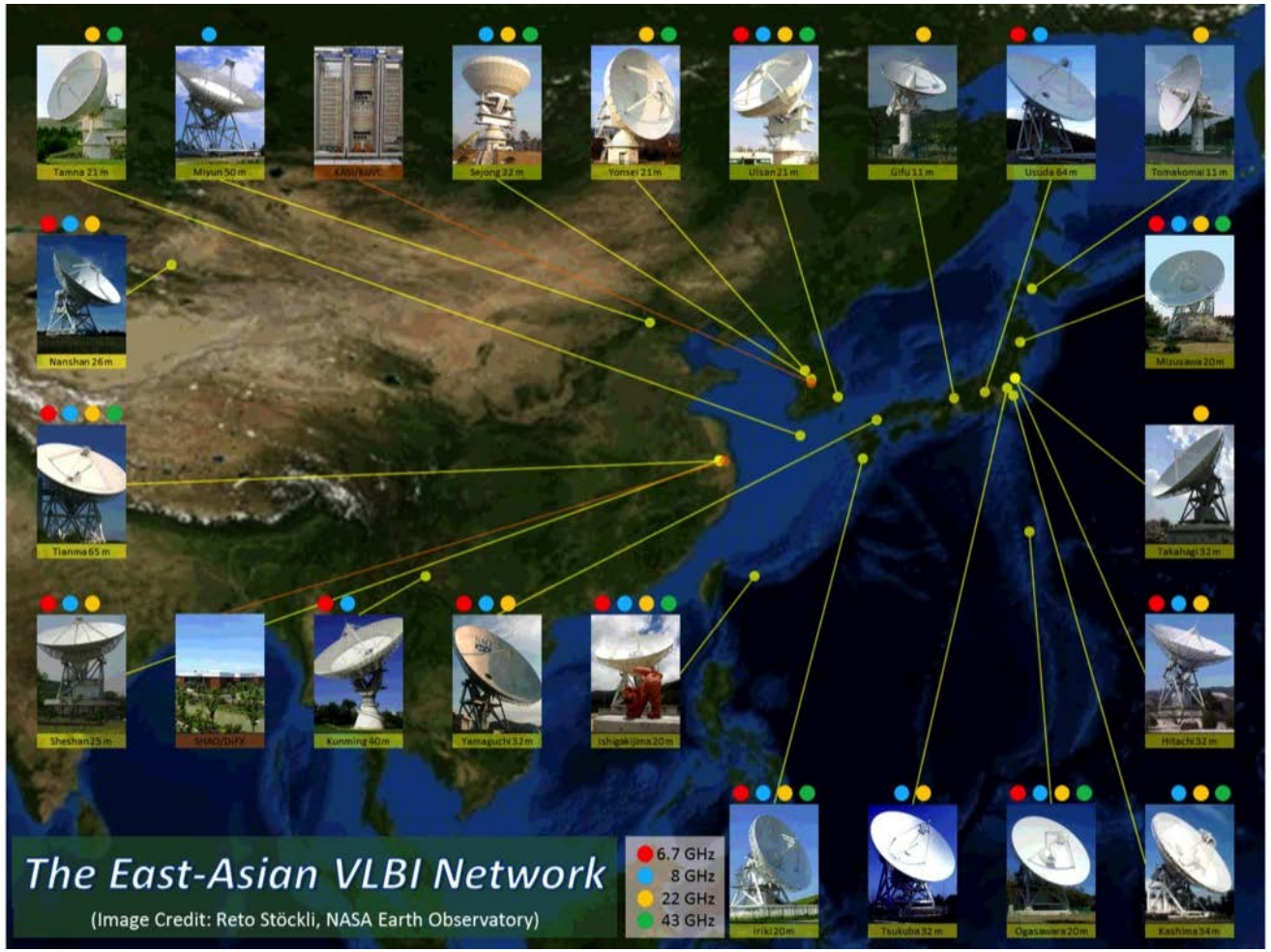
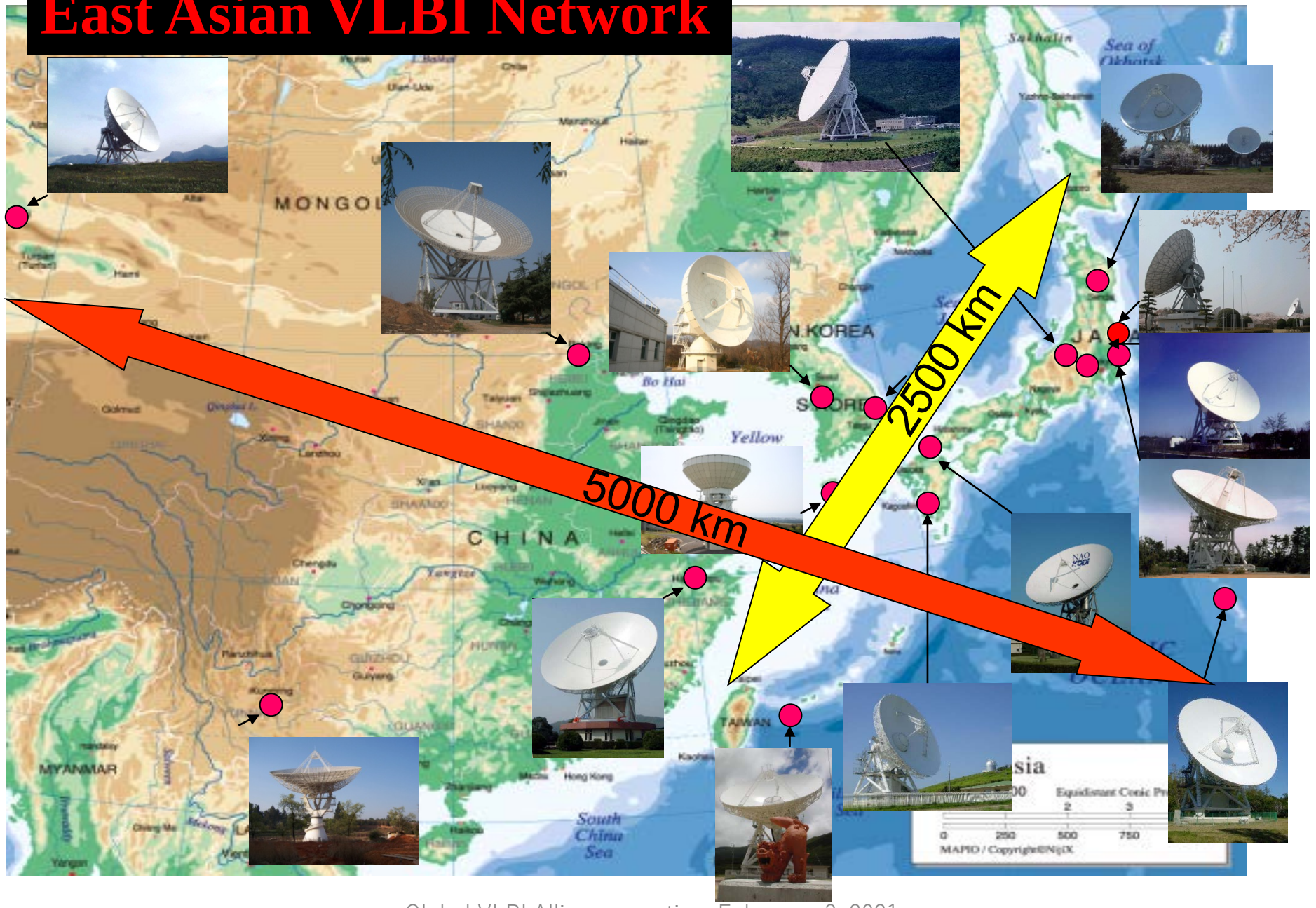
East Asian VLBI network

H.Kobayashi(NAOJ.Mizusawa)

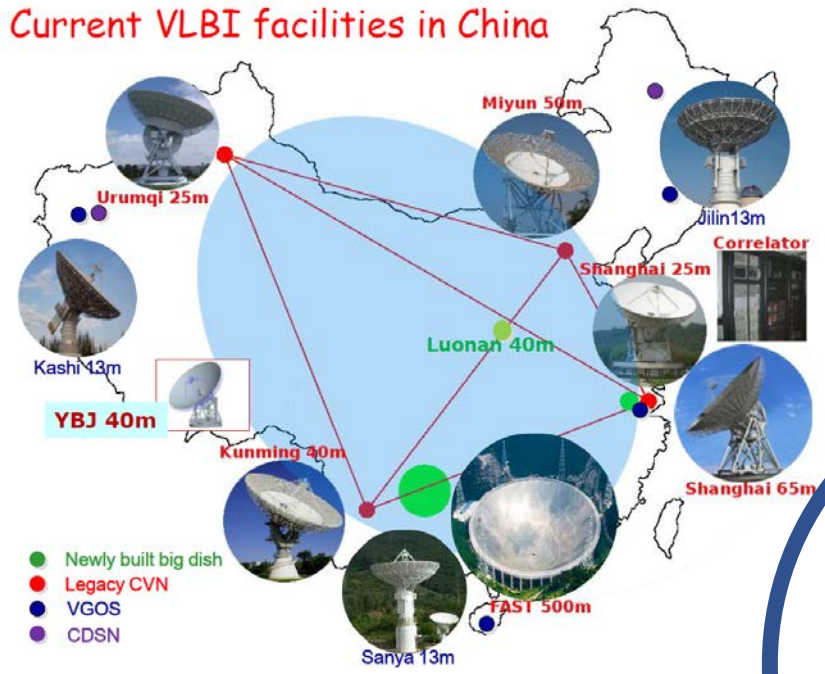


7,Sep,2018 Signing of MOU for EAVN
KASI(Korea), NAOJ(Japan),
SHAO(China), XAO(China)

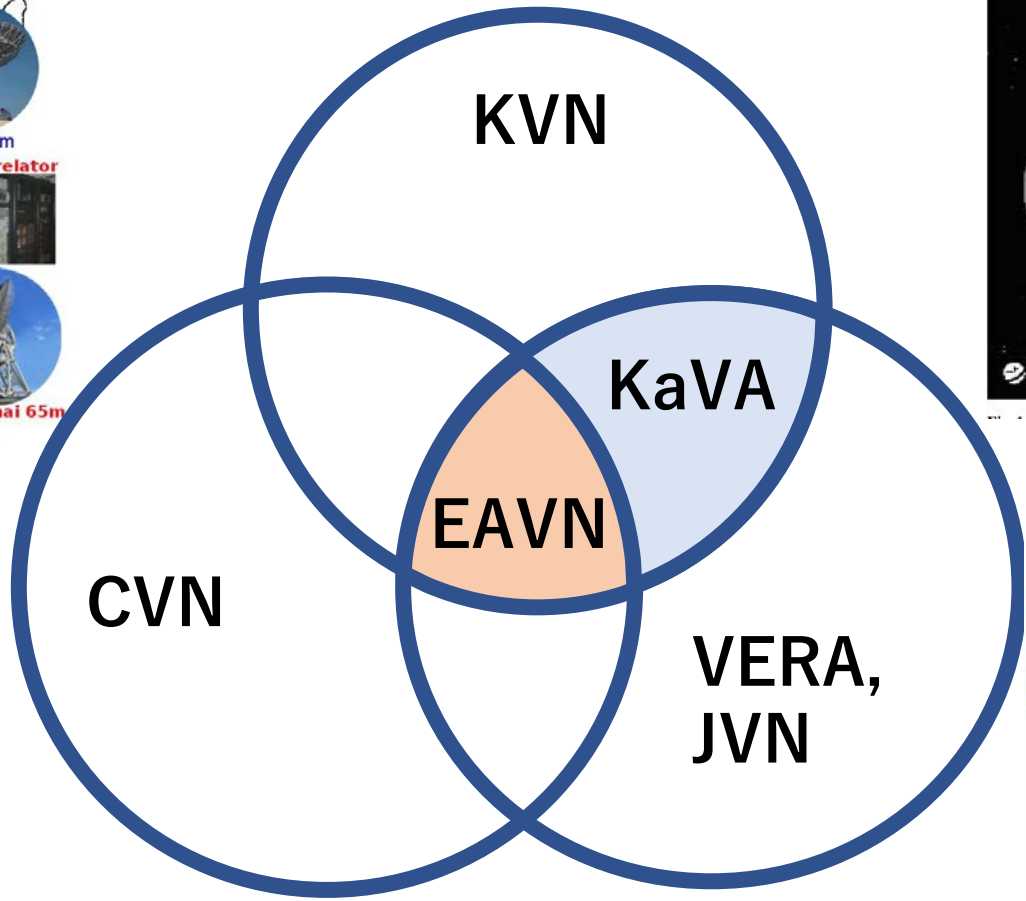
East Asian VLBI Network

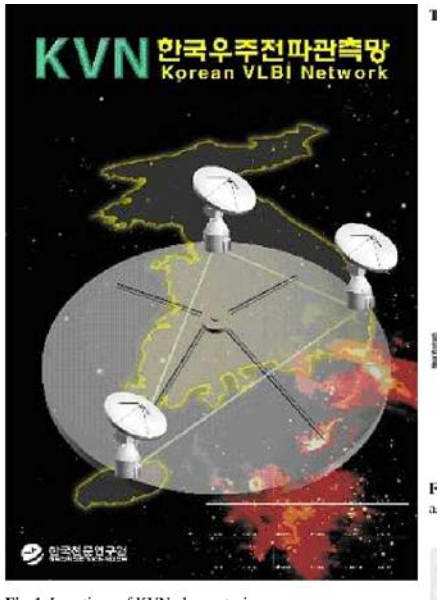


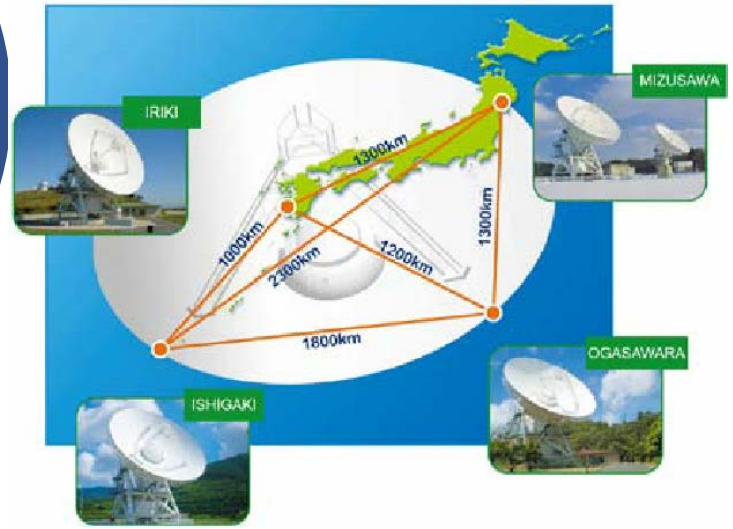
Structure of East Asian VLBI networks



Z. Shen (2018)

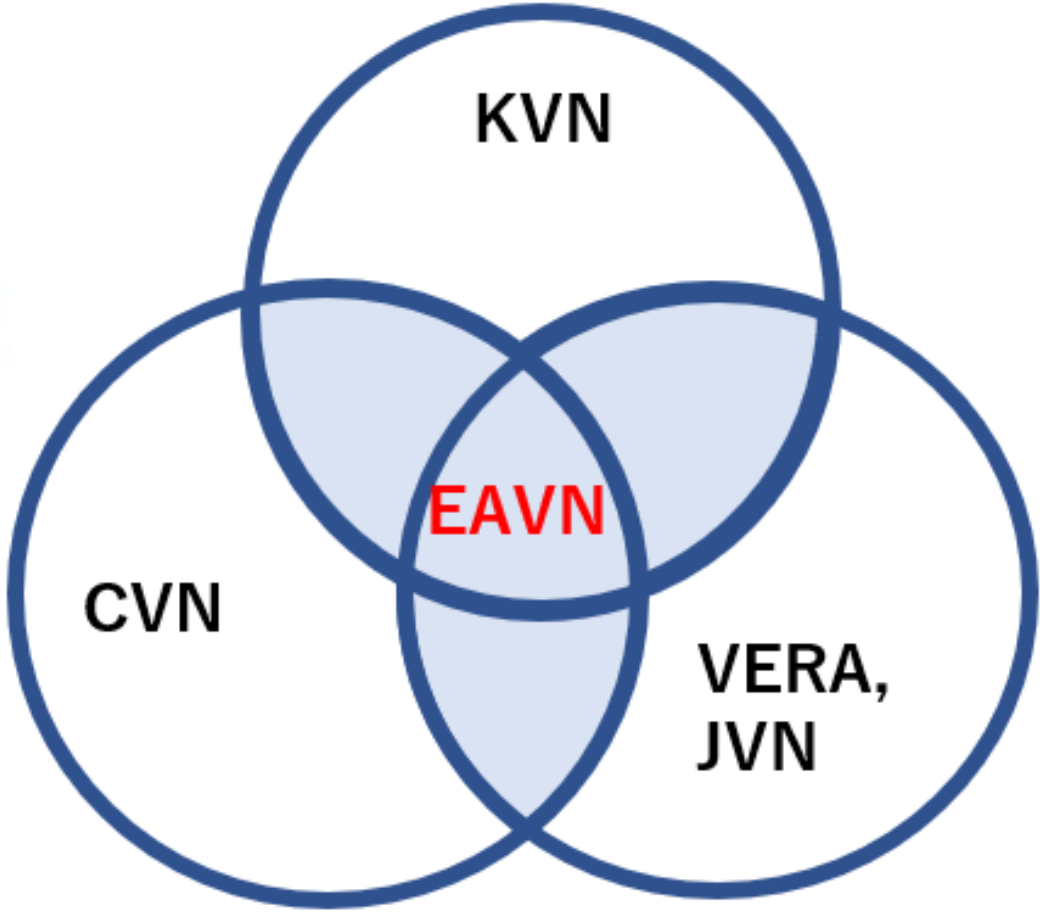


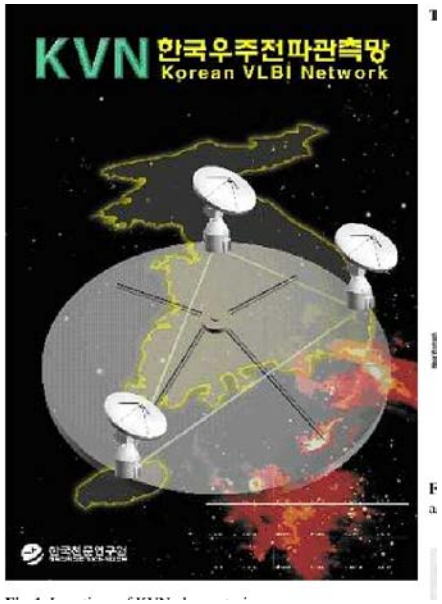


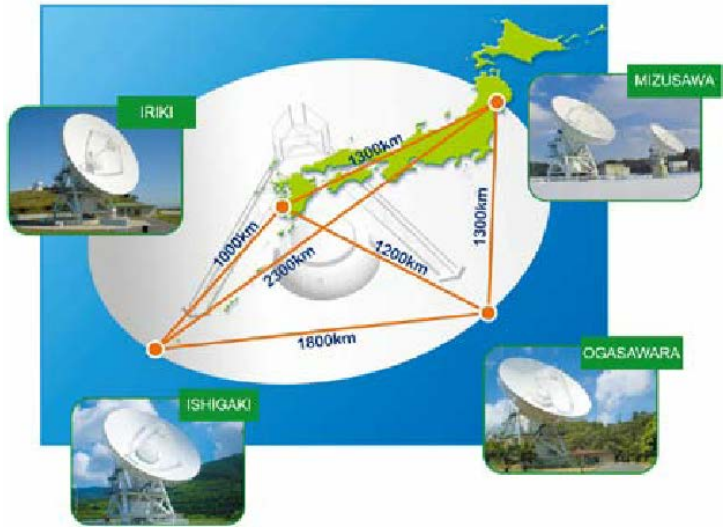


Structure of East Asian VLBI networks in future

Z. Shen (2018)







Open use of East Asian VLBI Network

https://radio.kasi.re.kr/eavn/proposal_info.php

East Asian VLBI Network (EAVN)

Main | About EAVN | Activity | Proposal | Schedule | Feedback | User Support | Status Report

Call for Proposals for the East Asian VLBI Network (EAVN) for the 2021A semester

Proposal submission deadline: 2020 November 2 (Mon.), 8:00 UT

Go to proposal submission

Major revisions from the 2020B semester

- EAVN will be operated using 14 telescopes (VERA, KVN, Tianma, Sheshan, Nanshan, Nobeyama, Takahagi, Hitachi, and Yamaguchi). Availability of VERA's antenna will depend on the financial situation in the fiscal year 2021.
- C-band (6.7 GHz) observation mode is newly opened.

Overview

We invite proposals for open-use observations with the East Asian VLBI Network (EAVN), which is the international collaborative VLBI array between China, Korea, and Japan. In the 2021A semester, 14 telescopes (VERA 4 x 20 m, KVN 3 x 21 m, Tianma 65 m, Sheshan 25 m, Nanshan 26 m, Nobeyama 45 m, Takahagi 32 m, Hitach 32 m, and Yamaguchi 32 m) participate in the EAVN open-use program.

Observing mode

EAVN provides an opportunity of a VLBI observation with a data recording rate of 1 Gbps (total bandwidth of 256 MHz and with single polarization at 6.7, 22, and 43 GHz. Dual-frequency (22 and 43 GHz) simultaneous observation system can be used for EAVN observations at KaVA and Nobeyama, while the session will be set in which the system is available. Details of available observing mode can be found in the EAVN Status Report on the EAVN website.

C, K ,and Q bands

EAVN and KaVA observation mode

- EAVN: VERA, KVN, Tianma, NSRT,Nobeyama(→10 stns)
- KaVA: VERA, KVN(→7 stns)
- Observation Time
  100 hrs/semester(EAVN), 250 hrs/semester(KaVA) for Open Use
  300 hrs/year for 3 large programs
- Band 6.7 GHz, 22GHz, 43GHz w/o Tianma
- Recording 1Gbps (128MHzx2bit)

Future mode

Polarization (L&R) coming soon!

recording rate 2/4 Gbps under testing

Band 86GHz(KVN , Nobeyama)

EAVN: Goal of Specifications

Number of telescopes: 20 Korea: 4, China: 5, Japan: 11

17 telescopes have participated to EAVN

Frequency range:

6.7 GHz (11 stations), 8 GHz (15), 22 GHz (17), 43 GHz (11)

Angular resolution:

2.4 mas (6.7 GHz; Ogasawara – Kunming)
1.5 mas (8 GHz; Ogasawara – Nanshan)
0.6 mas (22 GHz; Ogasawara – Nanshan)
0.7 mas (43 GHz; Ogasawara – Tianma)

Sensitivity for 7- σ fringe detection (τ = 60 s, B = 256 MHz):

1.6 mJy (8 GHz; Tianma – KVN)
9.5 mJy (22 GHz; Tianma – KVN)

Recording rate: ≧ 1 Gbps (= 256 MHz BW); possibly 2 Gbps; 8/16Gbps in near future

Correlator:

KJCC (Korea): Daejeon Hardware Correlator and DiFX
SHAO (China): DiFX

Thailand VLBI station　TNRT