

CAWSES: PAST, PRESENT, AND FUTURE

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We are poised to make significant advances in discovering the important processes that connect changes at the solar surface with features in the geospace environment and ultimately with climate variability. During the past decade simultaneous sun-to-earth observations have been made possible through global ground-based and space-based assets. New models of the active sun, the coupled sun-earth system, and whole-atmosphere models that simulate the climate and links to the upper atmosphere and space weather have been developed. SCOSTEP's science program (CAWSES-II) for 2009-2013 captures the exciting possibilities for interdisciplinary system science by capitalizing on these new developments and engaging the international science community. This opportunity is enabled by informatics and e-science through the creation of a virtual institute. CAWSES-II is based on the successful foundation established by CAWSES (2004-2008) and will address four major science questions: (1) What are the solar influences on climate, (2) How will geospace respond to an altered climate, (3) How does short term variability affect the geospace environment, and (4) What is the geospace response to variable waves from the lower atmosphere? This presentation will present highlights from the CAWSES program and describe the vision and goals for the CAWSES-II program.

Sun-earth coupling, solar physics, upper atmosphere

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