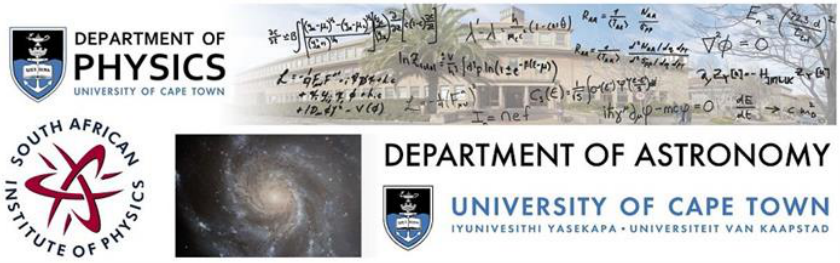

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TEC modelling over the African sector during geomagnetic storms

Wednesday, 6 July 2016 14:40 (20 minutes)

Abstract content
   (Max 300 words)
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Using available TEC data derived from GPS stations within the entire African sector, a regional empirical model for TEC predictions was developed based on the Empirical Orthogonal Functions (EOF). The regional TEC data was first decomposed in terms of EOF base functions and associated coefficients
and a system of coordinates that changes with location was adopted: local time and modified dip latitude, to allow the base functions to change from location to location. Thereafter, the EOF coefficients were estimated in terms of the global indices F10.7p, Ap, Dst and AE in order to take into account the solar and geomagnetic activities. The model validation will be done by comparing the reconstructed and observed TEC.

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Main supervisor (name and email)
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