New solar radiotelescopes in Belgium

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Abstract

In 2008, the Royal Observatory of Belgium has started refurbishing its radioastronomy station in Humain, located 120 km South-East of Brussels, by developing an entirely new set of solar radiotelescopes. In the coming months, several 4 and 6 meter parabolic antennas that were part of a decommissioned 48-element radioheliograph will be renovated. They will be adapted to feed new sweep-frequency radio-spectrographs in the metric and centimetric range, as well as absolute radiometers at several fixed frequencies, including 600 MHz and the 10.7cm band (2.8 GHz) widely used as a standard solar activity index. As a first step in this redeployment, a CALLISTO receiver built by the ETH-Zürich will be set up to monitor the solar radio spectrum in the 45-875 MHz range. We expect this spectrograph to become operational by mid-2008 as part of the world-wide CALLISTO network. While those new radiotelescopes will be integrated in the current scientific and forecast activities of the SIDC (ISES WDC-Brussels), the collected data will also be made freely accessible in near real-time to the whole community in support to space weather services and solar research. In the presentation, we will describe the planned development scheme and some early observations.