



Contribution ID: 633

Type: **Talk in a parallel session**

Diffusion spectra and equitemporal surfaces of ultrarelativistic shell radiation as applied to gamma-ray bursts

Monday, 8 July 2024 16:00 (15 minutes)

Large-scale cosmic emissions of explosive energy that occur during the explosions of certain supernovae or the merger of compact objects are called gamma-ray bursts. We study the radiation of the ultrarelativistic shell in the diffusion approximation, which takes place at the initial stage of a gamma-ray burst. We get the effective temperature, instantaneous and time-integrated spectra for the different distribution of the initial internal energy of the shell. The resulting time-integrated emission spectra of the shell photosphere contain a Band component and a thermal component. Also we considered the types of the equitemporal surfaces with a different type of the movement of the shell.

Primary author: KURHUZAVA, Aksana

Presenter: KURHUZAVA, Aksana

Session Classification: Emission mechanisms in gamma-ray bursts