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Type: **Poster Presentation**

Observations of the 22GHz Water maser in the source Orion KL

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Stars are believed to be formed from massive stable gas clouds, which under enough perturbation will collapse to form a protostar. The protostar evolves to form a star by accreting matter until the fusion is initiated in the dense core. Surrounding these protostars are ionized hydrogen (HII) regions and molecule species where masing occurs. MASER is an acronym for Microwave Amplification by Stimulated Emission of Radiation. It is here that Water masers are also found. Amongst the sources of water masers, is the Orion KL source region. Flares in this region from the 1.35cm water maser emission line occurred in 1984, with the second flare in 1998 and again this year (2011) there have been reports of the flare. The flare is very intense, increasing its flux density from around hundreds to millions of janskies. This poster will show the summary of observations made by the Hartebeesthoek Radio Astronomy Observatory (HartRAO) telescope for the water maser in the Orion KL source region as well as the calibration method. Jupiter is used as the calibrator source, while the absorption by atmospheric water vapour must also be allowed for. This uses estimates based on atmospheric temperature and humidity or can also be based on the time delay of GPS signals, corrected for barometric pressure.

Level (Hons, MSc, PhD, other)?

other

Consider for a student award (Yes / No)?

No

**Would you like to
 submit a short paper
 for the Conference
 Proceedings (Yes / No)?**

No

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