



Contribution ID: 241

Type: **Invited talk in the parallel session**

Classification of Photospheric Emission in sGRBs

Tuesday, 6 July 2021 11:30 (30 minutes)

In this talk, I will focus on the photospheric emission observed in the short gamma-ray bursts (GRBs). In our work, we find that several short GRBs are consistent with a pure, non-dissipative photospheric model, at least around the peak of the pulse. For these bursts, we find (i) a bimodal distribution in the values of the Lorentz factors and the hardness ratios and (ii) an anti-correlation between burst duration, T_{90} and the peak energy, E_{pk} . These results thus imply that the short GRB population may in fact be composed of two separate populations. Our results also show that thermal emission is initially dominant, but is accompanied at longer times by additional radiation.

Primary authors: Dr DERELI-BÉGUÉ, Hüsne (Bar-Ilan University); Prof. PE'ER, Asaf (Bar Ilan University); Prof. RYDE, Felix (KTH Royal Institute of Technology)

Presenter: Dr DERELI-BÉGUÉ, Hüsne (Bar-Ilan University)

Session Classification: Photospheric Emission in GRBs

Track Classification: Fast Transients: Photospheric Emission in GRBs