[구ID-17] VLBI test observations of the Korean VLBI Network at 43GHz

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We have carried out 43-GHz VLBI test observations of the Korean VLBI Network (KVN), which has obtained the first fringes at 22/43-GHz in 2009 (a talk by Sohn, Bong Won). In collaboration with VERA (VLBI Exploration of Radio Astrometry) in Japan, we have observed Active Galactic Nuclei (AGNs) and Orion-KL at 43GHz on 22nd and 23rd December, 2009, in order to evaluate the baseline- and image-sensitivity of KVN and KVN+VERA. In this talk we report the preliminary results of the VLBI test observations of the Korean VLBI Network at 43GHz.

[구ID-18] Phase Referencing Capability in KVN

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Following the success of detecting fringes on KVN (Korean VLBI Network), a phase referencing observation is currently planned in order to achieve a better sensitivity in mm-VLBI. The high frequency observation ($\geq$ 22 GHz), wide bandwidths ($\sim$512 MHz) and high speed data recording ($\sim$1 Gbps, Mark5B) will result in resolution and sensitivity improvement on KVN. In particular, two powerful techniques of VLBI phase correction by fast-antenna switching and multi-frequency phase referencing are also introduced in KVN, hoping to resolve the problem of atmospheric delay errors which degrade the coherence significantly. In this study, we have compared the expected performance of phase referencing between fast antenna switching and multi-frequency phase referencing and discussed the essential condition and postulates of phase referencing for KVN.