[구KVN-06] KVN/KaVA AGN WG report - Preparation of KVN/KaVA AGN Key Science

Bong Won Sohn & Motoki Kino on behalf of KVN/KaVA AGN working group
Affiliation Korea Astronomy & Space Science Institute

First, We will briefly introduce early science results of AGN observations with KVN and KaVA. KaVA is the combined array of the Korean VLBI network (KVN) and VLBI Exploration of Radio Astronomy (VERA). These include KaVA monitoring of M87, Sgr A* and a few bright blazars and KVN Search for circular polarized Blazars.

Furthermore, we will present our future plan of monitoring observation of Sgr A* and M87 with KaVA and Low Radio Power AGN multi frequency polarization survey with KVN. Because of the largeness of their centralsuper-massive black holes, we select them as top-priority sources of our key science program (KSP). The main science goals of the KaVA KSP are (1) mapping the velocity field of the M87 jet and testing magnetically-driven-jet paradigm, and (2) obtaining tightest constraints on physical properties of radio emitting region in Sgr A. High sensitivity achieved through simultaneous multifrequency phase referencing technique of KVN will allow us to explore Low Radio Power AGN cores which build majority of AGNs and therefore are important for undestanding the evolution of AGNs and of their hosts.