

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

Date: 5/25/2009	Author: John Watson / Salvatore Frullani
Beam Energy: 2.245 GeV	Using Pol $^3\text{He}$ Cell: <input checked="" type="radio"/> N, Long, <input checked="" type="radio"/> Trans or Vertical
RHRS	BigBite
Momentum (GeV/c): 2.2248	Polarity: "-" Current (A): 515
Angle: $16^\circ$	Sieve Plate: IN or <input checked="" type="radio"/> OUT Angle: $75^\circ$
	Polarity: Positive

Run Number	Start Time	Stop Time	Target	Beam ( $\mu\text{A}$ )	Number of Events	Dead Time	Comments	Replay Ok?
21657	19:39	20:14	$^3\text{He}$	10	4.30M	17		
21658	20:14	20:44	$^3\text{He}$	10	4.25M	17		✓
21659	20:45	-	$^3\text{He}$	10	-	-	Beam <sup>went</sup> off at start of run	
21660	20:57	21:26	$^3\text{He}$	10	4.22M	17		✓
21661	21:28	-	$^3\text{He}$	10	-	-	Beam off at start of run	
21662	21:53	-	$^3\text{He}$	10	-	-	Junk Run	
21663	22:24	22:51	$^3\text{He}$	10	4.27M			✓
21664	22:52	23:18	$^3\text{He}$	10	4.30M	17		✓
21665	23:20	23:49	$^3\text{He}$	10	4.27M	16		✓
21666	23:50	00:19	$^3\text{He}$	10	4.28M	16		✓
21667	00:19	00:46	$^3\text{He}$	10	4.27M	17		✓
21668	00:46	01:14	$^3\text{He}$	10	4.28	17		✓

↑  
JW  
SF  
↓

Please change to a new run sheet for a new setting or a new type of run on the Run Plan.  
More Comments:

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

Date: 5.26.2009	Author: Salvatore Frullone
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): 5.15 Polarity: Positive
Angle: $14.5^\circ$ Sieve Plate: IN or <input checked="" type="radio"/> OUT?	Angle: $75^\circ$

Run Number	Start Time	Stop Time	Target	Beam ( $\mu\text{A}$ )	Number of Events	Dead Time	Comments	Replay Ok?
2765	01:15	01:42	$^3\vec{\text{He}}$	10	4.07	6		<input checked="" type="checkbox"/>
2766	01:43	02:09	$^3\vec{\text{He}}$	10	4.07	6		<input checked="" type="checkbox"/>
2767	02:10	02:39	$^3\vec{\text{He}}$	10	4.07	7		<input checked="" type="checkbox"/>
2768	02:40	03:13	$^3\vec{\text{He}}$	10	4.07	6		<input checked="" type="checkbox"/>
2769	03:15	03:42	$^3\vec{\text{He}}$	10	4.07	7		<input checked="" type="checkbox"/>
2770	03:44	04:16	$^3\vec{\text{He}}$	10	4.07	6		<input checked="" type="checkbox"/>
2771	04:12	04:40	$^3\vec{\text{He}}$	10	4.07	7		<input checked="" type="checkbox"/>
2772	04:42	05:07	$^3\vec{\text{He}}$	10	4.07	7		<input checked="" type="checkbox"/>
2773	05:08	05:35	$^3\vec{\text{He}}$	10	4.07	7		<input checked="" type="checkbox"/>
2774	05:36	06:02	$^3\vec{\text{He}}$	10	4.07	6		<input checked="" type="checkbox"/>
2775	06:03	06:30	$^3\vec{\text{He}}$	10	4.07	6		<input checked="" type="checkbox"/>
2776	06:31	07:01	$^3\vec{\text{He}}$	10		6		<input checked="" type="checkbox"/>

Please change to a new run sheet for a new setting or a new type of run on the Run Plan.

More Comments:

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

Date: 5.26.2009	Author: <i>Selma Friebus</i>
Beam Energy: 2.425 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): 2.2248 Polarity: "-"	Current (A): 515 Polarity: Positive
Angle: 16° Sieve Plate: IN or <input checked="" type="radio"/> OUT?	Angle: 75°

Run Number	Start Time	Stop Time	Target	Beam ( $\mu\text{A}$ )	Number of Events	Dead Time	Comments	Replay Ok?
21669	01:15	01:43	$^3\text{He}$	10	4.30n	17		✓
21670	01:43	02:09	$^3\text{He}$	10	4.28n	17		✓
21671	02:10	02:39	$^3\text{He}$	10	4.28n	17		✓
21672	02:39	03:13	$^3\text{He}$	10	4.29n	16		✓
21673	03:14	03:43	$^3\text{He}$	10	4.28n	17	new target pol. 57.9% NMR	✓
21674	03:44	04:11	$^3\text{He}$	10	4.28n	16		✓
21675	04:11	04:41	$^3\text{He}$	10	4.29n	17		✓
21676	04:41	05:07	$^3\text{He}$	10	4.27n	16		✓
21677	05:08	05:35	$^3\text{He}$	10	4.28n	17		✓
21678	05:36	06:02	$^3\text{He}$	10	4.28n	17		✓
21679	06:03	06:30	$^3\text{He}$	10	4.27n	17		✓
21680	06:31	07:01	$^3\text{He}$	10	4.27n	17		✓

Please change to a new run sheet for a new setting or a new type of run on the Run Plan.

More Comments:

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

Date: 5.26.2009	Author: Salute Fullani / Brw Sch Oln...
Beam Energy: 2.485 GeV	Using Pol $^3\text{He}$ Cell: Y/N, Long, Tran, or Vertical
LHRS Momentum (GeV/c): 2.277 Angle: 14.5°	BigBite Current (A): 515 Angle: 75° Polarity: "-" Polarity: Positive
Sieve Plate: IN or <u>OUT</u> ?	

Run Number	Start Time	Stop Time	Target	Beam ( $\mu\text{A}$ )	Number of Events	Dead Time	Comments	Replay Ok?
2777	07:02	07:29	$^3\vec{\text{He}}$	10	4.07	6		V
2778	07:32	07:57	$^3\vec{\text{He}}$	10	4.07	7		✓
2779	07:58	08:26	$^3\vec{\text{He}}$	10	4 M	6		✓
2780	08:29	08:35	$^3\vec{\text{He}}$	10	771 K	7	Beam went down for beam studies	✓
2781	08:51	15:48	$^3\vec{\text{He}}$	0	2 M	20	COSMIC run	

Please change to a new run sheet for a new setting or a new type of run on the Run Plan.  
 More Comments:

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

Date: 5.26.2009	Author: <sup>Grav</sup> Sabine Furlan / Schoenrock
Beam Energy: 2.425 GeV	Using Pol $^3\text{He}$ Cell: Y/N, Long, Tran, or Vertical
RHRS	BigBite
Momentum (GeV/c): 2.2248 Polarity: "-"	Current (A): 515 Polarity: Positive
Angle: $-16^\circ$ Sieve Plate: IN or <u>OUT</u> ?	Angle: $75^\circ$

Run Number	Start Time	Stop Time	Target	Beam ( $\mu\text{A}$ )	Number of Events	Dead Time	Comments	Replay Ok?
21681	07:02	07:30	$^3\text{He}$	10	4.29 M	17		✓
21682	07:31	07:57	$^3\text{He}$	10	4.27 M	17	top pol = 55.8	✓
21683	07:58	08:26	$^3\text{He}$	10	4.28 M	16		✓
21684	08:29	08:35	$^3\text{He}$	10	796 K	17	Beam down for studies	✓
21685	08:51	18:48	$^3\text{He}$	0	659 K	7	cosmic / changes were made during run	

Please change to a new run sheet for a new setting or a new type of run on the Run Plan.

More Comments:

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

Date: 5/26/2009	Author:
Beam Energy: 2.425 GeV	Using Pol $^3\text{He}$ Cell: <u>Y</u> N, Long, <u>Tran</u> or Vertical
LHRS	BigBite
Momentum (GeV/c): 2.277	Polarity: "-" Current (A): 515
Angle: 14.5°	Sieve Plate: IN or <u>OUT</u> ? Angle: 82°

Run Number	Start Time	Stop Time	Target	Beam ( $\mu\text{A}$ )	Number of Events	Dead Time	Comments	Replay Ok?
2782	16:03	16:12	$^3\vec{\text{He}}$				Checkout Run	
2783	18:04	18:08	BeO	2	751k	38	Beam Optics Check	
2784	18:14	18:26	$^3\vec{\text{He}}$	2	1.27 M	12	(2x2 raster) Trigger Check Mode	
2785	18:29	18:30	$^3\vec{\text{He}}$	2	158k	12	Trigger Check 6x6 raster	
2786	18:35	18:38	$^3\vec{\text{He}}$	5.5	747k	32	Trigger Check 4x4 raster	
2787*	18:43	19:11	$^3\vec{\text{He}}$	10		3	Start of Production	
2788	19:17	19:32	$^3\vec{\text{He}}$	10		3	prod run & analyze Right HRS T50	
2789	19:37	20:04	$^3\vec{\text{He}}$	10	3.3M	3	No beam for first few minutes	
2790	20:06		$^3\vec{\text{He}}$	10		4	Good left arm data	
2791			$^3\vec{\text{He}}$	10			Good left ARM Data	
2792	21:14	22:00			No Beam		Just of T50	
2793	22:02	22:38	$^3\vec{\text{He}}$	10	4M	3		✓

Please change to a new run sheet for a new setting or a new type of run on the Run Plan.

More Comments:

\* Trigger supervisor died during run 2787

Loose T1 cable fixed

# RIGHT-ARM ONLY on this page: A<sub>x</sub>, A<sub>z</sub> Production Run Sheet

Date: 5/26/2009	Author: John Wilson
Beam Energy: 2.425 GeV	Using Pol <sup>3</sup> He Cell: <input checked="" type="radio"/> N, <input checked="" type="radio"/> Long, <input type="radio"/> Tran, or Vertical
RHRS	BigBite
Momentum (GeV/c): 2.175	Polarity: "-"
Angle: 18°	Sieve Plate: IN or <input checked="" type="radio"/> OUT
	Current (A): 515
	Angle: 82°
	Polarity: Positive

Run Number	Start Time	Stop Time	Target	Beam (μA)	Number of Events	Dead Time	Comments	Replay Ok?
21686	16:03	16:12	<sup>3</sup> He				Checkout Run	
<del>21687</del>								
21687*	18:43	19:11	<sup>3</sup> He	10		4	Start of Production	
21688	19:16	19:32	<sup>3</sup> He	10		5	End Run early in Right HRS TSO	
21689	19:37	20:04	<sup>3</sup> He	10	701K	4	No beam for first few minutes	
21690	20:06		<sup>3</sup> He	10		11		
21691	_____						Jun 12	
21692	21:13	22:00	No Beam				Test as Boot TSO	
21693	22:02	22:39	<sup>3</sup> He	10	3.24M	11		<input checked="" type="checkbox"/>

Please change to a new run sheet for a new setting or a new type of run on the Run Plan.

More Comments:

\* LHRS had problems during this run (21687)

Loose TT Cable fixed

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

Date: 5/26/2009	Author: John Watson
Beam Energy: 2.425 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
Angle: 14.50	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?
2794	22:42	23:12	$^3\vec{\text{He}}$	10	4M	3		✓
2795	23:13	23:48	$^3\vec{\text{He}}$	10	4M	3		✓
2796	23:49	00:20	$^3\vec{\text{He}}$	10	4M	3		✓
2797	00:22	00:48	$^3\vec{\text{He}}$	10	4M	3		✓
2798	00:51	01:21	$^3\vec{\text{He}}$	10	4M	2		✓
2799	01:22	01:52	$^3\vec{\text{He}}$	10	4M	3		✓
2800	01:53	02:20	$^3\vec{\text{He}}$	10	4M	3		✓
2801	02:22	02:50	$^3\vec{\text{He}}$	10	4M	4		✓
2802	02:51	03:21	$^3\vec{\text{He}}$	10	4M	3		✓
2803	03:22	03:52	$^3\vec{\text{He}}$	10	4M	3		✓
2804	03:53	04:21	$^3\vec{\text{He}}$	10	4M	3		✓
2805	04:22	04:51	$^3\vec{\text{He}}$	10	4M	4		✓

Please change to a new run sheet for a new setting or a new type of run on the Run Plan.

More Comments:



# RIGHT-ARM ONLY on this page: A<sub>x</sub>, A<sub>z</sub> Production Run Sheet

Date: 5/26/2009	Author: John Watson
Beam Energy: 2.425 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 Polarity: Positive
Angle: 180 Sieve Plate: IN or <input checked="" type="radio"/> OUT	Angle: 82°

Run Number	Start Time	Stop Time	Target	Beam (μA)	Number of Events	Dead Time	Comments	Replay Ok?
21694	22:42	23:12	<sup>3</sup> He	10	3.24 M	12		✓
21695	23:13	23:48	<sup>3</sup> He	10	3.02 M	12		✓
21696	23:49	00:20	<sup>3</sup> He	10	3.0 M	11	NTR = 58.6	✓
21697	00:22	00:50	<sup>3</sup> He	10	3.0 n	11		✓
21698	00:50	01:21	<sup>3</sup> He	10	3.0 n	12		✓
21699	01:22	01:52	<sup>3</sup> He	10	3.0 n	11		✓
21700	01:52	02:21	<sup>3</sup> He	10	3.0 n	11		✓
21701	02:21	02:50	<sup>3</sup> He	10	2.99 n	11		✓
21702	02:51	03:21	<sup>3</sup> He	10	3.0 n	11		✓
21703	03:22	03:52	<sup>3</sup> He	10	3.0 n	11		✓
21704	03:53	04:21	<sup>3</sup> He	10	2.99 n	12		✓
21705	04:22	04:51	<sup>3</sup> He	10	3.0	11		✓

Please change to a new run sheet for a new setting or a new type of run on the Run Plan.

More Comments:

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

Date: 5.27.2009	Author: <i>Selma Fullew/ Brad Schoenrock</i>
Beam Energy: 2.425 GeV	Using Pol $^3\text{He}$ Cell: <input checked="" type="checkbox"/> N, Long, <input checked="" type="checkbox"/> (ran) 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="checkbox"/> (OUT)?	Angle: 82°

Run Number	Start Time	Stop Time	Target	Beam ( $\mu\text{A}$ )	Number of Events	Dead Time	Comments	Replay Ok?
2806	04:52	05:20	$^3\text{He}$	10	47	3		<input checked="" type="checkbox"/>
2807	05:22	05:50	$^3\text{He}$	10	47	4		<input checked="" type="checkbox"/>
2808	05:52	06:25	$^3\text{He}$	10	47	3		<input checked="" type="checkbox"/>
2809	06:28	06:58	$^3\text{He}$	12	57	5		<input checked="" type="checkbox"/>
2810	06:59	07:31	$^3\text{He}$	12	57	5		<input checked="" type="checkbox"/>
2811	07:32	08:07	$^3\text{He}$	12	57	5		<input checked="" type="checkbox"/>
2812	08:09	08:46	$^3\text{He}$	12	5M	5		<input checked="" type="checkbox"/>
2813	08:46	09:26	$^3\text{He}$	12	5M	5		<input checked="" type="checkbox"/>
2814	09:31	10:13	$^3\text{He}$	12	5M	2	$\text{N}_2$ referant cell	<input checked="" type="checkbox"/>
2815	10:21	10:34	$\text{N}_2$	12	1.7m	2	Left Side Issue 96% deadtime	
2816	10:38	11:18	$\text{N}_2$	12	5.0M	4		<input checked="" type="checkbox"/>
2817	11:25	12:07	$^3\text{He}$	11	5.0	4		

Please change to a new run sheet for a new setting or a new type of run on the Run Plan.

## More Comments:

$\text{N}_2$  on Run 2815/2816 at 10psig

Run 2815 is suspected... high deadtimes - endearly