

Workshop

Stellar End Products: The Low Mass - High Mass Connection

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Title:

Testing methods of accurate low frequency astrometry for hydroxyl masers

Abstract:

VLBI astrometry can be used to measure accurate positions of masers relative to reference sources. However at low frequencies the ionosphere degrades the accuracy of maser astrometry, introducing a non-negligible systematic error. Here, we present in-beam VLBA astrometry of stellar OH masers. We give a sub-mas upper limit to the parallax and assess atmospheric errors using different methods. We show that the static ionosphere can cause offsets up to 0.5 mas at L-band even with in-beam phase referencing (0.7 deg source separation). We finally introduce our attempts to correct for these errors.