



A Threatened Future? The Experience of WDC-SILSO

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WDC-SILSO, responsible for the unique 400-year sunspot record of solar activity, was hosted by the Royal Observatory of Belgium since 1981. Over the past 15 years, our data center was operated with minimal means, just allowing to run the base data production process using heritage Fortran programs from the 1990's.

With the evolution of research on solar activity and on Global Climate Change over the past two decades, WDC-SILSO faced a steady increase in the demands from the scientific community: requests for new extended data, quality validation, and so on. This led to a recent effort to fully modernize our datasets (software, data portal, quality control) and a full revival in this research field. However, the current funding context did not follow this growing trend, recently bringing the WDC beyond the limits of sustainability (continuity of operations, preservation of data quality). As a consequence, since the spring of 2016, a number of measures have been undertaken to inform various institutions of this critical situation and to try prompting support actions.

Here, we will report about the present precarious status of WDC-SILSO. As this is certainly not an isolated case, we will also share some reflexions inspired by years of efforts to keep this long-term solar data service alive and up to the standards of contemporary research, and we will highlight key specificities of the WDC-SILSO compared to other WDCs. We hope to feed the general reflexion on present and future sustainability of small-size permanent data services, based on the structural obstacles that we identified in the case of WDC-SILSO.