0145	0.6021 ± 0.0144
9	0.5407 ± 0.0141	0.5675 ± 0.0137	0.5820 ± 0.0135	0.5946 ± 0.0135
10	0.5363 ± 0.0137	0.5624 ± 0.0134	0.5767 ± 0.0132	0.5890 ± 0.0132

Tabelle 54: D = 5", H = 15 cm, E_γ= 10,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.6111 ± 0.1303	0.6512 ± 0.1231	0.6735 ± 0.1172	0.7115 ± 0.1170
2	0.6705 ± 0.0617	0.7143 ± 0.0593	0.7182 ± 0.0571	0.7191 ± 0.0553
3	0.6913 ± 0.0420	0.7238 ± 0.0402	0.7405 ± 0.0395	0.7401 ± 0.0383
4	0.6845 ± 0.0324	0.7122 ± 0.0306	0.7103 ± 0.0295	0.7114 ± 0.0284
5	0.6714 ± 0.0260	0.6918 ± 0.0244	0.6921 ± 0.0234	0.6964 ± 0.0228
6	0.6488 ± 0.0214	0.6612 ± 0.0200	0.6611 ± 0.0192	0.6684 ± 0.0188
7	0.6164 ± 0.0178	0.6320 ± 0.0169	0.6391 ± 0.0165	0.6468 ± 0.0162
8	0.5886 ± 0.0155	0.6087 ± 0.0150	0.6195 ± 0.0147	0.6275 ± 0.0146
9	0.5730 ± 0.0143	0.5923 ± 0.0138	0.6045 ± 0.0137	0.6120 ± 0.0136
10	0.5651 ± 0.0139	0.5850 ± 0.0135	0.5979 ± 0.0133	0.6056 ± 0.0132

Tabelle 55: D = 5", H = 30 cm, E_γ = 0,2 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	1.0000 ± 0.1170	1.0000 ± 0.1170	1.0000 ± 0.1170	1.0000 ± 0.1170
2	0.9888 ± 0.0607	0.9888 ± 0.0607	0.9888 ± 0.0607	0.9888 ± 0.0607
3	0.9828 ± 0.0412	0.9828 ± 0.0411	0.9828 ± 0.0411	0.9828 ± 0.0411
4	0.9845 ± 0.0319	0.9845 ± 0.0319	0.9845 ± 0.0319	0.9845 ± 0.0319
5	0.9825 ± 0.0257	0.9825 ± 0.0257	0.9825 ± 0.0257	0.9825 ± 0.0257
6	0.9831 ± 0.0215	0.9831 ± 0.0215	0.9831 ± 0.0215	0.9831 ± 0.0215
7	0.9827 ± 0.0184	0.9827 ± 0.0184	0.9827 ± 0.0184	0.9827 ± 0.0184
8	0.9822 ± 0.0159	0.9822 ± 0.0159	0.9822 ± 0.0159	0.9822 ± 0.0159
9	0.9783 ± 0.0142	0.9785 ± 0.0142	0.9785 ± 0.0142	0.9785 ± 0.0142
10	0.9690 ± 0.0131	0.9692 ± 0.0131	0.9692 ± 0.0131	0.9692 ± 0.0131

Tabelle 56: D = 5", H = 30 cm, E_γ = 0,5 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.9804 ± 0.1386	0.9455 ± 0.1311	0.9821 ± 0.1324	1.0000 ± 0.1325
2	0.8601 ± 0.0623	0.9121 ± 0.0618	0.9419 ± 0.0625	0.9463 ± 0.0625
3	0.8544 ± 0.0407	0.8987 ± 0.0407	0.9215 ± 0.0410	0.9238 ± 0.0409
4	0.8606 ± 0.0310	0.8928 ± 0.0306	0.9143 ± 0.0307	0.9197 ± 0.0308
5	0.8499 ± 0.0251	0.8845 ± 0.0249	0.9012 ± 0.0249	0.9073 ± 0.0249
6	0.8368 ± 0.0208	0.8724 ± 0.0207	0.8895 ± 0.0206	0.8968 ± 0.0207
7	0.8271 ± 0.0175	0.8614 ± 0.0174	0.8772 ± 0.0174	0.8838 ± 0.0174
8	0.8110 ± 0.0152	0.8443 ± 0.0151	0.8607 ± 0.0151	0.8662 ± 0.0152
9	0.7890 ± 0.0134	0.8206 ± 0.0134	0.8356 ± 0.0135	0.8410 ± 0.0135
10	0.7686 ± 0.0126	0.7988 ± 0.0126	0.8133 ± 0.0127	0.8185 ± 0.0127

Tabelle 57: D = 5", H = 30 cm, E_γ = 1,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.6909 ± 0.1121	0.7705 ± 0.1124	0.8387 ± 0.1163	0.8281 ± 0.1138
2	0.7136 ± 0.0589	0.7456 ± 0.0572	0.7924 ± 0.0579	0.7992 ± 0.0572
3	0.6758 ± 0.0393	0.7111 ± 0.0382	0.7632 ± 0.0386	0.7767 ± 0.0385
4	0.6680 ± 0.0300	0.7164 ± 0.0296	0.7564 ± 0.0296	0.7750 ± 0.0295
5	0.6464 ± 0.0234	0.7009 ± 0.0233	0.7368 ± 0.0232	0.7580 ± 0.0232
6	0.6320 ± 0.0192	0.6844 ± 0.0191	0.7213 ± 0.0191	0.7413 ± 0.0191
7	0.6239 ± 0.0162	0.6762 ± 0.0162	0.7103 ± 0.0162	0.7262 ± 0.0161
8	0.5982 ± 0.0139	0.6484 ± 0.0138	0.6799 ± 0.0139	0.6957 ± 0.0139
9	0.5787 ± 0.0124	0.6268 ± 0.0124	0.6569 ± 0.0125	0.6722 ± 0.0125
10	0.5651 ± 0.0117	0.6132 ± 0.0118	0.6421 ± 0.0119	0.6570 ± 0.0119

Tabelle 58: D = 5" , H = 30 cm, E_γ = 1,5 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.4400 ± 0.0938	0.5741 ± 0.1031	0.6964 ± 0.1115	0.7368 ± 0.1137
2	0.5330 ± 0.0520	0.6101 ± 0.0529	0.6509 ± 0.0530	0.7017 ± 0.0543
3	0.5095 ± 0.0348	0.5961 ± 0.0359	0.6382 ± 0.0356	0.6744 ± 0.0360
4	0.5160 ± 0.0268	0.5937 ± 0.0274	0.6404 ± 0.0274	0.6783 ± 0.0277
5	0.5244 ± 0.0216	0.6000 ± 0.0219	0.6393 ± 0.0218	0.6650 ± 0.0218
6	0.5194 ± 0.0177	0.5903 ± 0.0180	0.6246 ± 0.0179	0.6457 ± 0.0178
7	0.5127 ± 0.0152	0.5795 ± 0.0153	0.6098 ± 0.0152	0.6313 ± 0.0152
8	0.4979 ± 0.0132	0.5553 ± 0.0132	0.5865 ± 0.0132	0.6094 ± 0.0132
9	0.4767 ± 0.0117	0.5320 ± 0.0118	0.5645 ± 0.0119	0.5860 ± 0.0120
10	0.4658 ± 0.0112	0.5198 ± 0.0113	0.5517 ± 0.0114	0.5732 ± 0.0115

Tabelle 59: D = 5" , H = 30 cm, E_γ = 2,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.3696 ± 0.0896	0.4902 ± 0.0980	0.5789 ± 0.1008	0.5932 ± 0.1003
2	0.5318 ± 0.0554	0.5584 ± 0.0532	0.6019 ± 0.0528	0.6364 ± 0.0538
3	0.5105 ± 0.0367	0.5573 ± 0.0358	0.6102 ± 0.0360	0.6434 ± 0.0363
4	0.4924 ± 0.0273	0.5603 ± 0.0274	0.6005 ± 0.0272	0.6305 ± 0.0273
5	0.5073 ± 0.0223	0.5626 ± 0.0220	0.5968 ± 0.0219	0.6230 ± 0.0218
6	0.4860 ± 0.0180	0.5443 ± 0.0179	0.5804 ± 0.0178	0.6046 ± 0.0178
7	0.4671 ± 0.0151	0.5271 ± 0.0151	0.5597 ± 0.0149	0.5818 ± 0.0149
8	0.4552 ± 0.0131	0.5047 ± 0.0130	0.5358 ± 0.0129	0.5597 ± 0.0130
9	0.4382 ± 0.0116	0.4890 ± 0.0117	0.5202 ± 0.0117	0.5433 ± 0.0118
10	0.4262 ± 0.0111	0.4760 ± 0.0112	0.5073 ± 0.0112	0.5295 ± 0.0113

Tabelle 60: D = 5" , H = 30 cm, E_γ = 3,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.5556 ± 0.1111	0.5455 ± 0.0996	0.6393 ± 0.1024	0.6452 ± 0.1020
2	0.5375 ± 0.0579	0.5544 ± 0.0536	0.5849 ± 0.0525	0.6063 ± 0.0524
3	0.4698 ± 0.0359	0.5011 ± 0.0339	0.5351 ± 0.0333	0.5784 ± 0.0337
4	0.4619 ± 0.0274	0.5061 ± 0.0262	0.5388 ± 0.0258	0.5738 ± 0.0259
5	0.4764 ± 0.0224	0.5127 ± 0.0212	0.5361 ± 0.0207	0.5655 ± 0.0208
6	0.4623 ± 0.0182	0.4994 ± 0.0175	0.5204 ± 0.0171	0.5508 ± 0.0171
7	0.4391 ± 0.0152	0.4755 ± 0.0146	0.4986 ± 0.0142	0.5218 ± 0.0142
8	0.4216 ± 0.0131	0.4560 ± 0.0126	0.4818 ± 0.0125	0.5039 ± 0.0125
9	0.3943 ± 0.0115	0.4345 ± 0.0113	0.4617 ± 0.0113	0.4841 ± 0.0113
10	0.3857 ± 0.0110	0.4252 ± 0.0109	0.4518 ± 0.0109	0.4740 ± 0.0109

Tabelle 61: D = 5", H = 30 cm, E_γ = 5,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.6279 ± 0.1208	0.6400 ± 0.1131	0.6786 ± 0.1101	0.7018 ± 0.1110
2	0.5114 ± 0.0539	0.5600 ± 0.0529	0.5947 ± 0.0512	0.6092 ± 0.0506
3	0.5140 ± 0.0380	0.5537 ± 0.0367	0.5940 ± 0.0358	0.6052 ± 0.0348
4	0.5235 ± 0.0296	0.5663 ± 0.0286	0.6000 ± 0.0278	0.6043 ± 0.0269
5	0.5184 ± 0.0233	0.5617 ± 0.0225	0.5857 ± 0.0218	0.5925 ± 0.0212
6	0.4982 ± 0.0190	0.5332 ± 0.0182	0.5531 ± 0.0176	0.5651 ± 0.0172
7	0.4831 ± 0.0161	0.5139 ± 0.0154	0.5309 ± 0.0148	0.5419 ± 0.0145
8	0.4668 ± 0.0138	0.4949 ± 0.0132	0.5134 ± 0.0129	0.5255 ± 0.0127
9	0.4446 ± 0.0123	0.4749 ± 0.0119	0.4974 ± 0.0118	0.5102 ± 0.0117
10	0.4373 ± 0.0118	0.4672 ± 0.0115	0.4896 ± 0.0114	0.5024 ± 0.0113

Tabelle 62: D = 5", H = 30 cm, E_γ = 7,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.6750 ± 0.1299	0.6596 ± 0.1185	0.6604 ± 0.1116	0.7091 ± 0.1135
2	0.6286 ± 0.0599	0.6717 ± 0.0582	0.6727 ± 0.0553	0.6870 ± 0.0547
3	0.6228 ± 0.0427	0.6616 ± 0.0410	0.6720 ± 0.0391	0.6817 ± 0.0383
4	0.6206 ± 0.0329	0.6494 ± 0.0310	0.6671 ± 0.0297	0.6683 ± 0.0288
5	0.6100 ± 0.0260	0.6369 ± 0.0245	0.6429 ± 0.0232	0.6504 ± 0.0227
6	0.5965 ± 0.0213	0.6205 ± 0.0200	0.6280 ± 0.0191	0.6324 ± 0.0186
7	0.5880 ± 0.0179	0.6007 ± 0.0167	0.6113 ± 0.0160	0.6174 ± 0.0157
8	0.5671 ± 0.0153	0.5787 ± 0.0144	0.5913 ± 0.0139	0.5979 ± 0.0137
9	0.5458 ± 0.0136	0.5621 ± 0.0130	0.5770 ± 0.0127	0.5853 ± 0.0125
10	0.5378 ± 0.0130	0.5546 ± 0.0125	0.5697 ± 0.0123	0.5783 ± 0.0121

Tabelle 63: D = 5", H = 30 cm, E_γ = 10,0 MeV

i	L = 3"	L = 4"	L = 5"	L = 6"
1	0.7500 ± 0.1369	0.7872 ± 0.1294	0.7800 ± 0.1249	0.7963 ± 0.1214
2	0.6590 ± 0.0617	0.7035 ± 0.0595	0.7014 ± 0.0577	0.7168 ± 0.0563
3	0.6737 ± 0.0421	0.7123 ± 0.0403	0.7238 ± 0.0394	0.7194 ± 0.0380
4	0.6682 ± 0.0324	0.5975 ± 0.0308	0.7011 ± 0.0297	0.6989 ± 0.0286
5	0.6673 ± 0.0260	0.6861 ± 0.0246	0.6880 ± 0.0236	0.6902 ± 0.0229
6	0.6485 ± 0.0216	0.6592 ± 0.0202	0.6638 ± 0.0194	0.6683 ± 0.0189
7	0.6301 ± 0.0182	0.6345 ± 0.0170	0.6413 ± 0.0163	0.6439 ± 0.0159
8	0.6005 ± 0.0154	0.6049 ± 0.0145	0.6142 ± 0.0140	0.6187 ± 0.0138
9	0.5781 ± 0.0137	0.5854 ± 0.0131	0.5962 ± 0.0127	0.6020 ± 0.0126
10	0.5638 ± 0.0131	0.5721 ± 0.0125	0.5835 ± 0.0122	0.5902 ± 0.0121