

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

Date: June 1	Author: W Boegliu
Beam Energy: 2.425 GeV	Using Pol $^3\text{He}$ Cell: <u>DN</u> , Long, Tran, or Vertical
RHRS	BigBite
Momentum (GeV/c): 2.277 Polarity: "-"	Current (A): 318 Polarity: Positive
Angle: $18^\circ$ Sieve Plate: IN or OUT ?	Angle: $82^\circ/75^\circ$

Run Number	Start Time	Stop Time	Target	Beam ( $\mu\text{A}$ )	Number of Events	Dead Time	Comments	Replay Ok?
21941	14:56	17:05	/		55k		lost neu -same problem	
21942-21944			status of runs unknown					
			⊗ BB to $75^\circ$ here ⊗					
21945	17:39	17:42	$^3\text{He}$	2	62k		chek T3 rates	
21946	17:47	17:57	$^3\text{He}$	11	825k			
21947	17:58	18:10	$^3\text{He}$	11			$^3\text{He}$ elastic, stopped due to DAQ crash	
21948	18:29	18:37	---	---			Junk;	
21949			---	---			Junk;	
21950	18:43	18:49	$^3\text{He}$	11				
21951	19:05	19:33	$^3\text{He}$	11				

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

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Date: June 1, 2009	Author: S. Sirca
Beam Energy: 2425 GeV	Using Pol $^3\text{He}$ Cell: <input checked="" type="radio"/> Y/N, <input checked="" type="radio"/> Long, Tran, or Vertical
LHRS	BigBite <sup>others too</sup>
Momentum (GeV/c): 2400	Polarity: "-" Current (A): 518
Angle: 12.5°	Sieve Plate: <input checked="" type="radio"/> IN or OUT? Angle: 75°

Run Number	Start Time	Stop Time	Target	Beam ( $\mu\text{A}$ )	Number of Events	Dead Time	Comments	Replay Ok?
3076	20:06	20:11	$\text{D}_2^{\text{ref}}$	2	97k	7%	ps3=10, ps4=5, ps6=2	
3077	20:12	20:14	$\text{D}_2^{\text{ref}}$	<del>2</del>	167k		ps3=1, ps4=1, ps6=2	
* 3078	20:18	20:52	$\text{D}_2^{\text{ref}}$	10	4M	12%	ps3= <del>5</del> , ps4= <del>5</del> , ps6=2	
* 3079	21:00	21:31	$\text{N}_2^{\text{ref}}$	10	4M	8%	ps3=5, ps4=5, ps6=2	
3080	21:52	21:57	$^3\text{He}$	8	0.5M	7%	ps3=100, ps4=5, ps6=ps5=1	
3081	21:59	22:28	$^3\text{He}$	10	4M	11%	← good production runs start here	
3082	22:33	2:05	$^3\text{He}$	10	4M	11%		
3083	23:05						junk	
3084	23:07	23:36	$^3\text{He}$	10	4M	11%		
3085	23:37		$^3\text{He}$	10	4M			
3086	00:05	00:32	$^3\text{He}$	10 $\mu\text{A}$	4M	10%		
3087	00:32		N	11	4M	11%		

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More Comments:

- \* good run with  $\text{D}_2$  ref. cell (195 prtg)
- \* good run with  $\text{N}_2$  ref. cell (20 prtg)

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Beam Energy: 2,425 GeV	Using Pol $^3\text{He}$ Cell: <input checked="" type="radio"/> N, <input checked="" type="radio"/> Long, Tran, or Vertical <i>others too</i>
RHRS	BigBite
Momentum (GeV/c): 2,400	Polarity: "-" Current (A): 578A Polarity: Positive
Angle: 17.5°	Sieve Plate: <input checked="" type="radio"/> IN or OUT? Angle: 75°

Run Number	Start Time	Stop Time	Target	Beam ( $\mu\text{A}$ )	Number of Events	Dead Time	Comments	Replay Ok?
21952	20:59	21:31	$\text{N}_2^{\text{ref}}$	10	2.8M	13%		
21953	21:52	21:57	$^3\text{He}$	8	0.35M	10%		
21954	21:59	22:28	$^3\text{He}$	10	2.9M	12%	← good production runs start here	
21955	22:33	23:06	$^3\text{He}$	10	3.1M	5%	<i>just</i>	<input checked="" type="checkbox"/>
21956							<i>just</i>	
21957	23:07	23:36	$^3\text{He}$	10	2.47M	11%		
21958	23:37		$^3\text{He}$	10	2.6M			
21959	00:05	00:32	$^3\text{He}$	10A	2.67M	11%		
21960	00:32		"	"	2.67M	"		

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Date: 2 June 2009	Author: EIP
Beam Energy: 2.428 GeV	Using Pol <sup>3</sup> He Cell: <u>Y</u> N, Long, Tran, or Vertical
LHRS Momentum (GeV/c): 2.4      Polarity: "-"	BigBite Current (A): 578 A      Polarity: Positive
Angle: 12.5°      Sieve Plate: IN or OUT ?	Angle: 75°

Run Number	Start Time	Stop Time	Target	Beam (μA)	Number of Events	Dead Time	Comments	Replay Ok?
3088	01:00	01:28	<sup>3</sup> He	10 μA	4 M			✓ (*)
3089	01:30	01:59	<sup>3</sup> He	10 μA	4 M			
3090	01:59	02:25	"	"	4 M	14%		
3091	02:25	02:52	"	"	4 M	10%		
3092	02:52	03:21	"	"	4 M	11%		✓ (*)
3093	03:21	03:41	"	"	4 M	11%		
3094	03:47	04:13	"	"	4 M	10%		
3095	04:16	04:45	"	"	4 M	11%		✓ (*)
3096	04:45	05:13	"	"	4 M	11%		
3097	05:13	05:50	"	"	4 M	10%		✓ (*)
3098	05:44	06:13	"	"	4 M	12%		✓
3099	06:18	06:25	"	"	4 M	17%		✓

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More Comments:

(\*) Gold run need to be updated - PS, Kinematics!

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Date:	2 June 2009	Author:	EIP
Beam Energy:	2.425 GeV	Using Pol <sup>3</sup> He Cell:	(Y/N, Long) Tran, or Vertical
RHRS		BigBite	
Momentum (GeV/c):	2.4	Polarity: "-"	Current (A): 0.18A
Angle:	12.5°	Sieve Plate: IN or OUT ?	Angle: 35°
		Polarity: Positive	

Run Number	Start Time	Stop Time	Target	Beam (μA)	Number of Events	Dead Time	Comments	Replay Ok?
21961	01:00	01:28	<sup>3</sup> He <sup>+</sup>	10μA	2.7M	11%		✓ ←
21962	01:29	01:59	<sup>3</sup> He <sup>+</sup>	10μA	2.60M			
21963	01:59	02:25	"	"	2.62M	11%		✗
21964	02:25	02:52	"	"	2.61M	N		
21965	02:52	03:21	"	"		N		✓ (✗)
21966	03:21	03:47	"	"	2.65M	"		
21967	03:47	04:13	"	"	2.66M	"		
21968	04:16	04:45	"	"	2.70M	11%		✓ (✗)
21969	04:45	05:13	"	"	2.69M	"		
21970	05:13	05:43	"	"	2.69M	"		✓ (✗)
21971	05:44	6:14	"	"	2.69M	"		✓
21972	06:18	06:55	"	"	2.69M	11%		✓

LHRS  
didn't get  
Gold - 1  
ats

(✗)

(✗)

(✗)

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More Comments:

~~6.7.7~~

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Date: 2 June 2009	Author: Kai Pan
Beam Energy: 2.45 GeV	Using Pol $^3\text{He}$ Cell: <input checked="" type="checkbox"/> N, <input checked="" type="checkbox"/> Long, Tran, or Vertical
LHRS	BigBite
Momentum (GeV/c): 2.4 Polarity: "-"	Current (A): 178A Polarity: Positive
Angle: 12.5° Sieve Plate: IN or OUT ?	Angle: 75°

Run Number	Start Time	Stop Time	Target	Beam ( $\mu\text{A}$ )	Number of Events	Dead Time	Comments	Replay Ok?
3100	06:56	07:06	$^3\text{He}$	100A	1.1M	11%	Stopped due to Beam study	
3103			/				Cosmics	
3104	15:25	15:31	Optics	2.436	2MA		cosmics + HARP	
3105-3108							~ test run	
3109	16:20						~ test run	
3110							calibration run	
3111	16:40	16:54	$^3\text{He}$	9MA	935K	8%	Calibration run	OK
3112	16:56	17:05	$^3\text{He}$	10MA	4M	7%	calibration, elastic	OK
3113	17:27	17:56	$^3\text{He}$	10MA	4M	7%	calibration	✓
3114	17:57	18:29	$^3\text{He}$	10MA	4M	7%	~	✓
3115	18:30	18:58	$^3\text{He}$	10MA	4M	8%	~	✓
3116	18:59	19:36	$^3\text{He}$	10MA	4M	7%	~	✓

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Date:	2 June 2009		Author:	Kai Pan	
Beam Energy:	2.925	GeV	Using Pol <sup>3</sup> He Cell:	ON, Long, Tran, or Vertical	
RHRS			BigBite		
Momentum (GeV/c):	2.4	Polarity: "-"	Current (A):	578A	Polarity: Positive
Angle:	12.5	Sieve Plate: IN or OUT ?	Angle:	75°	

Run Number	Start Time	Stop Time	Target	Beam (μA)	Number of Events	Dead Time	Comments	Replay Ok?
21973	06:56	07:06	<sup>3</sup> He	10μA	721k	11%	stopped due to beam study	
21977			/				cosmics	
21978	15:25	15:31	optics	2μA			check-out.	
<del>21979</del> 21982			~				test run.	
21983	16:20		~				test run.	
21984			~				calibration run	
21985	16:39	16:55	<sup>3</sup> He	8μA	710k	12%	production	✓
21986	16:56	17:26	<sup>3</sup> He	10μA	3M	12%	production.	✓
21987	17:26	17:57	<sup>3</sup> He	10μA	3M	10%	production	✓
21988	17:57	18:29	<sup>3</sup> He	10μA	3M		pro ~	✓
21989	18:30	18:58	<sup>3</sup> He	10μA	3M		product	✓
21990	18:59	19:36	<sup>3</sup> He	10μA	3M		✓	✓

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Date: 2 June	Author: Haijiang Lu
Beam Energy: 2.425 GeV	Using Pol $^3\text{He}$ Cell: <input checked="" type="checkbox"/> Y/N, Long, Tran, or Vertical
LHRS	BigBite
Momentum (GeV/c): 2.436 Polarity: "-"	Current (A): 528 Polarity: Positive
Angle: 12.5 Sieve Plate: IN or OUT ?	Angle: 75

Run Number	Start Time	Stop Time	Target	Beam ( $\mu\text{A}$ )	Number of Events	Dead Time	Comments	Replay Ok?
3117	19:37	20:07	$^3\text{He}$	10 $\mu\text{A}$	4M	7%	Calibration run	<input checked="" type="checkbox"/>
3118	20:08	21:05	$^3\text{He}$	10 $\mu\text{A}$	<del>4M</del>		stoppe by hand.	<input checked="" type="checkbox"/>
3119	21:06	21:34	$^3\text{He}$	10 $\mu\text{A}$	4M	7%		<input checked="" type="checkbox"/>
3120	21:36	22:07	$^3\text{He}$	10 $\mu\text{A}$	4M	7%		<input checked="" type="checkbox"/>
3121	22:07	22:33	$^3\text{He}$	10 $\mu\text{A}$	4M	7%		<input checked="" type="checkbox"/>
3122	22:52	23:18	Ref. $\text{N}_2$	10 $\mu\text{A}$	4M	9%	60.240% Calibr	<input checked="" type="checkbox"/>
3123	23:19	23:52	Ref $\text{N}_2$	10 $\mu\text{A}$	1.9M	8%		<input checked="" type="checkbox"/>
3124	00:11	00:16	Ref $\text{D}_2$	10 $\mu\text{A}$	414K	4%		<input checked="" type="checkbox"/>
3125	00:17	01:05	Ref $\text{D}_2$	11 $\mu\text{A}$	4 M	5%		<input checked="" type="checkbox"/>
3126	01:07	02:08	Ref $\text{D}_2$	11 $\mu\text{A}$	4 M	5%		<input checked="" type="checkbox"/>
3127	02:33	02:57	$^3\text{He}$	9 $\mu\text{A}$	480K	8%	Test	<input checked="" type="checkbox"/>
3128	02:58	03:08	$^3\text{He}$	9 $\mu\text{A}$	4 M	8%	Start Production	<input checked="" type="checkbox"/>

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Date: 2 June	Author: Haijiang Lu
Beam Energy: 2.425 GeV	Using Pol $^3\text{He}$ Cell: Y/N, Long, Tran, or Vertical
RHRS	BigBite
Momentum (GeV/c): 2.436 Polarity: "-"	Current (A): 528 Polarity: Positive
Angle: 12.5 Sieve Plate: IN or OUT ?	Angle: 75

Run Number	Start Time	Stop Time	Target	Beam ( $\mu\text{A}$ )	Number of Events	Dead Time	Comments	Replay Ok?
21991	19:27	20:07	$^3\text{He}$	10 $\mu\text{A}$	3M	11%	production	✓
21992	20:07	21:05	$^3\text{He}$	10 $\mu\text{A}$	5.5M		stopped by hand because the left arm problem	✓
21993	21:06	21:34	$^3\text{He}$	10 $\mu\text{A}$	3M	11%		✓
21994	21:35	22:07	$^3\text{He}$	10 $\mu\text{A}$	3M	11%		✓
21995	22:07	22:38	$^3\text{He}$	10 $\mu\text{A}$	3M	11%		✓
21996	22:52	23:18	Ref $\text{N}_2$	10 $\mu\text{A}$	2.7M	12%	Pol = 60.24% Calibrate	
21997	23:18	23:32	Ref $\text{N}_2$	10 $\mu\text{A}$	1.3M	12%		✓
21998	00:10	00:16	Ref $\text{D}_2$	10 $\mu\text{A}$	232 K	7%		✓
21999	00:16	01:05	Ref $\text{D}_2$	11 $\mu\text{A}$	2.3M	7%		✓
22000	01:06	02:08	Ref $\text{D}_2$	11 $\mu\text{A}$	2.3M	7%		✓
22001	02:32	02:37	$^3\text{He}$	9 $\mu\text{A}$	336 K	11%	Test	✓
22002	02:38	03:08	$^3\text{He}$	9 $\mu\text{A}$	2.8M	10%	start production	✓

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More Comments:

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Date: 6/3/09	Author: Eric Jensen		
Beam Energy: 2.4272 GeV	Using Pol $^3\text{He}$ Cell: Y/N, (Long) Tran, or Vertical		
LHRS	BigBite		
Momentum (GeV/c): 2.320	Polarity: "-"	Current (A): 518 A	Polarity: Positive
Angle: $12.5^\circ$	Sieve Plate: IN or (OUT)?	Angle: $75^\circ$	

Run Number	Start Time	Stop Time	Target	Beam ( $\mu\text{A}$ )	Number of Events	Dead Time	Comments	Replay Ok?
3129	03:10	03:56	$^3\vec{\text{He}}$	9 $\mu\text{A}$	4 M	8%		✓
3130	03:58	04:27	$^3\vec{\text{He}}$	9 $\mu\text{A}$	4 M	8%		✓
3131	04:29	05:01	$^3\vec{\text{He}}$	9 $\mu\text{A}$	4 M	8%		✓
3132	05:03	05:39	$^3\vec{\text{He}}$	9 $\mu\text{A}$	4 M	8%		✓
3134	05:41	06:16	$^3\vec{\text{He}}$	9 $\mu\text{A}$	4 M	8%		✓
3135	06:19	06:48	$^3\vec{\text{He}}$	9 $\mu\text{A}$	4 M	8%		✓
3136	06:50	07:30	$^3\vec{\text{He}}$	9 $\mu\text{A}$	4 M	8%		✓
3137	07:31	08:01	$^3\vec{\text{He}}$	9 $\mu\text{A}$	4 M	8%		✓
3138	08:05	08:38	$^3\vec{\text{He}}$	9 $\mu\text{A}$	4 M	8%		✓
3139	08:41	9:10	$^3\vec{\text{He}}$	9 $\mu\text{A}$	4 M	8%		✓
3140	9:12	9:37	$^3\vec{\text{He}}$	9 $\mu\text{A}$	1-7 M	8%	beam down for short period.	✓
3141	9:42		$^3\vec{\text{He}}$	9 $\mu\text{A}$	0.25 M	8%	Lost beam	

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More Comments: Accidentally started 3133 before ending 22006