

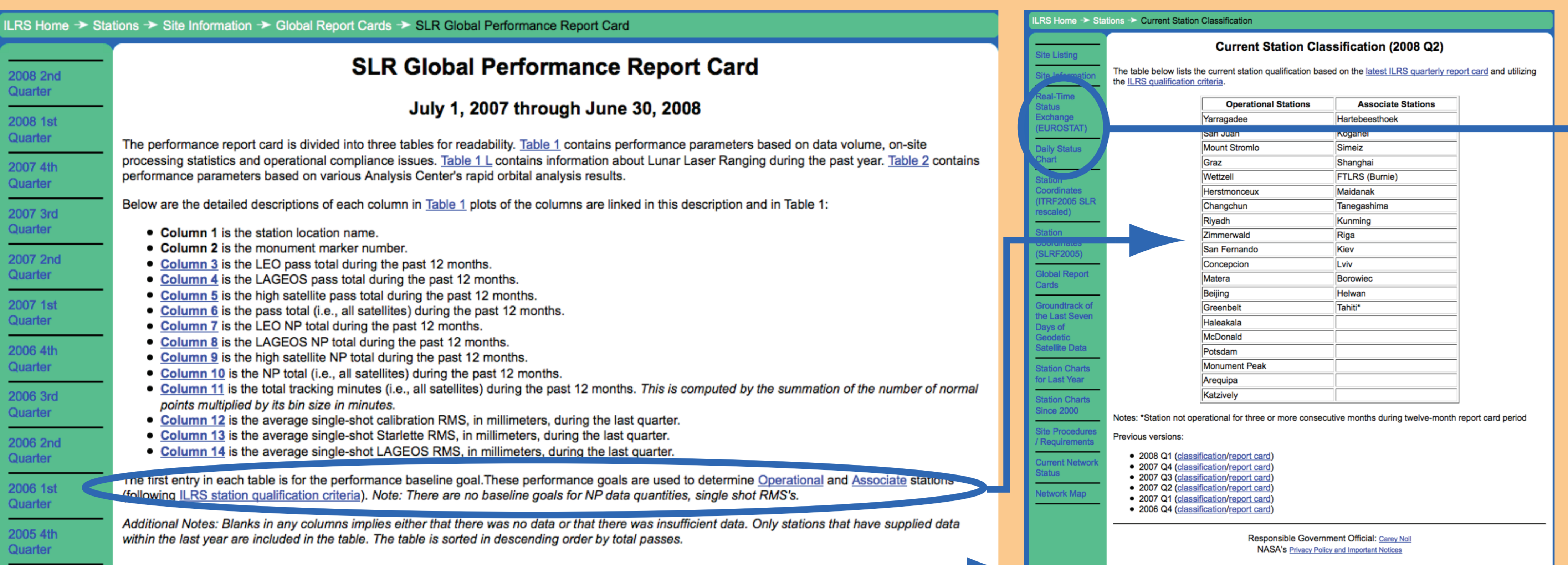
Abstract
The ILRS Web site, <http://ilrs.gsfc.nasa.gov>, is the central source of information for all aspects of the service. The Web site provides information on the organization and operation of ILRS and descriptions of ILRS components, data, and products. Furthermore, the Web site and provides an entry point to the archive of these data and products available through the data centers. Links are provided to extensive information on the ILRS network stations including performance assessments and data quality evaluations. Descriptions of supported satellite missions (current, future, and past) are provided to aid in station acquisition and data analysis. This poster will detail recent improvements made in several areas of the ILRS Web site including specific examples of key sections and webpages.

The ILRS Central Bureau staff has developed various reports and data plots to monitor network performance. The CB would like to encourage station operators, analysts, and other ILRS groups to peruse these reports and plots on a regular basis to monitor station performance as well as how the overall network is supporting our mission customers. All plots and reports can be accessed through the station pages on the ILRS Web site at URL <http://ilrs.gsfc.nasa.gov/stations>.

Station Performance Report Cards
The ILRS performance "report cards" are issued quarterly by the ILRS Central Bureau (CB). These reports tabulate the previous 12 months of data quality, quantity, and operational compliance by station. The CB uses these report cards to maintain lists of the operational and associate stations. The statistics are presented in two tables (one for artificial satellites and a second for lunar reflectors) by station and sorted by total passes in descending order. Plots of data volume (passes, normal points, minutes of data) and RMS (LAGEOS, Starlette, calibration) are created from this information and available on the report card Web site. A third table summarizes the orbital analysis of the data performed by five AC/AACs (DGFI, Hitotsubashi University, JCET, MCC, and the Shanghai Astronomical Observatory).

Real-Time and Daily Station Status Reports
Station status information is available on a daily and near-real time basis through the EUROSTAT utility. These reports allow the ILRS community to quickly view the status of the tracking network. ILRS stations can automatically upload status information to EUROSTAT that is then used to generate an overview of the current activities of the tracking stations. The real-time report shows actual station operations at that point in time. The daily report provides a one-line entry per day showing if stations are currently staffed, operational, off-shift, off-line because of system problems, etc. We encourage all stations in the network to participate in the daily and, if possible, real-time exchange of status information.

A recent version of the report card (2nd quarter 2008, 01-Jul-2007 through 30-Jun-2008) is shown in the web page figure below.

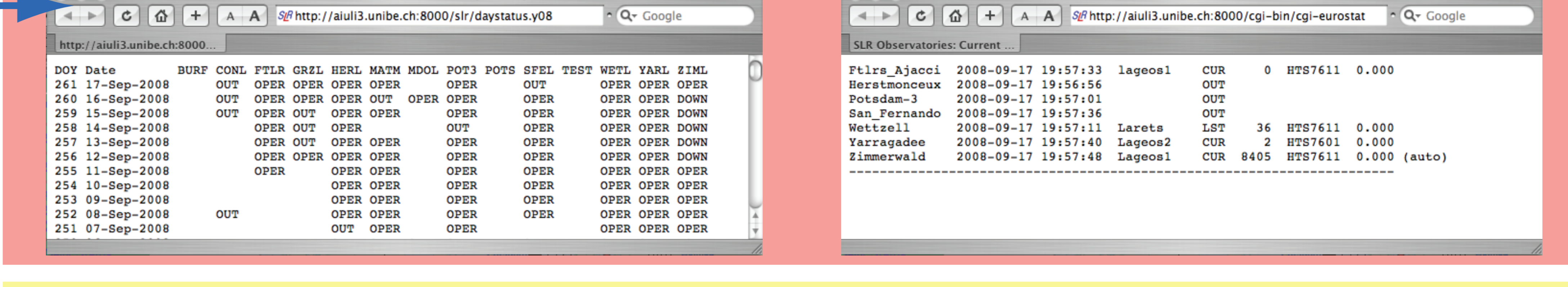


ILRS Global Performance Report Card
July 1, 2007 through June 30, 2008

The performance report card is divided into three tables for readability. Table 1 contains performance parameters based on data volume, on-site processing statistics and operational compliance issues. Table 1.1 contains information about Lunar Laser Ranging during the past year. Table 2 contains performance parameters based on various Analysis Centers' orbital analysis results.

Below are the detailed descriptions of each column in Table 1.1 plots of the columns are linked in this description and in Table 1:

- Column 1 is the station location name.
- Column 2 is the monument marker number.
- Column 3 is the LEO pass total during the past 12 months.
- Column 4 is the LAGEOS pass total during the past 12 months.
- Column 5 is the high satellite pass total during the past 12 months.
- Column 6 is the pass total (i.e., all satellites) during the past 12 months.
- Column 7 is the LEO NP total during the past 12 months.
- Column 8 is the LAGEOS NP total during the past 12 months.
- Column 9 is the high satellite NP total during the past 12 months.
- Column 10 is the NP total (i.e., all satellites) during the past 12 months.
- Column 11 is the total tracking minutes (i.e., all satellites) during the past 12 months. This is computed by the summation of the number of normal points multiplied by its bin size in minutes.
- Column 12 is the average single-shot calibration RMS, in millimeters, during the last quarter.
- Column 13 is the average single-shot Starlette RMS, in millimeters, during the last quarter.
- Column 14 is the average single-shot LAGEOS RMS, in millimeters, during the last quarter.



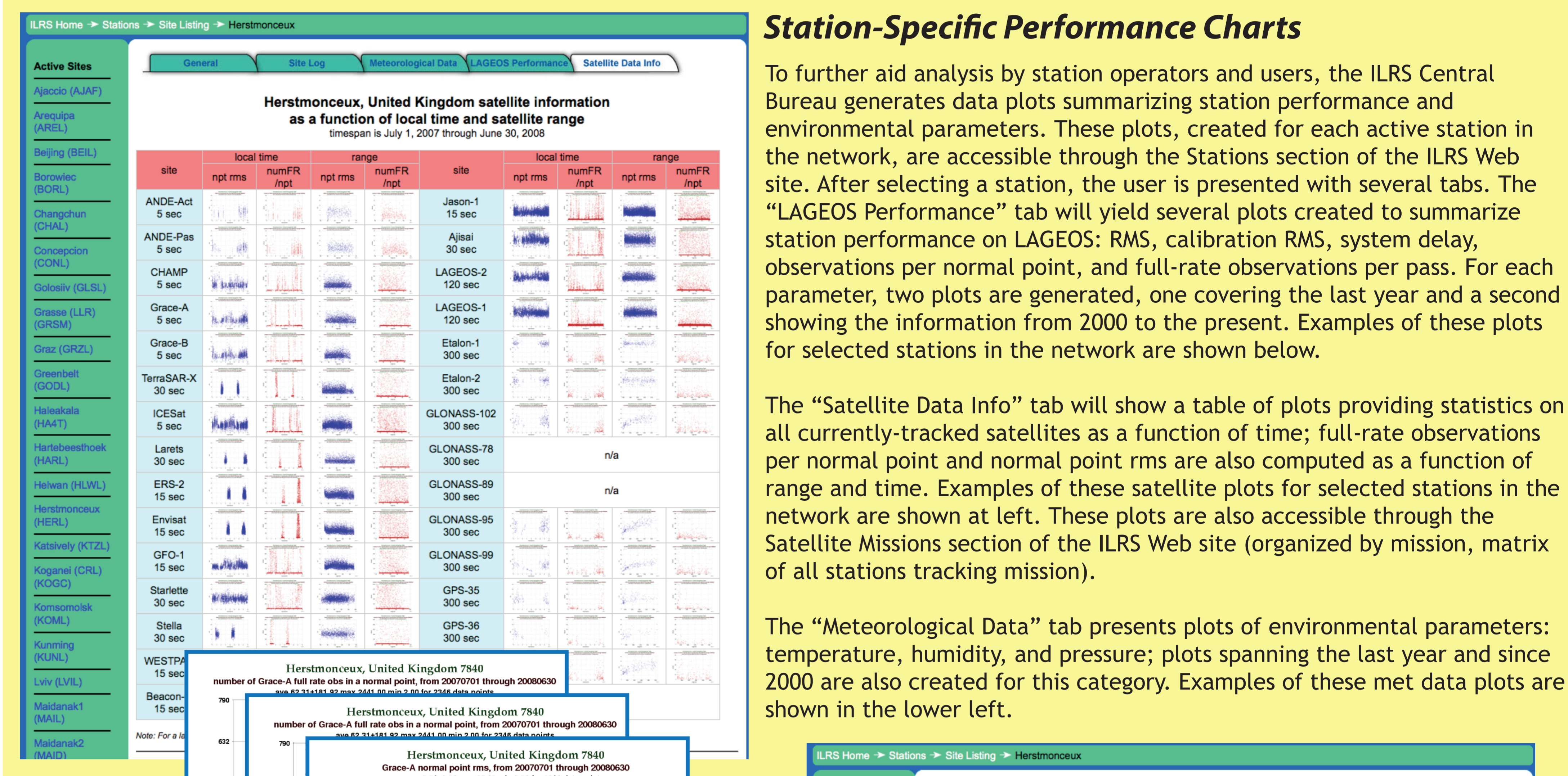
ILRS Observatories: Current Status

DOY Date	BUREAU	CONG	FTLR	GREL	HERNI	MARL	MOOL	POF3	POTS	EFEL	TSTL	WBLI	YARI	ZMLL
261 17-Sep-2008	OUT	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER
260 16-Sep-2008	OUT	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER
259 15-Sep-2008	OUT	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER
258 14-Sep-2008	OUT	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER
257 13-Sep-2008	OUT	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER
256 12-Sep-2008	OUT	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER
255 11-Sep-2008	OUT	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER
254 10-Sep-2008	OUT	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER
253 09-Sep-2008	OUT	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER
252 08-Sep-2008	OUT	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER
251 07-Sep-2008	OUT	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER	OPER

Table 1.1

Site Information

Location	Station	EO pass	LAGEOS	High pass	Total	EO NP	LAGEOS NP	High NP	Total NP	Minutes of Data	Cal. RMS	Star. RMS	LAG. RMS
Baseline		1000	400	100	1500								
Yarragadee	7090	2638	658	1099	4395	20421	25377	12731	242128	166320	4.7	8.9	9.4
San_Juan	7406	5255	1082	1303	7640	84520	13173	8659	106352	92649	13.1	13.9	16.2
Mount_Stromlo_2	7825	5297	1274	484	7055	70303	12660	3586	86749	66201	3.1	4.2	5.8
Wetzell	8834	4094	1033	411	5538	43417	7905	1727	53049	38825	4.6	12.1	19.1
Herstmonceux	7840	3881	888	374	5143	61069	10386	1582	73047	44178	7.3	12.1	15.4
Changchun	7237	3954	593	570	5117	44205	4953	2970	52128	37099	13.0	13.8	16.7
Riyadh	7832	3482	885	561	4928	42767	7089	3208	53062	43794	10.4	12.4	15.9
Zimmerwald_423	7810	3276	703	377	4356	51628	6376	2352	62356	42284			
Zimmerwald_532	7810	3276	703	377	4356	51628	6376	2352	62356	42284			
Zimmerwald_846	7810	3276	703	377	4356	51628	6376	2352	62356	42284			
San_Fernando	7824	2828	471	78	3531	44032	3589	373	47994	22813	6.4	11.5	15.3
Concepcion_847	7405	1877	1009	207	3093	23829	13070	1504	38043	42820	5.2	14.2	16.5
Concepcion_423	7405	1877	1009	207	3093	23829	13070	1504	38043	42820	5.2	14.2	16.5
Matera_MURO	7941	2081	645	119	2845	28146	6907	958	36011	28143	1.4	3.6	4.7
Beijing	7249	1850	296	194	2340	27806	2836	1489	32131	21875	7.0	14.4	25.9
Greenbelt	7105	1917	263	114	2314	44384	2893	682	47898	20616	4.8	7.9	8.7
Haleakala	7119	1785	431	216	2291	4954	3405	1873	5010	1061	5.0	10.6	10.4
McDonald	7080	1280	392	221	1893	14571	3710	913	19194	16275	9.4	12.7	12.2
Potsdam_3	7841	1573	281	184	2038	29698	3230	33128	13945	13.8	15.4	19.3	
Monument_Peak	7110	1437	289	78	1804	26749	3068	539	33396	16114	5.0	13.4	15.7
Arequipa	7403	1600	176	106	1778	19788	1164	20932	8406	5.5	9.2	5.7	
Katzevly	1893	1198	261	106	1565	19193	2186	643	22022	13606	46.3	72.8	40.7
Hartebeesthoek	7501	1194	240	30	1464	14034	1849	175	16058	8974	5.6	8.5	9.8
Koganei	7308	672	215	66	953	9773	1987	830	12590	11601	9.4	14.0	15.2
Simeiz	1873	614	181	79	874	8244	1638	1287	11167	8370	63.2	54.7	
Shanghai_2	7821	693	46	2	741	8755	47	7	9238	3745	11.8	15.3	20.0
Burnie_Tafe	7370	589	6	6	595	8207	25	8232	2785	5.3	11.1	13.0	
Maldanek_1	1864	315	154	97	566	9385	1279	398	5628	5391			
Tangashim	7358	310	61	92	463	5145	651	664	6480	6143	5.2	5.5	5.8
Kunming	7820	324	26	26	390	4617	171	4842	1939	18.8	18.1	19.8	
Riga	1884	263	184	1	447	2961	629	5910	2657	18.6	12.7	19.1	
Kiev	1824	186	11	1	187	2023	3	2026	851	42.0	59.8	58.2	
Lviv	1831	90	18	1	108	1593	170	1763	818				
Borowiec	7811	79	22	101	1133	214	1347	763	169	181	28.0		
Helwan	7831	56			56	392		392	109				
Papeete	7124	17	11	28	285	136	401	350	4.5	7.8	8.1		
Shanghai	7837	7	4		11	71	33	104	91	12.4	18.0	20.9	




Station-Specific Performance Charts
Herstmonceux, United Kingdom satellite information as a function of local time and satellite range.

The charts show performance metrics for various satellites (ANDE-A, ANDE-Pas, CHAMP, Grace-A, Grace-B, TeraSAR-X, LCESE, Lanets, ERS2, Envisat, GFO-1, Starlette, Shella, WESTRA, Beacon) over time. The x-axis represents local time (hr) and the y-axis represents satellite range (km).

Table 1.2

Site Information

Location	Station	num nights tracking last 12 mon	num npt last 12 mon	L5	L6	live npt rms last 3 mon
Baseline		10.0	20.0	95	10.0	20.0
Yarragadee	7090	28	23.8	3.6	100.0	1.7
San_Juan	7406	63	34.3	5.5	99.4	4.6
Mount_Stromlo_2	7825	2.9	20.2	5.5	99.2	2.8
Wetzell	8834	3.2	24.2	16.0	99.9	3.1
Herstmonceux	7840	2.9	22.2	7.3	100.0	2.1
Changchun	7237	2.7	26.5	9.6	100.0	2.2
Riyadh	7832	2.8	23.4	7.0	100.0	2.1
Zimmerwald_423	7810	2.5	19.8	7.3	99.9	1.7
Zimmerwald_846	7810	2.5	19.8	7.3	99.9	1.7
San_Fernando	7824	3.2	34.7	15.6	99.9	2.7
Concepcion_847	7405	3.4	34.3	4.3	99.9	2.4
Concepcion_423	7405	3.4	34.3	4.3	99.9	2.4
Matera_MURO	7941	23	25.5	12.5	100.0	1.8
Beijing	7249	12	18.7	16.7	90.5	5.7
Greenbelt	7105	30	21.7	7.4	100.0	2.0
Haleakala	7119	3.6	27.2	5.7	99.9	1.9
McDonald	7080	2.5	24.3	11.0	99.9	2.5
Potsdam_3	7841	5.5	23.0	6.5	99.3	3.2
Monument_Peak	7110	2.8	24.6	8.1	100.0	2.5
Arequipa	7403	2.7	31.7	28.4	100.0	4.1
Katzevly	1893	9.5	30.9	18.9	99.4	
Hartebeesthoek	7501	1.9	25.0	12.4	100.0	2.7
Simeiz	1873	27.7	45.1	43.8	73.0	76.9
Shanghai_2	7821	1.7	13.4	4.1	100.0	1.1
Tangashim	7358	5.1	30.3	33.8	100.0	1.8
Kunming	7820	1.1	11.2	3.3	100.0	
Riga	1884					
Borowiec	7811	11.2	32.2	99.5	94	16.7



Station-Specific Performance Charts
Herstmonceux, United Kingdom 7840

The charts show performance metrics for various satellites (ANDE-A, ANDE-Pas, CHAMP, Grace-A, Grace-B, TeraSAR-X, LCESE, Lanets, ERS2, Envisat, GFO-1, Starlette, Shella, WESTRA, Beacon) over time. The x-axis represents local time (hr) and the y-axis represents satellite range (km).

Below are the detailed descriptions of each column in Table 1.2:

- the first column, L1, is the station location name.
- the second column, L2, is the monument marker number.
- the third column, L3, is the number of nights during the past 12 months in which there were Lunar ranging measurements.
- the fourth column, L4, is the number of Lunar Laser Ranging normal points during the past 12 months.
- the fifth column, L5, is the number of Lunar Laser Ranging normal points during the past 3 months.
- the sixth column, L6, is the average Lunar Laser Ranging normal points rms 3 months in pass.

The first entry in each table is for the performance baseline goal. These performance goals are used to determine Operational and Associate Stations (following ILRS station qualification criteria). Note: There are no baseline goals for NP data quantities, single shot RMSs.

Additional Notes: Blanks in any columns implies either that there was no data or that there was insufficient data. Only stations that have supplied data within the last year are included in the table. The table is sorted in descending order by total passes.

* n.b. JCET does not yet have a year of results from which long term biases may be calculated.

Report on LAGEOS-1 QIND Residual Analysis
JUL 22, 2008

Shanghai Astronomical Observatory, Chinese Academy of Sciences
National Astronomical Observatory, Chinese Academy of Sciences

Station position from ITRF2000 (ILRS):
lat = 31.221021
lon = 121.272000
alt = 149.000000

The normal editing criteria are summarized below:
residuals above 10 cm are rejected right away (the residual map is with range bias above 6 cm are rejected (labeled DEL)).
passes with time bias above 0.05ms are rejected (labeled DEL).

Adopted abbreviations:
STATION ID number
dur = duration of each pass, (min.)
num = number of data in each pass
num rej = the number of data rejected
range = range bias of each pass, (mm)
rms = root mean square of residuals for the orbit
rms corr = root mean square of residuals corrected with I and J
sat = satellite ID.

Table 2

Site Information

Station Location	Station Number	LAG (short term) (mm)	NP (short term) (mm)	good (short term) (%)	CRS (short term) (mm)	NP (short term) (mm)	long term (mm)	good (long term) (%)	LAG (long term) (mm)	NP (long term) (mm)	% good (long term)
Baseline		10.0	20.0	95	1						