Sample of space-weather-related newspaper reporting in Japan (*The Daily Yomiuri* of 5 Feb 2013).

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NATIONAL

Solar flare monitoring antennas to be rebuilt

The Yomiuri Shimbun

With the aim of enhancing the accuracy of "space weather reports," a governmental research organization will rebuild a pair of parabolic antennas for the first time in 20 years, it has been learned.

Undertaking the antenna reconstruction project is the National Institute of Information and Communications Technology (NICT) in Koganei, western Tokyo.

The NICT has been observing solar radio waves, X-rays and other rays being emitted by the sun to monitor changes occurring on its surface. The data obtained are used to forecast the possible impacts of changes in such solar conditions, according to the institute.

High on the list is the possibility of frequent solar flares, or large-scale explosions on the sun's surface, which are expected to rise sharply around 2014, according to NICT.

As increasingly frequent solar flares could interfere with the operation of satellites and global positioning systems, the NICT observation schedule needs to be boosted before the expected surge, NICT officials said.

One of the two antennas is in the NICT headquarters premises in Koganei, and the other is in Hitachinaka, Ibaraki Prefecture.

NICT observation results, including forecasted changes in solar conditions, have been released daily as "space weather reports." They are utilized by space researchers, amateur space enthusiasts and airline companies whose flights can be affected by the changing states of solar flares.

The parabolic antennas have recently suffered malfunctions due to age-related degradation, impeding the observation process, according to the officials.

The antenna in Hitachinaka was out of order and unable to make observations for about three months from September last year, they said.

Consequently, the government has earmarked ¥1 billion in subsidies for reconstruction that have been incorporated into the supplementary budget for fiscal 2012 that the Cabinet approved in January.

The institute said the intensity of solar flares is believed to peak at intervals of about 11 years, meaning the phenomena will probably become more frequent around 2014.