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# "Early global brightening" during the first part of the 20th century: What sunshine duration records can tell us?

Arturo Sanchez-Lorenzo (1), Martin Wild (1), Josep Calbó (2), Enric Pallé (3), Rudolf Brazdil (4), Xiangao Xia (5), Gerald Stanhill (6), and Michele Brunetti (7)

(1) ETH Zürich, Institute for Atmospheric and Climate Science, Zürich, Switzerland (arturo.sanchez@env.ethz.ch), (2) University of Girona, Group of Environmental Physics, Girona, Spain, (3) Institute of Astrophysics of the Canary Islands, Spain, (4) Masaryk University, Institute of Geography, Czech Republic, (5) LAGEO, Institute of Atmospheric Physics, Chinese Academy of Sciences, Beijing, China, (6) Department of Environmental Physics and Irrigation, The Volcani Center, Israel, (7) Institute of Atmospheric Sciences and Climate, Italian National Research Council, Italy

A widespread reduction of surface solar radiation (SSR) from the 1950s to the 1980s has been well established and documented. Since the 1980s a reversal trend has been detected in many regions of the world. This decrease and increase in SSR have been defined as "global dimming" and "global brightening", respectively. However, both global dimming and recent brightening involve uncertainties in relation to their geographical extension, their quantification, and their causes. Moreover, the reliability of a possible brightening during the first half of the 20th century is especially uncertain. This "early global brightening" has been identified by different studies, but only using the scarce SSR series available. With respect to the above facts, we started a worldwide compilation of the longest sunshine duration records from the late 19th century until present in the framework of the "SunCloud project" initiative (http://www.iac.ethz.ch/people/arturos/suncloud/). Sunshine duration can be considered as an excellent proxy measure of SSR, and a detailed and up-to-date analysis of this variable on global or hemispheric scales is still missing. In this work, some preliminary results of the analysis of several sunshine duration series compiled in the "SunCloud project" are presented, including a brief summary of the main trends obtained in different regions such Europe, United States, China, Japan, Russia, etc. We emphasize the spatial and temporal patterns of the sunshine duration records during the first half of the 20th century, discussing the reliability of the suggested "early brightening" during this period.