Poster: KVN Surveys of Water and Methanol Masers in High-mass YSOs

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Various maser species, including water and methanol masers, are detected in star- forming regions. Observational studies of these masers are very helpful to understand the basic processes of star formation, such as infalls, accretion via disks, and jets/outflows. Water masers are observed both in low- and high-mass star-forming regions, while methanol masers are detected predominantly in high-mass star-forming regions. We made simultaneous single-dish surveys of 22 GHz water and 44/95 GHz class I methanol masers toward more than 1000 high-mass YSOs in different evolutionary stages using the KVN (Korean VLBI Network) 21-m telescopes. Our sample consists of infrared dark cloud cores, high-mass protostellar objects, and ultracompact HII regions. Then we conduct a linear polarization survey of about 40 strong (>50 Jy) 44/95 GHz methanol masers and perform fringe surveys of about strong 170 (>10 Jy) 44 GHz methanol maser sources. In this poster, we will present the main results of these KVN maser surveys and discuss the implications

Outflows and Disks