



Contribution ID: 42

Type: **Invited**

Ultrafast Inorganic Scintillators for future HEP and Imaging Applications

Tuesday, March 14, 2023 9:45 AM (30 minutes)

Heavy inorganic scintillators, such as LYSO:Ce, is currently used to construct the CMS Barrel Timing Layer aiming at 30 ps time resolution for the HL-LHC. Ultrafast inorganic scintillators, such as BAF2:Y, has been proposed for ultrafast calorimeter and GHz hard X-ray imaging. In this investigation, we report temporal response of ultrafast inorganic scintillators with ultrafast decay time, such as BaF₂, BaF₂:Y, Cs₂ZnCl₄, Ga₂O₃, Lu₂O₃:Yb, YAP:Yb, YAG:Yb and ZnO:Ga etc. Potential application for ultrafast timing, tracking and imaging will also be discussed.

Primary author: ZHU, Ren-Yuan (Caltech)

Presenter: ZHU, Ren-Yuan (Caltech)

Session Classification: Application

Track Classification: Applications