

[ST01] First Detection of the SiO ($v=3, J=2-1$) Maser Emission from χ Cygni

Se-Hyung Cho¹, Chang Won Lee¹, and Yong-Sun Park²

¹*Korea Astronomy and Space Science Institute,* ²*Department of Physics and Astronomy, Seoul National University*

From the simultaneous observations of SiO $v=3, J=2-1$ and $J=3-2$ masers using the TRA0 (Taeduk Radio Astronomy Observatory) 14 m telescope, the SiO $v=3, J=2-1$ maser emission was detected for the first time toward the S-type Mira variable χ Cyg. The line was a single spike and redshifted with respect to the stellar velocity. The SiO $v=3, J=3-2$ maser emission was not detected from this star. However, for the O-rich Mira variable TX Cam, the SiO $v=3, J=3-2$ maser emission was detected, while the $v=3, J=2-1$ maser was not detected. Two possible line overlaps was adopted for an explanation of these observational results.

[ST02] Coordinated VLBA/VLA observations of SiO masers in R Cas

Jiyune Yi

한국천문연구원

Coordinated Very Long Baseline Array (VLBA)/ Very Large Array (VLA) observations of two SiO maser lines at 43 GHz towards two Mira variables, R Cas and TX Cam were conducted. Previous VLBA only observations have shown that the images of SiO masers obtained by the VLBA do not recover all of the single dish flux density. This indicates that a significant fraction of weak diffuse maser emission in large angular-sized structures is resolved-out even by the shortest baselines of the VLBA. Coordinated VLBA/VLA measurements were made with a hope to recover the missing flux. Preliminary results of 7-mm SiO maser lines observations toward R Cas will be given.