

NARROW-BAND FREQUENCY STRUCTURES IN SOLAR MICROWAVE BURSTS

V.Fridman (1), O.Sheiner (1), S.Grechin (1,2)

(1) Radiophysical Research Institute, Nizhny Novgorod, (2) State University of Nizhny Novgorod

rfj@nirfi.sci-nnov.ru /Fax: +007-8312-369902

The spectrographic data of observations of solar polarized radio emission are analysed. The results are found using a sweeping spectrograph in the 8-12 and 13-17 GHz frequency ranges (consecutive time resolution of 10 ms and frequency resolutions of 100 MHz) and using the radio telescope RT-22 at the Crimea Astrophysical Observatory (angular resolution is 4'-6'). The special program for treatment of data is created. The main results are:

- a) establishment of the two-component composition of radio emission during impulsive stage of bursts, that is the evidence of different acceleration mechanism;
- b) detection of narrow-band component of emission with $\Delta f=0.4\text{GHz}$ and frequency drift of 70 MHz/s.

It was used the plasma origin hypothesis of radio emission from driving thermal fronts for determining the parameters of energy release regions in flaring loop and width of the angular spectrum from the radiating plasma turbulence