Ongoing Investigation Into Long-Term Solar Variability Based On Current Sunspot Number Databases

ROBERT DUFFIN, County College of Morris, LUCA BERTELLO, ALEXEI PEVTSOV, National Solar Observatory —

Many calibrations of historic sunspot number observations have been carried out in the past. New improved databases of historical sunspot data are in development. A US-India collaborative group with the participation of authors (2, 3) at NSO (National Solar Observatory), have constructed a proxy of sunspot parameters based on archived spectroheliograms of daily observations in Ca K II spectral line which began in 1904 at Kodaikanal Observatory (India) and in 1915 at Mount Wilson Observatory (California). A group made up of an international team at ISSI (International Space Science Institute, Bern) with participation of author (3) at NSO, is working on re-calibration of sunspot number time-series. There is an effort to recover all past records of sunspot observations and calibrate the observers to create a unified time-series. The most recent time-series of monthly sunspot numbers starting from 1818, is available via SILSO (Sunspot Index and Long Solar Observations). Author (1) investigating long-term solar variability based on historic sunspot number observations, presents a summary of historical sunspot number calibrations along with current findings from ongoing analysis.

Robert Duffin
County College of Morris

Date submitted: 11 Nov 2019

Electronic form version 1.4