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Investigation properties of type III solar radio burst using MatLab

J V Wijesekera¹, Nilmini K A C¹, E M V B Ekanayake¹, H M Ishani² ¹The Open University of Sri Lanka, Sri Lanka ²University of Peradeniya, Sri Lanka

S olar radio burst is an arrangement of a frequency space that varies with time. Solar radio frequency is ranging from 70 MHz to 2.2 GHz and most of the radio burst can be identified in low-frequency range (<200 MHz Type III solar radio burst is a fast drifting burst in frequency versus time and common phenomenon. Because the emission is at the plasma frequency (or its harmonic), the drift in frequency with time can be directly converted into a drift from high to low ambient coronal density with time The Type-III solar radio burst recorded on 07th December 2013 time period between 07.24 UT- 07.25 UT by the KRIM solar observatory was engaged to investigate the properties of type III solar radio burst. Math lab software and mathematical models were used to analysis type II solar radio burst. The frequency distribution of type III bursts was approximated as a Straight line curve fitting and medium/high drift rate value could be seen. The correlation coefficient between model frequency vs frequency was 0.94516. Newkirk model was used to estimate the drift velocities and electron density of the solar radio bursts. Although the special origin of the solar radio burst is not known clearly we assumed. Most of solar radio bursts were originated within the solar radius of 0.95 - 1.09 range from the photosphere. It was belongs to type III B. The average plasma velocity of type II solar radio bursts were determined as 1443.05 km s⁻¹.

vijayanga18@gmail.com

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