Station Report

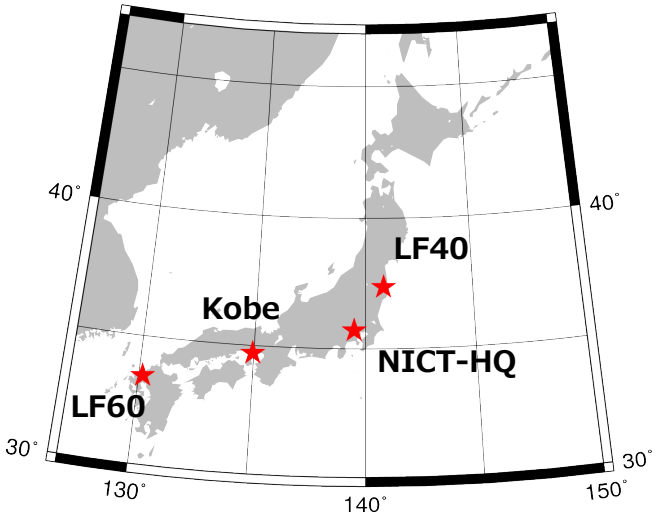
SEKIDO Mamoru, GOTOH Tadahiro, KOZUKI Yuto,
FUJIEDA Miho, ICHIKAWA Ryuichi, IDO Tetsuya

Changes and events from 2022

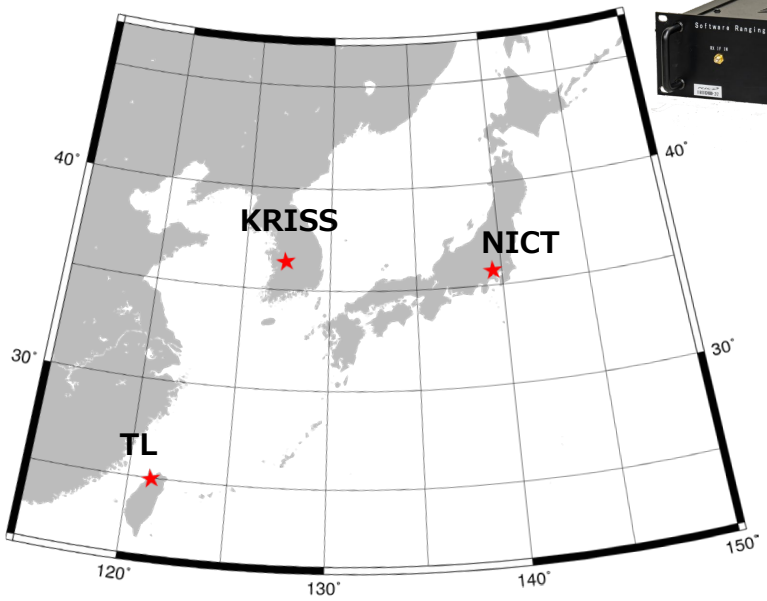
- Personnel: IDO Tetsuya, SEKIDO Mamoru, GOTOH Tadahiro, ICHIKAWA Ryuichi, KOZUKI Yuto
  - KOZUKI Yuto joined as a new member from April. 2023.
- Events:
  - EU-Asia link
    - Operation stopped for Jun.-Dec. 2022 due to frequency change and license problem.
  - Asia link
    - Operation stopped for Oct. 2022-Jan.2023 due to power leakage due to polarization misalignment.

Regular Links

Link (Satellite)	Stations	Modem
Domestic (E172B)	NICT HQ, LF40, LF60, Kobe	SRS Modem
Asia (E172B)	NICT, TL, KRISS	SRS Modem
Eu-Asia (Express-80)	PTB, SU, PL, NTSC, NIM, KRISS, NICT	SATRE Modem



Domestic Link for distributed Japan Standard Time system



TWSTFT link in east Asia

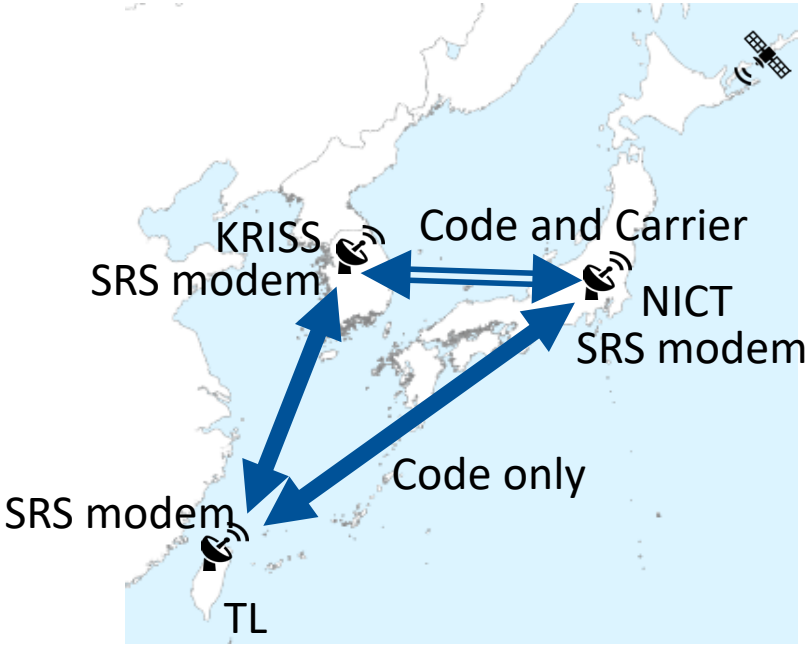
SRS modem.

Status of Asia Link in 2023

Satellite	Participating stations	Modem	Chip rate	Note
E172B	NICT, TL, KRISS	SRS modem	1 Mcps	• The same band is shared with domestic TWSTFT link

Polarization Problem

- Sep. 2022: Power leakage to opposite polarization was found. Then, Tx for all the stations was stopped in 1 Oct. 2022.
- Antenna pointing and feed angle were adjusted to clear the polarization separation requirement (over 25 dB) via peak&pol test with support of Eutelsat Service Center.
- Adjustment for all stations was finished and Two-way link has resumed from Mar. 2023.



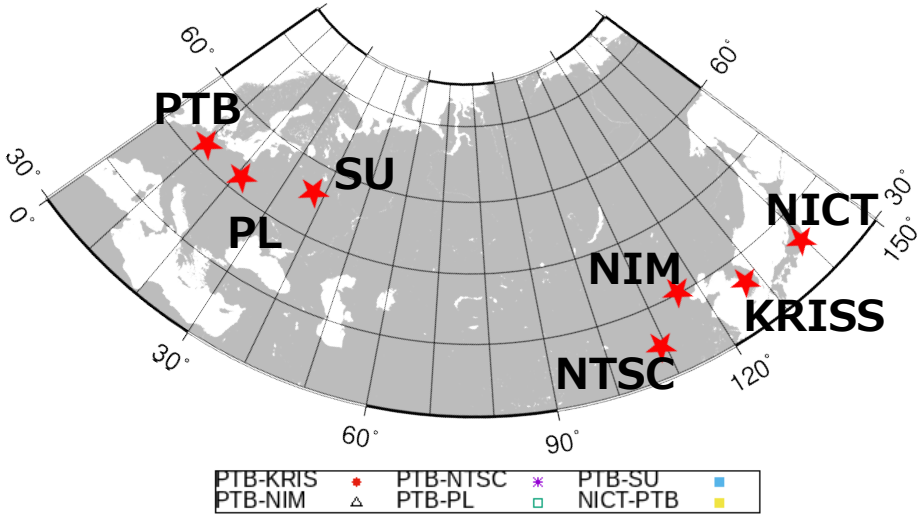
Update of stations

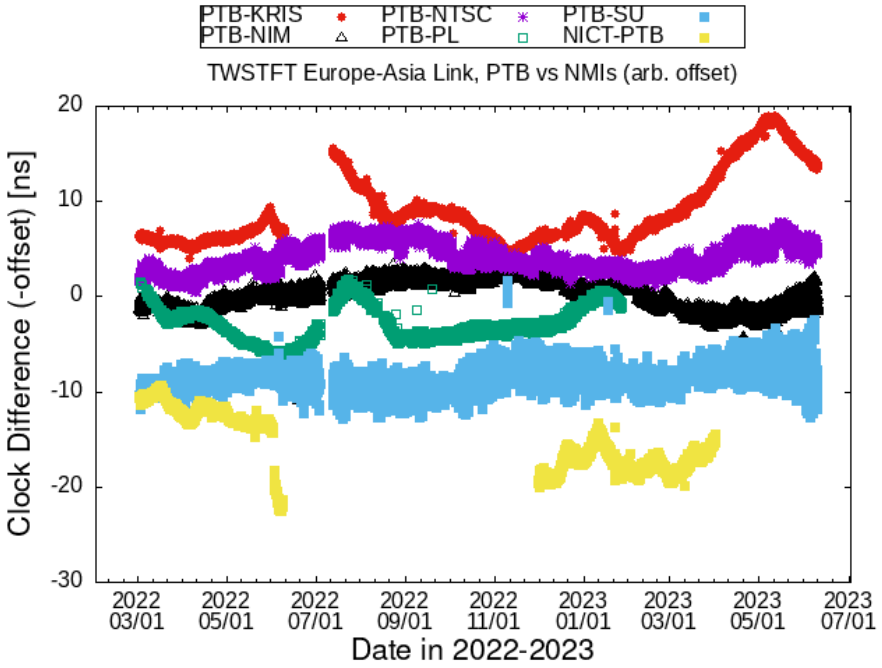
- KRISS and TL have prepared backup antenna.
- Both stations have finished peak&pol test by the end of May.

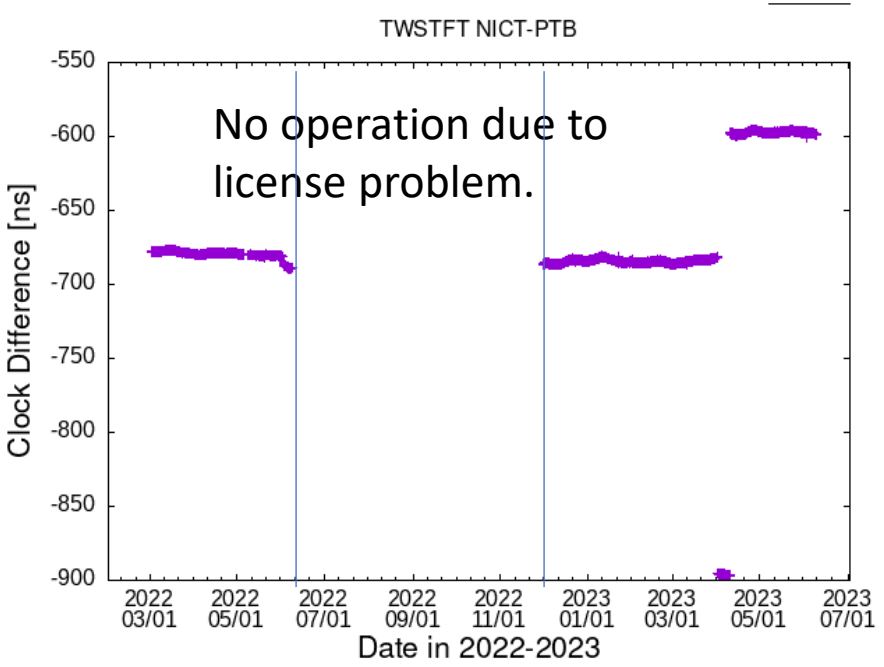
EU-Asia link

EU-Asia link resumed since Jan. 2022.

- 2022.6.8: Link frequency was changed from 14.225 GHz 14.483 GHz. It was out of licensed freq. range to NICT. We stopped operation.
- 2022.12.1: Tx license was revised, and we restarted participation.
- Clock jump due to interruption of reference signal. Calibration correction procedure need to be established.







Plans

- For stable operation of current links
  - Domestic link, Asia-link
    - Under the condition of sharing the same transponder, adjustment of operation may be necessary.
  - EU-Asia link
    - Calibration correction procedure need to be established to deal with clock jump due to interruption of reference signal.
- SRS modem test campaign
  - Testing device and Preparation of shipping SRS modem to OP, PTB, RISE,INRIM.