Sri Lanka

Type II Solar Radio Bursts Detected by CALLISTO at ACCIMT

S. GUNASEKERA[1], J. ADASSURIYA[1], I. MEDAGANGODA[1], C. MONSTEIN[2]
[1] Arthur C Clarke Institute for Modern Technologies, Sri Lanka
[2] Institute for Astronomy, ETH Zurich, Switzerland

As a result of IHY/UNBSSI and ISWI instrument deployment program a CALLISTO solar radio spectrometer was established at the Arthur C Clarke Institute for Modern Technologies (ACCIMT) in Sri Lanka. The system consists of CALLISTO spectrometer which was donated by Institute of Astronomy of ETH Zurich in Switzerland and a locally designed and constructed logarithmic periodic antenna. The system is connected to the e-CALLISTO global network and observes solar radio bursts in 24 hours.

The system has detected both type II and type III solar radio bursts in the frequency range of 110 MHz to 460 MHz. We report the first data analysis of type II solar radio burst detected on 4th November 2015 from the system along with the same event recorded on CALLISTO instruments at three other stations, ALMATY, GAURI and OOTY. The all four spectra were image processed to eliminate the artificial noise and trimmed. Drift rates were calculated from the frequencies of the maximum intensities along the bursts. Using the drift rates and with the assumption of Newkirk's coronal density model, full range of radial velocities of the radio source were determined for all the type II solar radio burst observed at four stations.