

[ID11] Simultaneous Dual Frequency VLBI Observation using VERA -
Phase Solution Analysis

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Korean VLBI Network (KVN) is the first VLBI facility in Korea and is the first dedicated millimeter VLBI system in the world. The phase fluctuation at millimeter wavelength is considerably high because of the condition of atmosphere and this degrades the quality in VLBI performance. The multi-frequency phase referencing method will be used in KVN for the phase calibration. The lowest frequency, 22GHz band, can be used as a phase reference. We analyse the simultaneous observation data obtained with VLBI Exploration of Radio Astrometry (VERA) at 22 GHz and 43 GHz. This was the first simultaneous dual frequency VLBI observation using VERA. We obtained the phase solutions for each frequency after the instrumental phase calibration and confirmed the well known non-dispersive characteristic of the Earth atmosphere over these frequency bands. It was examined to solve the 2π ambiguities and to apply the 22 GHz phase solutions in order to correct the atmospheric effects at 43 GHz.
