

**Performance Statistics for
SDSS Observing Operations**

Updated 08/05/2008

Dark Time

Category	Baseline	2001				
		Aug-01	Sep-01	Oct-01	Nov-01	Dec-01
Total Time		101:23	116:11	98:22	148:47	157:20
Imaging fraction	0.24	0.21	0.43	0.13	0.44	0.38
Spectro fraction	0.66	0.73	0.48	0.81	0.51	0.56
Weather	0.50	0.31	0.53	0.88	0.50	0.52
System uptime	0.90	0.89	0.98	0.93	0.89	0.92
Imaging efficiency	0.86	0.62	0.67	0.63	0.82	0.83
Spectro efficiency	0.65	0.60	0.59	0.57	0.60	0.66
Operations efficiency	0.90	0.93	0.93	0.96	0.96	0.94
Hours lost to problems		10:50	2:22	6:51	16:36	12:40
Hours lost to weather		68:33	55:05	12:12	73:14	73:58

Dark + Gray Time

Category	Baseline	2001				
		Aug-01	Sep-01	Oct-01	Nov-01	Dec-01
Total Time		141:18	161:17	130:34	214:11	221:09
Imaging fraction	0.24	0.17	0.31	0.12	0.34	0.31
Spectro fraction	0.66	0.70	0.59	0.84	0.64	0.64
Weather	0.50	0.30	0.59	0.82	0.49	0.49
System uptime	0.90	0.90	0.98	0.94	0.89	0.92
Imaging efficiency	0.86	0.62	0.67	0.63	0.82	0.83
Spectro efficiency	0.65	0.61	0.63	0.61	0.60	0.67
Operations efficiency	0.90	0.94	0.94	0.96	0.96	0.93
Hours lost to problems		13:29	3:08	7:34	22:30	16:59
Hours lost to weather		97:18	66:24	24:03	106:58	111:06

**Median Time for Spectroscopic
Observing Activities**

Category*	Baseline	2001				
		Aug-01	Sep-01	Oct-01	Nov-01	Dec-01
Cartridge change	10	7	7	6	6	6
Setup	10	14	14	14	15	13
Calibration	5	12	12	12	12	12
CCD readout (assumed)	0	3	3	3	3	3
Total overhead	25	36	36	35	36	34
Science exposure (assumed)	45	45	45	45	45	45
Total time per plate	70	81	81	80	81	79
Spectroscopic Efficiency	0.64	0.56	0.56	0.56	0.56	0.57

*Time shown in minutes

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**Performance Statistics for
SDSS Observing Operations**

Updated 08/05/2008

Dark Time

Category	Baseline	2002												
		Jan-02	Feb-02	Mar-02	Apr-02	May-02	Jun-02	Jul-02	Aug-02	Sep-02	Oct-02	Nov-02	Dec-02	
Total Time		161:21	152:40	144:02	123:40	100:11	92:34	61:12	Summer Shutdown	104:35	88:26	131:32	142:56	
Imaging fraction	0.24	0.31	0.13	0.24	0.02	0.22	0.15	0.00		0.12	0.60	0.34	0.26	
Spectro fraction	0.66	0.58	0.76	0.64	0.93	0.74	0.76	0.97		0.78	0.34	0.55	0.65	
Weather	0.50	0.55	0.46	0.44	0.64	0.53	0.52	0.37		0.40	0.47	0.58	0.34	
System uptime	0.90	0.93	0.99	0.95	0.99	0.90	0.98	0.96		0.98	1.00	0.98	0.98	
Imaging efficiency	0.86	0.84	0.74	0.87	0.68	0.83	0.84			0.88	0.90	0.90	0.85	
Spectro efficiency	0.65	0.60	0.66	0.58	0.63	0.63	0.58	0.65		0.67	0.56	0.64	0.66	
Operations efficiency	0.90	0.93	0.93	0.89	0.95	0.97	0.92	0.97		0.96	0.94	0.97	0.97	
Hours lost to problems		11:10	2:02	6:51	1:22	9:47	1:54	2:40			1:37	0:00	2:10	2:49
Hours lost to weather		69:41	83:03	78:12	43:55	42:04	44:21	38:28			63:05	46:33	55:40	94:54

Dark + Gray Time

Category	Baseline	2002												
		Jan-02	Feb-02	Mar-02	Apr-02	May-02	Jun-02	Jul-02	Aug-02	Sep-02	Oct-02	Nov-02	Dec-02	
Total Time		228:48	205:59	191:34	157:59	136:45	121:17	70:56	Summer Shutdown	136:37	116:34	177:35	197:49	
Imaging fraction	0.24	0.28	0.12	0.20	0.02	0.16	0.12	0.00		0.09	0.56	0.27	0.17	
Spectro fraction	0.66	0.65	0.78	0.70	0.93	0.78	0.81	0.97		0.82	0.42	0.65	0.77	
Weather	0.50	0.47	0.42	0.47	0.57	0.59	0.57	0.35		0.40	0.41	0.59	0.44	
System uptime	0.90	0.95	0.99	0.92	0.99	0.93	0.97	0.96		0.99	1.00	0.99	0.98	
Imaging efficiency	0.86	0.84	0.74	0.87	0.68	0.83	0.84			0.88	0.90	0.90	0.85	
Spectro efficiency	0.65	0.61	0.64	0.61	0.65	0.64	0.65	0.65		0.65	0.63	0.63	0.6	
Operations efficiency	0.90	0.92	0.92	0.90	0.95	0.95	0.92	0.97		0.96	0.94	0.96	0.95	
Hours lost to problems		12:00	2:21	15:24	1:55	9:55	4:11	2:40			1:43	0:00	2:21	4:16
Hours lost to weather		117:24	118:58	92:42	67:34	50:57	51:08	45:47			82:05	68:14	72:57	110:29

**Median Time for Spectroscopic
Observing Activities**

Category*	Baseline	2002											
		Jan-02	Feb-02	Mar-02	Apr-02	May-02	Jun-02	Jul-02	Aug-02	Sep-02	Oct-02	Nov-02	Dec-02
Cartridge change	10	6	5	5	5	5	5	5	Summer Shutdown	5	5	5	5
Setup	10	12	10	12	8	10	13	14		11	14	15	15
Calibration	5	14	12	15	12	12	12	14		14	14	13	13
CCD readout (assumed)	0	3	3	3	3	3	3	3		3	3	3	3
Total overhead	25	35	30	35	28	30	33	36		33	36	36	36
Science exposure (assumed)	45	45	45	45	45	45	45	45		45	45	45	45
Total time per plate	70	80	75	80	73	75	78	81		78	81	81	81
Spectroscopic Efficiency	0.64	0.56	0.60	0.56	0.62	0.60	0.58	0.56		0.58	0.56	0.56	0.56

*Time shown in minutes

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**Performance Statistics for
SDSS Observing Operations**

Updated 08/05/2008

Dark Time

Category	Baseline	2003												
		Jan-03	Feb-03	Mar-03	Apr-03	May-03	Jun-03	Jul-03	Aug-03	Aug-03	Sep-03	Oct-03	Nov-03	Dec-03
Total Time		137:48	140:14	140:15	126:35	110:52	98:57	92:29	Summer Shutdown	85:44	114:44	135:55	144:10	150:50
Imaging fraction	0.24	0.07	0.32	0.44	0.43	0.43	0.34	0.36		0.01	0.54	0.38	0.23	0.12
Spectro fraction	0.66	0.77	0.60	0.52	0.54	0.54	0.60	0.54		0.90	0.30	0.52	0.46	0.71
Weather	0.50	0.64	0.63	0.29	0.58	0.80	0.49	0.70		0.29	0.63	0.77	0.56	0.68
System uptime	0.90	0.98	0.91	0.99	1.00	0.99	0.98	0.92		0.99	0.92	1.00	0.97	0.84
Imaging efficiency	0.86	0.84	0.80	0.84	0.90	0.90	0.79	0.86			0.80	0.90	0.82	0.83
Spectro efficiency	0.65	0.63	0.61	0.57	0.60	0.60	0.55	0.61		0.60	0.55	0.70	0.70	0.7
Operations efficiency	0.90	0.96	0.96	0.96	0.96	0.97	0.95	0.97		0.93	0.95	0.97	0.96	0.94
Hours lost to problems		2:59	13:10	2:06	0:10	1:18	1:56	7:17		0:46	9:33	0:40	3:57	24:03
Hours lost to weather		49:49	51:14	98:54	52:50	22:11	50:18	22:17	60:30	42:49	31:53	63:53	39:31	

Dark + Gray Time

Category	Baseline	2003												
		Jan-03	Feb-03	Mar-03	Apr-03	May-03	Jun-03	Jul-03	Aug-03	Aug-03	Sep-03	Oct-03	Nov-03	Dec-03
Total Time		176:19	179:39	185:43	166:59	132:53	125:44	120:24	Summer Shutdown	98:11	147:42:00	203:07	216:32	232:24
Imaging fraction	0.24	0.08	0.37	0.33	0.38	0.42	0.33	0.36		0.01	0.46	0.29	0.17	0.1
Spectro fraction	0.66	0.79	0.61	0.64	0.61	0.58	0.66	0.58		0.91	0.44	0.59	0.57	0.73
Weather	0.50	0.58	0.57	0.32	0.55	0.78	0.47	0.64		0.30	0.63	0.73	0.54	0.61
System uptime	0.90	0.98	0.87	0.96	0.99	0.99	0.98	0.94		0.98	0.91	1.00	0.98	0.83
Imaging efficiency	0.86	0.84	0.80	0.84	0.90	0.90	0.79	0.86			0.80	0.90	0.82	0.83
Spectro efficiency	0.65	0.63	0.64	0.58	0.59	0.56	0.56	0.61		0.60	0.59	0.70	0.69	0.7
Operations efficiency	0.90	0.95	0.96	0.95	0.96	0.97	0.94	0.96		0.94	0.95	0.97	0.95	0.93
Hours lost to problems		2:59	23:58	3:53	1:24	1:18	2:30	7:17		1:37	12:51	0:40	3:57	39:02
Hours lost to weather		73:59	72:46	125:45	75:00	29:38	66:20	37:59	68:12	54:20	54:13	98:36	74:32	

**Median Time for Spectroscopic
Observing Activities**

Category*	Baseline	2003												
		Jan-03	Feb-03	Mar-03	Apr-03	May-03	Jun-03	Jul-03	Aug-03	Aug-03	Sep-03	Oct-03	Nov-03	Dec-03
Cartridge change	10	5	5	4	5	4	4	5	Summer Shutdown	7	4	4	4	4
Setup	10	13	11	15	14	10	13	15		14	13	11	15	13
Calibration	5	13	13	18	13	13	13	13		13	13	6	6	7
CCD readout (assumed)	0	3	3	3	3	3	3	3		3	3	3	3	3
Total overhead	25	34	32	40	35	30	33	36		37	33	24	28	27
Science exposure (assumed)	45	45	45	45	45	45	45	45		45	45	45	45	45
Total time per plate	70	79	77	85	80	75	78	81		82	78	69	73	72
Spectroscopic Efficiency	0.64	0.57	0.58	0.53	0.56	0.60	0.58	0.56		0.55	0.58	0.65	0.62	0.62

*Time shown in minutes

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**Performance Statistics for
SDSS Observing Operations**

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Dark Time

		2004											
Category	Baseline	Jan-04	Feb-04	Mar-04	Apr-04	May-04	Jun-04	Jul-04	Aug-04	Sep-04	Oct-04	Nov-04	Dec-04
Total Time		147:06	140:37	127:55	115:09	99:21	96:10		117:15	108:22	136:37	144:42	149:42
Imaging fraction	0.24	0.31	0.13	0.24	0.38	0.34	0.35		0.05	0.48	0.46	0.34	0.56
Spectro fraction	0.66	0.25	0.68	0.69	0.48	0.55	0.55		0.80	0.35	0.43	0.60	0.4
Weather	0.50	0.27	0.51	0.51	0.67	0.62	0.59		0.40	0.74	0.51	0.34	0.56
System uptime	0.90	1.00	0.96	0.98	0.99	0.94	0.98		0.98	0.95	0.89	0.91	0.97
Imaging efficiency	0.86	0.85	0.73	0.72	0.84	0.85	0.83		0.75	0.88	0.82	0.91	0.8
Spectro efficiency	0.65	0.65	0.69	0.66	0.67	0.69	0.66		0.70	0.72	0.78	0.70	0.69
Operations efficiency	0.90	0.96	0.96	0.96	0.97	0.96	0.96		0.92	0.97	0.95	0.96	0.96
Hours lost to problems		0:00	5:17	2:23	0:36	6:25	1:31		2:33	4:57	15:11	13:07	3:58
Hours lost to weather		107:58	68:50	62:33	37:52	37:28	38:30		69:50	27:57	57:02	84:08	65:32

Dark + Gray Time

		2004											
Category	Baseline	Jan-04	Feb-04	Mar-04	Apr-04	May-04	Jun-04	Jul-04	Aug-04	Sep-04	Oct-04	Nov-04	Dec-04
Total Time		215:41	201:46	174:12	153:06	125:12	126:25		183:08:00	133:44:00	197:05	222:34	231:45
Imaging fraction	0.24	0.17	0.11	0.23	0.34	0.30	0.34		0.10	0.45	0.54	0.32	0.42
Spectro fraction	0.66	0.40	0.68	0.65	0.48	0.57	0.57		0.73	0.39	0.40	0.63	0.51
Weather	0.50	0.34	0.49	0.46	0.62	0.61	0.52		0.39	0.75	0.47	0.38	0.54
System uptime	0.90	1.00	0.97	0.99	1.00	0.95	0.96		0.98	0.96	0.92	0.93	0.98
Imaging efficiency	0.86	0.06	0.73	0.72	0.84	0.85	0.83		0.75	0.88	0.82	0.91	0.8
Spectro efficiency	0.65	0.65	0.66	0.64	0.67	0.66	0.65		0.69	0.75	0.78	0.70	0.72
Operations efficiency	0.90	0.96	0.96	0.96	0.96	0.96	0.94		0.93	0.97	0.95	0.96	0.96
Hours lost to problems		0:00	6:08	2:23	8:38	6:25	4:26		4:26	4:57	15:19	14:41	4:52
Hours lost to weather		3435:36	103:27	94:24	57:32	48:28	56:36		112:08	33:37	93:36	126:38	105:38

**Median Time for Spectroscopic
Observing Activities**

		2004											
Category*	Baseline	Jan-04	Feb-04	Mar-04	Apr-04	May-04	Jun-04	Jul-04	Aug-04	Sep-04	Oct-04	Nov-04	Dec-04
Cartridge change	10	8	4	4	4	4	7		4	4	5	5	5
Setup	10	13	13	14	14	13	12		12	11	12	10	12
Calibration	5	6	6	6	6	6	6		6	6	6	6	6
CCD readout (assumed)	0	3	3	3	3	3	3		3	3	3	3	3
Total overhead	25	30	26	27	27	26	28		25	24	26	24	26
Science exposure (assumed)	45	45	45	45	45	45	45		45	45	45	45	45
Total time per plate	70	75	71	72	72	71	73		70	69	71	69	71
Spectroscopic Efficiency	0.64	0.60	0.63	0.62	0.62	0.63	0.62		0.64	0.65	0.63	0.65	0.63

*Time shown in minutes

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**Performance Statistics for
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Dark Time

Category	Baseline	2005												
		Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05	Jul/Aug-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05
Total Time		145:57	138:52	131:40	116:07	101:18	95:41	81:35:00	Summer Shutdown	5:46	5:98	151:06	154:04	152:26
Imaging fraction	0.24	0.18	0.37	0.24	0.13	0.39	0.71	0.04		0.56	0.94	0.81	0.53	0.12
Spectro fraction	0.66	0.74	0.59	0.68	0.82	0.54	0.25	0.61		0.24	0.03	0.16	0.39	0.82
Weather	0.50	0.47	0.13	0.57	0.59	0.64	0.66	0.59		0.42	0.39	0.87	0.71	0.76
System uptime	0.90	0.98	0.92	0.99	0.98	0.97	1.00	0.99		0.92	1.00	0.92	0.95	0.98
Imaging efficiency	0.86	0.89	0.84	0.94	0.87	0.83	0.79	0.60		0.84	0.84	0.93	0.91	0.85
Spectro efficiency	0.65	0.74	0.68	0.70	0.71	0.69	0.63	0.71		0.53	0.57	0.65	0.75	0.77
Operations efficiency	0.90	0.96	0.96	0.96	0.95	0.97	0.97	0.96		0.97	0.99	0.99	0.98	0.96
Hours lost to problems		2:44	11:03	1:48	2:53	3:11	0:24	1:03		9:59	0:24	11:45	8:17	2:46
Hours lost to weather		77:39	110:53	55:42	47:11	36:53	32:55	33:43		69:38	87:29	20:14	38:10	36:40

Dark + Gray Time

Category	Baseline	2005												
		Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05	Jul/Aug-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05
Total Time		219:02	207:56	195:19	160:45	131:39	128:59	96:52:00	Summer Shutdown	201:28:00	226:54:00	228:31	240:16	231:55
Imaging fraction	0.24	0.13	0.32	0.17	0.10	0.34	0.63	0.04		0.54	1.00	0.84	0.50	0.1
Spectro fraction	0.66	0.72	0.68	0.75	0.81	0.59	0.37	0.59		0.19	0.02	0.12	0.39	0.84
Weather	0.50	0.49	0.12	0.57	0.59	0.63	0.65	0.59		0.52	0.53	0.86	0.76	0.71
System uptime	0.90	0.98	0.94	0.98	0.98	0.98	0.99	0.99		0.95	1.00	0.93	0.93	0.96
Imaging efficiency	0.86	0.89	0.84	0.94	0.87	0.83	0.79	0.60		0.84	0.84	0.93	0.91	0.85
Spectro efficiency	0.65	0.73	0.69	0.63	0.71	0.70	0.67	0.71		0.49	0.34	0.62	0.74	0.76
Operations efficiency	0.90	0.97	0.96	0.96	0.95	0.96	0.97	0.96		0.98	0.99	0.99	0.98	0.96
Hours lost to problems		3:33	11:34	3:17	3:38	3:11	0:41	1:03		10:20	0:24	17:06	17:46	9:06
Hours lost to weather		111:36	172:15	83:34	65:09	48:27	45:33	39:42		90:10	105:58	31:30	50:16	64:08

**Median Time for Spectroscopic
Observing Activities**

Category*	Baseline	2005												
		Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05	Jul/Aug-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05
Cartridge change	10	5	5	5	4	4	4	4	Summer Shutdown	5	0	8	6	5
Setup	10	11	10	9	9	11	10	11		5	18	7	10	10
Calibration	5	6	6	6	6	6	6	6		5	5	5	5	5
CCD readout (assumed)	0	3	3	3	3	3	3	3		3	3	3	3	3
Total overhead	25	25	24	23	22	24	23	24		18	26	10	13	23
Science exposure (assumed)	45	45	45	45	45	45	45	45		45	45	45	45	45
Total time per plate	70	70	69	68	67	69	68	69		63	71	55	58	68
Spectroscopic Efficiency	0.64	0.64	0.65	0.66	0.67	0.65	0.66	0.65		0.71	0.63	0.66	0.65	0.66

*Time shown in minutes

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SDSS Observing Operations**

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Dark Time

		2006											
Category	Baseline	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06
Total Time		140:13	129:29	115:35	102:07	90:18	92:27	Summer Shutdown	5:15	5:81	151:51	159:15	159:56
Imaging fraction	0.24	0.11	0.00	0.03	0.19	0.30	0.17		0.64	0.95	0.94	0.86	0.01
Spectro fraction	0.66	0.82	0.96	0.90	0.73	0.63	0.78		0.00	0.03	0.01	0.11	0.92
Weather	0.50	0.70	0.45	0.44	0.63	0.83	0.34		0.21	0.56	0.59	0.78	0.4
System uptime	0.90	0.95	1.00	1.00	0.96	0.97	0.95		0.96	1.00	0.99	1.00	0.98
Imaging efficiency	0.86	0.82		0.60	0.74	0.80	0.73		0.87	0.88	0.90	0.92	0
Spectro efficiency	0.65	0.75	0.74	0.74	0.69	0.70	0.74		0.47	0.47	0.65	0.52	0.8
Operations efficiency	0.90	0.96	0.96	0.96	0.97	0.97	0.96		0.99	0.99	0.99	0.99	0.93
Hours lost to problems		7:23	0:18	0:19	3:37	2:23	4:18		5:33	0:06	2:09	0:00	3:43
Hours lost to weather		41:13	70:58	64:39	37:32	15:45	60:57		97:07	6:50	62:52	34:16	95:23

Dark + Gray Time

		2006											
Category	Baseline	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06
Total Time		202:19	187:38	159:43	139:22	120:35	126:22	Summer Shutdown	175:37:00	191:25:00	211:21	226:11	232:22
Imaging fraction	0.24	0.09	0.00	0.03	0.17	0.28	0.11		0.70	0.99	1.00	0.85	0.00
Spectro fraction	0.66	0.78	0.96	0.88	0.74	0.67	0.84		0.00	0.03	0.01	0.16	0.9
Weather	0.50	0.69	0.38	0.42	0.59	0.75	0.39		0.16	0.63	0.62	0.72	0.42
System uptime	0.90	0.93	1.00	0.99	0.97	0.98	0.96		0.96	1.00	0.98	0.99	0.98
Imaging efficiency	0.86	0.82		0.60	0.74	0.80	0.73		0.87	0.88	0.90	0.92	0.00
Spectro efficiency	0.65	0.75	0.75	0.74	0.68	0.71	0.75		0.00	0.40	0.65	0.58	0.78
Operations efficiency	0.90	0.96	0.96	0.96	0.95	0.96	0.95		0.98	0.99	0.99	0.98	0.93
Hours lost to problems		14:23	0:18	1:35	3:45	2:23	4:43		6:11	0:54	3:53	2:23	4:19
Hours lost to weather		59:08	116:30	92:28	57:04	30:07	77:19		148:14	71:34	80:37	63:32	135:20

**Median Time for Spectroscopic
Observing Activities**

		2006											
Category*	Baseline	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06
Cartridge change	10	5	5	5	5	5	5	Summer Shutdown	0.00	0.00	0.00	13.00	5
Setup	10	10	8	9	11	9	12		0.00	15.00	0.00	13.00	8
Calibration	5	5	5	5	5	5	5		0.00	10.00	0.00	5.00	5
CCD readout (assumed)	0	3	3	3	3	3	3		3.00	3.00	3.00	3.00	3.00
Total overhead	25	23	21	22	24	22	25		3	28	3	16	21
Science exposure (assumed)	45	45	45	45	45	45	45		45.00	45.00	45.00	45.00	45
Total time per plate	70	68	66	67	69	67	70		48	73	48	61	66
Spectroscopic Efficiency	0.64	0.66	0.68	0.67	0.65	0.67	0.64		0.62	0.00	0.57	0.68	

*Time shown in minutes

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**Performance Statistics for
SDSS Observing Operations**

Updated 08/05/2008

Dark Time

		2007											
Category	Baseline	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
Total Time		153:03	139:07	120:44	105:30	91:47	87:03		135:15	108:19	152:50	165:52	172:13
Imaging fraction	0.24	0.02	0.11	0.07	0.15	0.00	0.07		0.92	0.01	0.73	0.73	0.18
Spectro fraction	0.66	0.92	0.81	0.85	0.77	0.88	0.86		0.02	0.70	0.22	0.25	0.69
Weather	0.50	0.16	0.40	0.59	0.44	0.49	0.43		0.36	0.62	0.77	0.82	0.43
System uptime	0.90	1.00	1.00	0.98	1.00	0.99	0.96		1.00	0.98	0.99	0.99	0.84
Imaging efficiency	0.86	0.00	0.76	0.74	0.77	0.00	0.66		0.89	0.65	0.90	0.93	0.74
Spectro efficiency	0.65	0.74	0.75	0.73	0.71	0.73	0.74		0.00	0.74	0.72	0.68	0.64
Operations efficiency	0.90	0.94	0.95	0.93	0.94	0.94	0.93		0.99	0.94	0.98	0.98	0.93
Hours lost to problems		0:00	0:40	2:47	1:40	0:28	3:38		0:39	1:48	1:13	1:15	26:55
Hours lost to weather		128:51	83:07	49:05	58:55	46:33	49:53		86:29	41:37	35:51	30:17	98:35

Dark + Gray Time

		2007											
Category	Baseline	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
Total Time		227:56	203:54	167:06	147:20	126:50	120:20		210:10	137:31	262:22	295:10	286:10
Imaging fraction	0.24	0.02	0.08	0.07	0.13	0.00	0.06		0.89	0.02	0.70	0.71	0.21
Spectro fraction	0.66	0.92	0.77	0.76	0.80	0.87	0.85		0.11	0.69	0.28	0.29	0.64
Weather	0.50	0.13	0.49	0.59	0.42	0.53	0.40		0.42	0.53	0.65	0.80	0.50
System uptime	0.90	1.00	1.00	0.98	1.00	0.98	0.96		1.00	0.99	0.99	0.99	0.90
Imaging efficiency	0.86	0.00	0.76	0.74	0.77	0.00	0.66		0.89	0.65	0.90	0.93	0.74
Spectro efficiency	0.65	0.73	0.77	0.72	0.73	0.74	0.72		0.75	0.73	0.73	0.69	0.69
Operations efficiency	0.90	0.94	0.95	0.94	0.93	0.94	0.93		0.99	0.94	0.98	0.98	0.94
Hours lost to problems		0:00	0:40	2:47	0:27	2:25	4:43		0:59	1:48	1:46	3:22	29:36
Hours lost to weather		198:57	102:58	69:19	84:49	60:10	72:08		122:56	64:44	91:38	59:49	143:11

**Median Time for Spectroscopic
Observing Activities**

		2007											
Category*	Baseline	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
Cartridge change	10	6	5	5	5	4	5		5	5	5	5	5
Setup	10	8	9	7	8	7	7		6	7	7	11	10
Calibration	5	5	5	6	6	6	6		16	11	11	11	11
CCD readout (assumed)	0	3.00	3.00	3.00	3.00	3.00	3.00		3.00	3.00	3.00	3.00	3.00
Total overhead	25	22	22	21	22	20	21		30	26	10	14	29
Science exposure (assumed)	45	45.00	45.00	45.00	45.00	45.00	45.00		45.00	45.00	45.00	45.00	45.00
Total time per plate	70	67	67	66	67	65	66		75	71	55	59	74
Spectroscopic Efficiency	0.64	0.67	0.67	0.68	0.67	0.69	0.68		0.60	0.63	0.63	0.60	0.61

*Time shown in minutes

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**Performance Statistics for
SDSS Observing Operations**

Updated 08/05/2008

Dark Time

Category	Baseline	2008						Jul-08
		Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	
Total Time		168:46	156:16	140:21	106:16	94:45	93:42	Summer Shutdown
Imaging fraction	0.24	0.07	0.00	0.00	0.00	0.00	0.00	
Spectro fraction	0.66	0.86	0.92	0.93	0.93	0.93	0.90	
Weather	0.50	0.53	0.64	0.65	0.64	0.70	0.13	
System uptime	0.90	0.99	0.99	1.00	1.00	0.95	0.99	
Imaging efficiency	0.86	0.80	0.00	0.00	0.00	0.00	0.00	
Spectro efficiency	0.65	0.74	0.76	0.79	0.79	0.75	0.79	
Operations efficiency	0.90	0.93	0.93	0.93	0.93	0.93	0.90	
Hours lost to problems		1:33	1:25	0:30	0:00	4:27	1:20	
Hours lost to weather		79:24	56:14	49:30	38:16	28:18	80:23	

Dark + Gray Time

Category	Baseline	2008						Jul-08
		Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	
Total Time		296:25	292:50	268:28	192:53	162:00	159:59	Summer Shutdown
Imaging fraction	0.24	0.06	0.00	0.00	0.00	0.00	0.00	
Spectro fraction	0.66	0.84	0.90	0.91	0.88	0.90	0.73	
Weather	0.50	0.58	0.47	0.57	0.55	0.77	0.12	
System uptime	0.90	0.99	1.00	0.04	1.00	0.97	0.99	
Imaging efficiency	0.86	0.80	0.00	0.00	0.00	0.00	0.00	
Spectro efficiency	0.65	0.76	0.78	0.79	0.81	0.76	0.73	
Operations efficiency	0.90	0.92	0.93	0.93	0.94	0.93	0.93	
Hours lost to problems		2:33	1:25	2:47	0:00	5:36	1:20	
Hours lost to weather		123:13	155:58	69:19	85:55	36:52	139:53	

**Median Time for Spectroscopic
Observing Activities**

Category*	Baseline	2008						Jul-08
		Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	
Cartridge change	10	5	5	5	4	4	4	Summer Shutdown
Setup	10	8	7	8	7	8	10	
Calibration	5	6	6	6	6	11	6	
CCD readout (assumed)	0	3.00	3.00	3.00	3.00	3.00	3.00	
Total overhead	25	22	21	22	20	26	23	
Science exposure (assumed)	45	45.00	45.00	45.00	45.00	45.00	45.00	
Total time per plate	70	67	66	67	65	71	68	
Spectroscopic Efficiency	0.64	0.67	0.68	0.67	69%	63%	66%	
					0.69	0.63	0.66	

*Time shown in minutes

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