



## VLBI Activities in Japan and East Asia

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VLBI activity in Japan and East Asia is reported.

In Japan, VERA, consisting of four 20 m radio telescopes, has been observing for over 10 years. This VLBI telescopes has function of two-beam phase referencing, and the VLBI network is conducting research on the galactic dynamics by precise astrometric observation of maser objects. There are several radio telescopes operated by universities in Japan, and those telescopes including VERA form the Japanese VLBI Network (JVN).

South Korea operates the VLBI observation network KVN (Korean VLBI Network) consisting of three 21 m radio telescopes. The prominent function of this telescope is a quasi-optical system that can simultaneously observe 4 bands of 22-129 GHz. Frequency-source phase referencing technique is used for KVN observation for detecting sources at higher frequencies.

KaVA is the combined VLBI network of VERA and KVN. KaVA has been conducting proposal-based observations opened to the world since 2014 at 22 and 43 GHz.

In China, Shanghai 65 m, Urumqi 26 m and other telescopes consist Chinese VLBI network (CVN). Recently, FAST, the world largest radio telescope with diameter of 500 m, began operation. Since 2018, Shanghai 65 m and Urumqi 26 m have participated in KaVA to form the East Asia VLBI Network (EAVN). EAVN has baseline lengths up to 5000 km and observation bands of 22 and 43 GHz. It has high sensitivity in a relatively high frequency band.

In China, the plan of QTT 110 m is in progress, and a construction of radio telescope of 40 m has started in Thailand. As these radio telescopes participate in EAVN, it becomes VLBI network of world scale, comparable to VLBA and EVN.