

NIM Station Report

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20th Meeting of the CCTF WG on TWSTFT

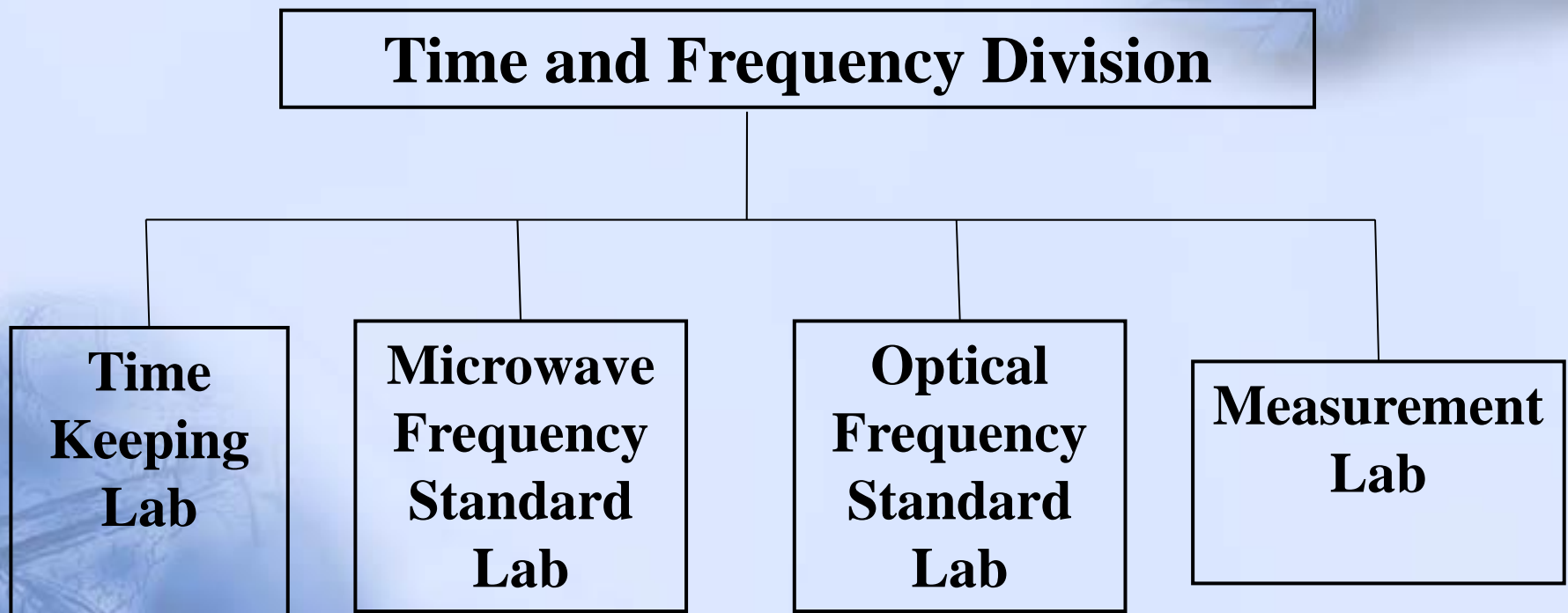
6-7 September, 2012



中国计量科学研究院
National Institute of Metrology



Structure of NIM Time and Frequency Division





Tasks of Time Keeping Lab

- **Realization of UTC(NIM) ;**
- **Time and frequency transfer;**
- **Dissemination of time and frequency quantity value within China**



Time keeping at NIM

- **Official UTC(NIM) is generated at old campus :**
 - 1 H-maser (MHM2010)**
 - 2 Cs clocks (5071A)**
 - 2 GPS receivers**
- **New campus:**
 - 5 H-masers (MHM2010)**
 - 5 Cs clocks (5071A)**
 - 3 GPS receivers**
 - TWSTFT**
- **UTC(NIM) will be switched to our new campus at the end of this year**



TWSTFT Activities in 2012(1)

REFDELAY data is more stable

Improve RDFDELAY measurement system, the data is more reliable now.

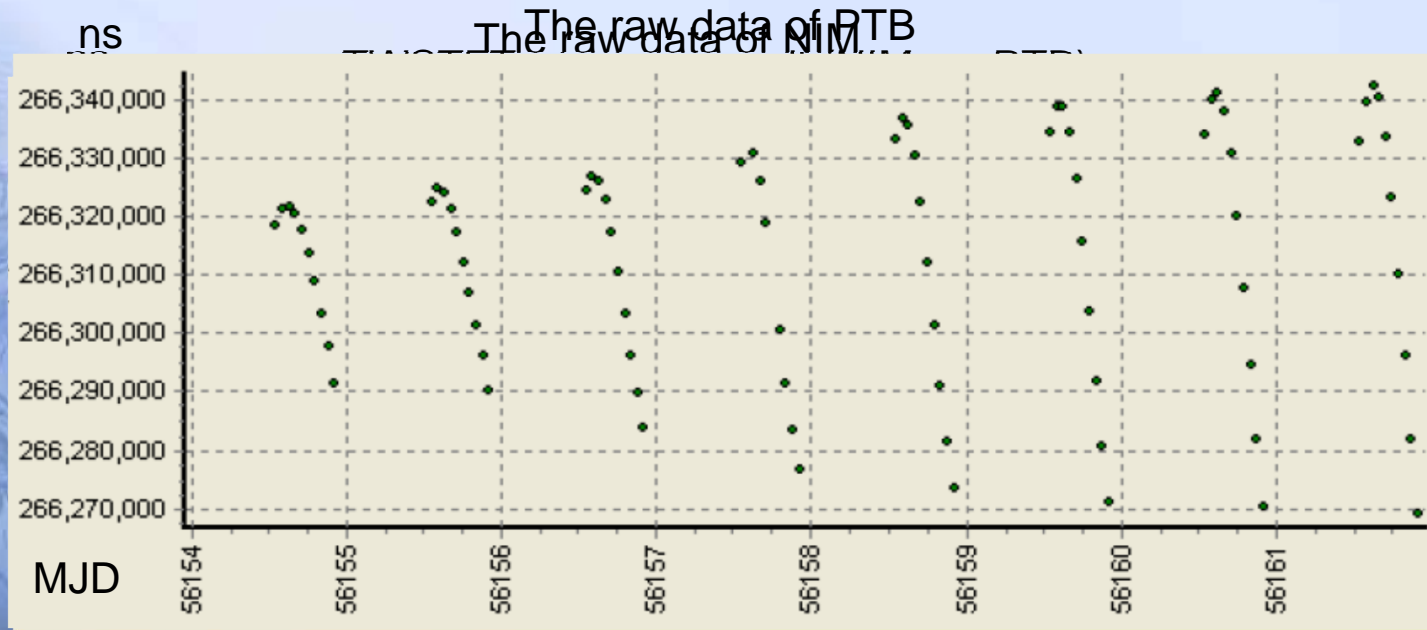
* EARTH-STAT	LI	MJD	STTIME	NTL	TW	DRMS	SMP	ATL	REFDELAY	RSIG	CI	S	CALR	ESDUAR	ESIG	TMP	HUM	PRES	
* LOC	REM		hhmmss	s	s	ns	s		s	ns			ns	ns	ns	deg	%		
NIM01	NTSC02	14	56110	130100	299	+0.254785740768	0.803	300	299	+0.000000794807	0.013	999	9	999999999	999999999	99999	28	46	982
NIM01	PTB03	14	56110	130700	299	+0.266302375544	0.870	299	298	+0.000000794807	0.013	999	9	999999999	999999999	99999	28	47	982
NIM01	TL02	14	56110	131300	299	+0.255691313666	0.750	300	299	+0.000000794807	0.014	999	9	999999999	999999999	99999	28	47	982
NIM01	NPLI01	14	56110	131900	299	+0.251038776320	0.607	297	296	+0.000000794803	0.013	999	9	999999999	999999999	99999	28	47	982
NIM01	NICT14	14	56110	133100	299	+0.261904734046	0.754	300	299	+0.000000794807	0.013	999	9	999999999	999999999	99999	27	46	983
NIM01	SU01	14	56110	133700	299	+0.261948301377	0.683	299	298	+0.000000794806	0.013	999	9	999999999	999999999	99999	27	49	983



TWSTFT Activities in 2012(2)

TWSTFT data post-process software is developed

Last seven days' data is processed and emailed to relevant person automatically. The following example is the result between NIM and PTB from MJD56154 to MJD56161.

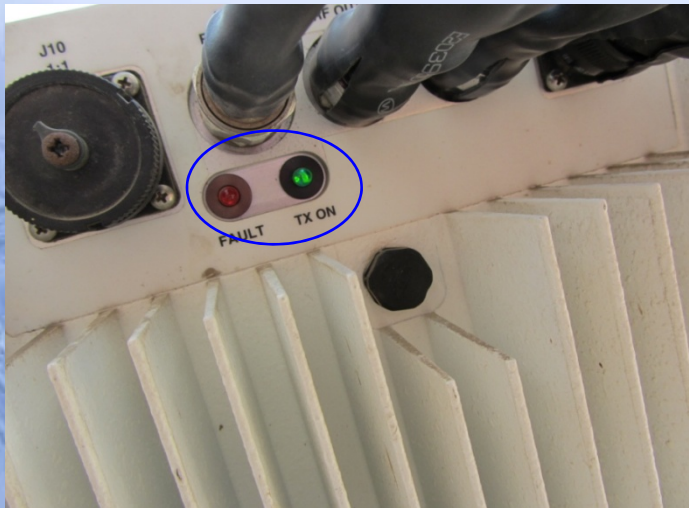




TWSTFT Activities in 2012(3)

The repairment of transceiver

NIM station worked abnormally from Mar.27 (MJD56013) because of the malfunction of transceiver. We got it repaired by the Comtech agency and the station worked normally since Apr.13(MJD56030).

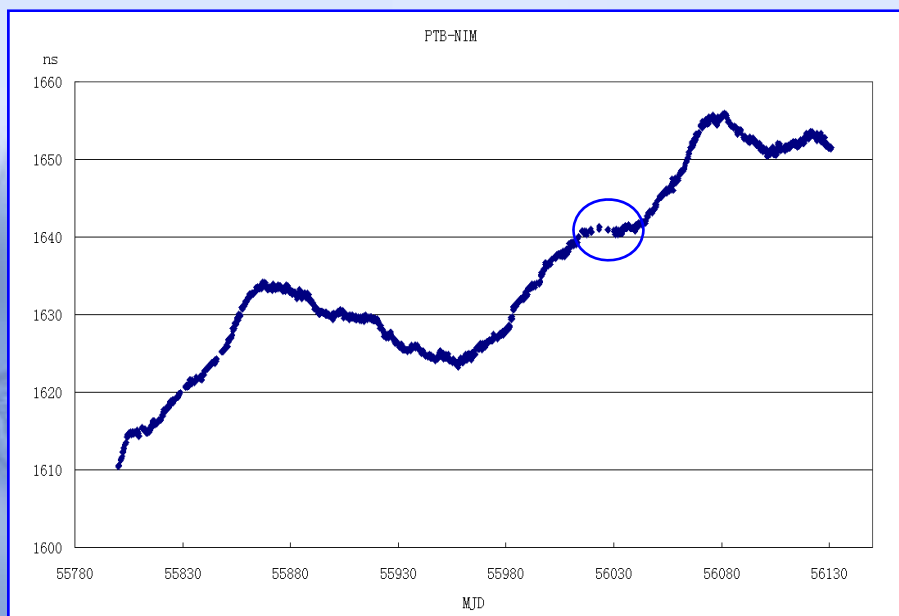




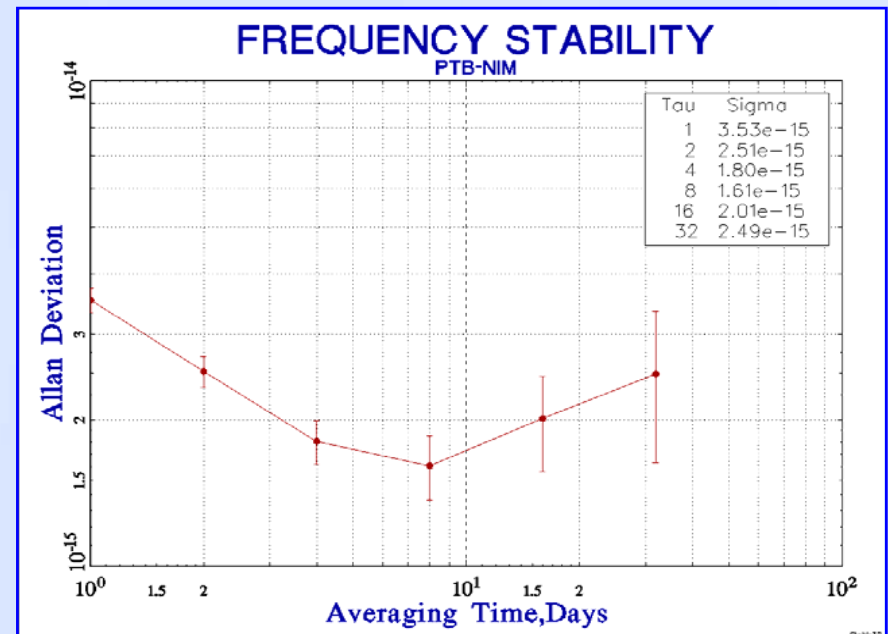
NIM TWSTFT measurement results(1)

PTB-NIM (MJD55800 to MJD56130)

Time difference



Frequency stability

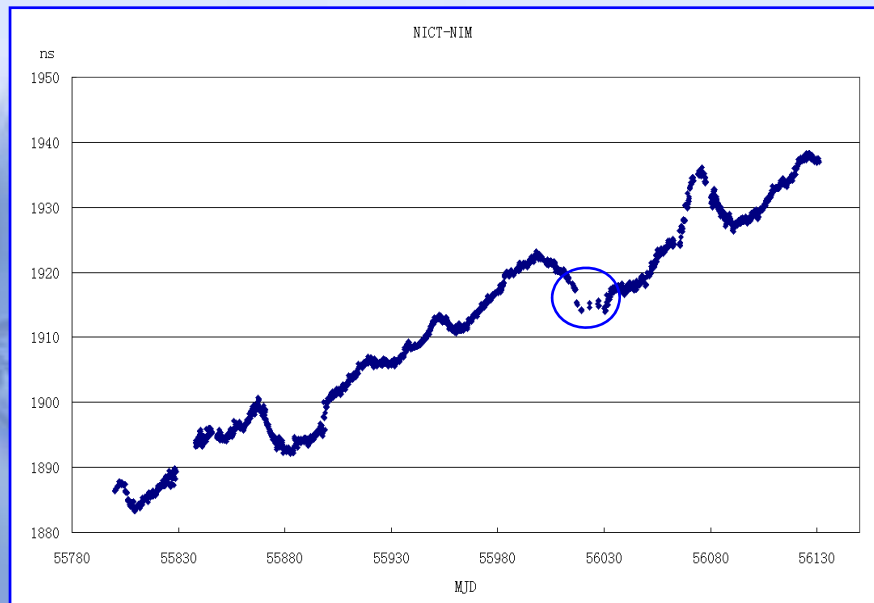




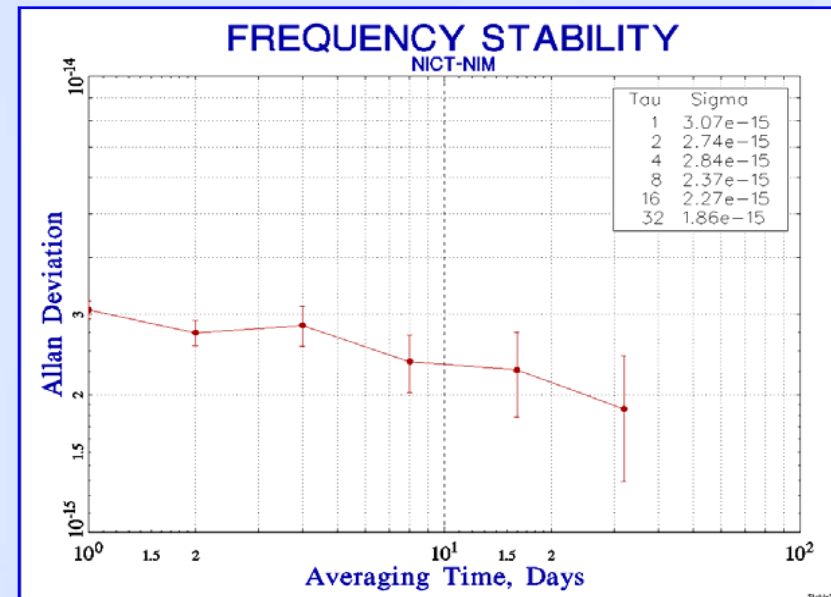
NIM TWSTFT measurement results

NICT-NIM (MJD55800 to MJD56130)

Time difference



Frequency stability

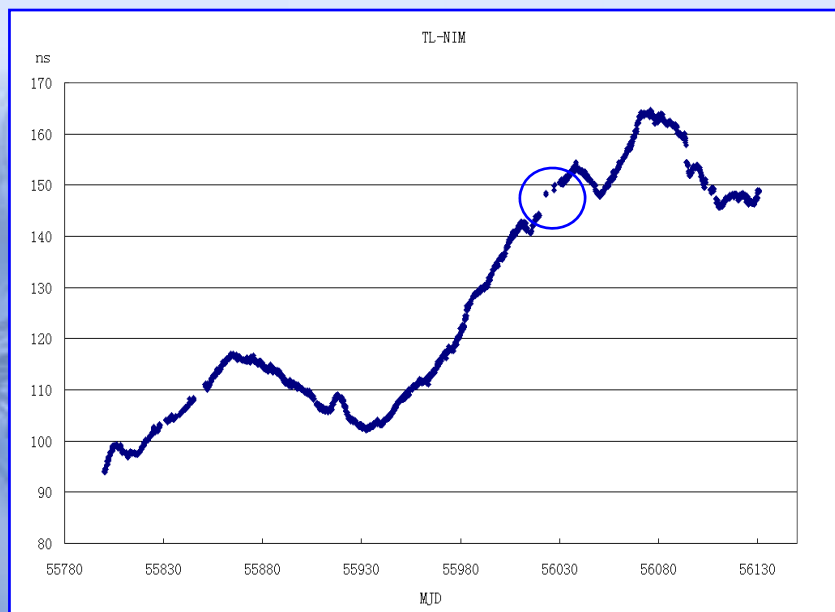




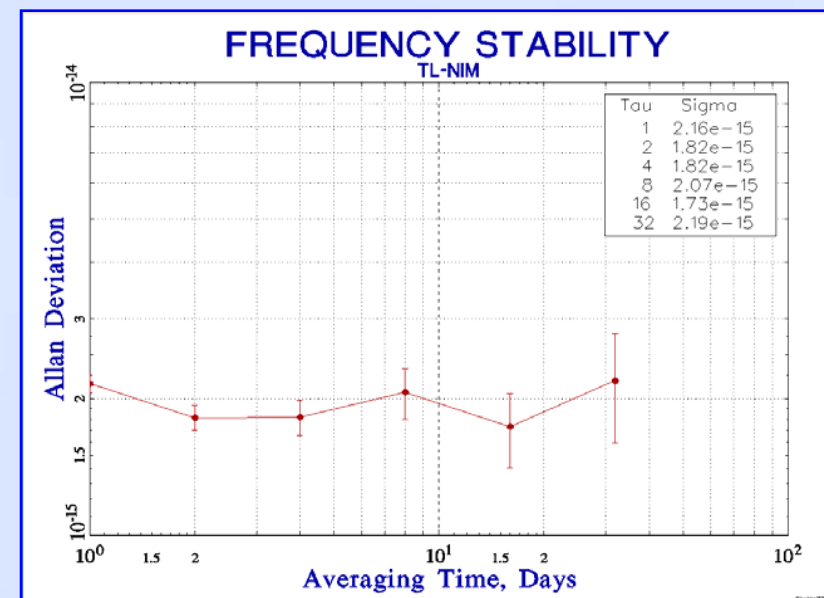
NIM TWSTFT measurement results

TL-NIM (MJD55800 to MJD56130)

Time difference



Frequency stability



Thank you !



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