

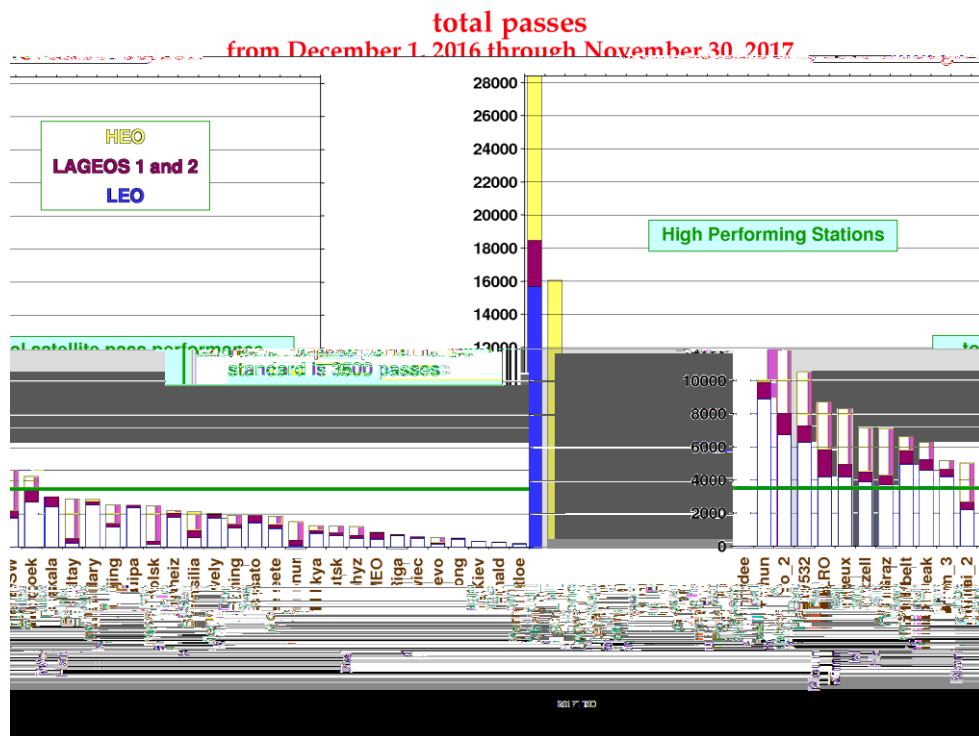
2017

2017

SLR

1.1 2017 SLR

2017



1.1.1

2017

KHz

17898

1.8

5789

2263

747

154

1.1.1 2017

SLR

1.1.1 2017

SLR

1	518	1514	2032
2	456	819	1275
3	283	808	1091
4	508	882	1390
5	213	212	425
6	431	716	1147
7	508	564	1072
8	502	625	1127
9	747	1343	2090
10	737	1526	2263
11	525	1417	1942
12	361	1683	2044
	5789	12109	17898

14.	SARAL		
15.	STSAT-2C		
16.	Swarm-A		
17.	Swarm-B		
18.	Swarm-C		
19.	SpinSat		
20.	TechnoSat		
21.	TanDEM-X		
22.	TerraSAR-X		
23.	PN-1A		
24.	LAGEOS-1		5860km/5620km
25.	LAGEOS-2		
26.	Etalon-1		19120km
27.	Etalon-2		
28.	GLONASS-101	19140km	
29.	GLONASS-102		
30.	GLONASS-103		
31.	GLONASS-105		
32.	GLONASS-106		
33.	GLONASS-107		
34.	GLONASS-116		
35.	GLONASS-117		
36.	GLONASS-118		
37.	GLONASS-119		
38.	GLONASS-120		
39.	GLONASS-121		
40.	GLONASS-122		
41.	GLONASS-125		
42.	GLONASS-126		
43.	GLONASS-127		
44.	GLONASS-128		
45.	GLONASS-129		
46.	GLONASS-131		
47.	GLONASS-132		
48.	GLONASS-133		
49.	GLONASS-134		
50.	GLONASS-135		
51.	GLONASS-136		
52.	Galileo-101	23220km	
53.	Galileo-102		
54.	Galileo-103		
55.	Galileo-104		
56.	Galileo-201	17000km-26210km	

57.	Galileo-202	
58.	Galileo-203	23220km
59.	Galileo-204	
60.	Galileo-205	
61.	Galileo-206	
62.	Galileo-207	
63.	Galileo-208	
64.	Galileo-209	
65.	Galileo-210	
66.	Galileo-211	
67.	Galileo-212	
68.	Galileo-213	
69.	Galileo-214	
70.	COMPASS-G1	35792.9km
71.	COMPASS-IS1	37790.2km
72.	COMPASS-IS2	
73.	COMPASS-I3	
74.	COMPASS-I5	
75.	COMPASS-I6B	35677km
76.	COMPASS-M3	21500km
77.	COMPASS-MS1	
78.	COMPASS-MS2	
79.	QZS-1	32000km-40000km
80.	QZS-2	
81.	QZS-3	36000km
82.	QZS-4	32000km-40000km
83.	IRNSS-1C	42293km
84.	IRNSS-1D	
85.	IRNSS-1E	35786km

2017

ILRS Space Debris Study Group

TOPEX OICETS

52

15

1.2.2 2017

SLR

1	ENVISAT	219

2	GRACE-A	158
3	GRACE-B	99
4	OICETS	46
5	TOPEX	490
6	Tiangong1	52
7	Tiangong2	66
8	1	102
9	2	55

PN-1A		6
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1.3.1 2017

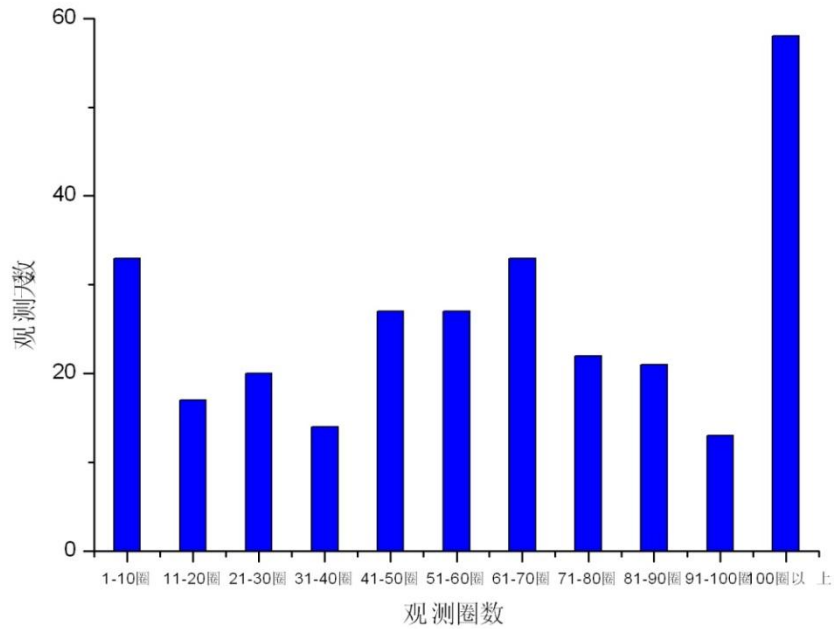
1.5.1 2017

2014 2017

2017 5

1.5.2. 2017

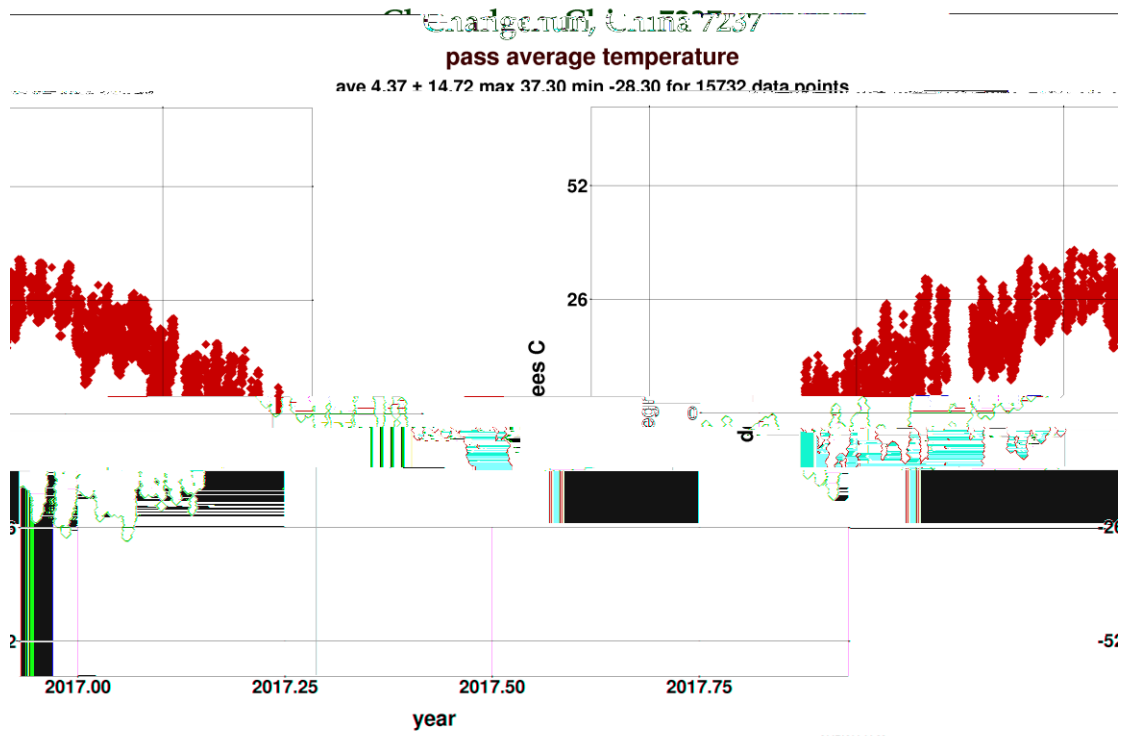
91 -100	13
100	58
	285



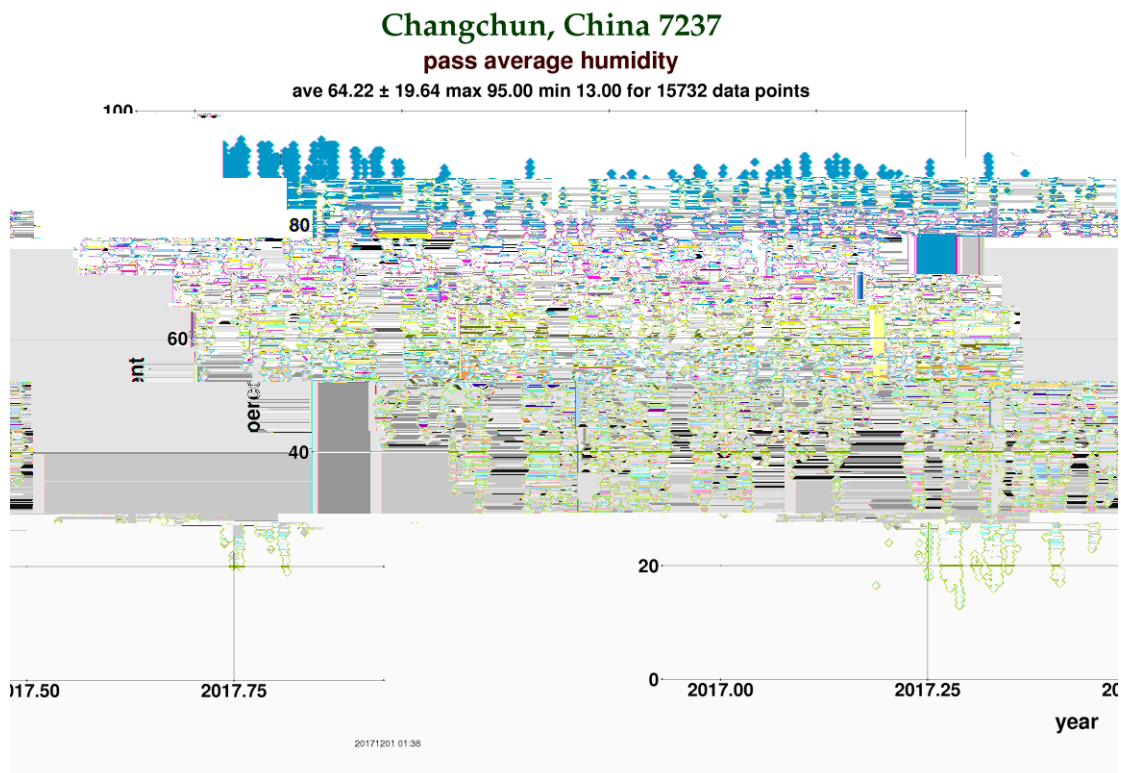
1.5.2 2017

1.5.3.

	2014	2015	2016	2017
1 -10	29	31	18	33
11 -20	20	24	17	17
21 -30	24	22	12	20
31 -40	16	22	20	14
41 -50	25	22	18	27
51 -60	29	28	18	27
61 -70	31	30	31	33
71 -80	23	36	20	22
81 -90	23	15	31	21



1.5.4 2017

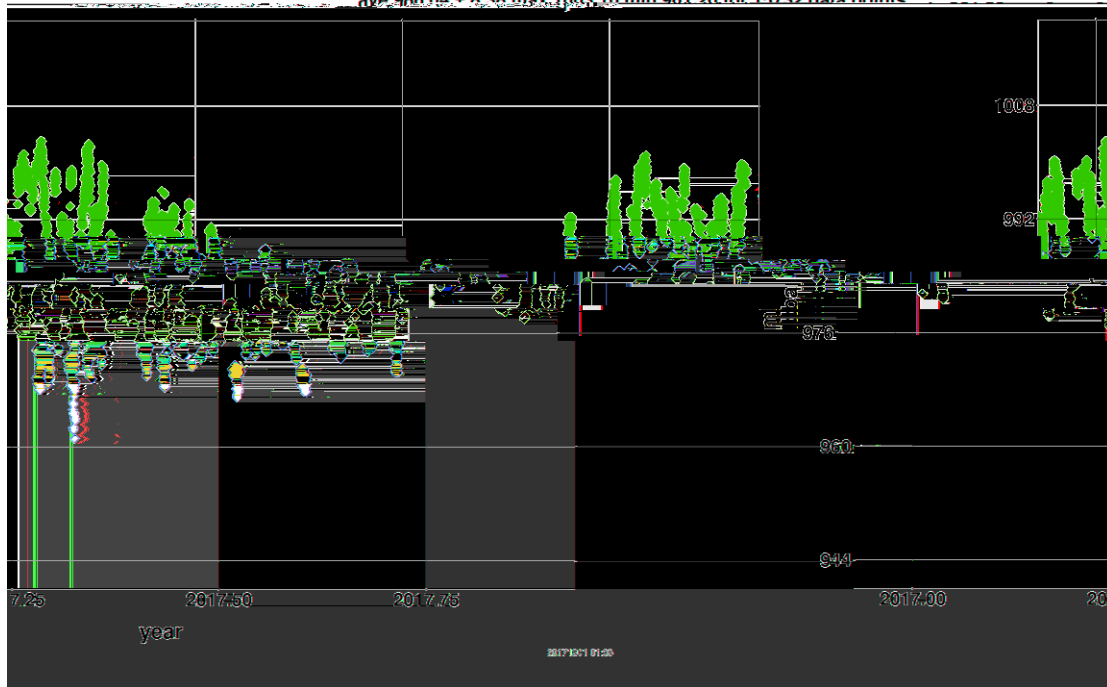


1.5.5 2017

Changchun, China 7237

mass average pressure

ave 986.04 + 8.38 max 1003.10 min 961.20 for 15732 data points



1.5.6 2017

1.6

1 2017 SLR

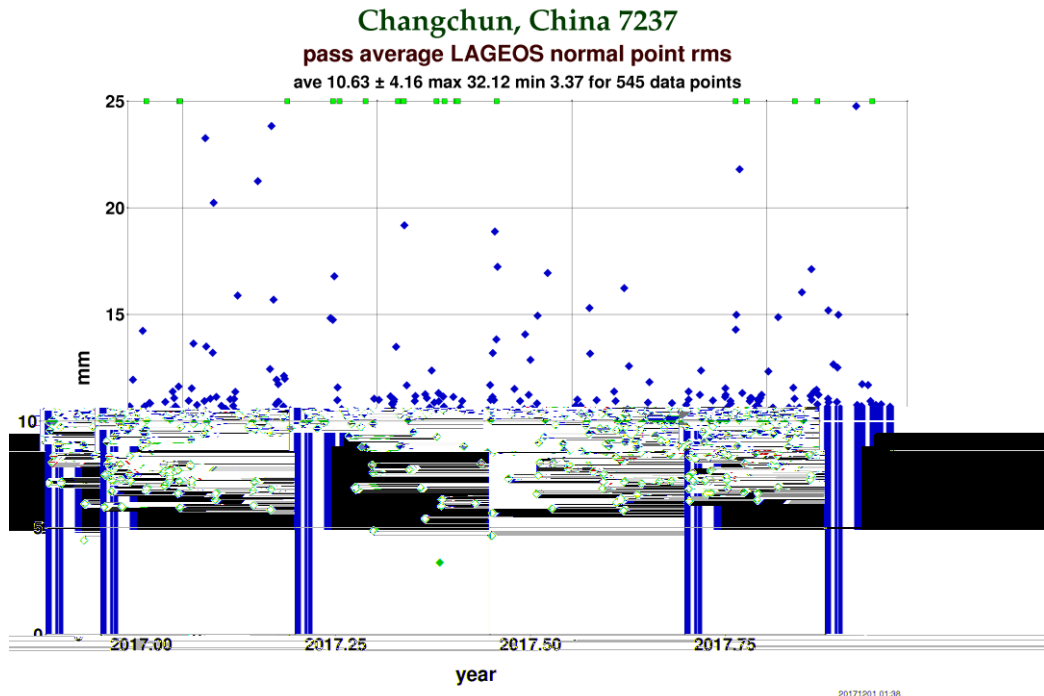
KHz SLR

2017

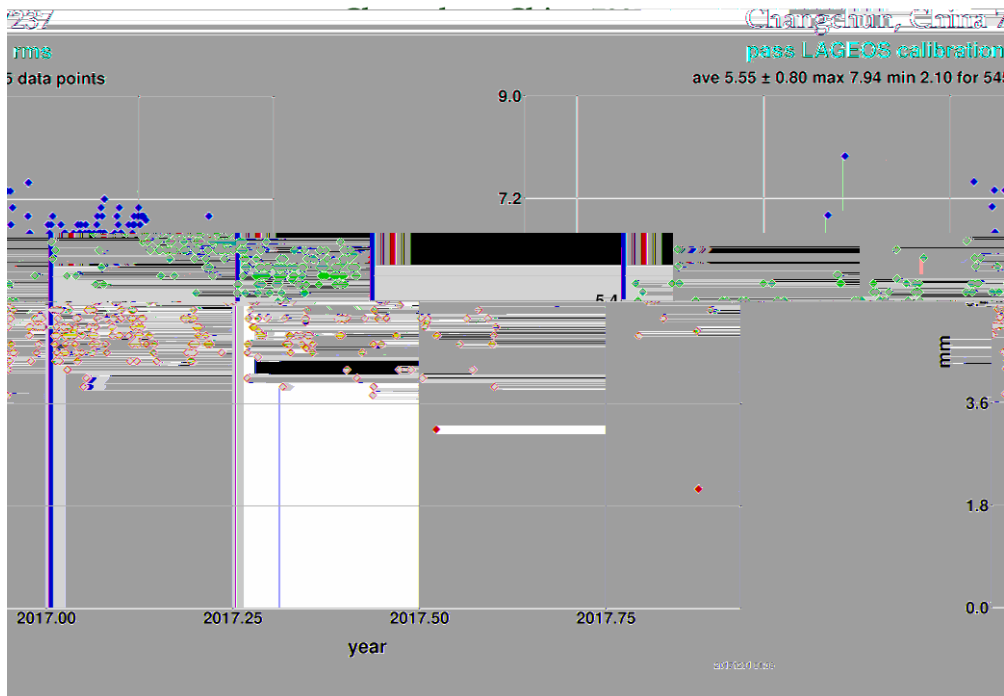
LAGEOS

1.7.1

1.7.2



1.6.1 2017 LAGEOS



1.6.2 2017 LAGEOS

2017

1

PI

1W 2017 8



2.1.1

2

A033

A033

A032

3 PCI-RGG

PCI-E FPGA

RGG

PCI

4 50Hz-RS232

50HzTTL

50Hz 1PPS

windows

5

GFZ CPF

SLR

CPF time bias prediction



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Watch List

Predictions for: 2018-01-23 02:06:58 UTC

Target	Provider	CPFs
geoiK2	SPN	SPN5221 -23.9ms (0.3 / #7)
		SPN5201 17.8ms (1.3 / #22)
hy2a	SHA	SHA5221 -10.1ms (0.1 / #6)
		SHA5211 -12.6ms (0.1 / #9)
kompsat5	KGS	KGS5221 -6.9ms (0.0 / #4)
		KGS5211 12.8ms (0.1 / #6)
isa	ISA	No Data
		ESA5221 3.4ms (0.2 / #4)
ib	ISA	ESA5221 1.5ms (Last / #2)
		ESA5211 2.1ms (0.3 / #7)
id	ISA	ESA5221 3.9ms (Last / #3)
		ESA5211 13.4ms (0.3 / #7)
isa0	AAS	AAS5221 0.2ms (0.1 / #4)
		AAS5211 7.1ms (0.1 / #5)
isa1	ISA	No Data
		ESA5201 250.5ms (Last / #2)
isa2	ISA	ESA5201 59.0ms (0.4 / #13)
		ESA5191 133.9ms (0.5 / #22)
isa3	ISA	ESA5201 15.9ms (0.3 / #14)
		ESA5191 31.4ms (0.3 / #26)
isa4	ISA	ESA5201 50.5ms (0.6 / #12)
		ESA5191 124.7ms (0.5 / #22)
isa5	ISA	AAS5201 -13.0ms (0.1 / #8)
		AAS5191 -22.3ms (0.1 / #17)

2.1.2 GFZ CPF

卫星名称	CPF预报	TB	日期
Ajisai	SGF 5221	-0.0ms	2018-01-22 02
BeaconC	SGF 5221	0.1ms	2018-01-22 02
Cryosat2	ESA 5221	1.0ms	2018-01-22 04
Envisat	DLR 5211	No Data	2018-01-21 14
HY2A	SHA 5221	-10.1ms	2018-01-22 01
Jason2	CNE 5221	0.2ms	2018-01-22 06
Jason3	CNE 5221	-0.8ms	2018-01-22 06
Kompsat5	KGS... 5221	-6.9ms	2018-01-22 00

2.1.3 SLR

