

# RIGHT-ARM ONLY on this page: $A_x$ , $A_z$ Production Run Sheet

Date: 5-27-2009	Author: <i>Selma Fuller / Brad Schreyer</i>
Beam Energy: 2.425 GeV	Using Pol $^3\text{He}$ Cell: <input checked="" type="radio"/> N, Long, <input checked="" type="radio"/> (ran) or Vertical
RHRS	BigBite
Momentum (GeV/c): 2.175      Polarity: "-"	Current (A): 515      Polarity: Positive
Angle: 18.0      Sieve Plate: IN or <input checked="" type="radio"/> (OUT) ?	Angle: 82.0

Run Number	Start Time	Stop Time	Target	Beam ( $\mu\text{A}$ )	Number of Events	Dead Time	Comments	Replay Ok?
21706	04:52	05:21	$^3\text{He}$	10	2.99n	12		✓
21707	05:21	05:51	$^3\text{He}$	10	2.99n	12		✓
21708	05:51	06:25	$^3\text{He}$	10	2.99n	11		✓
21709	06:27	06:58	$^3\text{He}$	12	3.7n	13		✓
21710	06:59	07:31	$^3\text{He}$	12	3.7n	13		✓
21711	07:32	08:07	$^3\text{He}$	12	3.7M	13		✓
21712	08:09	08:46	$^3\text{He}$	12	3.67M	13		✓
21713	08:46	09:26	$^3\text{He}$	12	3.7M	13		✓
21714	09:36	10:13	$\text{H}_2$	12	3.7M	11	$\text{H}_2$ reference Cell	✓
21715	10:21	10:34	$\text{N}_2$	12	1.3m	12	Left Side DAA at 96% deadtime	
21716	10:38	11:18	$\text{N}_2$	12	4.08M	12		✓
21717	11:25	12:07	$\text{He}^3$	10	3.99M	12		

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### More Comments:

End 21715 early in left HRS DAA Reboot

# LEFT-ARM ONLY on this page: $A_x$ , $A_z$ Production Run Sheet

Date: 5/27/09	Author: Brad Schoenrock / John Watson
Beam Energy: <del>2.4</del> 2.5 GeV	Using Pol $^3\text{He}$ Cell: (Y)N, Long, (Tran) or Vertical
LHRS	BigBite
Momentum (GeV/c): 2.277	Polarity: "-" Current (A): 515
Angle: 1405	Sieve Plate: IN or OUT? Angle: 82°

Run Number	Start Time	Stop Time	Target	Beam ( $\mu\text{A}$ )	Number of Events	Dead Time	Comments	Replay Ok?
2818	12:10	12:46	$^3\text{He}$	11	5M	4		✓
*							Moller Runs	
2819							junk <del>at</del> DAQ failed	
2820	17:38	17:41	BeO				Spot ++	
2821			$^3\text{He}$	2			2x2 Raster	
2822	17:54	17:57	$^3\text{He}$	2	77K		6x6 Raster	
2823	17:59	18:00	$^3\text{He}$	2	44K		4x4 Raster	
2824	18:03	18:37	$^3\text{He}$	16	5M	4	Beginning Producing	✓
2825	18:38	19:13	$^3\text{He}$	11	5M	4		✓
<del>2826</del> 2826	19:14	19:49	$^3\text{He}$	11	5M	4		✓
2827	19:51	20:26	$^3\text{He}$	11	5M	5		✓
2828	20:27	20:59	$^3\text{He}$	11	5M	4		✓

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More Comments:

\* Moller Runs

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Date: 5/27/09	Author: Brad Schoenrock / John Watson
Beam Energy: 2.427 GeV	Using Pol <sup>3</sup> He Cell: Y/N, Long, Tran, or Vertical
RHRS	BigBite
Momentum (GeV/c): 2.175	Polarity: "-" Current (A): 515
Angle: 18°	Sieve Plate: IN or OUT? Angle: 82

Run Number	Start Time	Stop Time	Target	Beam (μA)	Number of Events	Dead Time	Comments	Replay Ok?
21718	1210	1246	<sup>3</sup> He	11	3.98M	12		✓
*							Moller Runs	
21719								
21720								
21721			<sup>3</sup> He				2x2 raster	
21722			<sup>3</sup> He					
21723			<sup>3</sup> He				4x4 raster	
21724	1803	1837	<sup>3</sup> He	11	3.91M	12	Beginning Production	#✓
21725	1838	1913	<sup>3</sup> He	11	3.71M	12		✓
21726	1914	1950	<sup>3</sup> He	11	3.71M	12		#✓
21727	1951	2027	<sup>3</sup> He	11	3.71M	12		✓
21728	2027	2000	<sup>3</sup> He	11	3.70M	12		✓

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### More Comments:

\* Moller runs

# Noticed that several TDCs on NI-NS have increased by factors of 2-5 or so. Otherwise replay is okay

# NI-NS TDCs fine now

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Beam Energy: 2.425 GeV	Using Pol $^3\text{He}$ Cell: <input checked="" type="radio"/> Y/N, Long, <input checked="" type="radio"/> Tran, or Vertical
LHRS	BigBite
Momentum (GeV/c): 2.277 Polarity: "-"	Current (A): 515 Polarity: Positive
Angle: 14.5° Sieve Plate: IN or <input checked="" type="radio"/> OUT	Angle: 82°

Run Number	Start Time	Stop Time	Target	Beam ( $\mu\text{A}$ )	Number of Events	Dead Time	Comments	Replay Ok?
2829	21:01	21:38	$^3\vec{\text{He}}$	11	5M	5		✓
2830	21:39	22:23	$^3\vec{\text{He}}$	11	5M	4		✓
2831	22:24	22:58	$^3\vec{\text{He}}$	11	5M	5		✓
2832	22:57	23:39	$^3\vec{\text{He}}$	11	5M	5		<del>✓</del>
2833	23:40	00:18	$^3\vec{\text{He}}$	11	5M	4		✓
2834	00:20	01:20	$^3\vec{\text{He}}$	11	< 1M	5	Roc 5 crashed junk	✓
2835	01:24	2:01	$^3\vec{\text{He}}$	11	5M	4		✓
2836	2:02	2:36	$^3\vec{\text{He}}$	11	5M	4		✓
2837	2:38	3:14	$^3\vec{\text{He}}$	11	5M	5		✓
2838	3:16	3:50	$^3\vec{\text{He}}$	11	5M	5		✓
2839	3:52	4:25	$^3\vec{\text{He}}$	11	5M	5		✓
2840	4:26	4:58	$^3\vec{\text{He}}$	11	5M	4		✓

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Date: 5/27/2009	Author: John Watson
Beam Energy: 2.427 GeV	Using Pol $^3\text{He}$ Cell: <input checked="" type="radio"/> Y/N, Long, <input checked="" type="radio"/> Tran, or Vertical
RHRS Momentum (GeV/c): 2.175	BigBite Polarity: "-" Current (A): 515 Polarity: Positive
Angle: $18^\circ$	Sieve Plate: IN or <input checked="" type="radio"/> OUT? Angle: $82^\circ$

Run Number	Start Time	Stop Time	Target	Beam ( $\mu\text{A}$ )	Number of Events	Dead Time	Comments	Replay Ok?
21729	21:01	21:38	$^3\vec{\text{He}}$	11	5.72M	12		✓
21730	21:38	22:23	$^3\vec{\text{He}}$	11	3.72M	12		✓
21731	22:24	22:56	$^3\vec{\text{He}}$	11	3.72M	13		✓
21732	22:57	23:39	$^3\vec{\text{He}}$	11	3.69M	12		✓
21733	23:40	00:18	$^3\vec{\text{He}}$	11	3.7M	12		✓
21734	00:19	01:22	$^3\vec{\text{He}}$	11	6M	12	Roc 5 crashed see left arm	✓
21735	01:24	2:01	$^3\vec{\text{He}}$	11	3.8M	12		✓
21736	2:02	2:36	$^3\vec{\text{He}}$	11	3.5M	13		✓
21737	2:57	3:15	$^3\vec{\text{He}}$	11	3.5M	12		✓
21738	3:16	3:51	$^3\vec{\text{He}}$	11	3.6M	12		✓
21739	3:51	4:25	$^3\vec{\text{He}}$	11	3.7M	12		✓
21740	4:26	4:59	$^3\vec{\text{He}}$	11	3.8M	12		✓

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Date: 5/28/09	Author: Eric Jensen
Beam Energy: 2.427 GeV	Using Pol $^3\text{He}$ Cell: <input checked="" type="radio"/> N, Long, <input checked="" type="radio"/> Tran, or Vertical
LHRS	BigBite
Momentum (GeV/c): 2.277 Polarity: "-"	Current (A): 515 Polarity: Positive
Angle: $14.5^\circ$ Sieve Plate: IN or <input checked="" type="radio"/> OUT?	Angle: $82^\circ$

Run Number	Start Time	Stop Time	Target	Beam ( $\mu\text{A}$ )	Number of Events	Dead Time	Comments	Replay Ok?
2841	5:01	5:34	$^3\text{He}$	11	5M	5		✓
2842	5:36	6:21	$^3\text{He}$	11	5M	5		✓
2843	6:23	6:59	$^3\text{He}$	11	5M	4		✓
2844	7:01	7:40	$^3\text{He}$	11	5M	4	Some Cerentov APCs had high counts	✓
2845	7:43	8:29	$^3\text{He}$	11	5M	4		✓
2846	8:31	09:15	$^3\text{He}$	11	3.2M	4%	Run ok but stopped because beam off for awhile	n/a
2847	9:46	10:32	$^3\text{He}$	11	5M			✓
2848	10:33	11:15	$^3\text{He}$	11	5M	4%		
2849							Test DAQ	
2850							Test DAQ	
2871			Optics <del>Optics</del>				spot for optics	
2872			$^3\text{He}$				11 $^3\text{He}$	

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Date: 5/28/09	Author: Eric Jensen
Beam Energy: 2,427 GeV	Using Pol <sup>3</sup> He Cell: <input checked="" type="radio"/> N, Long <input checked="" type="radio"/> Tran, or Vertical
RHRS	BigBite
Momentum (GeV/c): 2.175	Polarity: "-" Current (A): 515
Angle: 18°	Sieve Plate: IN or <input checked="" type="radio"/> OUT? Angle: 82°
Polarity: Positive	

Run Number	Start Time	Stop Time	Target	Beam (μA)	Number of Events	Dead Time	Comments	Replay Ok?
21741	4:59	5:34	<sup>3</sup> He	11	3.6M	13		✓
21742	5:35	6:21	<sup>3</sup> He	11	3.7M	12		✓
21743	6:22	6:59	<sup>3</sup> He	11	3.7M	12		✓
21744	7:00	7:41	<sup>3</sup> He	11	3.7M	12		✓
21745	7:43	8:30	<sup>3</sup> He	11	3.8M	12		✓
<del>21746</del>	8:31	8:15	<sup>3</sup> He	11	2.4M	12%	Run ok but stopped because beam was off for a while	n/a
21747	9:46	10:32	<sup>3</sup> He	11	3.7M			✓
21748	10:33	11:15	<sup>3</sup> He	11	3.7M	12%		
21749	11:20						Test DAQ	
11								
21752							spot t1 for optics	
21753							" 3He	

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Date: 5/28/2009	Author: Hyoung Kang
Beam Energy: 2.427 GeV	Using Pol $^3\text{He}$ Cell: <input checked="" type="checkbox"/> N, Long, <input checked="" type="checkbox"/> Tran, or Vertical
LHRS	BigBite
Momentum (GeV/c): 2.27      Polarity: "-"	Current (A): 518      Polarity: Positive
Angle: $14.5^\circ$ Sieve Plate: IN or <input checked="" type="checkbox"/> OUT?	Angle: $82^\circ$

Run Number	Start Time	Stop Time	Target	Beam ( $\mu\text{A}$ )	Number of Events	Dead Time	Comments	Replay Ok?
2874	16:50	17:28	$^3\vec{\text{He}}$	11	5M	4		✓
2875	17:32	18:13	$^3\vec{\text{He}}$	11	5M	4		✓
2876	18:16	18:49	$^3\vec{\text{He}}$	11	5M	5		✓
2877	18:50	19:34	$^3\vec{\text{He}}$	11	5M	5		✓
2878	19:34	20:08	$^3\vec{\text{He}}$	11	5M	4		✓
2879	20:09	20:45	$^3\vec{\text{He}}$	11	5M	4		✓
2880	20:46	21:17	$^3\vec{\text{He}}$	11	5M	4		✓
2881	21:19	21:51	$^3\vec{\text{He}}$	11	5M	4		✓
2882	21:52	22:28	$^3\vec{\text{He}}$	11	5M	4		✓
2883	22:28	23:03	$^3\vec{\text{He}}$	11	5M	4		✓
2884	23:04	23:40	$^3\vec{\text{He}}$	11	5M	4		✓
2885	23:41	00:24	$^3\vec{\text{He}}$	11		4		✓

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**More Comments:**



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Date: 5/28/2009	Author: Hoyoung Kang
Beam Energy: 2.427 GeV	Using Pol $^3\text{He}$ Cell: <input checked="" type="radio"/> N, Long, <input checked="" type="radio"/> Tran or Vertical
RHRS	BigBite
Momentum (GeV/c): 2.175      Polarity: "-"	Current (A): 518      Polarity: Positive
Angle: $18^\circ$ Sieve Plate: IN or <input checked="" type="radio"/> OUT?	Angle: $82^\circ$

Run Number	Start Time	Stop Time	Target	Beam ( $\mu\text{A}$ )	Number of Events	Dead Time	Comments	Replay Ok?
21755	16:49	17:29	$^3\vec{\text{He}}$	11	3.7M	12		✓
21756	17:31	18:13	$^3\vec{\text{He}}$	11	3.7M	12		✓
21757	18:15	18:49	$^3\vec{\text{He}}$	11	3.7M	12		✓
21758	18:49	19:34	$^3\vec{\text{He}}$	11	3.7M	13		✓
21759	19:34	20:08	$^3\vec{\text{He}}$	11	3.7M	12		✓
21760	20:09	20:45	$^3\vec{\text{He}}$	11	3.7M	12		✓
21761	20:45	21:17	$^3\vec{\text{He}}$	11	3.7M	13		✓
21762	21:19	21:51	$^3\vec{\text{He}}$	11	3.7M	13		✓
21763	21:51	22:28	$^3\vec{\text{He}}$	11	3.7M	13		✓
21764	22:28	23:03	$^3\vec{\text{He}}$	11	3.8M	12		✓
21765	23:03	23:41	$^3\vec{\text{He}}$	11	3.7M	13		✓
21766	23:41	00:24	$^3\vec{\text{He}}$	11	3.8M	12		✓

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**More Comments:**

# LEFT-ARM ONLY on this page: $A_x$ , $A_z$ Production Run Sheet

Date: 29 May 2009	Author: EIP		
Beam Energy: GeV	Using Pol $^3\text{He}$ Cell: <input checked="" type="radio"/> N, Long, <input checked="" type="radio"/> Tran, or Vertical		
LHRS	BigBite		
Momentum (GeV/c): 2.277	Polarity: "-"	Current (A): 0.18 A	Polarity: Positive
Angle: 14.5°	Sieve Plate: IN or OUT ?	Angle: 82°	

Run Number	Start Time	Stop Time	Target	Beam ( $\mu\text{A}$ )	Number of Events	Dead Time	Comments	Replay Ok?
2886	00:24	01:15	$^3\text{He}$	11 $\mu$	5M	4%		✓
2887	01:16	01:50	$^3\text{He}$	11 $\mu$	5M	4%		✓
2888	01:52	02:20	"	"	5M	8%		✓
2889	02:30	03:05	"	"	5M	"		✓
2890	03:05	03:39	"	"	5M	"		
2891	03:39	04:12	"	"		"		✓
2892	05:17	05:36	"	"		"		⊗
2893	05:37	06:25	"	"		"	Start after magnets cool	✓
2894	06:28	07:07	"	"	3.5M	"	Q1 off	

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More Comments:

⊗ only left arm / Right HRS - magnet are not read yet.