BAMS article outline

Title: A new, operational, climate data record of solar irradiance

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* Abstract
* Introduction
* The need for a solar irradiance climate data record
* Climate Data Record NOAA Vision (robust and reliable, consistent, algorithms, data stewardship, for broad community use)
* Earth Climate Variable: Earth Radiation Budget
* Solar Irradiancesets
* & connection to extant record
* limitations of extant datasets for constructing a CDR for use in climate change simulations (hence need for model algorithm)
* Irradiance Variability Model
* Algorithm
* NRL TSI and SSI models – version 2 description
* Mg II and USAF sunspot area sources
* Model parameter characteristics –spot and facular contrasts
* Outline Differences from version 1
* Reference more detailed comparison validation in second paper

Uncertainty Analysis

Uncertainty in model assumptions, regression coefficients, model inputs

* Tabulate first values
* Results and Validation
* Plot of (rotational and solar cycle) time series of TSI, with error bars, compared to measurement record and (?) other models of TSI
* Plot of (rotational and solar cycle(?)) time series of bin-integreated SSI with error bars, compared to measurement record and (?) other models of SSI
* Deliverables/Products
* Description, time range, spectral resolution, daily and time averaged: TSI composites, historical reconstruction, contemporary TSI/SSI (daily, monthly-averaged, yearly-averaged)
* Inclusion of Uncertainties
* NetCDF4 format.
* Data sets created at LASP and Archived at NCDC. Can also download data from LASP LISIRD over a user-specified time and spectral range.
* Stewardship (TSIS ATBD, CDR development, irradiance composites, enable rapid generation of solar irradiance CDR following TSIS launch). Documentation archived at NOAA NCDC
* Time Series Data Updates
* Applications/Users (put near end instead?)
* Applications/Users (put here in or intro?)
* Future plans, expected utility, upgrades etc
* Conclusion