

Section 3. Radio Astronomy

Observations of solar brightness distributions are daily conducted with $\lambda 8$ -cm radioheliograph. One of the remarkable features in the maps is low brightness regions of extended size. One particular region, which appeared consecutively for four or five solar rotations in the later part of 1975, was coincident with a high-velocity solar wind stream or with a recurrent magnetic storm. A detailed analysis of this low brightness region has been made and will be submitted to PASJ (Shibasaki et al., 1977). Solar maps for the period March 20 through May 5, 1976 will be published on a UAG report of a "Retrospective World Interval" during STIP Interval II.

In order to improve distorted image of the sun a computer program has been developed (Suzuki, 1977) for those data prior to phase measurement and adjustment of the antennas of $\lambda 8$ -cm heliograph. A set of phase error data, which is regarded as that of prior days, is used to correct phases of observed images in the (u,v) plane. Amplitudes and corrected phases are then Fourier inverted to give a corrected image of the sun. The period depends on the season how long a set of phase error data is useful prior to the phase measurement, but a good amount of data are recovered by this method.

A new set of radio polarimeters at 9.4, 3.75, 2 and 1 GHz is operating together with the old set, and is now under final adjustment.

A new data acquisition system will be installed for polarimeters and interferometers, which is composed of a small computer system with an analogue-digital converter, a communication control unit and other peripherals. This system is connected with a large host computer system in the main building, and enable us to send all the observed solar radio data, as an on-line job, to the mass storage of the host computer at a communication speed of 48K-baud. It is also possible to monitor at the terminal those data processed by the host computer.

We are just at the beginning of the new solar cycle. The local minima of daily solar flux at 3.75 GHz of 75 sfu(1 AU corrected) were observed

March 1-3 and June 3-5 in 1976. The minimum value of monthly mean was 76.7 sfu(1 AU corrected) in July 1976.

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Énomé made a summary report on radio bursts at Japan-US seminar on High Energy Phenomena in Solar Flares held in May 1976 in Tokyo.

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