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Abstract for an Invited Paper for the MAR13 Meeting of the American Physical Society

The Solar Climate Link: How Large? How Come? How important?

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Solar variations appear to have a significant effect on climate. I will begin by reviewing the evidence pointing to a large solar/climate link and present measurements quantifying it. I will then discuss the atmospheric effects of cosmic rays, which offer the most consistent mechanism linking between solar variations and climate change. I will end by placing the link in context of other climate questions, such as the value of the climate sensitivity and implications to the understanding of 20th and 21st century climate change.