

Table 1: 2H , 3H and 3He Cross Section and Rates for d/u Extraction with **one HRS**. A $W^2 > 4$ cut is applied when calculating the rate ($W^2 > 3$ when $x > 0.75$). 15 cm Target Length is used and 10% reduction with SOS is applied. F2ALLM97 model is used.

	x_{bj} ($x_{bj^{avg}}$)	W^2 (GeV^2)	Q^2 (GeV^2)	E' (GeV)	θ (Deg)	σ_{H2} (nb/s /GeV)	σ_{H3} (nb/sr /GeV)	σ_{He3} (nb/sr /GeV)	H2 Rate &Hour Hz(Hour)	H3 Rate &Hour Hz(Hour)	He3 Rate &Hour Hz(Hour)	Total Hour
HRS	0.59(0.59)	7.03	8.85	3.00	30.00	0.3056	0.4013	0.5155	1.199(5.79)	0.686(10.13)	1.264(5.49)	21.42
HRS	0.63(0.63)	6.33	9.28	3.15	30.00	0.2303	0.2997	0.3912	0.947(7.33)	0.537(12.94)	1.006(6.91)	27.18
HRS	0.67(0.67)	5.66	9.69	3.29	30.00	0.1698	0.2189	0.2905	0.729(9.52)	0.410(16.96)	0.780(8.90)	35.38
HRS	0.71(0.71)	5.00	10.09	3.42	30.00	0.1225	0.1565	0.2111	0.548(12.68)	0.305(22.79)	0.590(11.77)	47.24
HRS	0.75(0.74)	4.37	10.48	3.55	30.00	0.0902	0.1142	0.1565	0.391(17.74)	0.216(32.19)	0.424(16.37)	66.30
HRS	0.79(0.77)	3.76	10.85	3.68	30.00	0.0704	0.0884	0.1229	0.264(26.32)	0.144(48.13)	0.288(24.13)	98.58
HRS	0.83(0.78)	3.18	11.21	3.80	30.00	0.0583	0.0727	0.1023	0.161(43.01)	0.088(79.25)	0.177(39.24)	161.51
HRS	0.85(0.79)	2.89	11.38	3.86	30.00	0.0539	0.0669	0.0947	0.123(56.41)	0.067(104.28)	0.135(51.35)	212.04
HRS	0.87(0.80)	2.61	11.56	3.92	30.00	0.0497	0.0616	0.0876	0.090(77.55)	0.048(143.77)	0.099(70.44)	291.75
HRS	0.89(0.80)	2.33	11.73	3.98	30.00	0.0466	0.0575	0.0822	0.061(113.83)	0.033(211.59)	0.067(103.21)	428.63

	x_{bj} ($x_{bj^{avg}}$)	W^2 (GeV^2)	Q^2 (GeV^2)	E' (GeV)	θ (Deg)	σ_{H2} (nb/s /GeV)	σ_{H3} (nb/sr /GeV)	σ_{He3} (nb/sr /GeV)	H2 Rate &Hour Hz(Hour)	H3 Rate &Hour Hz(Hour)	He3 Rate &Hour Hz(Hour)	Total Hour
HRS	0.59(0.59)	7.14	9.01	2.87	31.00	0.2726	0.3578	0.4599	1.020(6.81)	0.583(11.91)	1.076(6.45)	25.17
HRS	0.63(0.63)	6.43	9.45	3.01	31.00	0.2048	0.2664	0.3481	0.804(8.63)	0.456(15.24)	0.854(8.13)	32.00
HRS	0.67(0.67)	5.75	9.88	3.14	31.00	0.1509	0.1944	0.2582	0.619(11.21)	0.348(19.98)	0.662(10.48)	41.67
HRS	0.71(0.71)	5.08	10.29	3.28	31.00	0.1078	0.1377	0.1858	0.461(15.06)	0.256(27.08)	0.497(13.98)	56.11
HRS	0.75(0.75)	4.44	10.69	3.40	31.00	0.0782	0.0989	0.1357	0.330(21.04)	0.182(38.20)	0.358(19.40)	78.64
HRS	0.79(0.77)	3.83	11.08	3.53	31.00	0.0600	0.0753	0.1048	0.221(31.45)	0.121(57.59)	0.241(28.83)	117.87
HRS	0.83(0.79)	3.23	11.46	3.65	31.00	0.0491	0.0612	0.0862	0.135(51.37)	0.073(94.74)	0.148(46.83)	192.94
HRS	0.85(0.80)	2.93	11.64	3.70	31.00	0.0446	0.0554	0.0785	0.101(68.52)	0.055(126.82)	0.111(62.31)	257.64
HRS	0.87(0.80)	2.65	11.82	3.76	31.00	0.0412	0.0510	0.0727	0.073(94.62)	0.040(175.68)	0.081(85.87)	356.17
HRS	0.89(0.81)	2.36	12.00	3.82	31.00	0.0384	0.0473	0.0678	0.050(137.54)	0.027(256.03)	0.056(124.57)	518.14

	x_{bj} ($x_{bj^{avg}}$)	W^2 (GeV^2)	Q^2 (GeV^2)	E' (GeV)	θ (Deg)	σ_{H2} (nb/s /GeV)	σ_{H3} (nb/sr /GeV)	σ_{He3} (nb/sr /GeV)	H2 Rate &Hour Hz(Hour)	H3 Rate &Hour Hz(Hour)	He3 Rate &Hour Hz(Hour)	Total Hour
HRS	0.59(0.59)	7.24	9.15	2.74	32.00	0.2449	0.3215	0.4134	0.875(7.93)	0.500(13.88)	0.923(7.52)	29.33
HRS	0.63(0.63)	6.52	9.61	2.87	32.00	0.1829	0.2379	0.3109	0.687(10.11)	0.389(17.86)	0.729(9.52)	37.50
HRS	0.67(0.67)	5.83	10.05	3.01	32.00	0.1341	0.1728	0.2296	0.527(13.19)	0.295(23.51)	0.563(12.33)	49.02
HRS	0.71(0.71)	5.16	10.48	3.13	32.00	0.0948	0.1210	0.1635	0.388(17.89)	0.216(32.20)	0.418(16.60)	66.68
HRS	0.75(0.75)	4.51	10.89	3.26	32.00	0.0680	0.0859	0.1180	0.278(24.95)	0.153(45.32)	0.302(22.99)	93.26
HRS	0.79(0.77)	3.88	11.30	3.38	32.00	0.0513	0.0642	0.0896	0.185(37.51)	0.101(68.74)	0.202(34.36)	140.61
HRS	0.83(0.79)	3.27	11.69	3.50	32.00	0.0414	0.0514	0.0727	0.113(61.31)	0.061(113.23)	0.124(55.85)	230.39
HRS	0.85(0.80)	2.98	11.88	3.55	32.00	0.0376	0.0466	0.0662	0.084(82.20)	0.046(152.33)	0.093(74.69)	309.22
HRS	0.87(0.80)	2.68	12.07	3.61	32.00	0.0346	0.0428	0.0611	0.061(113.20)	0.033(210.42)	0.068(102.64)	426.26
HRS	0.89(0.81)	2.39	12.25	3.66	32.00	0.0320	0.0395	0.0567	0.042(167.21)	0.022(311.68)	0.046(151.31)	630.20

Table 2: 2H , 3H and 3He Cross Section and Rates for d/u Extraction with **one HRS**. A $W^2 > 4$ cut is applied when calculating the rate ($W^2 > 3$ when $x > 0.75$). 15 cm Target Length is used and 10% reduction with SOS is applied. F2ALLM97 model is used.

	x_{bj} ($x_{bj^{avg}}$)	W^2 (GeV^2)	Q^2 (GeV^2)	E' (GeV)	θ (Deg)	σ_{H2} (nb/s /GeV)	σ_{H3} (nb/sr /GeV)	σ_{He3} (nb/sr /GeV)	H2 Rate &Hour Hz(Hour)	H3 Rate &Hour Hz(Hour)	He3 Rate &Hour Hz(Hour)	Total Hour
HRS	0.59(0.59)	7.33	9.28	2.62	33.00	0.2212	0.2902	0.3733	0.755(9.19)	0.432(16.09)	0.797(8.71)	33.99
HRS	0.63(0.63)	6.61	9.76	2.75	33.00	0.1647	0.2141	0.2800	0.591(11.75)	0.335(20.75)	0.628(11.06)	43.56
HRS	0.67(0.67)	5.91	10.21	2.88	33.00	0.1201	0.1546	0.2056	0.451(15.39)	0.253(27.44)	0.483(14.38)	57.21
HRS	0.71(0.71)	5.23	10.66	3.00	33.00	0.0847	0.1080	0.1461	0.332(20.91)	0.184(37.65)	0.358(19.40)	77.96
HRS	0.75(0.75)	4.58	11.09	3.12	33.00	0.0597	0.0754	0.1037	0.237(29.32)	0.130(53.30)	0.257(27.01)	109.63
HRS	0.79(0.78)	3.94	11.50	3.24	33.00	0.0445	0.0557	0.0777	0.158(44.03)	0.086(80.76)	0.172(40.31)	165.10
HRS	0.83(0.79)	3.32	11.91	3.35	33.00	0.0352	0.0437	0.0618	0.095(73.02)	0.051(135.00)	0.104(66.46)	274.49
HRS	0.85(0.80)	3.02	12.11	3.41	33.00	0.0320	0.0396	0.0564	0.071(97.22)	0.039(180.36)	0.079(88.28)	365.86
HRS	0.87(0.81)	2.72	12.30	3.47	33.00	0.0292	0.0360	0.0516	0.051(134.92)	0.028(251.11)	0.057(122.23)	508.26
HRS	0.89(0.81)	2.42	12.49	3.52	33.00	0.0269	0.0331	0.0476	0.035(199.89)	0.019(373.11)	0.038(180.71)	753.72

	x_{bj} ($x_{bj^{avg}}$)	W^2 (GeV^2)	Q^2 (GeV^2)	E' (GeV)	θ (Deg)	σ_{H2} (nb/s /GeV)	σ_{H3} (nb/sr /GeV)	σ_{He3} (nb/sr /GeV)	H2 Rate &Hour Hz(Hour)	H3 Rate &Hour Hz(Hour)	He3 Rate &Hour Hz(Hour)	Total Hour
HRS	0.59(0.59)	7.42	9.41	2.50	34.00	0.2006	0.2632	0.3387	0.655(10.59)	0.374(18.55)	0.692(10.04)	39.18
HRS	0.63(0.63)	6.69	9.89	2.63	34.00	0.1491	0.1938	0.2536	0.512(13.55)	0.290(23.95)	0.545(12.75)	50.25
HRS	0.67(0.67)	5.99	10.37	2.76	34.00	0.1080	0.1390	0.1849	0.389(17.87)	0.218(31.88)	0.416(16.69)	66.45
HRS	0.71(0.71)	5.30	10.82	2.88	34.00	0.0763	0.0972	0.1316	0.287(24.23)	0.159(43.64)	0.309(22.47)	90.34
HRS	0.75(0.75)	4.64	11.27	3.00	34.00	0.0528	0.0667	0.0918	0.203(34.29)	0.111(62.37)	0.220(31.57)	128.24
HRS	0.79(0.78)	3.99	11.70	3.11	34.00	0.0386	0.0483	0.0675	0.134(51.80)	0.073(95.09)	0.147(47.39)	194.27
HRS	0.83(0.80)	3.36	12.12	3.22	34.00	0.0304	0.0377	0.0535	0.082(84.79)	0.044(156.89)	0.090(77.13)	318.80
HRS	0.85(0.80)	3.05	12.32	3.28	34.00	0.0273	0.0338	0.0481	0.061(114.75)	0.033(213.12)	0.067(104.10)	431.97
HRS	0.87(0.81)	2.75	12.52	3.33	34.00	0.0248	0.0306	0.0439	0.043(160.31)	0.023(298.72)	0.048(145.10)	604.13
HRS	0.89(0.82)	2.45	12.72	3.38	34.00	0.0228	0.0280	0.0404	0.029(239.20)	0.016(447.04)	0.032(216.07)	902.31

	x_{bj} ($x_{bj^{avg}}$)	W^2 (GeV^2)	Q^2 (GeV^2)	E' (GeV)	θ (Deg)	σ_{H2} (nb/s /GeV)	σ_{H3} (nb/sr /GeV)	σ_{He3} (nb/sr /GeV)	H2 Rate &Hour Hz(Hour)	H3 Rate &Hour Hz(Hour)	He3 Rate &Hour Hz(Hour)	Total Hour
HRS	0.59(0.59)	7.50	9.53	2.39	35.00	0.1832	0.2402	0.3093	0.573(12.12)	0.327(21.23)	0.604(11.49)	44.84
HRS	0.63(0.63)	6.77	10.03	2.52	35.00	0.1352	0.1756	0.2299	0.445(15.61)	0.252(27.59)	0.473(14.68)	57.88
HRS	0.67(0.67)	6.06	10.51	2.64	35.00	0.0980	0.1262	0.1680	0.338(20.53)	0.190(36.64)	0.362(19.18)	76.34
HRS	0.71(0.71)	5.36	10.98	2.76	35.00	0.0690	0.0880	0.1191	0.249(27.91)	0.138(50.29)	0.268(25.88)	104.08
HRS	0.75(0.75)	4.69	11.44	2.87	35.00	0.0471	0.0594	0.0818	0.175(39.79)	0.096(72.43)	0.190(36.63)	148.85
HRS	0.79(0.78)	4.04	11.88	2.99	35.00	0.0340	0.0425	0.0596	0.116(60.12)	0.063(110.44)	0.126(54.97)	225.53
HRS	0.83(0.80)	3.40	12.31	3.09	35.00	0.0264	0.0327	0.0464	0.070(99.42)	0.038(184.13)	0.077(90.38)	373.93
HRS	0.85(0.81)	3.09	12.52	3.15	35.00	0.0236	0.0291	0.0416	0.052(134.82)	0.028(250.63)	0.057(122.24)	507.69
HRS	0.87(0.81)	2.78	12.73	3.20	35.00	0.0213	0.0262	0.0377	0.037(189.98)	0.020(354.39)	0.040(171.83)	716.19
HRS	0.89(0.82)	2.48	12.94	3.25	35.00	0.0196	0.0240	0.0347	0.024(285.18)	0.013(533.54)	0.027(237.41)	1076.13

Table 3: 2H , 3H and 3He Cross Section and Rates for d/u Extraction with **one HRS**. A $W^2 > 4$ cut is applied when calculating the rate ($W^2 > 3$ when $x > 0.75$). 15 cm Target Length is used and 10% reduction with SOS is applied. F2ALLM97 model is used.

	x_{bj} (x_{bj}^{avg})	W^2 (GeV^2)	Q^2 (GeV^2)	E' (GeV)	θ (Deg)	σ_{H2} (nb/s /GeV)	σ_{H3} (nb/sr /GeV)	σ_{He3} (nb/sr /GeV)	H2 Rate &Hour Hz(Hour)	H3 Rate &Hour Hz(Hour)	He3 Rate &Hour Hz(Hour)	Total Hour
HRS	0.59(0.59)	7.58	9.64	2.29	36.00	0.1675	0.2196	0.2828	0.502(13.84)	0.287(24.24)	0.530(13.11)	51.19
HRS	0.63(0.63)	6.84	10.15	2.42	36.00	0.1239	0.1610	0.2108	0.391(17.76)	0.221(31.40)	0.416(16.71)	65.87
HRS	0.67(0.67)	6.12	10.64	2.53	36.00	0.0891	0.1147	0.1527	0.295(23.55)	0.165(42.03)	0.316(21.99)	87.57
HRS	0.71(0.71)	5.43	11.13	2.65	36.00	0.0622	0.0792	0.1073	0.215(32.29)	0.119(58.22)	0.232(29.93)	120.45
HRS	0.75(0.75)	4.75	11.60	2.76	36.00	0.0424	0.0535	0.0738	0.152(45.76)	0.083(83.32)	0.165(42.10)	171.17
HRS	0.79(0.78)	4.08	12.05	2.87	36.00	0.0301	0.0376	0.0527	0.100(69.66)	0.054(128.05)	0.109(63.66)	261.38
HRS	0.83(0.80)	3.44	12.50	2.97	36.00	0.0229	0.0284	0.0403	0.060(115.96)	0.032(214.96)	0.066(105.34)	436.25
HRS	0.85(0.81)	3.12	12.72	3.03	36.00	0.0205	0.0253	0.0362	0.044(157.42)	0.024(292.92)	0.049(142.62)	592.96
HRS	0.87(0.82)	2.81	12.93	3.08	36.00	0.0185	0.0228	0.0328	0.031(220.69)	0.017(412.03)	0.035(199.48)	832.19
HRS	0.89(0.82)	2.51	13.15	3.13	36.00	0.0169	0.0207	0.0300	0.021(332.23)	0.011(622.20)	0.023(299.66)	1254.09

	x_{bj} (x_{bj}^{avg})	W^2 (GeV^2)	Q^2 (GeV^2)	E' (GeV)	θ (Deg)	σ_{H2} (nb/s /GeV)	σ_{H3} (nb/sr /GeV)	σ_{He3} (nb/sr /GeV)	H2 Rate &Hour Hz(Hour)	H3 Rate &Hour Hz(Hour)	He3 Rate &Hour Hz(Hour)	Total Hour
HRS	0.59(0.59)	7.65	9.74	2.20	37.00	0.1545	0.2025	0.2609	0.444(15.65)	0.253(27.41)	0.468(14.83)	57.89
HRS	0.63(0.63)	6.91	10.27	2.32	37.00	0.1136	0.1475	0.1932	0.344(20.21)	0.194(35.73)	0.365(19.00)	74.94
HRS	0.67(0.67)	6.19	10.77	2.43	37.00	0.0815	0.1048	0.1397	0.259(26.83)	0.145(47.91)	0.277(25.05)	99.79
HRS	0.71(0.71)	5.48	11.27	2.54	37.00	0.0568	0.0724	0.0981	0.189(36.78)	0.105(66.32)	0.204(34.08)	137.19
HRS	0.75(0.75)	4.80	11.75	2.65	37.00	0.0383	0.0483	0.0667	0.132(52.52)	0.073(95.68)	0.144(48.31)	196.51
HRS	0.79(0.78)	4.13	12.22	2.76	37.00	0.0269	0.0336	0.0471	0.087(79.82)	0.047(146.82)	0.095(72.91)	299.55
HRS	0.83(0.80)	3.48	12.68	2.86	37.00	0.0202	0.0250	0.0355	0.052(133.24)	0.028(247.19)	0.057(120.98)	501.41
HRS	0.85(0.81)	3.16	12.90	2.91	37.00	0.0180	0.0222	0.0318	0.038(181.58)	0.021(338.13)	0.042(164.43)	684.14
HRS	0.87(0.82)	2.84	13.12	2.96	37.00	0.0161	0.0198	0.0285	0.027(257.70)	0.014(481.64)	0.030(232.77)	972.11
HRS	0.89(0.82)	2.53	13.34	3.01	37.00	0.0147	0.0180	0.0260	0.018(386.13)	0.010(723.85)	0.020(348.04)	1458.02

	x_{bj} (x_{bj}^{avg})	W^2 (GeV^2)	Q^2 (GeV^2)	E' (GeV)	θ (Deg)	σ_{H2} (nb/s /GeV)	σ_{H3} (nb/sr /GeV)	σ_{He3} (nb/sr /GeV)	H2 Rate &Hour Hz(Hour)	H3 Rate &Hour Hz(Hour)	He3 Rate &Hour Hz(Hour)	Total Hour
HRS	0.59(0.59)	7.72	9.84	2.11	38.00	0.1423	0.1865	0.2404	0.392(17.71)	0.224(31.02)	0.414(16.77)	65.50
HRS	0.63(0.63)	6.97	10.37	2.22	38.00	0.1044	0.1356	0.1777	0.303(22.89)	0.172(40.48)	0.323(21.52)	84.89
HRS	0.67(0.67)	6.25	10.89	2.34	38.00	0.0748	0.0962	0.1283	0.228(30.42)	0.128(54.32)	0.245(28.39)	113.12
HRS	0.71(0.71)	5.54	11.40	2.44	38.00	0.0520	0.0661	0.0897	0.166(41.87)	0.092(75.53)	0.179(38.79)	156.20
HRS	0.75(0.75)	4.84	11.89	2.55	38.00	0.0348	0.0439	0.0606	0.116(59.97)	0.064(109.28)	0.126(55.14)	224.40
HRS	0.79(0.78)	4.17	12.37	2.65	38.00	0.0240	0.0299	0.0420	0.076(91.78)	0.041(168.93)	0.083(83.80)	344.52
HRS	0.83(0.80)	3.51	12.84	2.75	38.00	0.0179	0.0221	0.0315	0.045(152.86)	0.024(283.79)	0.050(138.72)	575.36
HRS	0.85(0.81)	3.19	13.07	2.80	38.00	0.0158	0.0195	0.0279	0.033(210.01)	0.018(391.43)	0.037(190.05)	791.49
HRS	0.87(0.82)	2.87	13.30	2.85	38.00	0.0142	0.0174	0.0251	0.023(296.79)	0.013(555.14)	0.026(267.93)	1119.86
HRS	0.89(0.83)	2.55	13.53	2.90	38.00	0.0128	0.0157	0.0227	0.015(451.09)	0.008(846.48)	0.017(406.31)	1703.88

Table 4: 2H , 3H and 3He Cross Section and Rates for d/u Extraction with **one HRS**. A $W^2 > 4$ cut is applied when calculating the rate ($W^2 > 3$ when $x > 0.75$). 15 cm Target Length is used and 10% reduction with SOS is applied. F2ALLM97 model is used.

	x_{bj} ($x_{bj,avg}$)	W^2 (GeV^2)	Q^2 (GeV^2)	E' (GeV)	θ (Deg)	σ_{H2} (nb/s /GeV)	σ_{H3} (nb/sr /GeV)	σ_{He3} (nb/sr /GeV)	H2 Rate &Hour Hz(Hour)	H3 Rate &Hour Hz(Hour)	He3 Rate &Hour Hz(Hour)	Total Hour
HRS	0.59(0.59)	7.78	9.94	2.03	39.00	0.1319	0.1729	0.2229	0.349(19.89)	0.199(34.84)	0.369(18.83)	73.57
HRS	0.63(0.63)	7.03	10.48	2.14	39.00	0.0967	0.1256	0.1646	0.270(25.72)	0.153(45.50)	0.287(24.19)	95.41
HRS	0.67(0.67)	6.30	11.01	2.25	39.00	0.0690	0.0886	0.1182	0.202(34.35)	0.113(61.36)	0.217(32.05)	127.76
HRS	0.71(0.71)	5.59	11.52	2.35	39.00	0.0477	0.0607	0.0824	0.146(47.42)	0.081(85.57)	0.158(43.92)	176.91
HRS	0.75(0.75)	4.89	12.03	2.45	39.00	0.0317	0.0400	0.0552	0.102(68.33)	0.056(124.58)	0.111(62.81)	255.71
HRS	0.79(0.78)	4.21	12.52	2.55	39.00	0.0218	0.0271	0.0382	0.067(103.79)	0.036(191.10)	0.073(94.74)	389.62
HRS	0.83(0.81)	3.54	13.00	2.65	39.00	0.0158	0.0196	0.0279	0.039(176.07)	0.021(327.15)	0.043(159.69)	662.91
HRS	0.85(0.82)	3.22	13.24	2.70	39.00	0.0140	0.0172	0.0248	0.029(238.54)	0.016(444.95)	0.032(215.75)	899.24
HRS	0.87(0.82)	2.89	13.47	2.75	39.00	0.0125	0.0154	0.0222	0.020(340.26)	0.011(636.95)	0.023(307.00)	1284.21
HRS	0.89(0.83)	2.57	13.70	2.80	39.00	0.0113	0.0138	0.0200	0.013(524.37)	0.007(984.89)	0.015(472.02)	1981.28

	x_{bj} ($x_{bj,avg}$)	W^2 (GeV^2)	Q^2 (GeV^2)	E' (GeV)	θ (Deg)	σ_{H2} (nb/s /GeV)	σ_{H3} (nb/sr /GeV)	σ_{He3} (nb/sr /GeV)	H2 Rate &Hour Hz(Hour)	H3 Rate &Hour Hz(Hour)	He3 Rate &Hour Hz(Hour)	Total Hour
HRS	0.59(0.59)	7.85	10.02	1.95	40.00	0.1225	0.1606	0.2070	0.312(22.29)	0.178(39.05)	0.329(21.10)	82.44
HRS	0.63(0.63)	7.09	10.58	2.05	40.00	0.0893	0.1159	0.1520	0.240(28.99)	0.135(51.29)	0.255(27.25)	107.52
HRS	0.67(0.67)	6.35	11.12	2.16	40.00	0.0637	0.0818	0.1092	0.180(38.68)	0.100(69.12)	0.192(36.09)	143.89
HRS	0.71(0.71)	5.64	11.64	2.26	40.00	0.0440	0.0560	0.0760	0.130(53.41)	0.072(96.41)	0.140(49.46)	199.28
HRS	0.75(0.75)	4.93	12.16	2.36	40.00	0.0291	0.0367	0.0507	0.090(77.26)	0.049(140.92)	0.098(71.01)	289.19
HRS	0.79(0.79)	4.25	12.66	2.46	40.00	0.0196	0.0244	0.0344	0.059(118.21)	0.032(217.81)	0.064(107.85)	443.88
HRS	0.83(0.81)	3.57	13.15	2.56	40.00	0.0142	0.0175	0.0250	0.035(199.15)	0.019(370.27)	0.038(180.54)	749.95
HRS	0.85(0.82)	3.24	13.39	2.60	40.00	0.0124	0.0153	0.0220	0.025(272.34)	0.014(508.39)	0.028(246.19)	1026.91
HRS	0.87(0.82)	2.92	13.63	2.65	40.00	0.0111	0.0136	0.0197	0.018(391.33)	0.009(733.22)	0.020(352.86)	1477.42
HRS	0.89(0.83)	2.59	13.87	2.69	40.00	0.0100	0.0122	0.0178	0.012(598.18)	0.006(1124.30)	0.013(538.21)	2260.69

	x_{bj} ($x_{bj,avg}$)	W^2 (GeV^2)	Q^2 (GeV^2)	E' (GeV)	θ (Deg)	σ_{H2} (nb/s /GeV)	σ_{H3} (nb/sr /GeV)	σ_{He3} (nb/sr /GeV)	H2 Rate &Hour Hz(Hour)	H3 Rate &Hour Hz(Hour)	He3 Rate &Hour Hz(Hour)	Total Hour
HRS	0.59(0.59)	7.90	10.11	1.87	41.00	0.1143	0.1497	0.1931	0.279(24.85)	0.159(43.55)	0.295(23.53)	91.93
HRS	0.63(0.63)	7.15	10.67	1.98	41.00	0.0833	0.1081	0.1418	0.215(32.29)	0.122(57.14)	0.229(30.35)	119.79
HRS	0.67(0.67)	6.41	11.22	2.08	41.00	0.0592	0.0761	0.1016	0.161(43.20)	0.090(77.20)	0.172(40.30)	160.70
HRS	0.71(0.71)	5.68	11.75	2.18	41.00	0.0407	0.0517	0.0703	0.116(60.01)	0.064(108.34)	0.125(55.56)	223.91
HRS	0.75(0.75)	4.97	12.28	2.28	41.00	0.0269	0.0338	0.0468	0.080(86.94)	0.044(158.63)	0.087(79.88)	325.46
HRS	0.79(0.79)	4.28	12.79	2.37	41.00	0.0178	0.0222	0.0313	0.052(133.66)	0.028(246.38)	0.057(121.90)	501.94
HRS	0.83(0.81)	3.60	13.30	2.46	41.00	0.0128	0.0157	0.0225	0.031(225.50)	0.017(419.54)	0.034(204.33)	849.38
HRS	0.85(0.82)	3.27	13.54	2.51	41.00	0.0112	0.0137	0.0197	0.022(310.51)	0.012(580.04)	0.025(280.57)	1171.13
HRS	0.87(0.83)	2.94	13.79	2.55	41.00	0.0098	0.0121	0.0175	0.016(447.11)	0.008(838.38)	0.017(402.94)	1688.44
HRS	0.89(0.83)	2.61	14.03	2.60	41.00	0.0089	0.0108	0.0158	0.010(686.98)	0.005(1292.36)	0.011(617.73)	2597.07

Table 5: 2H , 3H and 3He Cross Section and Rates for d/u Extraction with **one HRS**. A $W^2 > 4$ cut is applied when calculating the rate ($W^2 > 3$ when $x > 0.75$). 15 cm Target Length is used and 10% reduction with SOS is applied. F2ALLM97 model is used.

	x_{bj} ($x_{bj,avg}$)	W^2 (GeV^2)	Q^2 (GeV^2)	E' (GeV)	θ (Deg)	σ_{H2} (nb/s /GeV)	σ_{H3} (nb/sr /GeV)	σ_{He3} (nb/sr /GeV)	H2 Rate &Hour Hz(Hour)	H3 Rate &Hour Hz(Hour)	He3 Rate &Hour Hz(Hour)	Total Hour
HRS	0.59(0.59)	7.96	10.18	1.80	42.00	0.1067	0.1397	0.1803	0.251(27.66)	0.143(48.48)	0.265(26.19)	102.33
HRS	0.63(0.63)	7.20	10.75	1.90	42.00	0.0777	0.1008	0.1322	0.193(35.98)	0.109(63.67)	0.205(33.81)	133.46
HRS	0.67(0.67)	6.45	11.31	2.00	42.00	0.0551	0.0708	0.0945	0.144(48.20)	0.081(86.15)	0.154(44.96)	179.31
HRS	0.71(0.71)	5.72	11.86	2.10	42.00	0.0377	0.0480	0.0652	0.103(67.12)	0.057(121.22)	0.112(62.13)	250.48
HRS	0.75(0.75)	5.01	12.39	2.19	42.00	0.0249	0.0314	0.0434	0.071(97.27)	0.039(177.53)	0.078(89.36)	364.16
HRS	0.79(0.79)	4.31	12.92	2.29	42.00	0.0163	0.0203	0.0287	0.046(150.02)	0.025(276.65)	0.051(136.79)	563.46
HRS	0.83(0.81)	3.63	13.43	2.38	42.00	0.0116	0.0143	0.0204	0.027(252.95)	0.015(470.86)	0.030(229.12)	952.93
HRS	0.85(0.82)	3.30	13.68	2.42	42.00	0.0100	0.0123	0.0178	0.020(348.07)	0.011(650.64)	0.022(314.36)	1313.08
HRS	0.87(0.83)	2.96	13.93	2.47	42.00	0.0089	0.0109	0.0157	0.014(507.29)	0.007(951.79)	0.015(456.98)	1916.06
HRS	0.89(0.83)	2.63	14.18	2.51	42.00	0.0079	0.0097	0.0141	0.009(781.68)	0.005(1471.58)	0.010(702.53)	2955.79

	x_{bj} ($x_{bj,avg}$)	W^2 (GeV^2)	Q^2 (GeV^2)	E' (GeV)	θ (Deg)	σ_{H2} (nb/s /GeV)	σ_{H3} (nb/sr /GeV)	σ_{He3} (nb/sr /GeV)	H2 Rate &Hour Hz(Hour)	H3 Rate &Hour Hz(Hour)	He3 Rate &Hour Hz(Hour)	Total Hour
HRS	0.59(0.59)	8.01	10.26	1.74	43.00	0.0999	0.1309	0.1689	0.227(30.66)	0.129(53.74)	0.239(29.02)	113.42
HRS	0.63(0.63)	7.24	10.84	1.83	43.00	0.0726	0.0942	0.1236	0.174(39.94)	0.098(70.70)	0.185(37.53)	148.18
HRS	0.67(0.67)	6.50	11.40	1.93	43.00	0.0513	0.0659	0.0880	0.129(53.74)	0.072(96.08)	0.139(50.12)	199.95
HRS	0.71(0.71)	5.77	11.96	2.02	43.00	0.0350	0.0445	0.0605	0.093(75.04)	0.051(135.56)	0.100(69.45)	280.05
HRS	0.75(0.75)	5.05	12.50	2.12	43.00	0.0231	0.0291	0.0403	0.064(108.72)	0.035(198.47)	0.070(99.85)	407.04
HRS	0.79(0.79)	4.35	13.04	2.21	43.00	0.0151	0.0188	0.0265	0.042(167.15)	0.023(308.35)	0.046(152.36)	627.86
HRS	0.83(0.81)	3.66	13.56	2.29	43.00	0.0105	0.0130	0.0186	0.024(284.18)	0.013(529.28)	0.027(257.31)	1070.76
HRS	0.85(0.82)	3.32	13.82	2.34	43.00	0.0090	0.0111	0.0160	0.018(393.70)	0.009(736.46)	0.020(355.40)	1485.57
HRS	0.87(0.83)	2.98	14.07	2.38	43.00	0.0080	0.0098	0.0142	0.012(571.51)	0.006(1073.07)	0.013(514.59)	2159.17
HRS	0.89(0.84)	2.65	14.32	2.42	43.00	0.0071	0.0087	0.0127	0.008(883.56)	0.004(1664.55)	0.009(793.72)	3341.83

	x_{bj} ($x_{bj,avg}$)	W^2 (GeV^2)	Q^2 (GeV^2)	E' (GeV)	θ (Deg)	σ_{H2} (nb/s /GeV)	σ_{H3} (nb/sr /GeV)	σ_{He3} (nb/sr /GeV)	H2 Rate &Hour Hz(Hour)	H3 Rate &Hour Hz(Hour)	He3 Rate &Hour Hz(Hour)	Total Hour
HRS	0.59(0.59)	8.06	10.33	1.67	44.00	0.0939	0.1230	0.1587	0.205(33.87)	0.117(59.37)	0.217(32.06)	125.30
HRS	0.63(0.63)	7.29	10.91	1.77	44.00	0.0679	0.0881	0.1157	0.157(44.28)	0.089(78.38)	0.167(41.60)	164.26
HRS	0.67(0.67)	6.54	11.49	1.86	44.00	0.0479	0.0616	0.0823	0.117(59.61)	0.065(106.59)	0.125(55.58)	221.77
HRS	0.71(0.71)	5.80	12.05	1.95	44.00	0.0328	0.0416	0.0567	0.084(83.12)	0.046(150.18)	0.090(76.92)	310.22
HRS	0.75(0.75)	5.08	12.61	2.04	44.00	0.0215	0.0270	0.0375	0.057(121.16)	0.031(221.25)	0.062(111.25)	453.66
HRS	0.79(0.79)	4.38	13.15	2.13	44.00	0.0139	0.0172	0.0243	0.037(186.99)	0.020(345.10)	0.041(170.40)	702.48
HRS	0.83(0.81)	3.68	13.68	2.22	44.00	0.0096	0.0118	0.0169	0.022(319.08)	0.012(594.61)	0.024(288.79)	1202.48
HRS	0.85(0.82)	3.34	13.94	2.26	44.00	0.0082	0.0101	0.0146	0.016(438.44)	0.008(820.56)	0.018(395.65)	1654.64
HRS	0.87(0.83)	3.00	14.20	2.30	44.00	0.0072	0.0088	0.0129	0.011(640.18)	0.006(1202.71)	0.012(576.19)	2419.08
HRS	0.89(0.84)	2.67	14.46	2.34	44.00	0.0065	0.0079	0.0115	0.007(992.99)	0.004(1871.83)	0.008(891.65)	3756.48

Table 6: 2H , 3H and 3He Cross Section and Rates for d/u Extraction with **one HRS**. A $W^2 > 4$ cut is applied when calculating the rate ($W^2 > 3$ when $x > 0.75$). 15 cm Target Length is used and 10% reduction with SOS is applied. F2ALLM97 model is used.

x_{bj} (x_{bj}^{avg})	W^2 (GeV^2)	Q^2 (GeV^2)	E' (GeV)	θ (Deg)	σ_{H2} (nb/s /GeV)	σ_{H3} (nb/sr /GeV)	σ_{He3} (nb/sr /GeV)	H2 Rate &Hour Hz(Hour)	H3 Rate &Hour Hz(Hour)	He3 Rate &Hour Hz(Hour)	Total Hour	
HRS	0.59(0.59)	8.10	10.39	1.61	45.00	0.0883	0.1157	0.1493	0.186(37.33)	0.106(65.45)	0.197(35.33)	138.10
HRS	0.63(0.63)	7.33	10.99	1.71	45.00	0.0638	0.0828	0.1087	0.142(48.84)	0.080(86.48)	0.151(45.88)	181.20
HRS	0.67(0.67)	6.58	11.57	1.80	45.00	0.0450	0.0578	0.0772	0.106(65.78)	0.059(117.64)	0.113(61.33)	244.74
HRS	0.71(0.71)	5.84	12.14	1.88	45.00	0.0307	0.0390	0.0531	0.076(91.96)	0.042(166.18)	0.082(85.08)	343.22
HRS	0.75(0.75)	5.12	12.71	1.97	45.00	0.0201	0.0252	0.0350	0.052(134.33)	0.028(245.35)	0.056(123.32)	502.99
HRS	0.79(0.79)	4.40	13.26	2.06	45.00	0.0128	0.0159	0.0225	0.033(208.20)	0.018(384.41)	0.037(189.68)	782.29
HRS	0.83(0.81)	3.71	13.80	2.14	45.00	0.0087	0.0108	0.0155	0.020(356.07)	0.010(663.92)	0.022(322.15)	1342.13
HRS	0.85(0.82)	3.36	14.06	2.18	45.00	0.0075	0.0092	0.0133	0.014(488.84)	0.008(915.41)	0.016(440.95)	1845.19
HRS	0.87(0.83)	3.02	14.33	2.22	45.00	0.0065	0.0080	0.0116	0.010(718.68)	0.005(1351.09)	0.011(646.53)	2716.31
HRS	0.89(0.84)	2.68	14.59	2.26	45.00	0.0058	0.0071	0.0104	0.006(1133.56)	0.003(2138.25)	0.007(1017.42)	4289.24

x_{bj} (x_{bj}^{avg})	W^2 (GeV^2)	Q^2 (GeV^2)	E' (GeV)	θ (Deg)	σ_{H2} (nb/s /GeV)	σ_{H3} (nb/sr /GeV)	σ_{He3} (nb/sr /GeV)	H2 Rate &Hour Hz(Hour)	H3 Rate &Hour Hz(Hour)	He3 Rate &Hour Hz(Hour)	Total Hour	
HRS	0.59(0.59)	8.15	10.46	1.56	46.00	0.0834	0.1092	0.1410	0.170(40.97)	0.097(71.84)	0.179(38.77)	151.58
HRS	0.63(0.63)	7.37	11.06	1.65	46.00	0.0602	0.0781	0.1026	0.130(53.61)	0.073(94.93)	0.138(50.36)	198.90
HRS	0.67(0.67)	6.62	11.65	1.73	46.00	0.0423	0.0543	0.0726	0.096(72.44)	0.054(129.58)	0.103(67.54)	269.57
HRS	0.71(0.71)	5.88	12.23	1.82	46.00	0.0288	0.0366	0.0498	0.069(101.33)	0.038(183.14)	0.074(93.75)	378.22
HRS	0.75(0.75)	5.15	12.80	1.91	46.00	0.0188	0.0237	0.0328	0.047(148.27)	0.026(270.88)	0.051(136.11)	555.26
HRS	0.79(0.79)	4.43	13.36	1.99	46.00	0.0119	0.0148	0.0209	0.030(230.12)	0.016(425.00)	0.033(209.60)	864.72
HRS	0.83(0.82)	3.73	13.91	2.07	46.00	0.0081	0.0099	0.0143	0.018(394.20)	0.009(735.32)	0.019(356.55)	1486.07
HRS	0.85(0.83)	3.38	14.18	2.11	46.00	0.0069	0.0084	0.0122	0.013(541.95)	0.007(1015.32)	0.014(488.72)	2045.99
HRS	0.87(0.83)	3.04	14.45	2.15	46.00	0.0060	0.0073	0.0106	0.009(804.89)	0.005(1514.10)	0.010(723.79)	3042.78
HRS	0.89(0.84)	2.70	14.71	2.19	46.00	0.0053	0.0065	0.0095	0.006(1257.18)	0.003(2373.00)	0.006(1127.86)	4758.04

x_{bj} (x_{bj}^{avg})	W^2 (GeV^2)	Q^2 (GeV^2)	E' (GeV)	θ (Deg)	σ_{H2} (nb/s /GeV)	σ_{H3} (nb/sr /GeV)	σ_{He3} (nb/sr /GeV)	H2 Rate &Hour Hz(Hour)	H3 Rate &Hour Hz(Hour)	He3 Rate &Hour Hz(Hour)	Total Hour	
HRS	0.59(0.59)	8.19	10.51	1.50	47.00	0.0790	0.1034	0.1335	0.155(44.79)	0.088(78.54)	0.164(42.39)	165.72
HRS	0.63(0.63)	7.41	11.12	1.59	47.00	0.0567	0.0736	0.0966	0.118(58.94)	0.067(104.38)	0.125(55.36)	218.68
HRS	0.67(0.67)	6.65	11.72	1.68	47.00	0.0399	0.0512	0.0684	0.087(79.59)	0.049(142.39)	0.094(74.19)	296.18
HRS	0.71(0.71)	5.91	12.31	1.76	47.00	0.0270	0.0344	0.0468	0.062(111.72)	0.034(201.96)	0.067(103.34)	417.02
HRS	0.75(0.75)	5.18	12.89	1.84	47.00	0.0176	0.0221	0.0307	0.042(164.00)	0.023(299.69)	0.046(150.51)	614.20
HRS	0.79(0.79)	4.46	13.46	1.92	47.00	0.0111	0.0138	0.0195	0.027(253.96)	0.015(469.18)	0.030(231.27)	954.41
HRS	0.83(0.82)	3.75	14.01	2.00	47.00	0.0074	0.0092	0.0132	0.016(435.39)	0.009(812.52)	0.018(393.69)	1641.60
HRS	0.85(0.83)	3.40	14.29	2.04	47.00	0.0063	0.0077	0.0112	0.011(606.12)	0.006(1136.24)	0.013(546.35)	2288.72
HRS	0.87(0.83)	3.06	14.56	2.08	47.00	0.0055	0.0067	0.0097	0.008(889.19)	0.004(1673.51)	0.009(799.31)	3362.01
HRS	0.89(0.84)	2.71	14.83	2.12	47.00	0.0048	0.0059	0.0086	0.005(1414.19)	0.003(2671.21)	0.005(1268.12)	5353.51

Table 7: 2H , 3H and 3He Cross Section and Rates for d/u Extraction with **one HRS**. A $W^2 > 4$ cut is applied when calculating the rate ($W^2 > 3$ when $x > 0.75$). 15 cm Target Length is used and 10% reduction with SOS is applied. F2ALLM97 model is used.

x_{bj} (x_{bj}^{ave})	W^2 (GeV^2)	Q^2 (GeV^2)	E' (GeV)	θ (Deg)	σ_{H2} (nb/s /GeV)	σ_{H3} (nb/sr /GeV)	σ_{He3} (nb/sr /GeV)	H2 Rate &Hour Hz(Hour)	H3 Rate &Hour Hz(Hour)	He3 Rate &Hour Hz(Hour)	Total Hour
HRS	0.59(0.59)	8.23	1.45	48.00	0.0748	0.0979	0.1264	0.142(48.98)	0.081(85.90)	0.150(46.35)	181.23
HRS	0.63(0.63)	7.45	1.54	48.00	0.0537	0.0696	0.0915	0.108(64.41)	0.061(114.08)	0.115(60.50)	238.99
HRS	0.67(0.67)	6.69	1.62	48.00	0.0377	0.0484	0.0647	0.080(87.03)	0.045(155.71)	0.086(81.12)	323.85
HRS	0.71(0.71)	5.94	1.70	48.00	0.0255	0.0324	0.0441	0.057(122.59)	0.031(221.65)	0.061(113.38)	457.62
HRS	0.75(0.75)	5.20	1.78	48.00	0.0166	0.0208	0.0289	0.039(179.92)	0.021(328.85)	0.042(165.10)	673.86
HRS	0.79(0.79)	4.48	1.86	48.00	0.0104	0.0129	0.0182	0.025(279.61)	0.013(516.71)	0.027(254.57)	1050.89
HRS	0.83(0.82)	3.77	1.94	48.00	0.0069	0.0085	0.0122	0.014(481.36)	0.008(898.65)	0.016(435.12)	1815.13
HRS	0.85(0.83)	3.42	1.98	48.00	0.0058	0.0071	0.0103	0.010(668.46)	0.006(1253.68)	0.012(602.35)	2524.50
HRS	0.87(0.84)	3.07	2.02	48.00	0.0050	0.0061	0.0089	0.007(990.91)	0.004(1866.00)	0.008(890.41)	3747.33
HRS	0.89(0.84)	2.73	2.05	48.00	0.0044	0.0054	0.0079	0.004(1574.35)	0.002(2975.03)	0.005(1411.31)	5960.69

x_{bj} (x_{bj}^{ave})	W^2 (GeV^2)	Q^2 (GeV^2)	E' (GeV)	θ (Deg)	σ_{H2} (nb/s /GeV)	σ_{H3} (nb/sr /GeV)	σ_{He3} (nb/sr /GeV)	H2 Rate &Hour Hz(Hour)	H3 Rate &Hour Hz(Hour)	He3 Rate &Hour Hz(Hour)	Total Hour
HRS	0.59(0.59)	8.26	1.40	49.00	0.0709	0.0929	0.1199	0.130(53.40)	0.074(93.65)	0.137(50.53)	197.58
HRS	0.63(0.63)	7.49	1.49	49.00	0.0509	0.0660	0.0867	0.099(70.29)	0.056(124.52)	0.105(66.02)	260.82
HRS	0.67(0.67)	6.72	1.57	49.00	0.0356	0.0456	0.0611	0.073(95.38)	0.041(170.69)	0.078(88.89)	354.97
HRS	0.71(0.71)	5.97	1.65	49.00	0.0241	0.0306	0.0417	0.052(133.93)	0.029(242.19)	0.056(123.86)	499.99
HRS	0.75(0.75)	5.23	1.73	49.00	0.0156	0.0196	0.0272	0.035(197.62)	0.019(361.28)	0.038(181.31)	740.21
HRS	0.79(0.79)	4.51	1.80	49.00	0.0097	0.0121	0.0171	0.023(307.69)	0.012(568.79)	0.025(280.07)	1156.55
HRS	0.83(0.82)	3.79	1.88	49.00	0.0064	0.0079	0.0113	0.013(530.37)	0.007(990.56)	0.014(479.30)	2000.23
HRS	0.85(0.83)	3.44	1.92	49.00	0.0054	0.0066	0.0095	0.009(736.95)	0.005(1382.73)	0.010(663.87)	2783.55
HRS	0.87(0.84)	3.09	1.95	49.00	0.0046	0.0056	0.0082	0.006(1081.57)	0.003(2037.60)	0.007(971.59)	4090.76
HRS	0.89(0.84)	2.74	1.99	49.00	0.0041	0.0049	0.0073	0.004(1743.57)	0.002(3296.73)	0.004(1562.40)	6602.70

x_{bj} (x_{bj}^{ave})	W^2 (GeV^2)	Q^2 (GeV^2)	E' (GeV)	θ (Deg)	σ_{H2} (nb/s /GeV)	σ_{H3} (nb/sr /GeV)	σ_{He3} (nb/sr /GeV)	H2 Rate &Hour Hz(Hour)	H3 Rate &Hour Hz(Hour)	He3 Rate &Hour Hz(Hour)	Total Hour
HRS	0.59(0.59)	8.30	1.36	50.00	0.0673	0.0881	0.1139	0.119(58.14)	0.068(101.98)	0.126(55.01)	215.12
HRS	0.63(0.63)	7.52	1.44	50.00	0.0484	0.0627	0.0824	0.091(76.42)	0.051(135.38)	0.097(71.77)	283.57
HRS	0.67(0.67)	6.75	1.52	50.00	0.0337	0.0433	0.0579	0.067(103.88)	0.037(185.91)	0.072(96.81)	386.60
HRS	0.71(0.71)	6.00	1.59	50.00	0.0228	0.0290	0.0395	0.048(146.15)	0.026(264.32)	0.051(135.14)	545.60
HRS	0.75(0.75)	5.26	1.67	50.00	0.0148	0.0185	0.0257	0.032(215.68)	0.018(394.37)	0.035(197.86)	807.92
HRS	0.79(0.79)	4.53	1.75	50.00	0.0091	0.0113	0.0161	0.021(336.47)	0.011(622.12)	0.023(306.22)	1264.82
HRS	0.83(0.82)	3.81	1.82	50.00	0.0060	0.0073	0.0106	0.012(581.34)	0.006(1086.16)	0.013(525.23)	2192.73
HRS	0.85(0.83)	3.45	1.86	50.00	0.0050	0.0061	0.0088	0.009(806.16)	0.005(1513.22)	0.010(726.00)	3045.38
HRS	0.87(0.84)	3.10	1.89	50.00	0.0043	0.0052	0.0076	0.006(1198.27)	0.003(2258.66)	0.006(1076.03)	4532.96
HRS	0.89(0.85)	2.75	1.93	50.00	0.0038	0.0046	0.0067	0.004(1925.21)	0.002(3641.88)	0.004(1724.60)	7291.69