

A_y (E05-015) Shift Check List

Date: 05/12/09

	Owl	Day	Swing
Time (hh/mm,24:00)	06:09		
Your Name	M. MIHOVIC		
Visual Hall Inspection	✓		
Beam Energy (MeV)	2425.5181		
Beam Current (uA)	0		
# beam trips last hour	0		
SPOT++ size X/Y (mm)	0		
SPOT++ saved in Halog ?	✓		
Beam Position at 1H04A X/Y (mm)	✓		
Beam Position at 1H04B X/Y (mm)	✓		
Hall A beam position feedback	ON		
Alarm Handler running ?	✓		
Saved Hall A tools screen into Halog ?	✓		
Wien angle	6.920		
Beam half-wave plate IN/OUT ?	OUT		
Most recent Hall A Moller date/result	89.1% / 04/30/09		
Target position	³ He		
Pol. ³ He optical pumping direction	LONGITUDINAL		
Pumping laser on ?	✓		
Temperature in laser optics enclosure	?		
Pol. ³ He oven heater ON ?	✓		
³ He cell oven temperature (RTDs)	231/222/292		
³ He cell temperature (RTDs)	78.2/40/41/43/53		
³ He cell polarization, recent NMR	✓		
³ He cell polarization, recent EPR	✓		
Spin-flip ON ?	✓		
Target cooling jet flow	41.3		
Ref. cell gas type			
Ref. cell low pressure gauge (left)	✓		
Ref. cell high pressure gauge (right)	TURNED OFF		
Ref. cell temperature (RTDs)	42/42/42		
Left Arm Angle	14.5		
Left Arm Momentum (GeV/c)	2.18130		
Left Arm NMR locked ?	✓		
Left Arm Helium flow OK ?	✓		
Left Arm liquid level OK ?	✓		
Left Arm Quad #1 (A)	1641.024		
Left Arm Quad #2 (A)	439.05		
Left Arm Dipole (A)	741.71		
Left Arm Quad #3 (A)	868.42		

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Date:

	Owl	Day	Swing
Right Arm Angle	16.00		
Right Arm Momentum (GeV/c)	2.98130		
Right Arm NMR locked ?	✓		
Right Arm Helium flow OK ?	✓		
Right Arm liquid level OK ?	✓		
Right Arm Quad #1 (A)	1639.742		
Right Arm Quad #2 (A)	938.82		
Right Arm Dipole (A)	76.90		
Right Arm Quad #3 (A)	868.14		
Argon pressure (PSI)	215.918		
Ethane pressure (PSI)	370.324		
CO2 pressure (PSI)	600.243		
Left VDC gas flow (top/bottom)	5.32 / 5.86		
Left Cerenkov pressure (PSI)	✓		
Left VDC HV on (top/bottom) ?	3.996 / 4.000		
Left VDC threshold on (top/bot.) ?	3.84 / 3.96		
Left S1/S2 HV on ?	✓		
Left Cerenkov HV on ?	✓		
Right VDC gas flow (top/bottom)	6.004 / 5.887		
Right Cerenkov pressure (PSI)	✓		
Right VDC HV on (top/bottom) ?	3.996 / 4.166		
Right VDC threshold on (top/bot.) ?	3.87 / 3.89		
Right S1/S2 HV on ?	✓		
Right Cerenkov HV on ?	✓		
Happex-run started/run-# ?	/		
Last-Left-HRS run number			
Left-HRS-DAQ deadtime			
Left-HRS-DAQ CODA rate			
Left-HRS-prescale PS3/PS4			
Left-HRS-rates T3/T4			
Last Left-HRS run replayed			
Left VDC eff./wiremap OK ?			
Last-Right-HRS run number			
Right-DAQ deadtime			
Right-DAQ CODA rate			
Right-prescale PS1/PS2			
Right-rates T1/T2			
Last Right-HRS run replayed			
Right VDC eff./wiremap OK ?			

A_x (E05-~~015~~) Shift Check List
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Date: 13 MAY 2009

	Owl	Day	Swing
Time (hh/mm,24:00)	6:16	15:00	19:53
Your Name	Al Tobias	T. Averett	P. King
Visual Hall Inspection	✓ (Ramp Roll-up door open)	✓	✓
Beam Energy (MeV)	2427	2425	2425.5
Beam Current (uA)	5 uA	7.5 uA	7.9 uA
# beam trips last hour	15	2-3	6
SPOT++ size X/Y (mm)	4x4 mm	4x4	4x4
SPOT++ saved in Halog ?	YES	yes	yes
Beam Position at 1H04A X/Y (mm)	-0.416/2.191	-0.42/2.17	-0.42/2.19
Beam Position at 1H04B X/Y (mm)	-0.510/2.014	-0.50/2.02	-0.51/2.00
Hall A beam position feedback	ON	on	ON
Alarm Handler running ?	YES	yes	yes
Saved Hall A tools screen into Halog ?	✓	✓	✓
Wien angle	66.9203		66.92
Beam half-wave plate IN/OUT ?	OUT		out
Most recent Hall A Moller date/result	~		
Target position	D2 Reference	³ He	³ He
Pol. ³ He optical pumping direction	LONG.	Long	long
Pumping laser on ?	YES.	yes	yes
Temperature in laser optics enclosure			
Pol. ³ He oven heater ON ?	YES.	yes	yes
³ He cell oven temperature (RTDs)	230/228/253		238.1 / 225.3 / 250.7
³ He cell temperature (RTDs)	105/85/55/45/60		82.5/48.3/41.5/48.3/54.9
³ He cell polarization, recent NMR		64%	62.6%
³ He cell polarization, recent EPR			
Spin-flip ON ?	NO	NO	no
Target cooling jet flow	46.5		
Ref. cell gas type	D2	D2	D2
Ref. cell low pressure gauge (left)	1	1	1
Ref. cell high pressure gauge (right)	100	99 psia	99
Ref. cell temperature (RTDs)	0/40/40		0/42/42
Left Arm Angle	14.500	14.5	14.50
Left Arm Momentum (GeV/c)	2.3	2.3	2.3
Left Arm NMR locked ?	✓	✓	✓
Left Arm Helium flow OK ?	✓	✓	✓
Left Arm liquid level OK ?	✓	✓	✓
Left Arm Quad #1 (A)	1730.213	1730.2	1730.7
Left Arm Quad #2 (A)	990.57	990.6	990.6
Left Arm Dipole (A)	785.47	785.5	785.5
Left Arm Quad #3 (A)	915.49	915.5	915.5

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A_x A_z

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Date: 13 MAY 2009

	Owl	Day	Swing
Right Arm Angle	15.998	16.0	16.0
Right Arm Momentum (GeV/c)	2.25	2.25	2.25
Right Arm NMR locked ?	✓	✓	✓
Right Arm Helium flow OK ?	✓	✓	✓
Right Arm liquid level OK ?	✓	✓	✓
Right Arm Quad #1 (A)	1691.493	1691.5	1691.4
Right Arm Quad #2 (A)	968.46	968.5	968.5
Right Arm Dipole (A)	767.29	787.3	787.3
Right Arm Quad #3 (A)	895.27	895.3	895.3
Argon pressure (PSI)	2581.934	2584	2505
Ethane pressure (PSI)	587.988	522	478
CO2 pressure (PSI)	667.090	740	711
Left VDC gas flow (top/bottom)	5.20/5.87	4.3/5.9	4.98/5.86
Left Cerenkov pressure (PSI)			
Left VDC HV on (top/bottom) ?	3.992/4.001	3.997/4.001	3.990/4.00
Left VDC threshold on (top/bot.) ?		3.9/3.97	3.90/3.97
Left S1/S2 HV on ?		✓	✓
Left Cerenkov HV on ?		✓	✓
Right VDC gas flow (top/bottom)		6.96/6.01	6.70/5.56
Right Cerenkov pressure (PSI)			
Right VDC HV on (top/bottom) ?		0/4.013	4.00/4.01
Right VDC threshold on (top/bot.) ?		3.87/3.84	3.87/3.84
Right S1/S2 HV on ?			✓
Right Cerenkov HV on ?			✓
Happex-rup started/run-# ?	31364	31366	31367
Last-Left-HRS run number	2167	2185	2197
Left-HRS-DAQ deadtime		8	8
Left-HRS-DAQ CODA rate		3.6 kHz	2.5 kHz
Left-HRS-prescale PS3/PS4		2/4	2/4
Left-HRS-rates T3/T4			5
Last Left-HRS run replayed		✓	✓
Left VDC eff./wiremap OK ?			✓
Last-Right-HRS run number		21085	21097
Right-DAQ deadtime		12	12
Right-DAQ CODA rate		2.1 kHz	1.9 kHz
Right-prescale PS1/PS2		1/1	1/1
Right-rates T1/T2			300
Last Right-HRS run replayed		✓	✓
Right VDC eff./wiremap OK ?			✓

A_y (E05-015) Shift Check List

Date: 14 MAY 2009

	Owl	Day	Swing
Time (hh/mm,24:00)	6:20	19:48	19:48
Your Name	Hazi	P. King	P. King
Visual Hall Inspection			
Beam Energy (MeV)	2425.47		2425.9
Beam Current (uA)	7.44A		8.3
# beam trips last hour			6
SPOT++ size X/Y (mm)			4x4
SPOT++ saved in Halog ?			✓
Beam Position at 1H04A X/Y (mm)	-0.427/2.172		-0.49/2.03
Beam Position at 1H04B X/Y (mm)	-0.502/1.974		-0.48/2.97
Hall A beam position feedback	ON		ON
Alarm Handler running ?	✓		Yes
Saved Hall A tools screen into Halog ?	✓		✓
Wien angle	66.9°		66.9°
Beam half-wave plate IN/OUT ?	out		OUT
Most recent Hall A Moller date/result			14 MAY : 83.4%
Target position	³ He		³ He ⁰
Pol. ³ He optical pumping direction	LONGITUDINAL		Long ... Anti.
Pumping laser on ?	✓		✓
Temperature in laser optics enclosure	✓		26/20/25
Pol. ³ He oven heater ON ?	✓		✓
³ He cell oven temperature (RTDs)	250.1/229.6/225.4		250/230/226
³ He cell temperature (RTDs)	80.9/42.4/41.4/42.6/52.9		82/56/49/45/45
³ He cell polarization, recent NMR	61.958%		63.5931
³ He cell polarization, recent EPR	✓		✓
Spin-flip ON ?	OFF		off
Target cooling jet flow	41.5		—
Ref. cell gas type	D ₂		—
Ref. cell low pressure gauge (left)	1 Torr		1
Ref. cell high pressure gauge (right)	98 psig		98
Ref. cell temperature (RTDs)	0/42/42		0/40/40
Left Arm Angle	14.5		14.5
Left Arm Momentum (GeV/c)	2.3		2.3
Left Arm NMR locked ?	Yes		Yes
Left Arm Helium flow OK ?	Yes		Yes
Left Arm liquid level OK ?	Yes		Yes
Left Arm Quad #1 (A)	1730.159		1730.5
Left Arm Quad #2 (A)	990.58		990.6
Left Arm Dipole (A)	785.48		785.5
Left Arm Quad #3 (A)	915.50		915.5

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Date: 14 MAY 2009

	Owl	Day	Swing
Right Arm Angle	16		16.0
Right Arm Momentum (GeV/c)	2.25		2.25
Right Arm NMR locked ?	Yes		Yes
Right Arm Helium flow OK ?	Yes		Yes
Right Arm liquid level OK ?	Yes		Yes
Right Arm Quad #1 (A)	1691.44		1691.5
Right Arm Quad #2 (A)	966.47		968.5
Right Arm Dipole (A)	787.29		787.3
Right Arm Quad #3 (A)	895.28		895.3
Argon pressure (PSI)	2420.801		2426
Ethane pressure (PSI)	451.465		548
CO2 pressure (PSI)	679.02		681
Left VDC gas flow (top/bottom)	6.576/5.84		5.01 / 5.87
Left Cerenkov pressure (PSI)			
Left VDC HV on (top/bottom) ?	4KV / 4		3.994 / 3.999
Left VDC threshold on (top/bot.) ?	3.9 / 3.97		3.90 / 3.96
Left S1/S2 HV on ?	✓		✓
Left Cerenkov HV on ?	✓		✓
Right VDC gas flow (top/bottom)	5.04 / 5.87		6.37 / 5.92
Right Cerenkov pressure (PSI)			
Right VDC HV on (top/bottom) ?	3.95 / 3.996		4.00 / 4.01
Right VDC threshold on (top/bot.) ?	3.9 / 3.97		3.87 / 3.84
Right S1/S2 HV on ?	✓		✓
Right Cerenkov HV on ?	✓		✓
Happex-run started/run-# ?	✓		17:54 / 31371
Last-Left-HRS run number	2218		2241
Left-HRS-DAQ deadtime	8		9
Left-HRS-DAQ CODA rate	2932		3348
Left-HRS-prescale PS3/PS4	2 / 4		2 / 4
Left-HRS-rates T3/T4	6077 / 141		No 6870 / 155
Last Left-HRS run replayed	2:01M		2241
Left VDC eff./wiremap OK ?	✓		✓
Last-Right-HRS run number	2118		2148 SM
Right-DAQ deadtime	11		12
Right-DAQ CODA rate	1803		2101
Right-prescale PS1/PS2	1 / 2		1 / 1
Right-rates T1/T2	2112 / 164		2225 / 603
Last Right-HRS run replayed	2:06M		2118 3M
Right VDC eff./wiremap OK ?	✓		✓

A_y (E05-015) Shift Check List

Date: 15 May 2009

	Owl	Day	Swing
Time (hh/mm,24:00)	7:05 7:05	13:05	19:34
Your Name	Holmstrom	Jin Ge	P. King
Visual Hall Inspection	✓	✓	✓
Beam Energy (MeV)	2425	2425	2425
Beam Current (uA)	10	9.8	10.2
# beam trips last hour	9	9	13
SPOT++ size X/Y (mm)		4x4	4x4
SPOT++ saved in Halog ?		✓	✓
Beam Position at 1H04A X/Y (mm)	-0.515 / 2.065	-0.569 / 2.090	-0.58 / 2.08
Beam Position at 1H04B X/Y (mm)	-0.494 / 1.994	-0.504 / 2.007	-0.50 / 2.00
Hall A beam position feedback	✓	✓	on
Alarm Handler running ?	✓		✓
Saved Hall A tools screen into Halog ?	✓	✓	✓
Wien angle	66.9°		66.92
Beam half-wave plate IN/OUT ?	OUT	In	In
Most recent Hall A Moller date/result			
Target position	³ He	³ He	³ He
Pol. ³ He optical pumping direction	LONG	long	long
Pumping laser on ?			✓
Temperature in laser optics enclosure			
Pol. ³ He oven heater ON ?	✓		✓
³ He cell oven temperature (RTDs)	250 / 230 / 226	225 / 225	230 / 226
³ He cell temperature (RTDs)	82 / 58 / 50 / 41	77 / 45 / 40 / 45 / 53	79 / 46 / 40 / 42 / 54
³ He cell polarization, recent NMR	62.55	62.08	61.7309
³ He cell polarization, recent EPR			
Spin-flip ON ?	X		X
Target cooling jet flow			
Ref. cell gas type			
Ref. cell low pressure gauge (left)		1	1
Ref. cell high pressure gauge (right)		0.97	0.97
Ref. cell temperture (RTDs)		0 / 40 / 40	0 / 38.8 / 39.0
Left Arm Angle	14.5	14.5	14.5
Left Arm Momentum (GeV/c)	2.3	2.3	2.300
Left Arm NMR locked ?	✓	✓	✓
Left Arm Helium flow OK ?	✓	✓	✓
Left Arm liquid level OK ?	✓	✓	✓
Left Arm Quad #1 (A)	1730.5	1730.5	1730.5
Left Arm Quad #2 (A)	990.0	990.6	990.6
Left Arm Dipole (A)	785.5	785.5	785.5
Left Arm Quad #3 (A)	915.5	915.5	915.5

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Date: 15 MAY 2009

	Owl	Day	Swing
Right Arm Angle	16	16	16.0
Right Arm Momentum (GeV/c)	2.25	2.25	2.225
Right Arm NMR locked ?	✓		✓
Right Arm Helium flow OK ?	✓	✓	✓
Right Arm liquid level OK ?	✓	✓	✓
Right Arm Quad #1 (A)	1642	1642.4	1673.0
Right Arm Quad #2 (A)	966	966	957.5
Right Arm Dipole (A)	787	787	777.4
Right Arm Quad #3 (A)	895	895	885.3
Argon pressure (PSI)	2320.6	2382	2267
Ethane pressure (PSI)	509.5	606	541
CO2 pressure (PSI)	605.6	637	549
Left VDC gas flow (top/bottom)	5.3159 / 6.158	5.46 / 5.87	5.44 / 5.88
Left Cerenkov pressure (PSI)	880		
Left VDC HV on (top/bottom) ?	3.90 / 3.96	3.90 / 3.97	3.993 / 4.000
Left VDC threshold on (top/bot.) ?	4.44	5.06 / 4.97	3.90 / 3.96
Left S1/S2 HV on ?	✓		✓
Left Cerenkov HV on ?	✓	6.35 / 6.01	✓
Right VDC gas flow (top/bottom)	6.215.8	5.87 / 5.4	6.17 / 5.82
Right Cerenkov pressure (PSI)			
Right VDC HV on (top/bottom) ?	3.87 / 3.60	3.90 / 3.97	4.000 / 4.012
Right VDC threshold on (top/bot.) ?	4 / 4	5.06 / 4.96	3.87 / 3.84
Right S1/S2 HV on ?	✓		✓
Right Cerenkov HV on ?	✓		✓
Happex-run started/run-# ?	31375	31377	17:51 / 31378
Last-Left-HRS run number	2262	2276	2288
Left-HRS-DAQ deadtime	8	2	7
Left-HRS-DAQ CODA rate	2.5 KHz	2.8 KHz	2.96 Hz
Left-HRS-prescale PS3/PS4	3/4	3/4	3/4
Left-HRS-rates T3/T4	7.1K / 188	8.7K / 197	8.45 Hz / 188 Hz
Last Left-HRS run replayed	✓	✓	✓
Left VDC eff./wiremap OK ?	✓	✓	✓
Last-Right-HRS run number	21169	21184	21195
Right-DAQ deadtime	15	15	16
Right-DAQ CODA rate	1.7 KHz	2.125	2.6 Hz
Right-prescale PS1/PS2	1/1	1/1	1/1
Right-rates T1/T2	52 / 45	3.2e5 / 2.7e5	3.1e5 / 2.71e5 Hz
Last Right-HRS run replayed	✓	✓	2
Right VDC eff./wiremap OK ?	✓	✓	✓

A_y (E05-015) Shift Check List

Date: 16 MAY

	Owl	Day	Swing
Time (hh/mm,24:00)	03153	1410	2310
Your Name	Ibrahim	Anderson	J. HUANG
Visual Hall Inspection	OK	OK	OK
Beam Energy (MeV)	2425.48	2425.50	2425.48
Beam Current (uA)	10	10	10
# beam trips last hour	6	14	5
SPOT++ size X/Y (mm)	4x4	4x4	4x4
SPOT++ saved in Halog ?	yes	yes	✓
Beam Position at 1H04A X/Y (mm)	-0.575/2.09	-0.585/2.066	-0.57/2.07
Beam Position at 1H04B X/Y (mm)	-0.502/2.015	-0.477/1.998	-0.50/2.00
Hall A beam position feedback	yes	yes	✓
Alarm Handler running ?	yes	yes	✓
Saved Hall A tools screen into Halog ?	yes	yes	✓
Wien angle	66.92	66.92	66.92
Beam half-wave plate IN/OUT ?	IN	IN	IN
Most recent Hall A Moller date/result			
Target position	³ He	³ He	³ He
Pol. ³ He optical pumping direction	Long	Long	Long
Pumping laser on ?	yes	yes	✓
Temperature in laser optics enclosure			—
Pol. ³ He oven heater ON ?	yes	yes	✓
³ He cell oven temperature (RTDs)	80/45/40/40/53	80/45/40/40/53	78/46/40/42/53
³ He cell temperature (RTDs)			
³ He cell polarization, recent NMR	61.7%	62.2%	63.3
³ He cell polarization, recent EPR			
Spin-flip ON ?	NO		NO
Target cooling jet flow	43.2		43.1
Ref. cell gas type	D ₂	D ₂	D ₂
Ref. cell low pressure gauge (left)	1	1	1
Ref. cell high pressure gauge (right)	97	96	96
Ref. cell temperature (RTDs)	-140 140	0/40/40	0/40/40
Left Arm Angle	14.5	14.5	14.5
Left Arm Momentum (GeV/c)	2.3	2.3	2.300
Left Arm NMR locked ?	yes	yes	✓
Left Arm Helium flow OK ?	yes	yes	✓
Left Arm liquid level OK ?	yes	OK (1~10W)	✓
Left Arm Quad #1 (A)	1730.533	1730.480	1730.50
Left Arm Quad #2 (A)	990.60	990.60	990
Left Arm Dipole (A)	765.50	765.50	765.50
Left Arm Quad #3 (A)	915.50	915.51	915.51

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Date: 16 MAY

	Owl	Day	Swing
Right Arm Angle	16.0	16.0	16.0
Right Arm Momentum (GeV/c)	2.225	2.225	2.2248
Right Arm NMR locked ?	Yes	Yes	✓
Right Arm Helium flow OK ?	Yes	Yes	✓
Right Arm liquid level OK ?	Yes	Yes	✓
Right Arm Quad #1 (A)	1672.961	1.000 *	0
Right Arm Quad #2 (A)	957.49	957.50	957
Right Arm Dipole (A)	777.58	777.56	777
Right Arm Quad #3 (A)	885.28	885.28	885
Argon pressure (PSI)	2180.273	2184.92	2079
Ethane pressure (PSI)	500.977	569.12	531
CO2 pressure (PSI)	477.832	442.386	345
Left VDC gas flow (top/bottom)	5.09 / 5.88	5.03 / 5.89	5.48 / 5.87
Left Cerenkov pressure (PSI)			
Left VDC HV on (top/bottom) ?	3.989 / 3.999	3.999 / 3.999	3.989 / 4.000
Left VDC threshold on (top/bot.) ?		3.95 / 3.97	3.90 / 3.96
Left S1/S2 HV on ?	Yes	Yes/Yes	✓
Left Cerenkov HV on ?	Yes	Yes	✓
Right VDC gas flow (top/bottom)	6.05 / 5.76	5.53 / 5.47	6.21 / 5.8
Right Cerenkov pressure (PSI)			not used HV db
Right VDC HV on (top/bottom) ?	+4 / 4.011	3.992 / 4.001	0 / 4.012
Right VDC threshold on (top/bot.) ?		3.66 / 3.64	3.67 / 3.64
Right S1/S2 HV on ?	Yes	?	✓
Right Cerenkov HV on ?	Yes	?	✓
Happex-run started/run-# ?	Yes / 31380	Yes / 31382	31383
Last-Left-HRS run number	2303	2332	2335
Left-HRS-DAQ deadtime	7-8%	Rebooting ROs 10	8%
Left-HRS-DAQ CODA rate	3.2 KHz		3K
Left-HRS-prescale PS3/PS4	3/4		3/4
Left-HRS-rates T3/T4	8.7 KHz / 190		8.6K
Last Left-HRS run replayed	OK		✓
Left VDC eff./wiremap OK ?	OK		✓
Last-Right-HRS run number	21210		21241
Right-DAQ deadtime	16%		16%
Right-DAQ CODA rate	2.8 KHz		
Right-prescale PS1/PS2	1/1		1/1
Right-rates T1/T2	3.3K / 87		3.3K / 87
Last Right-HRS run replayed	OK		✓
Right VDC eff./wiremap OK ?	OK		✓

* See HALOG entry