

Towards an Astronomical Use of New Generation Geodetic Observations

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Abstract

The VLBI Global Observing System (VGOS) is a next generation VLBI system developed by the International VLBI Service for Geodesy and Astrometry (IVS) to achieve geodetic observations with ultra-wideband receivers, observing from 3 to 11 GHz. These receivers observe in linear polarization to achieve optimal polarization purity. This poster delves into the intricacies of VGOS data calibration, including the conversion from linear to circular polarization using PolConvert and the implementation of the Wideband Global Fringe-Fitting algorithm. Distancing ourselves from the conventional geodetic approach of fringe-fitting separately for each baseline, we present the first results obtained by performing a Global Fringe-Fitting across a global IVS array, comprising 8 antennas with intercontinental baselines, for the complete VGOS bandwidth.

My poster in zenodo.org can be found here