

**LEFT-ARM ONLY on this page:  $A_y$  and  $(e, e'd)$  Commissioning Run Sheet**

Date: 6/25/2009	Author: G.M. UCCIOLI
Beam Energy: 1.245 GeV	Using Pol $^3\text{He}$ cell: Y/N, Long. Tran. or Vertical ?
Left HRS momentum (GeV/c): 1.1404 angle: 17° never moved. Sieve plate: IN or OUT ?	BigBite current (A): 8 polarity: positive angle: never moved. Sieve slit: IN or OUT ?

Run Number	start time	stop time	target	beam ( $\mu\text{A}$ )	# of events	dead time	comments T3, T4 rates	replay OK ?
1414	8:12	8:18	H <sub>2</sub>	1.09	1n		-	
1415	8:19	~	<del>H<sub>2</sub></del>	1.09	1n		4.6K, 48Hz END OF RUN PAUSED	
1416	8:32	8:42	<del>H<sub>2</sub></del>	1.5	1n		4.6K, 48Hz	
<del>1417</del>	8:43	8:53	/	/	1n		4.5K, 57Hz	
<del>1418</del>	8:53	9:02	/	2.	1n		4.4K, 51Hz	
1419	9:03	9:11	/	2.1	1n		4.7K, 60Hz	
1420	9:12	9:21	/	1.	1n		<del>18.4K</del> 4.8K, 62Hz	
1421	9:22	!	/	2	!		4.7K, 64Hz	
1422-1423	RUN							
1424	RUN							
1425	10:57	10:41	Nuclri foil	4	1n		3.9K, 61Hz	
1426	10:41	10:55	"	4	1n		3.9K, 34Hz	

Please change to a new run sheet for a new setting or a new type of run on the run plan.  
More comments:

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Date: Apr 25, 2009	Author: Hassan Ibrahim
Beam Energy: GeV	Using Pol $^3\text{He}$ cell: Y/N, Long. Tran. or Vertical ?
Right HRS momentum (GeV/c) : 1.2112      polarity: "-" angle : 17° never moved.      Sieve plate: IN or OUT ?	BigBite current (A) :      polarity: positive angle : never moved.      Sieve slit: IN or OUT ?

Run Number	start time	stop time	target	beam ( $\mu\text{A}$ )	# of events	dead time	comments T1, T2 rates (Hz)	replay OK ?
20275	6:14	6:22	H <sub>2</sub>	2	1M		2.6 k	
20276	6:22		~	~			2.7 k	
20278	6:41		~	~	1M		3.5 k	
20279	6:54		~	~			3.5 k	
20281	7:08		~	~				
20283	7:22		~	~	1M		3.1 k	
20284	7:30		~	~	1M		3.1 k	
20285	7:37		~	~	1M		3.1 k	
20286	7:44		~	~	1M		3.1 k	
20287	7:51		~	~	1M		3.1 k	
20288	8:00		~	~			3.2 k	

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Date: Apr 26, 2009	Author: Hassan Ibrahim
Beam Energy: 1.245 GeV	Using Pol $^3\text{He}$ cell: Y/N, Long. Tran. or Vertical ?
Left HRS momentum (GeV/c): angle : 17° never moved. Sieve plate: <u>IN</u> or OUT ?	BigBite current (A): angle : never moved. Sieve slit: <u>IN</u> or OUT ?

Apr 25 ←

Run Number	start time	stop time	target	beam ( $\mu\text{A}$ )	# of events	dead time	comments T3, T4 rates (Hz)	replay OK ?
1445	19:14:41		optics empty	9.80			See h-log	No
1454	1:06	2:00	Optics	10	650k	1	$P=1.275$ 200, 140	
1455	2:00	2:32	~	12	486k	2	250, 170	
1456	2:36	3:07	~	12	1M	3	$P=1.238$ 550, 180	
1457	3:08	3:40	~	~	1M			
1458	3:41	4:03	~	~	632k	4	540, 190	
1460	4:14	4:30	~	~	1M	8	$P=1.200$ 1.1k, 195	
1461	4:31	4:49	~	~	1M	7	1.1k, 195	
1462	4:51	5:13	~	~	804k	7	1.1k, 188	

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Date: 4/75/2009	Author: G. N. VRCI '04
Beam Energy: 1.145 GeV	Using Pol $^3\text{He}$ cell: Y/N, Long. Tran. or Vertical ?
Right HRS momentum (GeV/c): 1.1406 angle : 17° never moved. Sieve plate: IN or OUT ?	BigBite current (A) : <del>1.2</del> polarity: positive angle : never moved. Sieve slit: IN or OUT ?

Run Number	start time	stop time	target	beam ( $\mu\text{A}$ )	# of events	dead time	comments T1, T2 rates	replay OK ?
20288	8:32	8:44	H <sub>2</sub>	1.5	1n		172 k, 71 k	
20290	8:45	8:52	/	/	1n		172 k, 71 k	
20291	8:52	8:58	/	2	1n		863 k, 51 k	
20292	9:00	9:06	/	2	1n		437 k, 55 k	
20293	9:07	9:13	/	2.1	1n		185 k, 74 k	
20294	9:14	9:20	/	2	1n		182 k, 79 k	
20295	9:21	9:28	/	2	1n		181 k, 74 k	
20296	JUNK							
20297	JUNK							
20298	10:38	10:46	muon foil	4	1n		933 k, 40 k	
20299	10:46	10:54	" "	4	1n		920 k, 39 k	
				<del>4</del>	<del>1</del>		<del>920 k, 39 k</del>	

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Date: <u>Apr. 26, 2009</u>	Author:
Beam Energy: <u>1-245</u> GeV	Using Pol $^3\text{He}$ cell: Y/N, Long. Tran. or Vertical ?
Left HRS momentum (GeV/c): <u>1-2205</u> polarity: " <u>-</u> " angle: <u>17°</u> never moved. Sieve plate: IN or <u>OUT</u> ?	BigBite current (A): angle: never moved. Sieve slit: IN or <u>OUT</u> ?

Run Number	start time	stop time	target	beam ( $\mu\text{A}$ )	# of events	dead time	comments T3, T4 rates	replay OK ?
1466	6:16	6:20	optics		1M		spot++ check	
1467	6:23	6:26	~		640k		~	
1474	7:23	7:41	Ref. @ vac.	2	1M	5	pressure curves 950, 410	
1475	7:56	8:07	Ref @ 15 psig	2	1M	10	1.1k 41	YES
1476	8:19	5:17	Ref @ 15 psig	2			Junk (no beam)	
1477	8:29	8:38	Ref @ 15 psig	2	1M		N2	YES
1478	8:39	8:49	Ref @ 15 psig		.83M		153, 66 Hz	YES
1479	8:51	9:01	Ref @ 15 psig	2	1M	12	231 Hz, 90 Hz	YES
1480	9:02	9:11	Ref @ 15 psig		1.7M	13		YES
1481	9:12	9:28	Ref @ 15 psig		1M		<del>231 Hz</del>	YES
1482							JUNK	
1483	9:36	9:46	Ref @ 15 psig		1M		288 Hz, 105 Hz	YES

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~~1484~~

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Date: <i>Apr 26, 2009</i>	Author: <i>Hassan Ibrahim</i>
Beam Energy: <i>1.245</i> GeV	Using Pol $^3\text{He}$ cell: Y/N, Long. Tran. or Vertical ?
Right HRS momentum (GeV/c): angle : $17^\circ$ never moved. Sieve plate <i>(IN)</i> or OUT ?	BigBite current (A): angle : never moved. Sieve slit: <i>(IN)</i> or OUT ?

Run Number	start time	stop time	target	beam ( $\mu\text{A}$ )	# of events	dead time	comments T1, T2 rates (Hz)	replay OK ?
<i>20360</i>	<i>1:06</i>	<i>2:00</i>	<i>optics</i>	<i>10</i>	<i>47k</i>	<i>3</i>	<i>150<sup>P=1.275</sup>, 50</i>	
<i>20361</i>	<i>2:00</i>	<i>2:32</i>	<i>"</i>	<i>12</i>	<i>295k</i>	<i>4</i>	<i>180, 55</i>	
<i>20362</i>	<i>2:43</i>		<i>~</i>	<i>~</i>		<i>8</i>	<i>480<sup>P=1.238?</sup>, 65</i>	
<i>20363</i>	<i>2:58</i>	<i>3:40</i>	<i>~</i>	<i>~</i>	<i>1M</i>	<i>9</i>	<i>455<sup>P=1.238</sup>, 60</i>	
<i>20364</i>	<i>3:41</i>	<i>4:03</i>	<i>~</i>	<i>~</i>	<i>495k</i>	<i>10</i>	<i>470, 65</i>	
<i>20365</i>	<i>4:14</i>	<i>4:31</i>	<i>~</i>	<i>12</i>	<i>1M</i>	<i>21</i>	<i>1.2k<sup>P=1.200</sup>, 97</i>	
<i>20366</i>	<i>4:32</i>	<i>4:53</i>	<i>~</i>	<i>~</i>	<i>1M</i>	<i>21</i>	<i>1.2k, 86</i>	
<i>20367</i>	<i>4:53</i>	<i>5:13</i>	<i>~</i>	<i>~</i>	<i>637k</i>	<i>24</i>	<i>1.2k, 80</i>	

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Date: 4/26/09	Author: G.A. Morrison
Beam Energy: 1.245 GeV	Using Pol $^3\text{He}$ cell: Y/N, Long. Tran. or Vertical ?
Left HRS momentum (GeV/c): 1.264 polarity: "-" angle: 17° never moved. Sieve plate: IN or OUT ?	BigBite current (A): polarity: positive angle: never moved. Sieve slit: IN or OUT ?

Run Number	start time	stop time	target	beam ( $\mu\text{A}$ )	# of events	dead time	comments T3, T4 rates	replay OK ?
1484	9:40	9:49	REF +10 PSIG	0	0.467		<del>1.2 kHz</del>	YES
1485	9:52	10:11	REF +10 PSIG	2	0.667	7%	128 Hz, 45 Hz	YES
1486	11:58	11:05	REF -10 PSIG	2	0.477	42%	1.5 kHz, 57 Hz	
1487	11:15	11:22	REF -10 PSIG				RASPER CELL	
1488	11:22	11:36	REF -10 PSIG	2	1.0	7%	<del>1.2 kHz</del> 45 Hz	YES
1489	12:33	12:51	REF -10 PSIG	2	0.847	7%	1.2 kHz, 48 Hz	YES
1490	13:09	13:14	POL LONG 3 He	2	1.1	27%	360 Hz, 70 Hz	
1491	13:22	13:41	POL LONG 3 He	2	1.0	5%	323 Hz, 60 Hz	
1492	13:32	13:41	POL LONG 3 He	2	1.0	5%	358 Hz, 65 Hz	
1493	13:42		POL LONG 3 He				300 Hz	
1494	13:46	13:56	POL LONG 3 He	7.1	1.0	6%	113 Hz, 57 Hz	
1495	13:50	14:07	POL LONG 3 He		1.0			

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Date: <u>Apr. 26, 2009</u>	Author: <u>Hassan Ibrahim</u>
Beam Energy: <u>1-245</u> GeV	Using Pol $^3\text{He}$ cell: Y/N, Long. Tran. or Vertical ?
Right HRS momentum (GeV/c): <u>1.2205</u> polarity: " <u>  </u> " angle: <u>17°</u> never moved. Sieve plate: IN or <u>OUT</u> ?	BigBite current (A): polarity: positive angle: never moved. Sieve slit: IN or <u>OUT</u> ?

Run Number	start time	stop time	target	beam ( $\mu\text{A}$ )	# of events	dead time	comments T1, T2 rates	replay OK ?
20372	7:23	7:42	Ref. @ Vac.	2	461k	6	pressure curves 440, 25	
20373	7:56	8:18	Ref. @ -4 psig	2	1M	15	1.8k, 50	YES
20374	8:25	8:49	REF -5 psig	2	1M		N2	YES
20375	8:50		REF +5 psig	2	1M	18	PSI=1 1.4kH <sub>2</sub> , 47H <sub>2</sub>	YES
20376	9:05	9:25	REF +5 psig		1M			YES
20377	9:22		REF +5 psig				500X	
20378	9:35	9:42	REF +15 psig		1M	22	1.7kH <sub>2</sub> , 55H <sub>2</sub>	YES
<del>20379</del>	<del>9:45</del>	<del>9:55</del>	<del>REF -10 psig</del>					

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Date: 4/17/2004	Author: G. W. VINCIGUERA
Beam Energy: 1.245 GeV	Using Pol $^3\text{He}$ cell: Y/N, Long. Tran. or Vertical ?
Left HRS momentum (GeV/c): 1.2105 polarity: "-"	BigBite current (A): polarity: positive
angle: 17° never moved. Sieve plate: IN or OUT ?	angle: never moved. Sieve slit: IN or OUT ?

Run Number	start time	stop time	target	beam ( $\mu\text{A}$ )	# of events	dead time	comments T3, T4 rates	replay OK ?
1496	14:08	14:17	POL LOW $^3\text{He}$		11	6%		
<del>1497</del>	<del>14:17</del>	<del>14:27</del>	<del>POL LOW <math>^3\text{He}</math></del>		<del>11</del>			
1498	14:26	14:36	POL LOW $^3\text{He}$		11			
1499	14:37	14:45	LOW POL $^3\text{He}$		11			
1500	14:46	14:54	LOW POL $^3\text{He}$		11			
1501	14:55	15:01	LOW POL $^3\text{He}$		0.811			
1502	15:05	15:14	LOW POL $^3\text{He}$		11	5%	X02 IN <del>374</del> $\text{Hz}$ ; 57.6 $\text{Hz}$	
1503	15:15	15:22	LOW POL $^3\text{He}$	?	11	6%	337 $\text{Hz}$ ; 10 $\text{Hz}$	
1504	15:23	15:31	LOW POL $^3\text{He}$	2	11	6%	400 $\text{Hz}$ ; 65 $\text{Hz}$	YES
1505	15:32	15:40	LOW POL $^3\text{He}$	2	11	5%	405 $\text{Hz}$ ; 61 $\text{Hz}$	
1506	15:41	15:51	LOW POL $^3\text{He}$	?	11	5%	304; 76 $\text{Hz}$	
1507	15:52	16:00	LOW POL $^3\text{He}$	?	11	6%	387; 63 $\text{Hz}$	

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Date: 4/26/2009	Author: G. N. V. K. ...
Beam Energy: 1.745 GeV	Using Pol $^3\text{He}$ cell: Y/N, Long. Tran. or Vertical ?
Right HRS momentum (GeV/c) : 1.2207      polarity: "-" angle : 17° never moved.      Sieve plate: IN or OUT ?	BigBite current (A) :      polarity: positive angle : never moved.      Sieve slit: IN or OUT ?

Run Number	start time	stop time	target	beam ( $\mu\text{A}$ )	# of events	dead time	comments T1, T2 rates	replay OK ?
20377	9:53	10:17	REF -10 Vsig	2	0.317	8%	645 $\text{H}_2$ , 31 $\text{H}_2$	YES
20380	11:58	12:05	REF -10 Vsig	2	0.2511	24%	232 $\text{H}_2$ , 31 $\text{H}_2$	
20381	12:14	12:20	REF -10 Vsig			12%	KASTER CHECK	
20382	12:22	12:50	-REF -10 Vsig	2	111	11%	314 $\text{H}_2$ ; 99 $\text{H}_2$	YES
20383	13:06	13:15	CONV. BOL. 3 $\text{He}$	2	111	34%	307 $\text{H}_2$ ; 145 $\text{H}_2$	YES
20384	13:21	13:34	POL. 3 $\text{He}$	2	117	13%	325 $\text{H}_2$ ; 161 $\text{H}_2$	
20385	13:35	13:48	POL. 3 $\text{He}$	2	111	11%	314 $\text{H}_2$ ; 187 $\text{H}_2$	
20386	13:48	13:50	POL. CONV. 3 $\text{He}$	2.1	0.87	10%	333 $\text{H}_2$ ; 169 $\text{H}_2$	YES
20387	13:58	14:00	POL. CONV. 3 $\text{He}$		111			

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