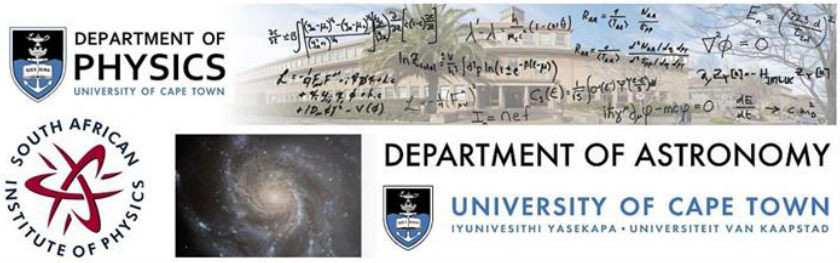

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Computerised Ionospheric Tomography (CIT) for supportive GNSS-derived ionospheric applications

Wednesday, 6 July 2016 16:10 (1h 50m)

Abstract content
   (Max 300 words)
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Computerised Ionospheric Tomography (CIT) is a technique where multiple measurements from signals modulated when passing through an object, are used as inputs to reconstruct the three-dimensional structure of the object by employing mathematical inversion techniques. In CIT the "object" is the spatial distribution of the electron density composition of the Earth's Ionosphere, i.e., the ionised component of Earth's atmosphere extending from about 50-2000 km above Earth. SANSA's Matlab-based near real-time TEC imaging system utilizes GPS observations from a Southern African regional network of about 60 dual frequency GNSS receivers. The objective of the project will be to develop necessary algorithms and software to extend SANSA's present 2D ionospheric TEC imaging system to a 3D Computerised Ionospheric Tomography system.

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Mark B. Moldwin
University of Michigan

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