



# WDC-SILSO: An Unprecedented Modernization

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WDC-SILSO (the World Data Center for Sunspot Index and Long-term Solar Observations, formerly known as SIDC) is preserving the longest record of solar activity, which spans the last four centuries. It also coordinates a worldwide network of more than 85 stations to extend this series and provide mid-term forecasts of the solar cycle on a monthly basis.

Over the past five years, a major and unprecedented modernization has been undertaken. It led to an extensive refurbishing of the base data processing software, moving from heritage FORTRAN code to Python software and libraries, the conversion of archives from simple text files to MySQL databases containing more than 500,000 individual observations, various new output products (error estimates, graphics, etc.) and an entirely new SILSO website ([www.sidc.be/silso](http://www.sidc.be/silso)).

In addition, a major breakthrough was the first ever end-to-end recalibration of the base sunspot data series itself. This was implemented in the framework of a series of workshops, gathering more than 50 international experts in long-term solar series. This effort culminated with the official release of the first revised series at the General Assembly of the International Astronomical Union in August 2015. This major transition led to a strong revival of research on long-term solar activity and laid the base for a future coordinated quality-assurance process to validate future upgrades of the reference sunspot data series.

In this short talk, we will summarize the main highlights of this eventful period 2011–2016 (more details on our activities will be presented in an associated poster).