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Achievements of the CAWSES Global Tidal Campaigns during CAWSES Phase I.

W.E. Ward and the CAWSES Global Tidal Campaign Team

University of New Brunswick, Department of Physics, Fredericton, N.B., Canada (wward@unb.ca, +1-(0)506-4534581)

The "CAWSES Global Tidal Campaigns" is one of the projects which was intiated under the CAWSES (Climate and Weather of the Sun Earth System program, a SCOSTEP sponsored program) Theme 3 "Atmospheric Coupling Processes". During the first phase of the CAWSES program this project initiated four global tidal campaigns and three workshops and provided an opportunity for the inter-comparison and combination of ground based and satellite observations and models, and covered the four seasons. This work established the equivalence between satellite and meteor radar observations and demonstrated that the reconstructed total tidal fields from satellite analyses must be used for this equivalence. Significant geographical variation in the diurnal and semi-diurnal amplitudes was also demonstrated and shown to vary with season. Comparisons involving temperature, airglow and constituent signatures, linkages between the thermospheric and ionospheric signatures, and the neutral signatures observed lower in the atmosphere and model compatisons were initiated and are now under way. In this presentation we review the successes of the first phase of the CAWSES program and the scientific issues we expect this project to address during the next stage of this program.