

## E04-007 Run sheet

Date : 4/10/08	Kinematic : C	Author: A. Michaels
Left Arm momentum (GeV/c) : 0.997 angle : 14.5	BigBite current (A) : 388 angle : 59	Right Arm momentum (GeV/c) 0.4735 angle 105

Run number Left/Right <sup>*</sup>	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
2718			LHZ 6cm	4	1M		
2719			↓	↓	1M		⊗
2720	9:11		LHZ 6cm	4	990k	RCS high deadtime near event 990k	✓
2721			↓	↓	1M		
2722			↓	↓	1M		✓
2723	9:50	10:02	↓	↓	1M		
2724	10:02		↓	↓	1M		✓
2725			↓	↓	1M		
2726	10:29	10:40	↓	↓	1M		

Comments: \* R-HRS run was 20650 throughout

## E04-007 Run sheet

Date : Apr 10, 2008	Kinematic : D	Author: R. Michaels
Left Arm momentum (GeV/c) : 1.194 angle : 12.5	BigBite current (A) : <del>388</del> 388 angle : <del>40</del> 54	Right Arm momentum (GeV/c) 0.4735 angle 105

## Elastic Runs

Run number Left/Right*	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
2728	12:42	12:57	Ta	3	550k	elastic Ta calib.	
2729	12:59	13:04	Ta	3	214k	repeat, since beam was unstable	
2730			C	3	short →	elastic C oops! bad prescale factors	
2731	13:10		C	3		Deadtime went high → try reboot ROC5	
2732			C	3		DT still high	decide to increa ps3, ps4
2733	13:20		C	3	546k	DT = 9% ok	
** 2734	13:32		C	3	694k	Adjust ps3, ps4 to keep lots of T3, T4. Better run.	
** 2735	13:51		Ta			back to Ta to get more T4	
			6cm Hyd				

Comments: \* R-HRS run 20651

\*\* Best runs for elastic .12c & Ta.

E04-007 Run sheet

Date : Apr 10, 2008	Kinematic : D	Author: R. Michaels
Left Arm momentum (GeV/c) : 1.007 angle : 12.5	BigBite current (A) : 388 angle : 54	Right Arm momentum (GeV/c) 0.4735 angle 105

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
2737 *	15:05	15:29	L12 6cm	3 $\mu$ A	1M		✓
2738	15:29	15:44	"	"	1M		
2739	15:44	16:00	"	"	1M		
2740	16:00	16:16	"		1M		
2741	16:19	16:32	"		1M	<div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;">                     T<sub>2</sub> set to 100 since                      previous shift                      (instead of 10) ✓                 </div>	
2742	16:33	16:48	"		1M		
2743	16:48	17:03	"		1M		
2744	17:04	17:18	"		0.85M		
2745						JUNK	
2746						JUNK	
2747	17:24	17:40	"	"	1M	<div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;">                     T<sub>2</sub> set to 10 ✓                 </div>	
2748	17:40	17:56	"	"	1M		

Comments: \* R-ARS <sup>run</sup> 20651 stop 17:00  
 RHRS 20652 start 17:00 stop 19:00

E04-007 Run sheet

Date :	Kinematic : <b>D</b>	Author:
Left Arm momentum (GeV/c) : <b>1,007</b> angle : <b>13,5</b>	BigBite current (A) : <b>398</b> angle : <b>54</b>	Right Arm momentum (GeV/c) <b>0,9735</b> angle <b>10,5</b>

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
2749	17:57	18:13	2Hz (6cm)	29	1,0 M		
2750	18:14	18:28	"	"	1 M		
2751	18:29	18:43	"	"	1,0 M		
2752	18:44	19:02	"	"	1,0 M		
2753	19:02	19:20	"	"	1 M		✓
2754	19:20	19:36	"	"	1 M		
2755	19:37	19:52	"	"	1,0 M		
2756	19:53	20:09	"	"	1,0 M		
2757	20:09	20:25	"	"	1,0 M		✓
2758	20:25	20:41	"	"	1,0 M		
2759	20:41	20:56	"	"	1 M		
2760	20:56	21:14	"	"	1,0 M		

~~2761~~  
Comments:

RHRS 20653 start ~~21:18~~ stop 22:57  
21:18

## E04-007 Run sheet

Date : <u>Apr 10, 2008</u>	Kinematic : <u>D</u>	Author: <u>FISUM</u>
Left Arm momentum (GeV/c) : <u>1.007</u> angle : <u>12.5°</u>	BigBite current (A) : <u>388</u> angle : <u>54°</u>	Right Arm momentum (GeV/c) : <u>0.4735</u> angle : <u>105°</u>

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
2761	21:15	21:30	$^2\text{H}_2$ (6cm)	3 $\mu$ A	1.0 M		✓
2762	21:31	21:47	"	"	1.0 M		
2763	21:48	22:06	"	"	0.8 M	ROC5 died	
2764	22:10	22:26	"	"	1 M		
2765	22:26	22:41	"	"	1 M		
2766	22:42	22:57	"	"	1.0 M		✓
2767	22:58	23:13	"	"	1.0 M		
2768	23:13	23:30	"	"	1.0 M		✓
2769	23:30	23:45	"	"	1.0 M		✓
2770	23:45	24:00	"	"	1.0 M		✓
2771	00:01	00:16	"	"	1 M		✓
2772	00:16		"	"		ROC5 errors in TDC timeout	✓

Comments:

RHRS 2065<sup>4</sup> start 22:58 stop 24:00

last revision 05-April-2008

This file can be found at: <http://hallaweb.jlab.org/experiment/E04-007/Documents/Run-Sheet.ps>The LaTeX file can be at: <http://hallaweb.jlab.org/experiment/E04-007/Documents/LaTeX/Run-Sheet.tex>

E04-007 Run sheet

Date : <b>Apr 11, 2008</b>	Kinematic : <b>D</b>	Author: <b>K. Ardashov</b>
Left Arm momentum (GeV/c) : <b>1.007</b> angle : <b>12.5</b>	BigBite current (A) : <b>388</b> angle : <b>54</b>	Right Arm momentum (GeV/c) : <b>.4735</b> angle : <b>105</b>

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
2773	JUNK				restarted	cada & ROC5	
2774	00:38	00:49	H <sub>2</sub> 6m	3.8	1M	new prescales	✓
2775	00:49	01:02	↓	↓	1M		✓
2776	01:02	01:20	↓	↓ <sub>3.0</sub>	1M	new prescales <del>pics, v02 gone for part of</del>	✓
2777	01:21	01:36	↓	3.0	1M		✓
2778	<del>01:33</del>	01:44	↓	3.0	88k	no beam	✓
2779	<del>6.33</del>	6:46	↓	↓	1M		
2780	6:46	7:00	↓	↓	1M		
2781	7:00	07:12	↓	↓	800k	no beam	
2782	7:26	7:41	↓	↓	1M		
2783	7:41	<del>7:56</del>	↓	↓	1M		
2784	<del>7:56</del>	7:56					

20656  
Right

Comments:

beam line problems for 5 hours

E04-007 Run sheet

Jin Ge

Date : 4/11	Kinematic : D	Author: Ge Jin
Left Arm momentum (GeV/c) : 1.007 angle : 12.5	BigBite current (A) : 388 angle : 54	Right Arm momentum (GeV/c) : 4.75 angle : 105

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
2784	7:56	8:11	LH2	2.9	1M		
2785	8:12	8:26	"	"	"		
2786	8:27	8:42	"	"	"		✓
2787	8:42	8:57	"	"	"		✓
2788	8:57	9:11	"	"	"		
2789	9:12	9:27	"	"	"		
2790	9:27	9:42	"	"	"		
2791	9:43	9:49	"	0	225K	Stop: No beam	
2792	10:41		"	2-9		ROCS problem	✓
20658	10:56	11:16	"		2.1K		
2793	10:56	11:15	"	0	752K	No beam	✓
2794 Junk 2795	12:12	13:41	"	0	231K	PS1=1, PS2=1 Test for Bob	

Comments:

E04-007 Run sheet

Date : 4/11/2008	Kinematic :	Author:
Left Arm momentum (GeV/c) : angle :	BigBite current (A) : angle :	Right Arm momentum (GeV/c) angle

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
2796	13:43		LH2			PS3=1 PS7=10000 ROC 5 died.	
2797	Junk		"			// <del>to</del>	
2798	14:04	15:06	LH2	0	284K	PS <del>same</del> above	
2799	15:07	15:34	"	"	323K	ROC 5 problem	
2800	15:55	16:07	"	2.7	1M	change back to normal ps	
2801	16:07	16:20	"	"	"		
2802	?						
2803	16:40	16:48	LH2	25	421611	change program FFBT=ST	HV trip
2804	17:25	17:38	LH2		1004473		
2807	21:19	21:33	LH2	2.5	1005296		
2808	21:34	21:45	LH2	2.73	1005302		
2809	21:46	21:58	LH2	2.45	1002007		

Comments:



## E04-007 Run sheet

Date: 4/11/2008	Kinematic: D	Author: K. Ardashev
Left Arm momentum (GeV/c): 1.007 angle: 12.5	BigBite current (A): 390 angle: 54	Right Arm momentum (GeV/c) 0.4735 angle 105

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
2810	10:01pm	10:12pm	LH <sub>2</sub>	2.4	1005057	set 1550V BBite DC (+50V)	
2811	10:13pm	10:25pm	LH <sub>2</sub>	2.74	1003719		
2812	10:26pm	10:35	LH <sub>2</sub>	2.72	1006177		
2813	10:40pm	10:50	LH <sub>2</sub>	2.73		BB DC HV -50V (1500V)	
2814	10:51pm	11:02	LH <sub>2</sub>	2.73	1005295	BB DC HV 1500V	
2815	11:03pm	11:19	LH <sub>2</sub>	2.40	1003532	Beam intensity had jump to 3.3	
2816	11:14pm	11:28	LH <sub>2</sub>	3.35	1005394	Beam intensity is going down to 2.75	
2817	11:29	11:38	LH <sub>2</sub>	2.72	1005187		
2818	11:39	11:50	LH <sub>2</sub>	2.73	1002940		
2819	11:52pm	00:19	LH <sub>2</sub>	2.73		beam in/out	✓
2820	00:20	00:39	↓		960K		✓
2821	00:40	00:49	↓		754K	ROC5 died	✓

Comments:

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E04-007 Run sheet

Date : 4/12/08	Kinematic : D	Author: K. Ardashev
Left Arm momentum (GeV/c) : 1.007 angle : 12.5	BigBite current (A) : 390 angle : 54	Right Arm momentum (GeV/c) 0.4735 angle 105

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
2822	00:52	01:05	eH2	3.0	1m		
2823	JUNK		↓		Z		
<del>2824</del>	<del>JUNK</del>						
2824	01:09	01:20			4.0	1m	dt=20
2825	? eH2			3.5			
2826	01:20	01:31		3.5	1m	dt=12	
2827	01:32	01:37			69K		✓
2828	02:31	02:34			194K	WC HV trip	✓
2829	02:40	2:50			1m		✓
2830	02:50	3:00			1m		✓
2831	3:00	3:10			1m		✓
2832	3:10	3:19			1m		✓

Comments:

## E04-007 Run sheet

Date :	Kinematic : <i>D</i>	Author: <i>Ardashev</i>
Left Arm momentum (GeV/c) : angle :	BigBite current (A) : angle :	Right Arm momentum (GeV/c) angle

*all the same*

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu A$ )			
<i>2833</i>	<i>3.19</i>	<i>3.29</i>	<i>CH2</i>	<i>3.5</i>	<i>1m</i>	<i>1</i>	<input checked="" type="checkbox"/>
<i>2834</i>	<i>3.29</i>	<i>3.39</i>	<i>↓</i>	<i>↓</i>	<i>1m</i>		<input checked="" type="checkbox"/>
<i>2835</i>	<i>3.40</i>	<i>3.50</i>	<i>↓</i>	<i>↓</i>	<i>1m</i>		<input checked="" type="checkbox"/>
<i>2836</i>	<i>3.50</i>	<i>3.59</i>	<i>↓</i>	<i>↓</i>	<i>1m</i>		<input checked="" type="checkbox"/>
<i>2837</i>	<i>3.59</i>	<i>4.09</i>	<i> </i>	<i> </i>	<i>1m</i>		<input checked="" type="checkbox"/>
<i>2838</i>	<i>4.09</i>	<i>4.19</i>	<i> </i>	<i> </i>	<i>1m</i>		<input checked="" type="checkbox"/>
<i>2839</i>	<i>4.19</i>	<i>4.28</i>	<i> </i>	<i> </i>	<i>1m</i>		<input checked="" type="checkbox"/>
<i>2840</i>	<i>4.29</i>	<i>4.40</i>	<i> </i>	<i> </i>	<i>1m</i>		<input checked="" type="checkbox"/>
<i>2841</i>	<i>4.40</i>	<i>4.50</i>	<i> </i>	<i> </i>	<i>1m</i>		<input checked="" type="checkbox"/>
<i>2842</i>	<i>4.50</i>	<i>5:01</i>	<i> </i>	<i> </i>	<i>0.4m</i>	<i>ROC 5 problems</i>	<input checked="" type="checkbox"/>
<i>2843</i>	<i>5.03</i>	<i>5.13</i>	<i> </i>	<i> </i>	<i>1m</i>		<input checked="" type="checkbox"/>
<i>2844</i>	<i>5.13</i>	<i>5.23</i>	<i> </i>	<i> </i>	<i>1m</i>		<input checked="" type="checkbox"/>

Comments:

last revision 05-April-2008

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E04-007 Run sheet

Date :	Kinematic : $D$	Author: <i>Ardaska</i>
Left Arm momentum (GeV/c) : angle :	BigBite current (A) : angle :	Right Arm momentum (GeV/c) angle

*all the same*

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu A$ )			
2845	05.23	5.32	$eH_2$	3.5	1m		✓
2846	5.33	5.43	↓	↓	1m		✓
2847	5.43	5.57	↓	↓	973K	beam gone	✓
2848	6.08	6.23	↓	↓	1m	beam in/out	✓
2849	6.23	6.33	↓	↓	1m		✓
2850	6.33	6:43	↓	↓	1m		✓
2851	6.43	6.53	↓	↓	1m	beam in/out	✓
2852	6.54	7.03	↓	↓	1m		✓
2853	7.03	7.14	↓	↓	1m		✓
2854	7.14	7.25	↓	↓	1m		✓
2855	7.26	7.35	↓	↓	1m		✓
2856	7.35	7.46	↓	↓	1m		✓

Comments:

E04-007 Run sheet

Date :	Kinematic : <i>D</i>	Author: <i>Ardashev / D. Ingham</i>
Left Arm momentum (GeV/c) : angle :	BigBite current (A) : angle :	Right Arm momentum (GeV/c) angle

*all the same*

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu A$ )	# events	comments	replay?
2857	7:46	7:59	<i>EN2</i>	3.5	<i>1m <del>3000</del></i>		✓
2858	7:59	8:10	<i>EN2</i>		<i>1m</i>		✓
2859	8:10	8:20			<i>.75M</i>		✓
2860	8:22	8:32	"	"	<i>1M</i>		✓
2861	8:33	8:43	"	"	<i>1M</i>		
2862	8:45	8:55	"	"	<i>1M</i>		
2863	8:56	9:04	"	"	<i>1M</i>	<i>planned control access after this run.</i>	
2864	<i>Jack</i>						
2865	09:25	9:32	-	-		<i>Cosmics to check LHP5 S2</i>	
2866	10:24		-	-		<i>Cosmics to check S2</i>	

Comments:

E04-007 Run sheet

Date : 4/12/08	Kinematic : E	Author: Lindgren
Left Arm momentum (GeV/c) : 1.194 angle : 12.5°	BigBite current (A) : 390 angle : 48°	Right Arm momentum (GeV/c) 0.4735 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
2876	15:38	15:48	Ta	2.8	0.50M	Beam Energy =	
2877	15:48	16:20	Ta	2.7	0.5M	Ta, beam energy walk.	
2878	17:18		Ta	2.8		Junk	
2879	17:18	17:25	Ta	2.8	.3M	FSD TRIP	
2880	19:35	22:37	Ta	0	812K	cosmic PS1,2,3,4 = 1	ROCS restart
2881	Junk		n/a		got lost	during coda restart	restart code
2882	22:46	23:57	Ta			starting tuning beam	
2883							

Comments:

E04-007 Run sheet

Date : 4/13/08	Kinematic : E	Author: Mitra S
Left Arm momentum (GeV/c) : 1.194 angle : 12.5°	BigBite current (A) : 390 angle : 49°	Right Arm momentum (GeV/c) 0.473 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
2883	02:35	02:54	Ta	2.9	506k	PS1 = 37000, PS2 = 97500 PS3 = 7, PS4 = 1, PS5 = 20 PS6 = 40, PS7 = 4000, PS8 = 100	✓
2884	03:02	03:14	C	2.8	513k	PS1 = 90000, PS2 = 16000 PS3 = 50, PS4 = 2, PS5 = 300 PS6 = 500, PS7 = 40000, PS8 = 100	✓
2885	03:28	03:48	LH2	2.7	757k	PS1 = 43x10 <sup>4</sup> , PS2 = 78x10 <sup>4</sup> PS3 = 1000, PS4 = 22, PS5 = 2x10 <sup>4</sup> PS6 = 35000, PS7 = 5x10 <sup>5</sup> , PS8 = 100	✓
<p><i>P = 1.158 GeV/c</i></p> <p><i>P = 1.007 GeV/c</i></p> <p>PRODUCTION DATA</p>							
* 2886	04:02	04:13	LH2	2.7	1M	PS1 = 46000, PS2 = 85000 PS3 = 37000, PS4 = 750, PS5 = 1 PS6 = 1, PS7 = 3700, PS8 = 100	✓
2887	04:18	04:34	LH2	1.9	1M	Same ↑	✓
2888	04:37	04:53	LH2	2	1M	PS1 = 28000, PS2 = 51400 PS3 = 2300, PS4 = 454, PS5 = 1 PS6 = 1, PS7 = 2280, PS8 = 100	✓
2889	04:55	05:06	LH2	2.5	1M	PS1 = 34000, PS2 = 61300 PS3 = 2700, PS4 = 554, PS5 = 1 PS6 = 1, PS7 = 2800, PS8 = 100	✓
2890	05:07	05:20	LH2	2.5	1M	↓ Same	✓
2891	05:24	05:40	LH2	2.5	830k		✓
2892	06:54	07:32	LH2	—	1M	COSMIC	

Comments:

FOR RHRS:

20661	02:35	03:03	Ta	2.9
20662	03:03	03:14	C	2.8
20663	03:29	03:48	LH2	2.7
20664	04:02	06:53	LH2	

\* Dead time was high, asked MCC to decrease current to 2 $\mu$ A.

# E04-007 Run sheet

Date : 4/13/2008	Kinematic : $E$	Author: C. FERNANDEZ-RAMIREZ
Left Arm momentum (GeV/c) : 1.194 angle : 12.50	BigBite current (A) : 390 angle : 48°	Right Arm momentum (GeV/c) 0.473 angle 105°

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu A$ )	# events	comments	replay?
2893	08:04	08:13	L H2	2.4	1M		✓
2894	08:14	08:24	L H2	2.4	1M		✓
2895	08:25	08:37	L H2	2.4	1M	DeadTime ~10%	✓
2896	08:38	08:50	L H2	2.4	1M	DeadTime ~10%	✓
2897	08:51	09:03	L H2	2.4	1M	Beam position changed BPMY changing Maybe a bad run	✓
2898	09:04	09:16	L H2	2.4	1M		✓
2899	09:17	09:28	L H2	2.4	1M		✓
2900	09:29	09:44	L H2	2.4	839k	<del>END</del> MAYBE JUNK ROCS REBOOT	✗
2901	09:45	—	L H2	2.4	—	JUNK/CODA REBOOTED	✗
2902	09:54	10:05	L H2	2.4	1M		✓
2903	10:05	10:24	L H2	2.4	1M		✓
2904	10:24	10:31	L H2	2.4	1M		✓

### Comments:

FOR RHRS

20665 : FROM 08:01 TO 08:24 ; 28390 events  
 20666 : FROM 08:26 TO 11:26 ; 207680 events  
 20667 : FROM 11:27 TO 14:10 ; 186166 events



E04-007 Run sheet

Date : 4/13/2007	Kinematic : E	Author: C. FERNANDEZ-RAMIREZ
Left Arm momentum (GeV/c) : 1.194 angle : 12.50	BigBite current (A) : 390 angle : 48°	Right Arm momentum (GeV/c) 0.473 angle 105°

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
2905	10:32	10:47	LH2	2.4	1 M		✓
2906	10:48	11:01	LH2	2.4	1 M		✓
2907	11:02	11:15	LH2	2.4	1 M		✓
2908	11:16	11:26	LH2	2.4	1 M		✓
2909	11:28	11:40	LH2	2.4	1 M		✓
2910	11:41	11:52	LH2	2.4	1 M		✓
2911	11:52	12:06	LH2	2.4	1 M		✓
2912	12:06	12:22	LH2	2.2	1 M		✓
2913	12:22	12:35	LH2	2.2	1 M		✓
2914	12:36	12:48	LH2	2.2	1 M		✓
2915	12:48	13:02	LH2	2.2	1 M		✓
2916	13:03	13:20	LH2	2.2	1 M		✓

Comments:

## E04-007 Run sheet

Date : 4/13/2007	Kinematic : E	Author: C. FERNANDEZ-RAMIREZ
Left Arm momentum (GeV/c) : 1.194 angle : 12.50	BigBite current (A) : 390 angle : 48°	Right Arm momentum (GeV/c) 0.473 angle 105°

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
2917	13:21	13:32	LH2	2.2	1M		✓
2918	13:33	13:59	LH2	2.2	782k	ROCS FROZEN	✓
2919	13:52	14:09	LH2	2.2	757k	ROCS FROZEN	✓
2920	14:23	—	LH2	—	—	JUNK	✗
2921	14:34	—	LH2	2.3	—	JUNK	✗
2922	14:50	14:58	LH2	2.3	571k		✓
2923	15:06	15:21	LH2	2.3	1M		✓
2924	15:24	15:38	LH2	2.3	1M		✓
2925	15:39	15:56	LH2	2.3	1M		✓
2926	15:56	16:09	LH2	2.3	1M		
2927	16:10	16:20	LH2	2.3	0.61	HV stripped	
2928	16:25	16:56	LH2	2.3	1M	data	

Comments:

20668 : FROM 14:22 TO 00:09 : 685K events

## E04-007 Run sheet

Date : 4/13	Kinematic : E	Author: K. Wang
Left Arm momentum (GeV/c) : 1.194 angle : 12.50	BigBite current (A) : 390 angle : 48	Right Arm momentum (GeV/c) 0.473 angle 105

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
2929	16:57	17:02	LH2	2.3	0.295M	HV. (w.c) erip.	✓
2930	17:04	17:15	LH2	2.3	1M		✓
2931	17:16	17:27	LH2	2.3	1M		✓
2932	17:20	17:40	LH2	2.3	1M		✓
2933	17:41	17:52	LH2	2.3	1M		✓
2934	17:52	18:06	LH2	2.3	1M		✓
2935	18:06	18:19	LH2	2.3	1M		✓
2936	18:20	18:31	LH2	2.3	1M		✓
2937	18:32	18:44	LH2	2.3	1M		✓
2938	18:45	18:58	LH2	2.3	1M		✓
2939	18:58	19:11	LH2	2.3	1M	Right <sup>4</sup> 20668	✓
2940	19:11	19:23	LH2	2.3	1M		✓

Comments:

## E04-007 Run sheet

Date : 4/13	Kinematic : E	Author: R. Wang
Left Arm momentum (GeV/c) : 1.194 angle : 12.5	BigBite current (A) : 398 angle : 48	Right Arm momentum (GeV/c) : 0.473 angle : 105

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
2941	19:23	~19:53	LH2	2.3	~8M ✓	slow rate, reboot	✓
2942	19:57	20:09	LH2	2.3	1M ✓	Reboot.	✓
2943	20:11	20:23	LH2	2.3	1M		✓
2944	20:24	20:36	LH2	2.3	1M		✓
2945	20:37	20:48	LH2	2.3	1M		✓
2946	20:49	21:01	LH2	2.3	1M		✓
2947	21:02	21:14	LH2	2.3	1M		✓
2948	21:14	21:26	LH2	2.3	1M		✓
2949	21:27	21:41	LH2	2.3	1M		✓
2950	21:41	21:54	LH2	2.3	1M		✓
2951	21:54	22:07	LH2	2.3	1M		✓
2952	22:08	22:23	LH2	2.3	1M		✓

Comments: normally Rate(diff) 1.5K. Rate(integ) 1.4K.

## E04-007 Run sheet

Date : 4/13	Kinematic : E	Author: K. Wang
Left Arm momentum (GeV/c) : 1.194 angle : 12.5	BigBite current (A) : 390 angle : 48	Right Arm momentum (GeV/c) : 473 angle : 105

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
2953/20668	22:23	22:36	LH2	2.3	1M		✓
2954	22:37	22:48	LH2	2.3	1M		✓
2955	22:49	23:01	LH2	2.3	1M		✓
2956	23:02	23:14	LH2	2.3	1M		✓
2957	23:15	23:27	LH2	2.3	1M		✓
2958	23:28	23:41	LH2	2.3	1M		✓
2959	23:41	23:52	LH2	2.3	0.733	Reboot	✓
2960	23:55	00:07	LH2	2.3	1M		✓
2961	00:09	00:21	LH2	2.3	1M		✓
2962	00:22	00:35	LH2	2.3	1M		✓
2963	00:36	00:47	LH2	2.3	1M		✓
2964	00:47	01:02	LH2	2.3	1M		✓

Comments:

20669: FROM 00:09 TO 00:23 ; 940K events  
 4/13                      4/14

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## E04-007 Run sheet

Date : 4/14/2008	Kinematic : E	Author: C. FERNÁNDEZ- RAMÍREZ
Left Arm momentum (GeV/c) : 1.194 angle : 12.5°	BigBite current (A) : 390 angle : 48°	Right Arm momentum (GeV/c) 0.473 angle 105°

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
2965	01:06	01:16	L H2	<del>2.2</del> 2.25	1 M	Dead Time ~24% for 2.2 $\mu$ A	✓
2966	01:17	01:29	L H2	2.24	1 M		✓
2967	01:30	01:42	L H2	2.34	1 M		✓
2968	01:43	01:54	L H2	2.35	1 M		✓
2969	01:55	02:07	L H2	2.37	1 M		✓
2970	02:07	02:24	L H2	2.34	1 M		✓
2971	02:24	02:37	L H2	2.3	1 M		✓
2972	02:38	02:49	L H2	2.3	1 M		✓
2973	02:49	03:02	L H2	2.3	1 M		✓
2974	03:03	03:15	L H2	2.3	1 M		✓
2975	03:16	03:28	L H2	2.3	1 M		✓
2976	03:29	03:38	L H2	2.3	734 K	ROCS REBOOTED	✓

Comments:

## E04-007 Run sheet

Date : 4/14/2008	Kinematic : E	Author: C. FERNANDEZ-RAMIREZ
Left Arm momentum (GeV/c) : 1.194 angle : 12.5°	BigBite current (A) : 390 angle : 48°	Right Arm momentum (GeV/c) 0.433 angle 105°

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
2977	03:41	03:53	<del>LH2</del> LH2	2.3	1M		✓
2978	03:54	04:06	LH2	2.3	1M		✓
2979	04:06	04:18	LH2	2.3	1M		✓
2980	04:09	04:31	LH2	2.3	1M		✓
2981	04:31	04:42	LH2	2.3	1M		✓
2982	04:43	04:55	LH2	2.3	1M		✓
2983	04:56	05:13	LH2	2.3	1M		✓
2984	05:14	05:26	LH2	2.3	1M		✓
2985	05:27	05:38	LH2	2.3	1M		✓
2986	05:39	05:57	LH2	2.3	1M		✓
2987	05:57	06:10	LH2	2.3	1M		✓
2988	06:10	06:23	LH2	2.3	1M		

Comments:

last revision 05-April-2008

This file can be found at: <http://hallaweb.jlab.org/experiment/E04-007/Documents/Run-Sheet.ps>The LaTeX file can be at: <http://hallaweb.jlab.org/experiment/E04-007/Documents/LaTeX/Run-Sheet.tex>

## E04-007 Run sheet

Date : 4/14/2008	Kinematic : E	Author: C. FERNANDEZ-RAMIREZ
Left Arm momentum (GeV/c) : 1.194 angle : 12.5°	BigBite current (A) : 390 angle : 48°	Right Arm momentum (GeV/c) 0.473 angle 105°

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
2989	06:23	06:34	LH2	2.3	1 M		✓
2990	06:34	06:48	LH2	2.3	1 M		✓
2991	06:49	07:00	LH2	2.3	1 M		✓
2992	07:01	07:12	LH2	2.3	1 M		✓
2993	07:12	07:22	LH2	2.3	724 k		✓
2994	07:23	07:36	LH2	2.3	1 M		✓
2995	07:36	07:49	LH2	2.3	1 M		✓
2996	07:49	08:00	LH2	2.3	1 M		✓
2997	08:01	08:12	LH2	2.3	1 M		✓
2998	08:13	08:25	LH2	2.4	1 h		✓
2999	08:25	08:36	LH2	2.4	1 h		✓
3000	08:37	08:48	LH2	2.4	1 h		✓

Comments:



## E04-007 Run sheet

Date : 4/14/08	Kinematic : E	Author: O. Hansen
Left Arm momentum (GeV/c) : 1.194 angle : 12.5°	BigBite current (A) : 390 angle : 48°	Right Arm momentum (GeV/c) angle

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
3001	08:49	08:59	LH2	2.4	1M		✓
3002	08:59	09:00	LH2	2.4	80k	high degaltine reboot ROC5	—
3003	09:04	09:04	LH2	2.4	60k	reboot ROC5	—
3004	09:09	09:24	LH2	2.4	535k	HV trip	✓
3005	09:30	09:43	LH2	2.4	1M	Beam current → 2.8 $\mu$ A rev 90k	✓
3006	09:44	09:55	LH2	2.3	1M		✓
3007	09:55	10:06	LH2	2.5	1M		✓
3008	10:07	10:18	LH2	2.8 <sup>22.5</sup>	1M	Current reduced at start, Nev ≈ 100k	✓
3009	10:19	10:30	LH2	2.3	1M		✓
3010	10:31	10:42	LH2	2.4	1M		✓
3011	10:43	10:54	LH2	2.3	1M		✓
3012	10:55	11:06	LH2	2.2	1M		✓

Comments:

last revision 05-April-2008

This file can be found at: <http://hallaweb.jlab.org/experiment/E04-007/Documents/Run-Sheet.ps>The LaTeX file can be at: <http://hallaweb.jlab.org/experiment/E04-007/Documents/LaTeX/Run-Sheet.tex>

### E04-007 Run sheet

Date : 4/14/08	Kinematic : E	Author: Ole Hansen
Left Arm momentum (GeV/c) : 1.194 angle : 12.5°	BigBite current (A) : 390 angle : 48°	Right Arm momentum (GeV/c) angle

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
3013	11:07	11:21	LH <sub>2</sub>	2.3	1M		✓
3014	11:21	11:31	LH <sub>2</sub>	2.2	1M		✓
3015	11:32	11:41	LH <sub>2</sub>	2.6	1M		✓
3016	11:41	11:52	LH <sub>2</sub>	2.5	1M		✓
3017	11:57	12:16	LH <sub>2</sub>	2.3	1M	frequent beam trips	✓
3018	12:16	12:28	LH <sub>2</sub>	2.3	1M		✓
3019	12:29	12:40	LH <sub>2</sub>	2.3	1M		✓
3020	12:41	12:53	LH <sub>2</sub>	2.3	1M		✓
3021	12:53	12:59	LH <sub>2</sub>	2.3	200k	Roc 5 crash reboot	✓
3022	13:05	13:16	LH <sub>2</sub>	2.3	1M		✓
3023	13:16	13:28	LH <sub>2</sub>	2.3	1M		✓
3024	13:29	13:41	LH <sub>2</sub>	2.4	1M		✓

Comments:

## E04-007 Run sheet

Date : 4/14/08	Kinematic : E	Author: Oh Hanson
Left Arm momentum (GeV/c) : 1.194 angle : 12.5°	BigBite current (A) : 390 angle : 48°	Right Arm momentum (GeV/c) angle

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
3025	13:41	13:52	LH <sub>2</sub>	2.4	1M		✓
3026	13:53	14:07	LH <sub>2</sub>	2.3	1M		✓
3027	14:08	14:22	LH <sub>2</sub>	2.3	1M		✓
3028	14:22	14:33	LH <sub>2</sub>	2.3	1M		✓
3029	14:34	14:44	LH <sub>2</sub>	2.3	1M		✓
3030	14:45	14:56	LH <sub>2</sub>	2.4	1M		✓
3031	14:56	15:07	LH <sub>2</sub>	2.4	1M		✓
3032	15:08	15:19	LH <sub>2</sub>	2.3	1M		✓
3033	15:19	15:29	LH <sub>2</sub>	2.3	873k	Ended for controlled access	✓
3034	16:28	16:40	<sup>loop 1</sup> LH <sub>2</sub>	2.2	1M		✓
3035	16:40	16:47	LH <sub>2</sub>	2.3	555k	B.B. HV trip - reboot roc 5 & 10	✓
303 <del>5</del> 8	17:15	17:30	LH <sub>2</sub>	2.3	1M		✓

shift worker:  
D. McNulty →

Comments:

last revision 05-April-2008

This file can be found at: <http://hallaweb.jlab.org/experiment/E04-007/Documents/Run-Sheet.ps>

The LaTeX file can be at: <http://hallaweb.jlab.org/experiment/E04-007/Documents/LaTeX/Run-Sheet.tex>

## E04-007 Run sheet

Date : 4/14/2008	Kinematic : $E$	Author: Dustin McNulty
Left Arm momentum (GeV/c) : 1.194 angle : $12.5^\circ$	BigBite current (A) : 390 angle : $48^\circ$	Right Arm momentum (GeV/c) angle

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu A$ )	# events	comments	replay?
3039	17:31	17:42	<sup>loop 1</sup> LH <sub>2</sub>	2.3	1 M		✓
3040	17:42	17:53	LH <sub>2</sub>	2.3	1 M		✓
3041	17:54	18:07	LH <sub>2</sub>	2.4	1 M		✓
3042	18:07	18:20	LH <sub>2</sub>	2.0	1 M		✓
3043	18:20	18:31	LH <sub>2</sub>	2.4	1 M		✓
3044	18:32	18:44	LH <sub>2</sub>	2.3	1 M		✓
3045	18:45	18:57	LH <sub>2</sub>	2.3	1 M		✓
3046	18:57	19:12	LH <sub>2</sub>	2.3	1 M		✓
3047	19:12	19:24	LH <sub>2</sub>	2.4	1 M		✓
3048	19:24	19:36	LH <sub>2</sub>	2.3	1 M		✓
3049	19:37	19:50	LH <sub>2</sub>	2.3	1 M		✓
3050	19:50	20:14	LH <sub>2</sub>	2.2	1 M		✓

Comments:

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E04-007 Run sheet

Date : 4/14/2008	Kinematic : E	Author: Dustin McNulty
Left Arm momentum (GeV/c) : 1.194 angle : 12.5°	BigBite current (A) : 390 angle : 48°	Right Arm momentum (GeV/c) angle

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
3051	20:14	20:27	<sup>wop</sup> LH <sub>2</sub>	2.3	1M		✓
3052	20:27	20:40	LH <sub>2</sub>	2.3	1M		✓
3053	20:40	20:54	LH <sub>2</sub>	2.2	1M		✓
3054	20:54	21:09	LH <sub>2</sub>	2.2	712k	Roc5 died	✓
3055	21:11	21:23	LH <sub>2</sub>	2.3	1M		✓
3056	21:23	21:44	LH <sub>2</sub>	2.3	980k	beam off last 10 minutes of run	✓
3057	21:44	22:02	LH <sub>2</sub>	2.0	1M		✓
3058	22:03	22:17	LH <sub>2</sub>	2.2	1M		✓
3059	22:17	22:33	LH <sub>2</sub>	2.2	1M		✓
3060	22:33	22:49	LH <sub>2</sub>	2.2	1M		✓
3061	22:49	23:03	LH <sub>2</sub>	2.4	1M		✓
3062	23:03	23: <sup>16</sup> <del>29</del>	LH <sub>2</sub>	2.4	1M		✓

Comments:

E04-007 Run sheet

Date : 4/14/2008	Kinematic : E	Author: Dustin McNulty
Left Arm momentum (GeV/c) : 1.194 angle : 12.5°	BigBite current (A) : 390 angle : 48°	Right Arm momentum (GeV/c) 0.423 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
3063	23:16	23:29	loop1 LH <sub>2</sub>	2.4	1M		✓
3064	23:29	23:41	LH <sub>2</sub>	2.4	1M		✓
3065	23:41	23:55	LH <sub>2</sub>	2.3	1M		✓
3066	23:56	00:11	LH <sub>2</sub>	2.3	1M		✓
3067	00:24	00:30	DUMMY	4.8	<del>113K</del>	Junk setting prescales	
3068	00:34	00:34	DUMMY	4.8	113K	BEAM OFF UNSTABLE	
3069	01:03	01:13	DUMMY	4.8	1M	BEAM UNSTABLE	
3070	01:24	01:25	LH <sub>2</sub> +col	2.4	116K	Changing prescales	
3071	01:26	01:42	LH <sub>2</sub> with col	2.4	1M		✓
3072	01:43	02:00	LH <sub>2</sub> +col	2.4	1M		✓
3073	02:01	02:20	LH <sub>2</sub> +col	2.4	1M		✓
3074	02:20	02:32	LH <sub>2</sub> +col	2.3	2K	ROCS CRASH	✓

Comments:

Run 20672 → START: 00:24      EVENTS: 11K  
STOP: 00:35      ← Beam unstable  
~~was~~ MCC called on a  
Beam off. Run stopped.

Run 20673 → START: 01:02      EVENTS: 16K  
STOP: 01:13

Run 20674 → START: 01:23      EVENTS: 394K  
STOP: 01:37

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The LaTeX file can be at: <http://halloweb.jlab.org/experiment/E04-007/Documents/LaTeX/Run-Sheet.tex>

E04-007 Run sheet

Date : 4/15/2008	Kinematic : E	Author: C. FERNANDEZ-RAMIREZ
Left Arm momentum (GeV/c) : 1.194 angle : 12.5°	BigBite current (A) : 390 angle : 48°	Right Arm momentum (GeV/c) 0.473 angle 105°

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
3075	02:35	02:49	LH2+col	2.3	1M		✓
3076	02:49	03:06	LH2+col	2.3	1M		✓
3077	03:06	03:19	LH2+col	2.3	1M		✓
3078	03:19	03:35	LH2+col	2.3	1M		✓
3079	03:35	03:53	LH2+col	2.3	1M		✓
3080	03:53	04:07	LH2+col	<del>2.3</del> 2.4	1M		✓
3081	04:08	04:23	LH2+col	2.4	1M		✓
3082	04:23	04:39	LH2+col	2.4	1M		✓
3083	04:40	04:56	LH2+col	2.4	1M		✓
3084	04:56	05:10	LH2+col	<del>2.3</del>	1M		✓
3085	05:10	05:25	LH2+col	2.4	1M		✓
3086	05:26	05:40	LH2+col	2.3	1M		✓

Comments:

E04-007 Run sheet

Date : 4/15/2008	Kinematic : E	Author: G. FERNÁNDEZ-RAMÍREZ
Left Arm momentum (GeV/c) : 1.194 angle : 12.50°	BigBite current (A) : 290 angle : 48°	Right Arm momentum (GeV/c) 0.473 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
3087	05:41	06:02	LH2+G1	2.3	1M		✓
3088	06:03	06:19	LH2+G1	2.3	1M		✓
3089	06:21	06:35	LH2+G1	2.3	1M		✓
3090	06:35	06:52	LH2+G1	2.3	1M		✓
3091	06:53	07:07	LH2+G1	2.3	749K	ROCS crash	✓
3092	07:10	07:25	LH2+G1	2.3	1M		✓
3093	07:26	07:36	LH2+G1	2.3	609K	Bigbite HV crash	✓
3094	07:42	08:05	LH2+G1	2.3	1M		✓
3095	08:05	08:21	LH2+G1	2.3	1M		✓
3096	08:21	08:27	LH2+G1	2.3	351K	Bigbite HV crash	✓
3097							
3106	16:59	18:05	empty			cosmics	

Comments:

Run 20675 → START: 07:42 STOP: 08:35 EVENTS: 54K Stopped because no beam. MCC took it for beam studies



E04-007 Run sheet

Date :	Kinematic : $E$	Author:
Left Arm momentum (GeV/c) : 1.194 angle : $12.50^\circ$	BigBite current (A) : $39^\circ$ angle : $48^\circ$	Right Arm momentum (GeV/c) angle

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu A$ )			
3107	4/15 18:05	4/16 00:41			46K	cos m/c.s.	
3108	2:31		Ta	5	200K	<del>300K</del> deadtime ~ 40%	
3109	02:38		Ta	5	540K	deadtime ~ 44% PS1=150, PS2=300, PS3=PS4=1	
3110			Ta	5			
3111	02:47		Ta	5	440K	PS1=150, PS2=300 PS3=4, PS4=PS5=PS6=1	
3112	3:04	3:07	C	4.5	516K	Deadtime ~ 80%	
3113	3:13		C	2	240K	magnet off 50% Dead time	
311							
3127	5:37		C	1		T1 $\approx$ 100 Hz T2 $\approx$ 1 kHz	
3128	5:44	5:54	C	1	233K	change Prescale	
3130	6:12	6:29	C	1	1M		

Comments: skip dummy target because ROC9  
keep rebooting

## E04-007 Run sheet

Date : 4/16/2008	Kinematic : F	Author: C. FERNANDEZ-RAMIREZ
Left Arm momentum (GeV/c): 0.997 angle : 14.5°	BigBite current (A) : 390 angle : <del>105</del> 48°	Right Arm momentum (GeV/c) 0.4735 angle 105°

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
<del>3135</del> 3135	7.23	7.29	H	4	440K	elastic H single arm cross section check	
3136	7.29		H	4	400K	"	
3137	7.35	7.42	H	3.5	502K	"	
3138	7.53	08:06	H	3.2		production	
3139	08:07	08:20	LH <sub>1</sub>	3.5	1M		✓
3140	08:20	08:38	LH <sub>1</sub>	3.5	1M		✓
3141	08:39	08:49	LH <sub>1</sub>	2.5	1M		✓
3142	08:51	09:00	LH <sub>1</sub>	3.5	1M		✓
3143	09:01	09:11	LH <sub>1</sub>	3.5	1M		✓
3144	09:12	09:24	LH <sub>1</sub>	4.0	1M		✓
3145	09:25	09:35	LH <sub>1</sub>	4.0	1M		✓
3146	09:36	09:46	LH <sub>1</sub>	4.0	1M		✓

Comments:

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E04-007 Run sheet

Date : 4/16/2008	Kinematic : F	Author: C. FERNANDEZ-RAMIREZ
Left Arm momentum (GeV/c) : 0.997 angle : 14.5°	BigBite current (A) : 3.90 angle : 48°	Right Arm momentum (GeV/c) 0.4735 angle 105°

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
3147	09:46	09:57	LH <sub>1</sub>	<del>4.0</del> 3.7	1 M		✓
3148	09:58	10:08	LH <sub>1</sub>	3.7	1 M		✓
3149	10:09	10:20	LH <sub>1</sub>	3.7	1 M		✓
3150	10:20	10:31	LH <sub>1</sub>	3.6	1 M		✓
3151	10:31	10:42	LH <sub>1</sub>	3.6	1 M		✓
3152	10:42	10:53	LH <sub>1</sub>	3.6	1 M	<del>ROCS CRASH</del>	✓
3153	10:54	10:57	LH <sub>1</sub>	3.6	320 K	ROCS CRASH	✓
3154	11:00	11:10	LH <sub>1</sub>	3.9	1 M		✓
3155	11:10	11:20	LH <sub>1</sub>	3.9	1 M		✓
3156	11:20	11:31	LH <sub>1</sub>	3.9	1 M	WARNING IN ROCS	✓
3157	11:35	11:42	LH <sub>1</sub>	3.9	1 M		✓
3158	11:42	11:53	LH <sub>1</sub>	3.9	1 M		✓

Comments:

Run: 20677 START: 11:00 (4/16/08) EVENTS: 245 K  
STOP: 14:06

## E04-007 Run sheet

Date : 4/16/2008	Kinematic : F	Author: C. FERNANDEZ-RAMIRES
Left Arm momentum (GeV/c) : 0.497 angle : 14.5°	BigBite current (A) : 390 angle : 48°	Right Arm momentum (GeV/c) 0.4735 angle 105°

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
3159	11:53	12:05	LH <sub>2</sub> 1	3.9	1M		✓
3160	12:09	12:16	LH <sub>2</sub> 1	3.9	1M		✓
3161	12:17	12:27	LH <sub>2</sub> 1	3.8	1M		✓
3162	12:28	12:40	LH <sub>2</sub> 1	3.8	1M		✓
3163	12:40	12:49	LH <sub>2</sub> 1	3.8	1M		✓
3164	12:50	12:59	LH <sub>2</sub> 1	3.8	1M		✓
3165	12:59	13:10	LH <sub>2</sub> 1	3.8	1M		✓
3166	13:11	13:20	LH <sub>2</sub> 1	3.8	1M		✓
3167	13:21	13:31	LH <sub>2</sub> 1	3.8	1M		✓
3168	13:31	13:40	LH <sub>2</sub> 1	3.8	1M		✓
3169	13:41	13:55	LH <sub>2</sub> 1	3.8	1M		✓
3170	13:56	14:05	LH <sub>2</sub> 1	3.8	722k	ROCS CRASH	✓

Comments:

last revision 05-April-2008

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## E04-007 Run sheet

Date : 4/16/2008	Kinematic : F	Author: C. FERNÁNDEZ-RAMÍREZ
Left Arm momentum (GeV/c): 0.997 angle : 14.5°	BigBite current (A) : 390 angle : 48°	Right Arm momentum (GeV/c) 0.4735 angle 105°

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
3171	14:08	14:18	LH <sub>2</sub> 1	3.8	1M		✓
3172	14:19	14:29	LH <sub>2</sub> 1	3.8	1M		✓
3173	14:30	14:39	LH <sub>2</sub> 1	3.8	1M		✓
3174	14:43	14:46	LH <sub>2</sub> 1	3.6	250K	TEST RUN	NO
3175	14:47	14:58	LH <sub>2</sub> 1	3.6	1M	PRODUCTION	✓
<del>3176</del> 3176	14:58	15:09	LH <sub>2</sub> 1	<del>3.8</del> 4.0	1M		✓
3177	15:09	15:20	LH <sub>2</sub> 1	3.8	1M		✓
3178	15:20	15:30	LH <sub>2</sub> 1	3.8	1M		✓
3179	15:31	15:41	LH <sub>2</sub> 1	3.8	1M		✓
3180	15:42	15:52	LH <sub>2</sub> 1	3.8	1M		✓
3181	15:52	16:01	LH <sub>2</sub> 1	3.8	1M		✓
3182						JUNK	X

Comments:

Run 20678 START: 14:09 (4/16/2008) EVENTS: 135 K  
STOP: 15:52

Run 20679 START: 15:51 (4/16/2008) EVENTS: 722 K  
STOP: 00:12 (4/17/2008)

## E04-007 Run sheet

Date : 4/16/2008	Kinematic : F	Author: Seonho Choi
Left Arm momentum (GeV/c) : 0.997 angle : 14.5°	BigBite current (A) : 3.90 angle : 48°	Right Arm momentum (GeV/c) 0.4735 angle 10.5°

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
3183	16:18	16:38	6cm DUMY	3.8	1M + 2213	DT = -6%	✓
3184	16:48	16:49	L1 6cm	3.9	213690	Test Run. Outer Paddles off. ps2 = 1 others = 00	
3185	16:50	16:51	L2 6cm	3.9	206037	ps7 = 1 others = 00	
3186	16:52	16:53	L1 6cm	3.9	204084	ps3 = ps7 = 1 others = 00	
3187	16:56	17:06	L1 LH2 6cm	3.9	1M	Back to normal production	✓
3188	17:06	17:16	L1 LH2 6cm	3.6	1M		✓
3189	17:16	17:27	L1 LH2 6cm	3.5	1M		✓
3190	17:28	17:38	L1 LH2 6cm	3.5	1M		✓
3191	17:39	17:49	L1 LH2 6cm	3.4	785K	<del>Reco Crash 2</del>	✓
3192	17:50	17:56	L1 LH2 6cm	3.4	542K		✓
3193	18:03	18:13	L1 LH2 6cm	3.4	1M		✓
3194	18:13	18:23	L1 LH2 6cm	3.4	1M		✓

Comments:

last revision 05-April-2008

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## E04-007 Run sheet

Date : 4/16/2008	Kinematic : F	Author: Seonho Choi
Left Arm momentum (GeV/c) : 0.997 angle : 14.5°	BigBite current (A) : 388.1 angle : 48°	Right Arm momentum (GeV/c) 0.4735 angle 10.5°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
3195	18:24	18:33	L1 LH2 6cm	3.7	1M		✓
3196	18:34	18:42	L1 LH2 6cm	3.7	487K	Adjusted Prescale factors.	✓
3197	18:51	19:02	L1 LH2 6cm	3.7	1M		✓
3198	19:02	19:19	L1 LH2 6cm	3.7	1M		✓
3199	19:19	19:33	L1 LH2 6cm	3.8	1M		✓
3200	19:34	19:44	L1 LH2 6cm	3.8	1M		✓
3201	19:44	19:57	L1 LH2 6cm	3.8	1M		✓
3202	19:57	20:11	L1 LH2 6cm	3.8	1M		✓
3203	20:11	20:22	L1 LH2 6cm	3.8	1M		✓
3204	20:22	20:35	L1 LH2 6cm	3.8	1M		✓
3205	20:35	20:49	L1 LH2 6cm	3.8	1M		✓
3206	20:49	21:00	L1 LH2 6cm	3.8	1M		✓

Comments:

last revision 05-April-2008

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## E04-007 Run sheet

Date : 4/16/2008	Kinematic : F	Author: Senho Choi
Left Arm momentum (GeV/c) : 0.997 angle : 145°	BigBite current (A) : 388.1 angle : 48°	Right Arm momentum (GeV/c) 0.4735 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
3207	21:00	21:10	L1 LH2 bcm	3.8	1M		✓
3208	21:11	21:22	L1 LH2 bcm	3.8	1M		✓
3209	21:23	21:45	L1 LH2 bcm	3.8	741K	RoCS problem	✓
3210	21:46	21:56	L1 LH2 bcm	3.8	1M	} weird Proton Physics Spectrum	✓
3211	21:56	22:06	L1 LH2 bcm	3.8	1M		✓
3212	22:06	22:19	L1 LH2 bcm	3.8	1M		✓
3213	22:19	22:30	L1 LH2 bcm	3.8	1M		✓
3214	22:30	22:41	L1 LH2 bcm	3.8	1M		✓
3215	22:41	22:53	L1 LH2 bcm	3.8	1M		✓
<del>3217</del> <del>3217</del>	22:58	23:02	L1 LH2 bcm	3.8	1M	RoCS Rebooted BigBite HV problem	
3218	23:07	23:18	L1 LH2 bcm	3.8	1M		
3219	23:18	23:28	L1 LH2 bcm	3.8	1M		

Comments:

last revision 05-April-2008

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## E04-007 Run sheet

Date : 4/16 - 4/17 2008	Kinematic : F	Author: Seonho Choi
Left Arm momentum (GeV/c) : 0.997 angle : 145°	BigBite current (A) : 300-1 angle : 40°	Right Arm momentum (GeV/c) 0.4735 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
3220	23:29	23:39	L1 LH2 6cm	3.0	1M		
3221	23:40	23:50	L1 LH2 6cm	3.0	1M		
3222	23:54	00:03	L1 LH2 6cm	3.8	1M		
3223	00:04	00:15	LH2 1	3.6	1M		✓
3224	00:15	00:27	LH2 1	3.6	1M		✓
3225	00:27	00:37	LH2 1 <del>DUMMY</del>	3.6	1M		✓
3226	00:48	00:50	DUMMY	4.2	192k	setting prescales	✓
3227	<del>00:52</del> 00:52	00:58	DUMMY	3.8	1M		✓
3228	01:18	01:27	LH2 1	3.8	1M		✓
3229	01:28	01:39	LH2 1	3.8	1M		✓
3230	01:40	01:51	LH2 1	3.8	1M		✓
3231	01:51	02:04	LH2 1	3.6	1M		✓

Comments: RUN 20680 START: 01:17  
STOP: 02:41

EVENTS: 108K

## E04-007 Run sheet

Date : 4/17/2008	Kinematic : F	Author: C. FERNANDEZ-RAMIREZ
Left Arm momentum (GeV/c) : 0.997 angle : 145°	BigBite current (A) : 390 angle : 48°	Right Arm momentum (GeV/c) 0.4735 angle 105°

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
3232	02:05	02:16	LH <sub>2</sub> 1	3.8	2M		✓
3233	02:16	02:26	LH <sub>2</sub> 1	3.7	1M		✓
3234	02:27	02:37	LH <sub>2</sub> 1	3.7	1M		✓
3235	02:38	02:40	LH <sub>2</sub> 1	3.7	256 k	ROCS CRASH	✓
3236	02:43	02:54	LH <sub>2</sub> 1	3.7	1M		✓
3237	02:54	03:05	LH <sub>2</sub> 1	3.7	1M		✓
3238	03:05	03:15	LH <sub>2</sub> 1	3.7	1M		✓
3239	03:15	03:27	LH <sub>2</sub> 1	3.7	1M		✓
3240	03:27	03:37	LH <sub>2</sub> 1	3.7	1M		✓
3241	03:38	03:49	LH <sub>2</sub> 1	3.7	1M		✓
3242	03:50	03:59	LH <sub>2</sub> 1	3.7	1M	Bigbite HV alarm	✓
3243	04:00	04:06	LH <sub>2</sub> 1	3.7	350k	Bigbite HV alarm	✓

Comments:

RUN: 20689

START: 02:44

STOP: 04:08

EVENTS: 109k

## E04-007 Run sheet

Date : 4/17/2008	Kinematic : F	Author: C. FERNANDEZ-RAMIREZ
Left Arm momentum (GeV/c) : 0.997 angle : 145°	BigBite current (A) : 390 angle : 48°	Right Arm momentum (GeV/c) 0.4735 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
3244	04:09	04:19	LH <sub>2</sub> 1	3.7	1M		✓
3245	04:19	04:31	LH <sub>2</sub> 1	3.7	1M		✓
3246	04:32	04:43	LH <sub>2</sub> 1	3.7	1M		✓
3247	04:44	04:55	LH <sub>2</sub> 1	3.7	1M		✓
3248	04:55	05:08	LH <sub>2</sub> 1	3.7	752k	Many trips, beam off	✓
3249	05:24	05:38	LH <sub>2</sub> 1	3.7	1M		✓
3250	05:38	05:54	LH <sub>2</sub> 1	3.5	1M		✓
3251	05:54	06:06	LH <sub>2</sub> 1	3.6	1M		✓
3252	06:06	06:17	LH <sub>2</sub> 1	3.6	1M		✓
3253	06:17	06:25	LH <sub>2</sub> 1	3.6	630k	ROCS CRASH	✓
3254	06:28	06:37	LH <sub>2</sub> 1	3.6	1M		✓
3255	06:38	06:48	LH <sub>2</sub> 1	3.6	1M	Bad file Halog # 132667	✓

Comments: RUN 20682 → START: 04:08      EVENTS: 74.6k  
STOP: 05:08

RUN 20683 → START: 05:24      EVENTS: 75.3k  
STOP: 06:25

RUN 20684 → START: 06:28      EVENTS:  
STOP:

E04-007 Run sheet

Date : 4/17/2008	Kinematic : F	Author: C. FERNANDEZ-RAMIREZ
Left Arm momentum (GeV/c) : 0.997 angle : 145°	BigBite current (A) : 390 angle : 48°	Right Arm momentum (GeV/c) 0.4735 angle 105°

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
3256	06:48	06:58	LH <sub>2</sub> 1	3.7	1M		✓
3257	06:58	07:09	LH <sub>2</sub> 1	3.7	1M		✓
3258	07:09	07:22	LH <sub>2</sub> 1	3.7	1M		✓
3259	07:22	07:31	LH <sub>2</sub> 1	3.7	1M		✓
3260	07:31	07:42	LH <sub>2</sub> 1	3.6	1M		✓
3261	07:42	07:54	LH <sub>2</sub> 1	3.7	1M		
3262	07:54	09:05	LH <sub>2</sub> 1	3.6	1M		
<del>3263</del>	<del>08:06</del>		<del>LH<sub>2</sub>1</del>	<del>3.6</del>			

Comments:

E04-007 Run sheet

Date : 4/17/08	Kinematic : F / G	Author: B Norum
Left Arm momentum (GeV/c) : 0.997 angle : 14.5	BigBite current (A) : 390 angle : 48°	Right Arm momentum (GeV/c) 0.4735 angle 105

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
L 3263	08:06	08:18	LH <sub>2</sub> 1	3.6	0.63 M	Beam down vacuum fig	
L 3264	08:24	08:35	LH <sub>2</sub> 1	3.6	1 M		
L 3265	08:44	08:59	Dummy	3.6	0.78 M	Beam down spot Move, LHRS sum	
R 20684	06:28	08:59	Varied		0.19 M	Luminosity monitor	
3255B AD	09:49	09:57	Ta	3.6	10 k	Comp reboot → wrong run #	
3266							
L 3267	10:02	10:09	Ta	3.6	0.22 M	RHRS's magnets dropped out.	
R 20685							
R 20686	10:03	10:09	Ta		5 k		
3268	11:02	11:10	Ta	3.8	~0.25 M	RHRS not ready DT ~ 27%	
R 20687	11:02	11:31	Ta	3.8	25 k	RHRS NOT SETTLED	
3269	11:11	11:30	Ta	3.8	0.55 M	PS1, PS2, PS7 inc by 10% DT ~ 15%	

Kin  
 F  
 ↑  
 ↓  
 Kin  
 G

Comments:

DT → 27%  
 Energy unstable.  
 energy lock Hall C

## E04-007 Run sheet

Date : 4/17/08	Kinematic : G	Author: B Norum
Left Arm momentum (GeV/c) : 0.997 angle : 14.5	BigBite current (A) : 390 angle : 48°	Right Arm momentum (GeV/c) 0.4735 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
L 3270	11:49	12:10	Ta	3.5	0.58M	Energy lock on Hall A	
R 20688	11:49	12:11	Ta	3.5	19K	Right dipole not ready	
L 3271	12:17	12:19	C			Junk	
L 3272	12:20	12:31	C	3.8	0.51M	DT ~ 6% → 27%??	
R 20689	12:20	12:31	C	3.8	<del>51K</del> 11K	ELock to Hall C	
L 3273	12:50	13:00	Loop/H	3.5	1M	Elastic	
R 20690	12:52	<del>13:01</del>	"	"	<del>1M</del>	See two pages forward.	
L 3274	<del>12:55</del> 13:15	13:31	Loop/H	"	1M	$\pi^0$ Prod.	
3275	13:33	13:52	✓	✓	✓	✓	
3276	13:53	14:09	✓	✓	✓	✓	
3277	14:10	14:34	✓	✓	✓	✓	
3278	14:35	14:41	✓	✓	0.33M	Stopped for BB HVV trip	

Comments:

3270 Problem with BB WC's seen.

## E04-007 Run sheet

Date : 4/17/08	Kinematic : G	Author: B Norum
Left Arm momentum (GeV/c) : 0.986 angle : 16.5°	BigBite current (A) : 390 angle : 48°	Right Arm momentum (GeV/c) 0.4735 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
3279	14:48	15:05	Loop 1 H <sub>2</sub>	3.4	1M		
3280	15:05	15:22	✓	✓	1M		
3281	15:22	15:35	✓	✓	1M		
3282	15:35	15:49	✓	✓	1M		
3283	15:49	16:05	✓	✓	1M		
3284	16:06	16:25	Loop 1 LH <sub>2</sub>	3.7	1M		
3285	16:26	16:44	Loop 1 LH <sub>2</sub>	3.5	1M		
3286	16:53	17:09	-11-	4.0	1M	Requested 4.0 $\mu$ A. BCM readout 3.7 $\mu$ A	
3287	17:10	17:26	-11-	3.7	1M		
3288	17:28	17:43	-11-	3.7	1M		✓
3289	17:44	17:58	-11-	3.7	1M		✓
3290	17:59	18:08	-11-	3.7	419K	Roc 5 error	

Comments:

last revision 05-April-2008

This file can be found at: <http://halloweb.jlab.org/experiment/E04-007/Documents/Run-Sheet.ps>The LaTeX file can be at: <http://halloweb.jlab.org/experiment/E04-007/Documents/LaTeX/Run-Sheet.tex>

## E04-007 Run sheet

Date : 4/17/08	Kinematic : G	Author: M. MIHOVILOVIC
Left Arm momentum (GeV/c) : 0.986 angle : 16.9°	BigBite current (A) : 388.1 angle : 48°	Right Arm momentum (GeV/c) 0.47350 angle 105°

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
R 20690	12:51	18:08	loop 1 LH2	~3.5	413k		
R 20691	18:11		loop 1 LH2	~3.8			
L 3291	18:10	18:26	loop 1 LH2	3.8	1M		✓
L 3292	18:27	18:40	-11-	3.8	1M		✓
L 3293	18:43	18:58	-11-	3.7	1M		✓
L 3294	19:02	19:16	-11-	3.8	1M		✓
L 3295	19:17	19:32	-11-	3.8	1M		✓
L 3296	19:33	19:47	-11-	3.8	1M		✓
L 3297	19:48	20:03	-11-	3.9	1M		✓
L 3298	20:05	20:19	-11-	3.8	1M		✓
L 3299	20:20	20:34	-11-	3.9	1M		✓
L 3300	20:34	20:48	-11-	3.9	1M		✓

Comments:



## E04-007 Run sheet

Date : 4/17/08	Kinematic : G	Author: M. MIHOVILOVIC
Left Arm momentum (GeV/c) : 0.986 angle : 16.5°	BigBite current (A) : 388.1 angle : 48°	Right Arm momentum (GeV/c) 0.47350 angle 105°

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
L 3301	20:49	21:03	loop 1 LH2	3.8	1M		✓
L 3302	21:04	21:19	-11-	4.1	1M		✓
L 3303	21:20	21:37	-11-	4.0	1M		✓
L 3304	21:38	21:52	-11-	3.6	1M		✓
L 3305	21:53	22:07	-11-	4.0	1M		✓
L 3306	22:08	22:22	-11-	3.9	1M		✓
L 3307	22:24	22:42	-11-	4.0	0.75M	Rec. 5 error	
L 3308	22:42	22:59	-11-	3.7	1M		
L 3309	23:00	23:14	-11-	3.9	1M		
L 3310	23:15	23:29	-11-	3.9	1M		
L 3311	23:29	23:44	-11-	3.9	1M		
L 3312	23:45	23:59	-11-	4.0	1M		✓

Comments:

## E04-007 Run sheet

Date : 4/18/08	Kinematic : 6	Author: M. MIHOVILOVIC
Left Arm momentum (GeV/c) : 0.986 angle : 16.5°	BigBite current (A) : 288.1 angle : 48°	Right Arm momentum (GeV/c) 0.47350 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
L 3313	00:00	00:14	loop1 LH2	4.0	1M	Good	✓
L 3314	00:15	00:30	"	"	1M	Good	✓
L 3315	00:31	00:44	"	"	1M	Good	✓
L 3316	00:45	00:58	"	"	1M	Good	✓
L 3317	00:59	01:16	"	"	0.9M	"	✓
L 3318	01:23	1:37	"	"	1M	Good	✓
L 3319	1:38	01:59	"	off	0.6M	Roc 5 error	
<del>L 3320</del>	<del>02:17</del>						
<u>L 2</u>	02:17	0:28	"	"	0.77	Run # bad but Run is good	✓
L 3320	02:28	3:01	LH2	3.9	1M	Good run	✓
L 3321	3:02	03:19	LH2	3.9	1M	"	✓
L 3322	03:19	3:35	"	"	1M	"	✓

Comments:

## E04-007 Run sheet

Date : 4/18/08	Kinematic : $G$	Author:
Left Arm momentum (GeV/c) : 0.986 angle : $16.5^\circ$	BigBite current (A) : 388 angle : $48^\circ$	Right Arm momentum (GeV/c) 0.4735 angle $105^\circ$

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu A$ )	# events	comments	replay?
L 3323	3:36	3:50	LH <sub>2</sub>	3.73	1 M	Good run	V
L 3324	3:51	4:08	LH <sub>2</sub>	3.79	1 M	Good run	V
L 3325	4:09	4:22	LH <sub>2</sub>	3.72	1 M	Good run	V
L 3326	4:23	4:38	LH <sub>2</sub>	3.72	1 M	Good run	V
L 3327	4:39	4:57	LH <sub>2</sub>	3.73	1 M	Good run	V
L 3328	4:58	5:20	LH <sub>2</sub>	3.7	1 M	Good run	V
L 3329	5:21	5:46	LH <sub>2</sub>	3.7	1 M	Good run	V
L 3330	5:46	6:09	LH <sub>2</sub>	3.6	1 M	Good run	V
L 3331	6:10	6:25	LH <sub>2</sub>	3.9	1 M	Good run	V
L 3332	6:25	6:39	LH <sub>2</sub>	3.7	1 M	Good run	V
L 3333	6:40	6:57	LH <sub>2</sub>	3.9	1 M	Good run	V
R 20692	18:49						

Comments:

## E04-007 Run sheet

Date : 4/18/2008	Kinematic : G	Author: Nelyubin
Left Arm momentum (GeV/c) : 0.986 angle : 16.5°	BigBite current (A) : 388.1 angle : 48°	Right Arm momentum (GeV/c) 0.4735 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
L3334	6:58	7:13	LH <sub>2</sub>	3.7	1 M	Good run	✓
L3335	7:13	07:33	LH <sub>2</sub>	3.7	0.97	ROC5 hung at end	✓
L3336	07:34	7:49	LH <sub>2</sub>	4.2	1 M	Good run	
L3337	7:50	8:04	LH <sub>2</sub>	4.3	1 M	Good run	
L3338	8:05	8:18	LH <sub>2</sub>	4.3	1 M	"	✓
3339	8:18	8:31	LH <sub>2</sub>	4.3	1 M	"	✓
3340	8:32	8:51	LH <sub>2</sub>	4.4	1 M	"	✓
3341	8:51	9:04	LH <sub>2</sub>	4.2	1 M	"	
3342	9:05	9:18	LH <sub>2</sub>	4.5	1 M	"	
3343	9:18	9:34	LH <sub>2</sub>	4.4	861k	End for beam studies	
3344	13:19	13:20	LH <sub>2</sub>	-0-	40k	pedrun	
3345	15:09	20:01	LH <sub>2</sub>	-0-	355k	junk - cosmic	

Comments:

## E04-007 Run sheet

Date : 04/13/08	Kinematic : G	Author: M. MIHOVILOVIC
Left Arm momentum (GeV/c) : 0.986 angle : 16.5°	BigBite current (A) : 388.1 angle : 48°	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
L 3346	21:20	21:30	Carbon with Hole	4.4	99.7k	Run to check beam position	
R 20693	17:32	21:21	?	?	198k	Cosmics, but beam came later on!	
R 20694	21:28	22:26	C with Hole	4.4	67k	Run to check beam position	
L 3347	21:30	21:41	Carbon with Hole	4.4	260k	Run to check beam position!	
L 3348	21:42	21:45	C with Hole	4.4	64k	-  -	
L 3349	21:51	21:56	-  -	4.4	145k	-  -	
L 3350	22:00	22:02	-  -	4.0	54k	-  -	
L 3351	22:07	22:12	-  -	4.4	129k	-  -	
L 3352	22:13	22:19	-  -	4.0	169k	-  -	
L 3353	22:20	22:22	-  -	4.4	53k	-  -	
L 3354	22:31	22:51	Dummy	4.3	1M	Prod.	
R 20695	22:33	22:52	Dummy	4.4	29k	Prod.	

Comments:

$ps 1 = 53k$        $ps 6 = 1$   
 $ps 2 = 90k$        $ps 7 = 1300$   
 $ps 3 = 100$        $ps 8 = 100$   
 $ps 4 = 40$   
 $ps 5 = 1$

last revision 05-April-2008

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## E04-007 Run sheet

Date : 04/18/08	Kinematic : G	Author: M. MIHOVILOVIC
Left Arm momentum (GeV/c) : 0.986 angle : 16.5°	BigBite current (A) : 388.1 angle : 48°	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
L 3355	23:02	23:15	loop1 LH2	4.0	1M	Prod.	
R 20696	23:04		-  -	4.0		Prod.	
L 3356	23:17	23:30	-  -	4.4	1M	Prod.	
L 3357	23:31	23:42	-  -	4.4	1M	Prod.	
L 3358	23:43	23:57	-  -	4.4	1M	Prod.	
L 3359	23:57	0:11	-  -	4.4	1M	Prod.	
L 3360	0:12	0:29	-  -	4.34	1M	Prod	
L 3361	0:20	0:37	LH2	4.31	1M	Prod	
L 3362	0:37	0:49	LH2	4.24	1M	Prod	
L 3363	0:50	1:03	"	4.23	1M	Prod	
L 3364	01:04	1:17	"	4.3	1M	Prod	
L 3365	01:17	1:30	"	4.17	1M	Prod	

Comments:

last revision 05-April-2008

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## E04-007 Run sheet

Date : 4/19/2008	Kinematic : G	Author: Nedyubin
Left Arm momentum (GeV/c) : 0.986 angle : 16.5°	BigBite current (A) : 388.1 angle : 48°	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
L 3366	1:31	1:45	LH <sub>2</sub>	4.3	1 M	Prod.	
L 3367	1:45	1:59	"	4.27	1 M	Prod	
L 3368	1:59	2:11	"	4.31	1 M	Prod	
L 3369	2:12	2:50	"	4.3	584K	Prod	
L 3370	2:51	3:04	"	4.24	<del>4.24</del> 1 M	Prod	
L 3371	<del>3:05</del>	3:17	"	4.24	1 M	Prod	
L 3372	3:17	3:27	"	4.2	1 M	Prod	
L 3373	3:30	3:41	"	4.42	1 M	Prod	
L 3374	3:41	3:55	"	4.42	1 M	Prod	
L 3375	3:55	4:07	"	4.44	1 M	Prod	
L 3376	4:07	4:20	"	4.4	1 M	Prod.	
L 3377	4:21	4:32	"	4.4	1 M	Prod	

Comments:

## E04-007 Run sheet

Date : 4/19/2008	Kinematic : G	Author: Nelyubin
Left Arm momentum (GeV/c) : 0.986 angle : 16.5°	BigBite current (A) : 388 angle : 48°	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
L 3378	4:33	4:45	LH <sub>2</sub>	4.4	1 M	Prod.	
L 3379	4:46	4:58	"	4.4	1 M	Prod.	
L 3380	4:58	5:11	LH <sub>2</sub>	4.4	1 M	Prod.	
L 3381	5:11	5:26	"	4.3	1 M	Prod.	
L 3382	5:26	5:40	"	4.2	1 M	Prod.	
L 3383	5:41	5:54	"	4.2	1 M	Prod.	
L 3384	5:54	6:08	"	4.3	1 M	Prod.	
L 3385	6:08	6:21	"	4.3	1 M	Prod.	
L 3386	6:22	6:30	"	4.3	0.5 M	Prod.	
L 3387	6:31	6:43	"	4.3	1 M	Prod.	
L 3388	6:44	7:00	"	4.2	1 M	Prod.	
L 3389	7:01	7:13	"	4.2	1 M	Prod.	

Comments:



E04-007 Run sheet

Date : 4/19/2008	Kinematic : G	Author:
Left Arm momentum (GeV/c) : 0.986 angle : 16.5°	BigBite current (A) : 388 angle : 48°	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
L 3390	7:22	7:41	dummy Al 60 $\mu$ m	4.4	1M	dummy target	
L 3391	7:49	8:05	LH2 60 $\mu$ m	4.4	1M	LH2 product.	✓
L 3392	08:06	8:20	Loop 1 LH2	4.3	1M	Prod.	✓
L 3393	8:20	8:33	-  -	4.4	1M	Prod.	✓
L 3394	8:33	8:46	-  -	4.3	1M	Prod.	✓
L 3395	8:47	8:59	-  -	4.4	1M	Prod.	✓
L 3396	9:00	9:13	-  -	4.4	1M	Prod.	✓
L 3397	9:13	9:26	-  -	4.4	1M	Prod.	✓
L 3398	9:27	9:39	-  -	4.3	1M	Prod.	✓
L 3399	9:39	9:51	-  -	4.5	1M	Prod.	✓
L 3400	9:52	10:04	-  -	4.5	1M	Prod.	✓
L 3401	10:08	10:21	-  -	4.5	1M	Prod.	

Comments: 135min  
 $\frac{10M}{135} = 0.07407 M/min$   
0.07692

## E04-007 Run sheet

Date : 4/19/08	Kinematic : 9	Author: M. MIHOVILOVIC
Left Arm momentum (GeV/c) : 0.986 angle : 16.5	BigBite current (A) : 388.1 angle : 48°	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
L 3402	10:22	10:35	loop1 LH2	4.4	1M	Prod.	
L 3403	10:37	11:00	-11-	4.4	794k	High Dead time 97% Bad Run!	
L 3404	11:02	11:15	-11-	4.5	1M	Prod.	
L 3405	11:16	11:29	-11-	4.4	1M	Prod	
R 20697	01:04	11:18	loop1 LH2	4.4	1M	One run (#3390) was Dummy Target	
R 20698	11:27		-11-	4.4			
L 3406	11:30	11:43	-11-	4.4	1M	Prod.	
L 3407	11:44	12:01	-11-	4.4	1M	Prod.	
L 3408	12:02	12:17	-11-	4.4	1M	Prod.	
L 3409	12:18	12:28	-11-	4.9	1M	Prod	
L 3410	12:29	12:41	-11-	4.9	1M	Prod.	
L 3411	12:41	12:53	-11-	4.9	1M	Prod.	

Comments:

## E04-007 Run sheet

Date : 4/19/08	Kinematic : G	Author: M. MIHOVILOVIĆ
Left Arm momentum (GeV/c) : 0.986 angle : 16.5°	BigBite current (A) : 388.1 angle : 48°	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
L3412	12:55	13:11	Loop 1 LH2	4.8	1M	Prod.	
L3413	13:12	13:24	-11-	4.8	1M	Prod.	
L3414	13:25	13:36	-11-	4.8	1M	Prod.	
L3415	13:37	13:49	-11-	4.9	1M	Prod.	
L3416	13:49	14:01	-11-	4.8	1M	Prod.	
L3417	14:02	14:35	-11-	4.8	629 k	Prod. then Beam Tripped	
L3418	14:41	14:54	-11-	4.7	1M	Productive	✓
L3419	14:54	15:05	-11-	4.8	1M	Prod.	
L3420	15:06	15:18	-11-	4.6	1M	Prod.	
L3421	15:19	15:34	-11-	4.6	86 k	Rec. 5 error	
L3422	15:34	15:45	-11-	4.9	1M	Prod.	
L3423	15:46	15:58	-11-	4.7	1M	Prod.	

Comments:

## E04-007 Run sheet

Date : 4/19/08	Kinematic : G	Author: M. MIHOVILOVIC
Left Arm momentum (GeV/c) : 0.486 angle : 16.5	BigBite current (A) : 388.1 angle : 48°	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
L3424	15:58	16:09	loop 1 LH2	4.8	1M	Prod	
L3425	16:10	16:20	"	4.8	500K	TS11 died run crashed	✓
L3426	16:38	16:49	"	4.8	1M	Production	✓
L3427	16:50	17:02	"	4.8	1002155	Production	✓
L3428	17:03	17:14	"	4.8	1003808	Production	
L3429	17:15	17:26	"	"	1M	Production	✓
L3430	17:26	17:37	"	4.8	1003284	Production	✓
L3431	17:38	17:49	"	4.8	1005915	Production	
L3432	17:49	18:00	"	4.8	1004395	Production	✓
L3433	18:01	18:12	"	4.8	1003159	Production	✓
L3434	18:12	18:24	"	4.8	1004336	Production	
L3435	18:24	18:35	"	4.8	1003920	Production	✓

Comments:

last revision 05-April-2008

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E04-007 Run sheet

Date : 04/19/08	Kinematic : G	Author: A. Rakhman
Left Arm momentum (GeV/c) : 0.986 angle : 16.5	BigBite current (A) : 388.1 angle : 48°	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
L3436	18:35	18:46	loop1 LH2	4.8	1002555	Production	✓
L3437	18:47	18:58	"	4.8	1003674	Production	
L3438	18:59	19:09	"	4.8	1001891	Production	✓
L3439	19:10	19:21	"	4.7	1002695	Production	✓
L3440	19:22	19:41	"	4.7	823669	end early <del>Junk</del> (Beam trip)	
L3441	19:42	19:53	"	4.8	1004329	Production	✓
L3442	19:53		"	4.8	952933	ROC 5 crash	✓
L3443	20:16	20:28	"	4.8	1003709	Production	✓
<del>R20678</del>	<del>21:27</del>	<del>20:31</del>	<del>"</del>	<del>4.8</del>	<del>100114</del>	<del>Production</del>	<del>✓</del>
L3444	20:32	20:43	"	4.8	1006552	Production	
L3445	20:43	21:00	"	4.8	1004432	Production	
L3446	21:00	21:11	"	4.8	1002977	Production	✓

Comments:

## E04-007 Run sheet

Date : 04/19/08	Kinematic : G	Author: A. Rakhman
Left Arm momentum (GeV/c) : 0.986 angle : 16.5	BigBite current (A) : 388.1 angle : 48°	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
L3447	21:12	21:23	loop1 LH2	4.8	1005246	Production	
L3448	21:24	21:24	'	4.8	0	Junk (pressed wrong button)	
L3449	21:25	21:37	'	4.8	1002813	Production	✓
L3450	21:38	21:49	'	4.8	1004317	Production	✓
L3451	21:51	22:03	'	4.8	1005127	Production	✓
L3452	22:03	22:15	'	4.8	1003987	Production	
L3453	22:15	22:27	'	4.8	1003831	Production	✓
L3454	22:28	22:40	'	4.8	1003983	Production	✓
L3455	22:40	22:52	'	4.8	1001548	Production	✓
L3456	22:53	23:04	'	4.8	1003113	Production	
L3457	23:04	23:16	'	4.8	1005683	Production	✓
L3458	23:16	23:28	'	4.8	1005234	Production	✓

Comments:

E04-007 Run sheet

Date : 04/19/08	Kinematic : G	Author: A. Rakhman
Left Arm momentum (GeV/c) : 0.986 angle : 16.5	BigBite current (A) : 388.1 angle : 48°	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
L3459	23:28	23:40	loop LH2	4.8	1002145	Production	✓
L3460	23:41	23:52	,	4.8	1003362	Production	✓
L3461	23:53	00:04	,	4.8	1005831	Production	✓
L3462	00:05	00:16	,	4.8	1M		✓
3463	00:16	00:27	LH2	4.8	1M		✓
3464	00:28	00:40	LH2	4.8	1M		✓
3465	00:40	00:51	LH2	4.8	1M		✓
3466	00:51	01:02	LH2	4.8	1M		✓
3467	01:03	01:14	LH2	4.7	1M		✓
3468	01:14	01:26	LH2	4.7	1M		✓
3469	01:26	01:37	LH2	4.7	1M		✓
3470	01:38	01:49	LH2	4.6	1M		✓

Comments:

RHRS							
20699	00:17	06:25	LH2	4.8	638 k		

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The LaTeX file can be at: <http://hallaweb.jlab.org/experiment/E04-007/Documents/LaTeX/Run-Sheet.tex>

## E04-007 Run sheet

Date : 4/20/08	Kinematic : G	Author: Mitra Shabestari
Left Arm momentum (GeV/c): 0.986 angle : 16.5°	BigBite current (A): 388 angle : 48°	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
3471	01:49	02:01	LH2	4.6	1M		✓
3472	02:02	02:12	"	4.7	1M		✓
3473	02:13	02:23	"	4.7	1M		✓
3474	02:24	02:36	"	4.7	1M		✓
3475	02:36	02:48	"	4.7	1M		✓
3476	02:49	03:00	"	4.6	1M		✓
3477	03:01	03:12	"	4.6	1M		✓
3478	03:12	03:24	"	4.6	1M		✓
3479	03:24	03:35	"	4.6	1M		✓
3480	03:35	03:46	"	4.7	1M		✓
3481	03:46	03:58	"	4.7	1M		✓
3482	03:58	04:10	"	4.7	1M		✓

Comments:

last revision 05-April-2008

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## E04-007 Run sheet

Date : 4/20/2008	Kinematic : G	Author: Mitra Shabestari
Left Arm momentum (GeV/c) : 0.986 angle : 16.5°	BigBite current (A) : 388 angle : 48°	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
3483	04:10	04:22	LH2	4.7	1M		✓
3484	04:22	04:34	"	4.6	1M		✓
3485	04:34	04:45	"	4.7	1M		✓
3486	04:46	04:57	"	4.7	1M		✓
3487	04:57	05:09	"	4.7	1M		✓
3488	05:09	05:21	"	4.7	1M		✓
3489	05:21	05:33	"	4.7	1M		✓
3490	05:33	05:44	"	4.7	1M		✓
3491	05:44	05:56	"	4.6	1M		✓
3492	05:57	06:08	"	4.6	1M		✓
3493	06:09	06:21	"	4.7	1M		✓
3494	06:26	06:42	LHZ + <sub>Coll.</sub>	4.6	1M	Deadtime decreased from 15% to 7%	✓

Comments:

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## E04-007 Run sheet

Date : 4/20/2008	Kinematic : G	Author: M. Shabestari
Left Arm momentum (GeV/c) : 0.986 angle : 16.5°	BigBite current (A) : 388 angle : 48°	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
3495	06:43	07:01	LH2+ Coll.	4.6	1 M		✓
3496	07:02	07:16	"	4.5	1 M		✓
3497	07:17	07:34	"	4.5	1 M		✓
3498	07:34	07:48	"	4.5	1 M		
3499	07:49	08:03	"	4.6	1 M		
3500	08:03	08:17	"	4.6	1 M	Prod.	✓
L3501	08:18	08:33	-  -	4.5	1 M	Prod.	✓
L3502	08:34	08:48	-  -	4.6	1 M	Prod.	✓
L3503	08:49	09:03	-  -	4.5	1 M	Prod.	✓
L3504	09:04	09:17	-  -	4.7	1 M	Prod.	✓
L3505	09:18	09:33	-  -	4.7	1 M	Prod.	✓
L3506	09:34	09:48	-  -	4.9	1 M.	Prod.	✓

Comments:

RHRS					
20700	06:47	10:23	LH2+ Coll.	4.6	301 K

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## E04-007 Run sheet

Date : 4/20/2008	Kinematic : G, H	Author: M. MIHOVILOVIC
Left Arm momentum (GeV/c) : 0.986/1.194 angle : 16.5°/20.5°/1.105	BigBite current (A) : 388.1 angle : 48°	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
L 3507	09:49	10:03	LH2+ Coll.	4.6	1M	Prod.	✓
L 3508	10:04	10:19	-  -	4.8	1M	Prod.	
L 3509	10:32	10:49	6cm DUMMY	4.7	1M	Prod.	✓
R 20701	10:35	10:49	6cm DUMMY	4.7	24k	Prod.	
L 3510	11:19	11:58	Ta	4.7	503k	Calibration	✓
R 20702	11:21	11:58	Ta	4.7	36k	Calibration	
L 3511	12:23	12:35	C	4.8	507k	Calibration	✓
R 20703	12:23	12:35	C	4.8	13k	Calibration	
L 3512	12:50	12:57	loop1 LH2	4.8	600k	Calibration	
R 20704	12:50	12:57	loop1 LH2	4.8	12k	Calibration	
L 3513	12:58	13:13	-  -	3.5	1M	Calibration	✓
R 20705	12:58	13:14	-  -	3.5	25k	Calibration	

High 30x. Dead Time!

Comments:

ps 1 = 670000  
ps 2 = 115000  
ps 3 = 2000  
ps 4 = 53

ps 5 = 1  
ps 6 = 1  
ps 7 = 1600  
ps 8 = 100

ps 1 = 20k  
ps 2 = 116k  
ps 3 = 77  
ps 4 = 1  
ps 5 = 50  
ps 6 = 77  
ps 7 = 7700  
ps 8 = 100

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## E04-007 Run sheet

Date : 4/20/2008	Kinematic : H	Author: M. MIHOVILOVIC
Left Arm momentum (GeV/c) : 0.960 angle : 20.5°	BigBite current (A) : 388.1 angle : 48°	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu A$ )	# events	comments	replay?
L 3514	13:21	13:44	loop 1 LH2	4.6	1M	Prod.	✓
R 20706	13:21	15:46	-11-	4.6	249K	Prod.	
L 3515	13:45	14:10	-11-	4.6	1M	Prod.	✓
L 3516	14:11	14:34	-11-	4.6	1M	Prod.	✓
L 3517	14:35	14:57	-11-	4.7	1M	Prod.	✓
L 3518	14:58	15:20	-11-	4.6	1M	Prod.	
L 3519	15:21	15:45	-11-	4.8	1M	Prod.	
L 3520	15:47	16:10	-11-	4.5	1M	No problems	✓
R 20707	15:48	16:36	-11-	4.5	80K	End of Access.	
L 3521	16:10	16:32	loop 1 LH2	4.8	1M	No Problems	
L 3522	17:34	17:58	"	4.8	1M	No Problems	✓
R 20708	17:34	19:40	"	"			

Comments:

replay  
 ? set 3515 as golden run in histogram comparisons 18:15

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## E04-007 Run sheet

Date : 4/20/2008	Kinematic : H	Author: D. McNulty
Left Arm momentum (GeV/c) : 0.960 angle : 20.5°	BigBite current (A) : 388.1 angle : 48°	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
3523	17:59	18:23	loop1 LH <sub>2</sub>	4.8	1M	No Problems	
3524	18:23	18:46	"	"	1M	"	
3525	18:46	19:07	"	"	1M	"	
3526	19:07	19:31	"	"	1M	"	
3527	19:31	19:53	"	"	1M	"	✓
20709	19:40	21:19	"	"	217K		
3528	19:54	20:16	"	"	1M	No Problems	
3529	20:16	20:41	"	"	1M	"	
3530	20:41	21:06	"	"	1M	"	✓
3531	21:06	21:07	"	"	19k	ROC5 died. &	
3532	JUNK					BB HV tripped	
3533	JUNK						

Comments:

last revision 05-April-2008

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## E04-007 Run sheet

Date : 4/20/2008	Kinematic : H	Author: D. McNulty
Left Arm momentum (GeV/c) : 0.960 angle : 20.5°	BigBite current (A) : 388.1 angle : 48°	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
3534	JUNK					fixing	
3535	JUNK					ROC5	
3536	JUNK					and BB HV	
3537	JUNK					failures	
3538	21:42	22:04	loop 1 LH <sub>2</sub>	4.8	1M	No Problems	✓
20710	21:52	00:02	loop 1 LH <sub>2</sub>	4.8	220K	No Problems	
3539	22:04	22:28	"	"	1M	No Problems	
3540	22:28	22:52	"	"	1M	"	
3541	22:52	23:16	"	"	1M	"	
3542	23:16	23:40	"	"	1M	"	
3543	23:40	<del>0:08</del>	"	"	1M		
20711	00:03		"	"			

Comments:

last revision 05-April-2008

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## E04-007 Run sheet

Date : 4/21/08	Kinematic : H	Author: Khem
Left Arm momentum (GeV/c): 0.96 angle : 20.5°	BigBite current (A) : 388 angle : 48°	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
3544	0.08	00-31	LH <sub>2</sub>	4.6	1M		✓
3545	<del>00.39</del>	0.56	LH <sub>2</sub>	4.6	386k	HV trip	✓
3546	4.05	1.28	LH <sub>2</sub>	4.6	1M		✓
3547	1.28	1.53	"	4.7	1M		✓
R 20711	0.03	1.53	"	4.7	180k		
3548	1.54	2.18	"	4.6	1M		✓
3549	2.18	2.43	"	4.6	1M		✓
3550	2.43	3.10	"	4.6	1M		✓
3551	3.11	3.35	"	4.6	1M		✓
3552	3.36	4.01	"	4.6	1M		✓
3553	4.01	4.27	"	4.6	1M		✓
R 20712	1.54	4.01	"	4.6	212k		

Comments:

last revision 05-April-2008

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## E04-007 Run sheet

Date : 4/21/08	Kinematic : H	Author: Kheem
Left Arm momentum (GeV/c) : 0.96 angle : 20.5°	BigBite current (A) : 388 angle : 48°	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
3554	4.27	4.51	LH <sub>2</sub>	4.7	1M		
3555	4.51	5.14	LH <sub>2</sub>	4.6	1M		✓
3556	5.15	5.38	LH <sub>2</sub>	4.7	1M		
3557	5.39	6.06	LH <sub>2</sub>	4.7	1M		
R 20713	4.02	6.05	LH <sub>2</sub>	4.7	206K		
3558	6.06	6.29	LH <sub>2</sub>	4.6	1M		✓
3559	6.30	6.53	LH <sub>2</sub>	4.6	1M		
3560	6.53	7.17	LH <sub>2</sub>	4.6	1M		✓
3561	7.17	7.40	LH <sub>2</sub>	4.6	1M		✓
3562	7.40	8.02	LH <sub>2</sub>	4.6	1M		
R 20714	6.06	8.00	LH <sub>2</sub>	4.6	197K		
L3563	08:03	08:27	LH <sub>2</sub>	4.6	1M		✓

Comments:

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## E04-007 Run sheet

Date : 04/21/08	Kinematic : H	Author: M. MIHOVILOVIC
Left Arm momentum (GeV/c) : 0.960 angle : 20.5°	BigBite current (A) : 388.10 angle : 48°	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
R 20715	08:01	10:04	loop1 LH2	4.7	203k	Prod.	
L 3564	08:28	08:48	-11-	4.7	505k	ROC 5 problem	
L 3565	08:49	09:10	-11-	4.9	1M	At the beginning chamber 2 was off!!	✓
L 3566	08:12	09:37	-11-	4.7	1M	Prod.	✓
L 3567	09:37	10:04	-11-	4.9	1M	Prod.	✓
R 20716	10:06	12:12	-11-	4.5	224k	Prod.	
L 3568	10:06	10:33	-11-	4.6	1M	Prod.	✓
L 3569	10:33	10:37	-11-	4.6	0	ROC 3 problem!	
L 3570	10:44	11:07	-11-	4.6	1M	Prod.	✓
L 3571	11:08	11:12	-11-	5.0	48k	Raster check	
L 3572	11:13	11:18	-11-	4.6	188k	Raster check	
L 3573	11:19	11:23	-11-	4.6	151k	Raster check	

Comments:

last revision 05-April-2008

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E04-007 Run sheet

Date : 04/21/08	Kinematic : H	Author: M. MIHOVILOVIC
Left Arm momentum (GeV/c) : 0.960 angle : 20.5°	BigBite current (A) : 388.1 angle : 48°	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
L 3574	11:24	11:41	loop1 LH2	6.6	1M	Prod.	✓
L 3575	11:42	11:57	-  -	6.7	1M	Prod.	
L 3576	11:57	12:12	-  -	6.6	861k	Prod.	
L 3577	12:21	12:44	-  -	5.2	1M	Prod.	✓
R 20717	12:21	14:01	-  -	5.2	184k	! Raster is On Prod.	
L 3578	12:45	13:02	-  -	5.4	1M	Prod.	
L 3579	13:03	13:22	-  -	5.4	1M	Prod.	
L 3580	13:23	13:40	-  -	5.4	1M	Prod.	✓
L 3581	13:43	14:01	-  -	5.3	1M	Prod.	
L 3582	14:04	14:33	-  -	3.8	1M	Prod.	✓
R 20718	14:05	14:54	-  -	3.8	77k	Prod.	
L 3583	14:34	14:54	-  -	3.9	616k	Prod.	✓

Comments:

RF problem! Beam  
went off!

E04-007 Run sheet

Date : 04/21/08	Kinematic : H	Author: M. MIHOVILOVIC / NORUM
Left Arm momentum (GeV/c) : 0.960 angle : 20.5°	BigBite current (A) : 388.1 angle : 48°	Right Arm momentum (GeV/c) 0.4596 angle 105°

NORUM

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
L3584	15:29	15:52	loop 1 LH2	4.8	1M		✓
R20719	15:29	15:52	-  -	4.8	39K		
L3585	16:00	16:15	6 cm Dummy	4.9	350 K	ROCH Failed	✓
R20720	16:00	16:15	-  -	4.9	23 <del>350</del> K	"	
L3586	16:20	16:36	"	"	373 K	Prescales changed. <del>Lg. Chg. Asym.</del>	✓
R20721	16:20	16:36	"	"	23 K		
L3587	16:38	17:10	"	"	1M	Lg. Chg. Asym.	✓
R20722	16:48	17:11	"	"	38 K	Lg. Chg. Asym.	
L3588	18:25	18:59	"	"	1M	Remove Chg Asym Raster o Pt.	
R20723	18:25	18:59	"	"	53 K	"	

Comments:  
Spectrometer move.

## E04-007 Run sheet

Date : 04/21/08	Kinematic : I	Author: B. Norum
Left Arm momentum (GeV/c) : 1.194 angle : 20.5	BigBite current (A) : 390 set angle : 43.5	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
L3589	20:07	20:54	Ta	4	545k	PS3 too high → 10	
R20724	20:07	20:54	Ta	4	44k	⊕	
L3590	21:00	21:09	C	5	110k	<del>PS3 → 1</del> PS3 = 10, too high	
L3591	21:11	21:32	C	5	1M	PS3 = 1 <sup>0125%</sup>	
R20725	21:00	21:32	C	5	32k		
L3592	21:45	<del>21:47</del>	H <sub>2</sub> Loop1	4	291k	Trig Rate 3K DT ~55%	JUNK
R20726	21:45	<del>22:03</del>	"	4	<del>190k</del>	<del>⊕</del>	
L3593	<del>21:47</del>	22:03	"	<del>4</del>	1M	<del>Production!</del> Elastic	
L3594	22:15	22:35	"	5	1M	Production!	✓
L3595	22:36	22:56	"	5	1M	"	
L3596	22:57	23:17	"	"	1M	"	
L3597	23:18	23:38	"	5	1M	"	

LHRS  
p=0.960

Comments:

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## E04-007 Run sheet

Date : 04/21/08	Kinematic : I	Author: B Norum
Left Arm momentum (GeV/c) : 0.960 angle : 20.5	BigBite current (A) : 390 angle : 43.5°	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
L3598	23:40	0.02	H <sub>2</sub> loop <sup>d</sup>	5	1M	✓	
R20727	23:40	1.57	"	5	<del>1M</del> 238K		
3599	0.03	0.23	"	5	1M		
3600	0.24	0.43	"	5	1M		
3601	0.43	1.01	"	5	1M		
3602	1.02	1.20	"	5	1M	✓	
3603	1.21	1.39	"	5	1M		
3604	1.39	1.57	"	5	1M	✓	
3605	1.57	2.15	"	5	1M		
3606	2.16		"	5	432K	ROE 5 reboot	
3607	2.32	2.47	"	5	778K	HV trip	
3608	2.54	3.11	"	5	1M		

Comments:

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## E04-007 Run sheet

Date : 04/22/08	Kinematic : I	Author: Khem
Left Arm momentum (GeV/c) : 0.960 angle : 20.5	BigBite current (A) : 390 angle : 43.5°	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
3609	3.12	3.30	H <sub>2</sub> lamp	5	1M		
3610	3.30	3.48	"	4.9	1M		✓
3611	3.49	4.07	"	4.9	1M		
3612	4.08	4.28	"	4.8	1M		✓
R 20728	1.58	4.13	"	4.8	239K		
3613	4.29	4.47	"	4.8	1M	End of run <del>3613</del> 9 appear* to be 3614.	✓
3614	4.48	5.06	"	4.9	1M		
3615	5.07	5.24	"	"	1M		
3616	5.25	5.43	"	"	1M		
R 20729	4.14	5.44	"	"	<del>156K</del>		
3617	5.44	6.07	"	"	1M		
3618	6.08	6.26	"	"	1M		

Comments:

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## E04-007 Run sheet

Date : 04/22/08	Kinematic : I	Author: Khem
Left Arm momentum (GeV/c) : 0.96 angle : 20.5°	BigBite current (A) : 390 angle : 43.5°	Right Arm momentum (GeV/c) 0.4596 angle 107°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
3619	6.26	6.46	H <sub>2</sub> loop 1	5	1M		
3620	6.46	7.05	"	5	1M		
3621	7.05	7.23	"	5	1M		
3622	7.23	7.41	"	5	1M		
R 20730	5.44	7.42	"	5	203K		
3623	7.41	8.00	"	"	1M		✓
3624	8.01	8.08	"	"	263K	HV trip	
3625	8.17	8.31	"	"	560920	FSD TRIP	✓
3626	14.28	14.31	"	5	70963	TRIP	
3627	14.33	14.39	"	5	284417	TRIP	
3628	14.41	15.03	"	"	1M		
36289	15.04	15.28	"	"	1M		

Comments: P<sub>1</sub> 900v, P<sub>2</sub> 1500v, P<sub>3</sub> 830 P<sub>4</sub> 20 P<sub>5</sub> 1 P<sub>6</sub> 1  
P<sub>7</sub> 650 P<sub>8</sub> 10v

## E04-007 Run sheet

Date : <i>04/22/08</i>	Kinematic : <i>E</i>	Author: <i>Thoraxo</i>
Left Arm momentum (GeV/c) : <i>0.960</i> angle : <i>20.5</i>	BigBite current (A) : <i>390A</i> angle : <i>43.5</i>	Right Arm momentum (GeV/c) <i>0.4596</i> angle <i>105</i>

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
<i>3630</i>	<i>15:29</i>	<i>15:47</i>	<i>H<sub>2</sub> 10p1</i>	<i>5</i>	<i>1M</i>		
<i>3631</i>	<i>15:47</i>	<i>16:05</i>	<i>"</i>	<i>"</i>	<i>1M</i>		
<i>3632</i>	<i>16:09</i>	<i>16:27</i>	<i>"</i>	<i>"</i>	<i>1M</i>		
<i>3633</i>	<i>16:48</i>	<i>16:47</i>	<i>"</i>	<i>"</i>	<i>1M</i>		
<i>3634</i>	<i>16:47</i>	<i>17:10</i>	<i>"</i>	<i>"</i>	<i>1M</i>		
<i>3635</i>	<i>17:11</i>	<i>17:34</i>	<i>"</i>	<i>"</i>	<i>1M</i>		
<i>20732</i>	<i>14:29</i>	<i>17:15</i>	<i>"</i>	<i>"</i>	<i>277225</i>		
<i>3636</i>	<i>17:34</i>	<i>17:54</i>	<i>"</i>	<i>"</i>	<i>1M</i>		
<i>3637</i>	<i>17:54</i>	<i>18:15</i>	<i>"</i>	<i>"</i>	<i>1M</i>		
<i>3638</i>	<i>18:15</i>	<i>18:33</i>	<i>"</i>	<i>"</i>	<i>1M</i>		
<i>3639</i>	<i>18:34</i>	<i>18:53</i>	<i>"</i>	<i>"</i>	<i>1M</i>		
<i>3640</i>	<i>18:54</i>	<i>19:19</i>	<i>"</i>	<i>"</i>	<i>1M</i>		

Comments:

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## E04-007 Run sheet

Date : 04/22/08	Kinematic : I	Author: Yi Zhang
Left Arm momentum (GeV/c) : 0.960 angle : 20.5	BigBite current (A) : 390 A angle : 43.5	Right Arm momentum (GeV/c) 0.4596 angle 10.5

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
3641	19:20	19:37	H <sub>2</sub> loop1	5 $\mu$ A	1M		
3642	19:38	19:56	"	"	1M		
3643	19:57	20:15	"	"	1M		
2746 <sup>33</sup> <del>274622</del>	17:16	19:58	"	"	274621		
2746 <sup>34</sup> <del>274622</del>	19:58	20:15	"	"	28576		
3644	20:37	21:21	Dummy	5 $\mu$ A	1M		
274635	20:37	22:22	Dummy	5 $\mu$ A	114563		
3645	22:22	<del>22:22</del>	Dummy	5 $\mu$ A	640k <del>Rec 5 dead</del>	<del>Rec 5</del> , Rec5 crashed -	
3646	22:46		H <sub>2</sub> loop1	5 $\mu$ A	1M		
3655	0.46		"	"	908R	After Hall access HV trip	✓
3656	1.17	1.41	"	"	1M	RO65 has active error condition message	
3657	1.41	2.01	"	"	1M		✓

Comments:

run 3656 - 3670  
T1 threshold 500

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## E04-007 Run sheet

Date : 04/23/08	Kinematic : I	Author: Khem
Left Arm momentum (GeV/c) : 0.96 angle : 20.7°	BigBite current (A) : 390 angle : 43.5°	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
3658	2.01	2.21	H <sub>2</sub> loop1	5	1M		✓
3659	2.21	2.39	"	"	1M		✓
3660	2.40	3.00	"	"	1M		✓
R 20738	0.98	2.51	"	4	345 k		
3661	3.00	3.19	"	"	1M		✓
3662	3.19	3.37	"	"	1M		✓
3663	3.38	3.57	"	"	1M		
3664	3.58	4.37	"	"	1M	← Rocs TDC active error do hardware	
3665	4.18	4.38	"	"	1M		✓
3666	4.39	4.59	"	"	1M		
R 20739	2.51	4.55	"	"	212 k		
3667	5.00	5.18	"	"	1M		
3668	5.18	5.37	"	"	1M		✓

Comments:

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E04-007 Run sheet

Date : 4/23/08	Kinematic : $\downarrow$	Author: Kherm
Left Arm momentum (GeV/c) : 0.96 angle : 20.5'	BigBite current (A) : 390 angle : 43.5'	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
3669	5.38	9.56	H <sub>2</sub> loop	5	1M		
3670	5.56	6.20	"	"	971K		✓
R 20740	4.55	6.21	"	"	143K	← set T1 threshold to 550	
<del>3671</del>			"	"			

Comments:

run 3656 - 3670  
T1 threshold 500

E04-007 Run sheet

Date : 4/23/2008	Kinematic : J	Author: Yi Qiang
Left Arm momentum (GeV/c) : 1.194 angle : 16.5	BigBite current (A) : 390 angle : 43.5	Right Arm momentum (GeV/c) 0.4596 angle 105

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
3671/20744	23:30	23:42	Ta	5	500k/11k	BB PS: 5600/16000/1/1/1 1/80/100	
3672/20742	23:48	23:58	C	5	500k/11k	BAPS: 16000/28000/7 1/1/2/600/100	
3673/20743	0:10	0:16	elastic H	5	500k	94800/158400/240/3 200/330/21500/100	✓
3674	0:16	0:33	same		500k		✓
3675	0:53		Hyd production	5	1M	keeping T5, T6 ps5=1, ps6=2	✓
3676	0	0:54	"	5	1M		✓
3677	0:54		"	5	1M	start R-HRS run 20744	✓
3678	1				1M		✓
3679					1M		✓
3680	01:17	01:39			1M		✓
3681	01:40				1M		✓
3682		2:03			1M		✓

start  
20744  
(R-HRS)

Comments:

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## E04-007 Run sheet

Date : 4/24/08	Kinematic : J	Author: R. Michael
Left Arm momentum (GeV/c) : 0.986 angle : 16.5	BigBite current (A) : 390 angle : 43.5	Right Arm momentum (GeV/c) 0.4596 angle 105

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
3683 *	02:03		LH2 6cm	5	317k	production stop to ...	✓
3684	2:07	2:18		5	1M	<del>stop to</del> adjust ps 4 to 55	✓
3685	2:18	2:30		5	1M		✓
3686	2:31	02:42		5	1M		✓
3687	2:43	02:48.54		5	1M		✓
3688	2:55	3:05		5	1M		✓
3689	3:05	3:21		5	1M		✓
3690	3:21	3:33		5	1M		✓
3691	3:33	3:44	↓	5	1M		✓
3692	3:44	3:56		5	1M		-
3693	3:57	4:08	↓	5	1M		-
3694	4:08	4:22	↓	5	1M		

Comments: \* Run 20744 continues

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## E04-007 Run sheet

Date : 4/24/08	Kinematic : J	Author: R. Michaels
Left Arm momentum (GeV/c) : 0.986 angle : 16.5	BigBite current (A) : 390 angle : 43.5	Right Arm momentum (GeV/c) 0.4596 angle 105

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
3695 *	04:20	4:30	LH2 6cm	5	1M	production	✓
3696	04:30	4:42	no collim		1M		✓
3697	04:42	04:54	↓		1M		✓
3698	04:54	5:08	↓		1M		✓
3699	5:08	5:22	↓		1M		✓
3700	5:22		↓	reduce to 4.4	1M	put p56 to 1 (it was 2)	✓
3701	5:35		↓	4.4	1M		✓
3702	5:47		↓		1M		✓
3703	5:59		↓		1M		✓
3704	6:11		↓		1M		✓
3705	6:23		↓		1M		✓
3706	6:34		↓	↓			✓

Comments: \* R-HRS run 20744 continues from 0:55

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## E04-007 Run sheet

Date : 4/24/08	Kinematic : J	Author: R. Michaels
Left Arm momentum (GeV/c) : 0.986 angle : 16.5	BigBite current (A) : 390 angle : 43.5	Right Arm momentum (GeV/c) 0.4596 angle 105

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
3707 *	6:44		LH2 6 cm (no collim)	4.4	1M	production	✓
3708	6:55	7:23 <sup>11</sup>		4.4	1M		✓
<del>3709</del> 307	7:23 <sup>11</sup>	7:23					✓
3710	7:23						✓
3711	7:35						✓
3712	7:46						✓
3713	7:57	8:07	" "	" "	1M	production	✓
3714	8:09	8:21	" "	" "	1M	"	✓
20744	0:55	8:22	" "	" "	741 K		
3715	Aborted since prescalo not changed						<del>✓</del>
3716	8:33	8:52	Dummy		1M	<del>Proton</del> Dummy	✓
20745	8:33	8:52	Dummy		29K	Dummy	

Comments: \* R-HRS run 20744 continues.

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E04-007 Run sheet

Date : 4/24/08	Kinematic : J	Author: B. Norum
Left Arm momentum (GeV/c) : 0.986 angle : 16.5	BigBite current (A) : 390 A angle : 43.5	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
L3717	9:01	9:18	H <sub>2</sub> Loop 1	4	1 M		✓
R20745	9:01	10:03	"	4	83 k	Beam lost - stop For Beam studies	
L3718	9:19	9:35	"	H3	1 M	Production	
L3719	9:35	9:48	"	"	1 M	Production	
L3720	9:48	10:03	"	"	0.44 M	Beam lost	
L3721	11:48	11:57	"	4.8	1 M	Production	
R20747	11:48	15:05	"	4.8	.325 M	"	
L3722	11:58	12:08		4.4	1 M	"	
L3723	12:08	12:19		4.4	1 M	"	
L3724	12:20	12:31		4.4	1 M	"	
L3725	12:31	12:37		4.3	0.52 M	HV Failure in BigBite	
L3726	12:46	12:56		4.3	1 M		

Comments:

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## E04-007 Run sheet

Date: 4/24/08	Kinematic: J	Author: B. Norum
Left Arm momentum (GeV/c): 0.986 angle: 16.5	BigBite current (A): 390 A angle: 43.5	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
L3727	12:57	13:07	Loop 1 H <sub>2</sub>	4.2	1M	Production	
L3728	13:07	13:18	"	"	1M	Production	
L3729	13:18	13:29	"	4.2	1M	"	
L3730	13:30	13:40	"	4.2	1M	"	
L3731	13:41	13:51	"	4.2	1M	"	
L3732	13:51	14:03	"	4.2	1M	"	
L3733	14:03	14:13	"	4.2	1M		
L3734	14:14	14:25	"	4.2	1M		
L3735	14:26	14:36	"	"	"		✓
L3736	14:38	14:49	"	4.4	1M	Prescales checked. ✓	
L3737	14:49	15:00	"	"	1M		
L3738	15:17	15:33	Dummy	"	1M		

Comments:

$PS_1 = 90,000$      $PS_2 = 150,000$      $PS_3 = 2100$      $PS_4 = 55$      $PS_5 = 1$   
 $PS_6 = 1$      $PS_7 = 1800$      $PS_8 = 100$

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E04-007 Run sheet

Date : 4/24	Kinematic : J	Author: B. Norum
Left Arm momentum (GeV/c) : 0.986 angle : 16.5	BigBite current (A) : 390A angle : 43.5	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
R27048	15:17	15:34	Dummy	4.4	27k		
Refilled He bags			Loop 1 Hz				
3739			LH <sub>2</sub>	∅	32k	PS8 = 1 test of helicity signal	
3740			LH <sub>2</sub>	beam on after miscounts	80k	party day run 40835 running during this test run	Important
3741	16:20	16:29	loop LH <sub>2</sub>	4.4	1M	First 140k events had party DAQ running (whoops)	
R 27049	16:24	18:40	H <sub>2</sub> Loop 1	4.4	229k		
3742	16:30	16:40	LH <sub>2</sub>	4.4	1M		✓
3743	16:41	16:50	LH <sub>2</sub>	4.4	1M		✓
3744	16:51	17:02	LH <sub>2</sub>	4.4	1M		✓
3745	17:02	17:12	LH <sub>2</sub>	4.4	1M		✓
3746	17:13	17:24	LH <sub>2</sub>	4.4	1M		✓
3747	17:24	17:39	LH <sub>2</sub>	4.4	1M		✓

Comments:

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## E04-007 Run sheet

Date : 4/24	Kinematic : J	Author: <i>Travis</i>
Left Arm momentum (GeV/c) : 0.986 angle : 16.5	BigBite current (A) : 300 A angle : 43.5	Right Arm momentum (GeV/c) 0.4596 angle 105

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
3748	17.35	17.49	LH2	4.4	1M		/
3749	17.49	17.59	LH2	4.4	1M		/
3750	18.00	18.10	LH2	4.4	1M		-
3751	18.10	18.20	LH2	4.4	1M		-
3752	18.24	18.31	LH2	4.4	1M		✓
3753	18.32	18.42	LH2	4.4	1M		
3754	18.43	18.54	LH2	4.4	1M		
R 20750R	18.43	20.43	LH2 1R	4.4	20K <sup>190K</sup>		
3755	18.54	19.07	LH2	4.4	1M		
3756	19.07	19.18	LH2	4.4	1M		
3757	19.18	19.37	LH2	4.4	1M		
3758	19.37	19.48	LH2	4.4	1M		

Comments:

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## E04-007 Run sheet

Date : 04/24	Kinematic : J	Author: T. 2009
Left Arm momentum (GeV/c) : 0.986 angle : 16.5	BigBite current (A) : 390 A angle : 48.5	Right Arm momentum (GeV/c) 0.4556 angle 105

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
3759	19.49	20.00	LH <sub>2</sub>	4.2	1M		
3760	20.01	20.10	LH <sub>2</sub>	4.2	1M		
3761	20.10	20.21	LH <sub>2</sub>	4.2	1M		
3762	<del>22.22</del> 20.31	20.31	LH <sub>2</sub>	4.4	1M		
3763	20.31	20.43	LH <sub>2</sub>	4.4	1M		
3764	20.43	20.53	LH <sub>2</sub>	4.4	1M		
3765	20.53	21.04	LH <sub>2</sub>	4.4	1M		
R20751	20.45	22.40	LAPI H <sub>2</sub>	4.4	155K		
3766	21.04	21.14	LH <sub>2</sub>	4.4	1M		
3767	21.14	21.30	LH <sub>2</sub>	4.4	1M		
3768	21.30	21.42	LH <sub>2</sub>	4.4	1M		
3769	21.42	21.53	LH <sub>2</sub>	4.4	1M		

Comments:

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## E04-007 Run sheet

Date : 04/24	Kinematic : J	Author: Tada
Left Arm momentum (GeV/c) : 0.986 angle : 16.5	BigBite current (A) : 390A angle : 43.5	Right Arm momentum (GeV/c) 0.4596 angle 105

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
3770	21.53	22.10	LH2	4.4	096K	code down for 20min	
3771	22.36	22.47	LH2	4.4	1M		
3772	22.47	22.57	LH2	4.4	1M		
3773	22.57	23.06	LH2	4.4	1M		
3774	23.08	23.21	LH2	4.4	1M		
3775	23.21	23.31	LH2	4.4	1M		
R 20752	22.41	0.53	LOOP H2	4.4	222K		
3776	23.32	23.43	LH2	4.4	1M		
3777	23.43	23.54	LH2	4.4	1M		✓
3778	23.54	0.06	LH2	4.4	1M		✓
3779	0.08	0.18	"	"	1M		✓
3780	0.21		"	"	1M		

Comments:

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E04-007 Run sheet

Date : 04/25	Kinematic : J	Author: Khem
Left Arm momentum (GeV/c) : 0.986 angle : 16.5°	BigBite current (A) : 390 angle : 43.5°	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
3781	0.32		H <sub>2</sub> loop 1	464	1M		
3782			"	"		short run test prescale	
3783	0.44	0.55	"	"	1M		
R 20753	0.53	2.39	"	"	178K		
3784	0.55	1.06	"	"	1M	hit per plane shifted Beam? ✓ Beam is Bad	✓
3785	1.08	1.19	"	"	1M		✓
3786	1.19	1.29	"	"	1M		✓
3787	1.29	1.39	"	"	1M		✓
3788	1.39	1.50	"	"	1M	no	✓
3789	1.50	2.00	"	"	1M	no more hvc 5 warning TPC active error condition ✓	✓
3790	2.01	2.11	"	"	1M		
3791	2.11	2.21	"	"	1M		

Comments:

## E04-007 Run sheet

Date : 4/25	Kinematic : J	Author: Khem
Left Arm momentum (GeV/c) : 0.986 angle : 16.5°	BigBite current (A) : 390 angle : 43.5°	Right Arm momentum (GeV/c) 0.4596 angle 107°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
3792	2.21	2.32	Loop <sup>1</sup> H <sub>2</sub>	4.4	1M		
3793	2.33	2.42	"	"	1M		
3794	2.42	2.53	"	"	1M		/
3795	2.54	3.04	"	"	1M	beam spot is big	J
3796	3.04	3.15	"	"	1M		
3797	3.16	3.26	"	"	1M		
3798	3.26	3.36	"	"	1M		
3799	3.37	3.47	"	"	1M		
3800	3.48	3.59	"	"	1M		/
3801	3.59	4.09	"	"	1M		J
3802	4.09	4.19	"	"	1M		
3803	4.19	4.30	"	"	1M		

Comments:

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## E04-007 Run sheet

Date : 4/25	Kinematic : J	Author: Khem
Left Arm momentum (GeV/c) : 0.986 angle : 16.5°	BigBite current (A) : 390 angle : 43.5°	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
3804	4.30	4.41	log 1 Hz	4.4	1M		✓
R 20754	2.39	4.34	"	4.4	192K		
3805	4.41	4.51	"	"	1M		✓
3806	4.52	5.03	"	"	1M		
R 20755	4.34	5.00	"	"	42K		
3807	5.03	5.13	"	"	1M		
3808	5.14	5.23	"	"	1M		
3809	5.24	5.34	"	"	1M		
3810	5.35	5.45	"	"	1M		/
3811	5.46	5.56	"	"	1M		/
3812	5.56	6.07	"	"	1M		
3813	6.08	6.17	"	"	1M		✓

Comments:

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E04-007 Run sheet

Date : 4/25	Kinematic : 5	Author: Khem
Left Arm momentum (GeV/c) : 0.986 angle : 16.5°	BigBite current (A) : 390 angle : 43.5°	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number Left/Right	start time (hh:mm)	stop time (hh:mm)	target	beam ( $\mu$ A)	# events	comments	replay?
3814	6.18	06:28	loop 1 Hz	4.4	1M		/
3815	6.29	6.39	"	"	1M		
3816	6.39	6.50	"	"	1M		/
R 20756	5.01	6.51	"	"	184K		
3817	6.50	7.06	"	"	1M		/
3818	7.06	7.19	"	"	1M		
3819	7.20	7.30	"	"	1M		
3820	7.31	7.41	"	"	1M		
3821	7.41	7.52	"	"	1M		
3822	7.52	8.02	"	"	1M		/
3823		8.13	"	"	1M		
3824	8.14	8.20	"	"	620K		/

R 20757 6.51 8.20 " " 142K  
Comments:

E04-007 Run sheet

Date : 4/25	Kinematic : K	Author: Khem/Lindgren
Left Arm momentum (GeV/c) : 1194 angle : 14.5°	BigBite current (A) : 390 angle : 43.5°	Right Arm momentum (GeV/c) 0.4596 angle 105°

J  
K  
↓

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
3825	8:30	8:47	Dummy	4.4	1M		
3826	9:15	9:20	Ta	3	262K	START RUN 20759 RHRS 9:16	
3827	9:21		Ta	3	~525K	change prescale (they are fixed) set	
3828	09:43	09:45	C	3	~256K	Adjust prescale factors	✓
3829	09:46	10:04	C	3	~924K	Good settings	✓
3830	10:16	10:16	LH2	3	~951K	Cal. Prescales	
3831	10:21	10:31	LH2	3	1M	Good settings	
3832	10:40	10:42	LH2	3	~27K	RHRS End Run 20759 changed field to 0.999 Cal. Prescales	
3833	10:42	10:53	LH2	3	1M	3, 4, 8 prescales bad	✓
3834	10:53	11:17	LH2	3	1M	3, 4, 8 prescales bad beam down	
3835	11:19	11:30	LH2	3	1M	Good Run	✓
3836	11:31	11:42	LH2	3	1M	Good Run	✓

Comments:

RHRS RUN 20760 start 10:43

## E04-007 Run sheet

Date : 4/25	Kinematic : K	Author: Mercado/Lindgren
Left Arm momentum (GeV/c) : 0.797 angle : 14.5°	BigBite current (A) : 390 angle : 43.5°	Right Arm momentum (GeV/c) 0.4596 angle 105°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
3837	11:43	11:54	LH2	3	1M	Good Run	✓
3838	11:55	12:06	LH2	3	1M	Good Run	✓
3839	12:06	12:18	LH2	3	1M	Good Run	
3840	12:19	12:34	LH2	3	1M	Good Run	
3841	12:35	12:45	LH2	3	1M	Good Run	
3842	12:46	12:48	LH2	3	1M	Good Run	
3843	12:58	13:09	LH2	3	1M	Good Run	
3844	13:13	13:22	LH2	3	~ 747K	Good Run	
3845	13:23	13:25	LH2	3.5	~ 196K	Cal. Prescales	✓
3846	13:26	13:37	LH2	3.5	1M	<del>Prescales</del> Prescales from B4	✓
3847	13:37	13:48	LH2	3.5	1M	Prescales from B4	✓
3848	13:48	13:57	LH2	3.5	1M	Good Run	✓

## Comments:

RITRS Run 20760 end 13:23 219K evs  
20761 start 13:24 → beam up to 3.9  $\mu$ A

E04-007 Run sheet

Date :	4/25	Kinematic :	K	Author:	Mercedes/Undgren
Left Arm momentum (GeV/c) :	0.997	BigBite current (A) :	390	Right Arm momentum (GeV/c)	0.4996
angle :	14.5	angle :	43.5°	angle	65°

Run number	start time	stop time	target	beam	# events	comments	replay?
Left/Right	(hh:mm)	(hh:mm)		( $\mu$ A)			
3849	13:58	14:07	LH2	3.5	1M	Good Run	✓
3850	14:08	14:17	LH2	3.5	1M	Good Run	
3851	14:19	14:20	LH2	3.9	~82 K	Precede Cal.	
3852	14:21	14:21	LH2	3.9	~53 K	Precede Cal.	
3853	14:22	14:32	LH2	3.9	1M	Good Run	
3854	14:32	14:42	LH2	3.9	1M	" "	✓
3855	14:42	14:52	LH2	3.9	1M	" "	
3856	14:52	14:59	LH2	4.0	1M	" "	
3857	15:00	15:08	LH2	4.0	1M	" "	
3858	15:09	15:17	LH2	4.0	1M	" "	
3859	15:18	15:26	LH2	4.0	1M	" "	
3860	15:26	15:35	LH2	4.0	1M	" "	

Comments:

stop  
14:33  
start  
14:34

EVENTS  
0.104M

RHRS Run 20761  
RHRS Run 20762

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