

**[AIM-07] Time Monitoring of SiO and H<sub>2</sub>O Masers  
Toward Orion KL: The Third Flaring of H<sub>2</sub>O Maser Emission**

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We present the results of time monitoring observations of <sup>28</sup>SiO  $\nu = 1, 2, J = 1-0$ , <sup>29</sup>SiO  $\nu = 0, J = 1-0$  and H<sub>2</sub>O 6<sub>16</sub>-5<sub>23</sub> maser lines toward radio Source I in Orion KL. The observations have been performed from 2009 June to 2013 April using the 21m single dish radio telescopes of the Korean VLBI Network.

Both SiO and H<sub>2</sub>O maser lines were simultaneously obtained at 20 epochs. In particular, the third outburst of H<sub>2</sub>O maser emission (the first: 1985, the second: 1998) was detected and the flux density variation curve was obtained. The maximum flux density flared up to an order of 10<sup>5</sup> Jy during 2012 May–July at peak velocity of 7.33 km s<sup>-1</sup>. Hirota et al. (2011) reported that the bursting maser features are located at 8" from Source I and coincident with the interacting region between the outflow from Source I and a dense ambient gas, Orion Compact Ridge.

In the case of SiO masers arising from close to the Source I, the peak emission of the  $\nu = 1, J = 1-0$  maser line appeared in 2010 April. We are investigating the possible relation between this SiO maser peak emission and the third H<sub>2</sub>O maser flaring.

**[AIM-08] On the Multiple Stellar Populations  
in the Globular Cluster NGC 6388**

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Unlike the conventional wisdom, observations made during the past decade have revealed that many globular clusters possess more than one stellar population. Here, we have discovered evidence for multiple red giant branches (RGBs) in the globular cluster NGC 6388 from the narrow-band Calcium and Strömrgren b & y (Caby) photometry. In order to confirm the difference in Calcium abundance, we have acquired the low resolution spectroscopy for these RGB stars. In this paper, we will present results of our photometry and hand in the preliminary results of spectroscopic observations.