

**LEFT-ARM ONLY on this page:  $A_y$  Production Run Sheet**

<b>Date:</b>	<b>Author:</b>
<b>Beam Energy:</b> GeV	<b>Using Pol <math>^3\text{He}</math> cell: Y/N, Long. Tran. or Vertical ?</b>
<b>Left HRS</b> momentum (GeV/c) :    polarity: " - " angle : 17° never moved.      Sieve plate: IN or OUT ?	<b>BigBite (not in use for <math>A_y</math>)</b> current (A) : 518 A    polarity: positive angle : never moved.

Run Number	start time	stop time	target	beam ( $\mu A$ )	# of events	dead time	comments Happex run-#, T3, T4 rates, etc.	replay OK ?

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: $A_y$ Production Run Sheet

Date: 29 April 2009	Author: EIP / GOLGE
Beam Energy: GeV	Using Pol $^3\text{He}$ cell: Y/N, Long. Tran. or Vertical ?
Right HRS momentum (GeV/c) : angle : 17° never moved. Sieve plate: IN or OUT ?	BigBite (not in use for $A_y$ ) current (A) : 518 A polarity: positive angle : never moved.

Run Number	start time	stop time	target	beam ( $\mu\text{A}$ )	# of events	dead time	comments Happex run-#T1, T2 rates, etc.	replay OK ?
20537	05:49		$\text{P}^3\text{He}$	6 $\mu\text{A}$	4.09M	1	$1.8 \cdot 10^4$ $7.7 \cdot 10^2$	N
20538	06:18		"	5.94 $\mu\text{A}$	4.09M	1	$1.78 \cdot 10^4$ $7.5 \cdot 10^2$	<del>N</del>
20539	07:02		"	6.0 $\mu\text{A}$	4.09M	1	$1.78 \cdot 10^4$ $7.9 \cdot 10^2$	Y
20540	07:42		N	6.1 $\mu\text{A}$			$1.74 \cdot 10^4$ $8.3 \cdot 10^2$	Y
<del>20541</del>								
20566	20:03						Cosmic Run, No target	
20567	22:54	22:57					spot ++	
20568	23:01	23:12					spot ++	
20569	23:13	23:20					spot ++ (5x4)	
20570	23:23	23:29					spot ++ (4x4)	

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More comments:

# LEFT-ARM ONLY on this page: $A_y$ Production Run Sheet

Date: 30 April 09	Author: W. Luo
Beam Energy: 3.605 GeV	Using Pol $^3\text{He}$ cell: Y/N, Long. Tran. or Vertical ?
Left HRS momentum (GeV/c): 3.085	BigBite (not in use for $A_y$ )
angle : 17° never moved. Sieve plate: IN or <u>OUT</u> ?	current (A) : 518 A polarity: positive angle : never moved.

Run Number	start time	stop time	target	beam ( $\mu\text{A}$ )	# of events	dead time	comments Happex run-#, T3, T4 rates, etc.	replay OK ?
1691	7:11	7:46	$^3\text{He}$		554k	3	$4.309 \times 10^8 / 3.11 \times 10 \text{ Hz}$	Y
1692	11:37		$^{12}\text{C}$	5		7	1.02 kHz / 45 Hz	
1693	11:54	12:01	$^{12}\text{C}$	5	110k	7	1.1 k / 49 Hz	
1694	12:14	12:21	$^{12}\text{C}$	5	/	/	No beam	
1695		13:13	$^{12}\text{C}$		3.1k		Junk for DAQ tests	
1696	13:14	13:17	$^3\text{He}$		1.8k		Spot ++	
_____							Junk	
1699	17:45	17:50	C	5	200k		spot ++, P3=1 T3=1000	
1700	17:56		$^3\text{He}$	2			spot ++ P3=	
1701							spot ++ 2x2 P3=175	
1702	18:17	18:19	$^3\text{He}$	2			spot ++ 6x6 P3=180	

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More comments:

# RIGHT-ARM ONLY on this page: $A_y$ Production Run Sheet

Date: 29 April, 09	Author: GOLGE
Beam Energy: GeV	Using Pol $^3\text{He}$ cell: Y/N, Long. Tran. or Vertical ?
Right HRS momentum (GeV/c): angle: 17° never moved.	BigBite (not in use for $A_y$ ) current (A): 518 A polarity: positive angle: never moved.
Sieve plate: IN or OUT ?	

Run Number	start time	stop time	target	beam ( $\mu\text{A}$ )	# of events	dead time	comments Happex run-#T1, T2 rates, etc.	replay OK ?
20571	23:37	23:50	$^3\text{He}$	2			Spot $^{++}$ T3:15	
20572	23:50	23:52					spot $^{++}$	
20573	23:58	00:11						
20574	00:12	00:20					Spot $^{++}$ T3=41 Hz	
20576	00:22	00:28		2			spot $^{++}$ T3=41 Hz	
20577	00:48	00:57		6		6	4x4 T3=104 Hz	
20578	02:15	2:50		5.78		13	$4.1 \times 10^2 / 3.28 \times 10^1$ Hz	y
20579	2:53	4:22		6.0	1.6M	12	$4.01 \times 10^2 / 3.51 \times 10^1$ Hz	y
20580	4:21	4:58		6.0	760K	10	$4.19 \times 10^2 / 3.50 \times 10^1$ Hz	y
20581	4:58	5:30		6.0	755K	12	$4.06 \times 10^2 / 3.31 \times 10^1$ Hz	y
20582	5:30	6:15		6.0	896K	12	$4.087 \times 10^2 / 3.64 \times 10^1$ Hz	y
20583	6:19	6:45		6.0	553K	10	$4.02 \times 10^2 / 3.41 \times 10^1$ Hz	y

Production run →

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More comments:

run 20578/1685  $\nearrow$  production run without Happex, Lumi  
nre

# LEFT-ARM ONLY on this page: $A_y$ Production Run Sheet

Date: <u>29 April, 09</u>	Author: <u>GOLGE</u>
Beam Energy: _____ GeV	Using Pol $^3\text{He}$ cell: <u>Y/N</u> , Long. Tran. or Vertical ?
Left HRS momentum (GeV/c) : _____ polarity: " - "	BigBite (not in use for $A_y$ )
angle : $17^\circ$ never moved. Sieve plate: IN or OUT ?	current (A) : 518 A polarity: positive angle : never moved.

Run Number	start time	stop time	target	beam ( $\mu\text{A}$ )	# of events	dead time	comments	replay OK ?
1678	23:37	23:50	$^3\text{He}$	2			$P_s^3=1$ , spot++ T3=50	
1679	23:50	23:52	"	"			spot++	
1680	23:58	00:11	"	"				
1681	<del>00:12</del>	0:20	"	"		1	spot++ 2x2 T3=167Hz	
1683	00:22	00:28					spot++ 6x6 T3=181Hz	
1684	00:48	00:57		6		4		
1685	01:50	2:49		5.88		0	$4.54 \times 10^1 / 2.84 \times 10^1$	y
1686	2:55	4:22		6.0	2.1M	3	$5.08 \times 10^2 / 3.13 \times 10^1$ Hz	y
1687	4:22	4:58		6.0	1.0M	3	$5.17 \times 10^2 / 3.61 \times 10^1$ Hz	y
1688	4:58	5:30		6.0	1.0M	4	$5.236 \times 10^2 / 3.53 \times 10^1$ Hz	y
1689	5:37	6:15		6.0	889k	3	$4.92 \times 10^2 / 3.16 \times 10^1$ Hz Roc3 crashed	y
1690	6:20	6:45		6.0	737k	4	$5.03 \times 10^2 / 3.165 \times 10^1$ Hz	y

→  
production  
run

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More comments:

1686: Saw 3 target spin flip state at the beginning of 50k events.

# RIGHT-ARM ONLY on this page: $A_y$ Production Run Sheet

Date:		Author:	
Beam Energy:	GeV	Using Pol $^3\text{He}$ cell: Y/N, Long. Tran. or Vertical ?	
Right HRS momentum (GeV/c) :	polarity: " - "	BigBite (not in use for $A_y$ ) current (A) : 518 A polarity: positive	
angle : 17° never moved	Sieve plate: IN or OUT ?	angle : never moved.	

Run Number	start time	stop time	target	beam ( $\mu\text{A}$ )	# of events	dead time	comments Happex run-#T1, T2 rates, etc.	replay OK ?

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: $A_y$ Production Run Sheet

Date: <u>30 April, 09</u>	Author: <u>BOLGE</u>
Beam Energy: _____ GeV	Using Pol $^3\text{He}$ cell: Y/N, Long. Tran. or Vertical ?
Left HRS momentum (GeV/c) : _____ polarity: " - " angle : $17^\circ$ never moved. Sieve plate: IN or OUT ?	BigBite (not in use for $A_y$ ) current (A) : 518 A polarity: positive angle : never moved.

Run Number	start time	stop time	target	beam ( $\mu\text{A}$ )	# of events	dead time	comments Happex run-#, T3, T4 rates, etc.	replay OK ?
1703	18:35	18:43	$^3\text{He}$	10	28K		Production, incorrect rates	
1704	18:47	19:10	$^3\text{He}$	10	1M	5	$P_{s3}=1, P_{s4}=1, P_{s8}=100$	✓
1705	19:12	19:32	"	"	1M	5	Production	✓
1706	19:35	19:56	"	"	1M	6	"	✓
1707	19:58	20:21	"	"	1M	5	"	✓
1708	21:12	22:10	"	"	2M	6	"	✓
1709	22:12	22:49	"	"	1M	5	"	✓
1710							Beam Loss 1	
1712	00:11						Spot++	
1713	1:29	1:39	$^3\text{He}$	2	9K		Spot++ test 2X2mm	
1714	1:44	1:55	$^3\text{He}$	2	57K		Spot++ 6X6	
1715	1:9	2:48	$^3\text{He}$	10	2M	2	<del><math>1.23 \times 10^2</math></del> / <del><math>1.73 \times 10^3</math></del> / <del><math>1.14 \times 10^2</math></del> $8.24 \times 10^2$ / $4.7 \times 10^4$ HE	y

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More comments:

9M

## RIGHT-ARM ONLY on this page: $A_y$ Production Run Sheet

Date: <u>April 30, 09</u>	Author: <u>W. Luo</u>
Beam Energy: <u>3.605</u> GeV	Using Pol $^3\text{He}$ cell: Y/N, Long. Tran. or Vertical ?
Right HRS momentum (GeV/c): <u>3.0855</u> polarity: " <u>-</u> "	BigBite (not in use for $A_y$ ) current (A): 518 A polarity: positive
angle: $17^\circ$ never moved. Sieve plate: IN or <u>OUT</u> ?	angle: never moved.

Run Number	start time	stop time	target	beam ( $\mu\text{A}$ )	# of events	dead time	comments Happex run-#T1, T2 rates, etc.	replay OK ?
20584	7:10	7:40	$^3\text{He}$		418K	10	$3.282 \times 10^3 / 3.58 \times 10^2 \text{ Hz}$	y
20585	11:37		$^{12}\text{C}$	5		13	915 Hz / 64 Hz	
20586	11:54	12:01	$^{12}\text{C}$	5	96K	16	1.0 Hz / 74 Hz	
20587	12:14	12:21	$^{12}\text{C}$	1	1	1	No beam	
20588		13:18	$^3\text{He}$		2.9K		junk, DAQ checkout	
20589	13:13	13:17	$^{12}\text{C}$		1.8K		spot + r	
_____							junk	
20591	17:45	17:50	C	3	174K		.	
20592							spot + r	
20593							spot + r	
20594	18:17	18:19	$^3\text{He}$	2			spot + r	

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: $A_y$ Production Run Sheet

Date: <u>May 1, 2008</u>	Author: <u>W. Luo</u>
Beam Energy: <u>3.605</u> GeV	Using Pol $^3\text{He}$ cell: Y/N, Long. Tran. or Vertical ?
Left HRS momentum (GeV/c): <u>3.0855</u> polarity: "-" angle: 17° never moved. Sieve plate: IN or OUT ?	BigBite (not in use for $A_y$ ) current (A) : 518 A polarity: positive angle : never moved.

Run Number	start time	stop time	target	beam ( $\mu\text{A}$ )	# of events	dead time	comments Happex run-#, T3, T4 rates, etc.	replay OK ?
1716	2:49	3:32	$^3\text{He}$	9.9	2M	6	$8.35 \times 10^2 / 5.01 \times 10^1$	y
1717	3:34	4:22	$^3\text{He}$	10 $\mu\text{A}$	2M	5	$8.55 \times 10^2 / 4.74 \times 10^1$	y
1718	4:23	5:22	$^3\text{He}$	10 $\mu\text{A}$	2M	6	$8.58 \times 10^2 / 4.52 \times 10^1$	y
1719	5:23	6:08	$^3\text{He}$	10 $\mu\text{A}$	2M	6	$8.45 \times 10^2 / 4.5 \times 10^1$	y
1720	6:09	6:59	$^3\text{He}$	10 $\mu\text{A}$	2M	6	$8.35 \times 10^2 / 4.84 \times 10^1$	y
1721	6:59	7:44	$^3\text{He}$	10 $\mu\text{A}$	2M	6	$8.42 \times 10^2 / 4.97 \times 10^1$	y
1723	8:34	9:32	$^3\text{He}$		2M	6	<del>8</del> 31302	
1724	9:32	9:45	$^3\text{He}$		2M			
1730	2:06	2:04	$^3\text{He}$	5 $\mu\text{A}$			$1 \times 10^3 /$	
1731								
1732	<del>2:00</del> 2:40	<del>2:40</del> 2:47	optics 3He	2 $\mu\text{A}$	0.6M		T3/ 180471	SPT check
1733	<del>2:50</del> 2:50	<del>2:52</del> 2:52	optics 3He	2 $\mu\text{A}$			180471	

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 More comments: 16M

# RIGHT-ARM ONLY on this page: $A_y$ Production Run Sheet

Date: 30 April, 09	Author: GOLGE
Beam Energy: _____ GeV	Using Pol $^3\text{He}$ cell: Y/N, Long. Tran. or Vertical ?
Right HRS momentum (GeV/c) : _____ polarity: " - " angle : 17° never moved. Sieve plate: IN or OUT ?	BigBite (not in use for $A_y$ ) current (A) : 518 A polarity: positive angle : never moved.

Run Number	start time	stop time	target	beam ( $\mu\text{A}$ )	# of events	dead time	comments Happex run-#T1, T2 rates, etc.	replay OK ?
20595	18:34	18:45	$^3\text{He}$	10	23K		Production, incorrect rates	
20596	18:47	19:10	$^3\text{He}$	10	0.7M	12	$\beta_{s1}=1, \beta_{s2}=1, \beta_{s8}=100$	✓
20597	19:12	19:32	"	"	0.75M	13	Production	✓
20598	19:34	19:57	"	"	0.75M	12	"	✓
20599	19:58	20:21	"	"	0.7M	12	"	✓
20600	21:11	22:10	"	"	1.5M	13	"	✓
20601	22:12	22:49	"	"	0.8M	13	"	✓
20602							Beam Lost!	
20607	1:28	1:40	$^3\text{He}$	0.2	75K		Spot test 2x2	
20608	1:44	1:55	$^3\text{He}$	2	48K		spot test 6x6	
20609	1:58	2:48	$^3\text{He}$	10	1.4PM	12	<del><math>3.64 \times 10^5 / 5.09 \times 10^1</math></del> <del>112</del> $6.54 \times 10^2 / 5.4 \times 10^1$	Y

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More comments:

6.69M