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ON THE PERIODICITY OF SOLAR GREAT HARD X RAY BURSTS ENERGETIC SOLAR RADIO BURSTS AND SUNSPOT DATA

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In the last solar maximum period (cycle 21) the 152 158 day periodicity wa found in the occurrence rate of solar flares through solar gamma ray, microwave oft X ray hard X ray and H alpha flares In the pre ent, brief communication we report the confirmation of 152 158 day periodicity through solar great hard X ray and energetic radio bursts

To calculate the periodicity of occurrence rate of solar great hard X ray bursts ($\geq$ 10000 photon count s ^{1}) and energetic type II and IV radio bursts we have carried out power spectrum analysis of daily counts of great hard X ray (GHXR) bursts and energetic type II and IV radio bursts for the period of 1 January 1980 31 December 1984 The GHXR bursts data have been taken from 'Hard X ray burst listing 1980 1985 by Dennis et al (1985) and energetic type II and IV radio burst have been taken from Solar Geophysical Data (1980 1986) The GHXR burst how periodicity around 155 day while type II and IV radio bursts flares show periodicity around 156 day The GHXR and energetic radio bursts confirm lthe 152 158 day periodicity in the occurrence rate of solar flares Further, since, the occurrence of GHXR bursts and energetic radio bursts are related with sunspot , therefore, we expected that sunspot number for same period should also show periodicity around 155 days Contradictory to the above, sunspots do not show any periodicity around 155 days

The detailed analysis is under publication elsewhere

Reference

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