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## A strategic independent geodetic VLBI network for Europe.

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# Abstract content <br> &nbsp; (Max 300 words)<br><a href="http://events.saip.org.za/getFile.py/atarget="\_blank">Formatting &<br>Special chars</a>

The main point of Very Long Baseline Interferometry (VLBI) is to observe the same object (quasars) at the same time from various and as many as possible locations on the Earth. Geodesists use radio telescopes in VLBI networks to determine the positions of each station relatively to each other in the network. Geodetic VLBI provides the link between the celestial reference frame and the terrestrial reference frame, necessary for determining the Earth's orientation in inertial space. Furthermore, it is the only technique that provides the full set of Earth orientation parameters (EOPs), which are indispensable for positioning and navigation on Earth and in space. We aim to investigate the stability of a proposed independent geodetic VLBI network for Europe and the accuracy of EOP measurements from observations of the proposed network. In particular, the Vienna VLBI Software (VieVS) is used to analyse the results. The proposed stations that will be used to investigate an independent geodetic VLBI network for Europe are the WETTZELL radio telescope in Germany, as well as two other German owned radio telescope in South Africa. To test the stability and the accuracy of the EOPs for this above mentioned network, we have processed existing T2 IVS sessions that include the four proposed stations and we present EOP results of the proposed network against all stations.

### Apply to be<br> considered for a student <br> &nbsp; award (Yes / No)?

Yes

#### Level for award<br>%nbsp;(Hons, MSc, <br> &nbsp; PhD)?

MSc

#### Main supervisor (name and email)<br>and his / her institution

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#### Would you like to <br>> submit a short paper <br>> for the Conference <br>> Proceedings (Yes / No)?

Yes

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Track Classification: Track D1 - Astrophysics