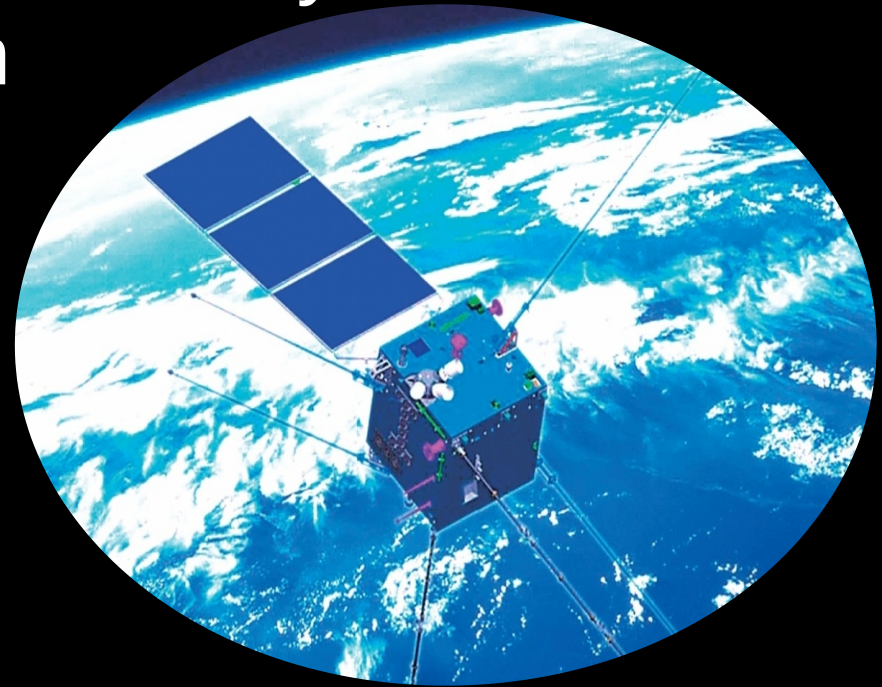


# Performance of the HEPD-02 LYSO calorimeter and expected sensitivity to GRBs detection

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On behalf of the CSES-Limadou Collaboration

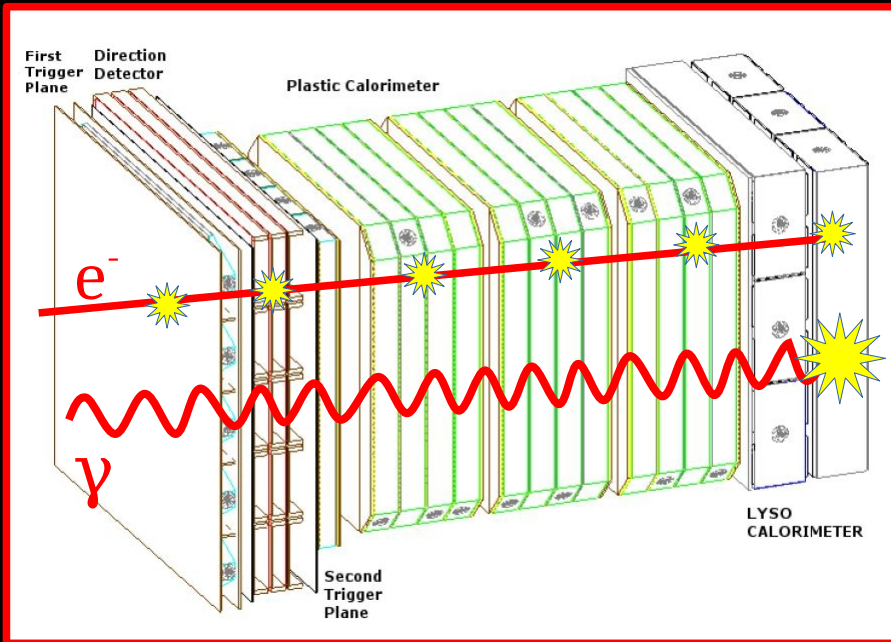


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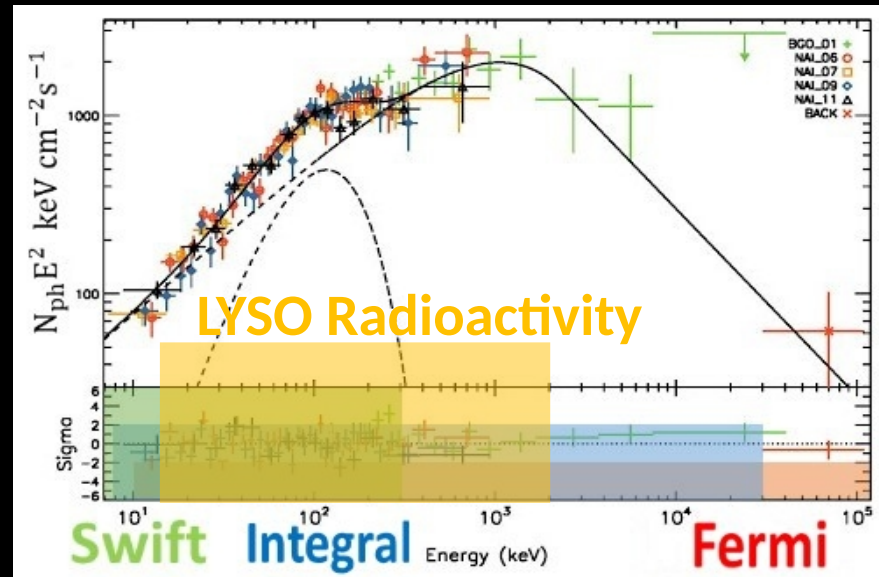
37<sup>th</sup> International  
Cosmic Ray Conference  
12–23 July 2021



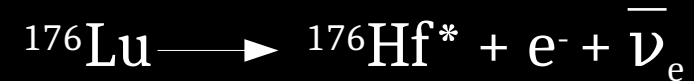
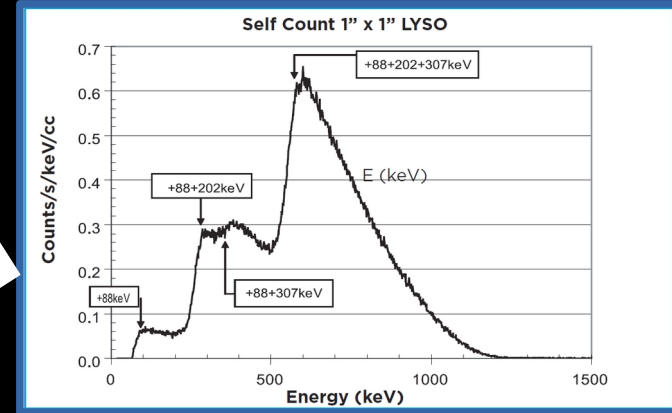
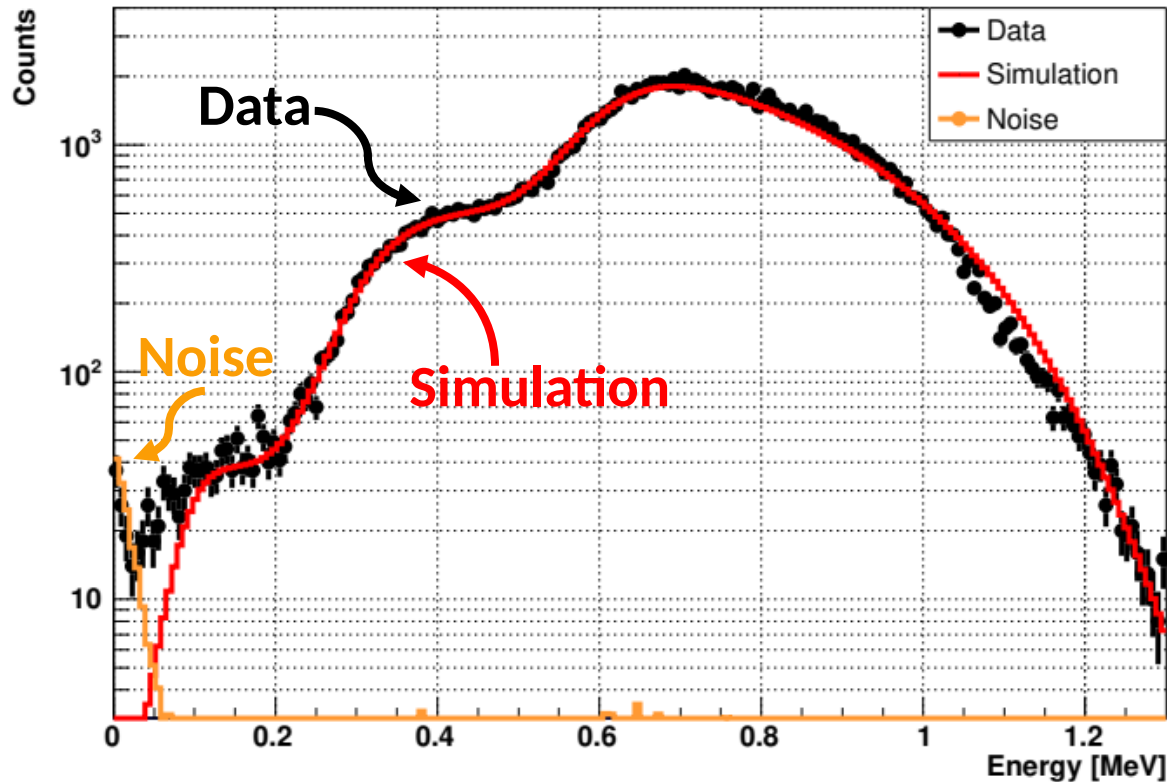
# HEPD: High Energy Particle Detector



Is it possible to use this detector for GRBs measurements?

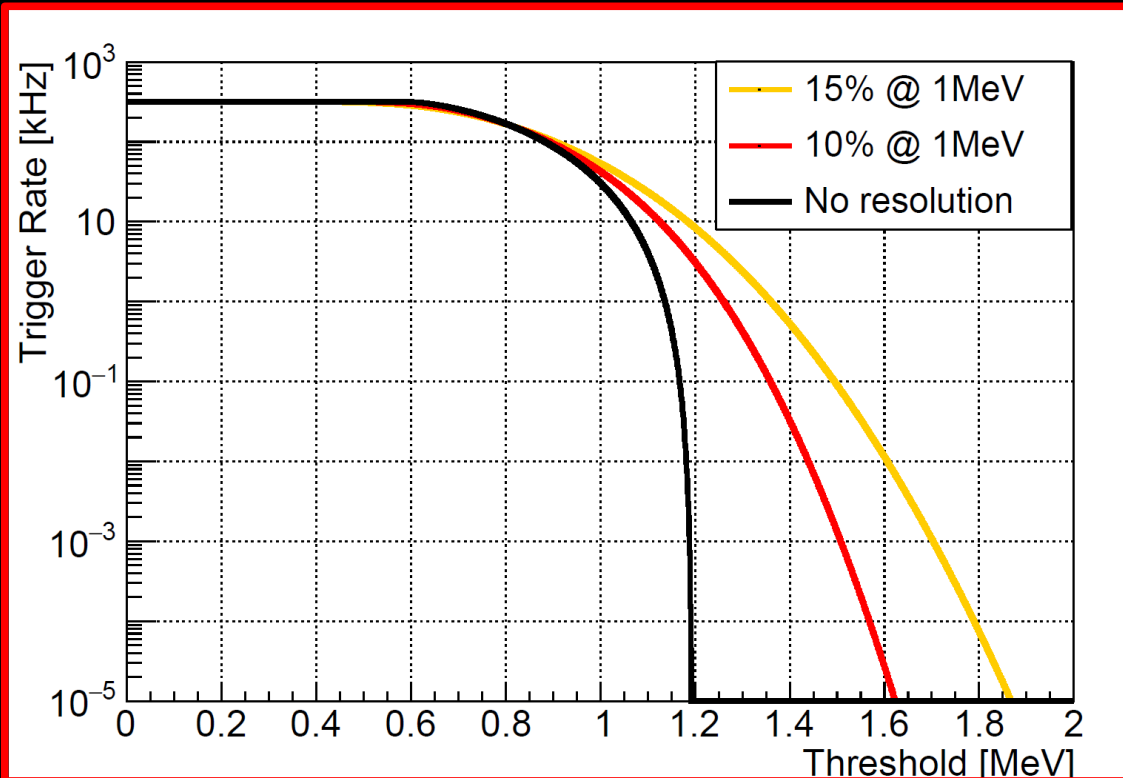


# LYSO background spectrum

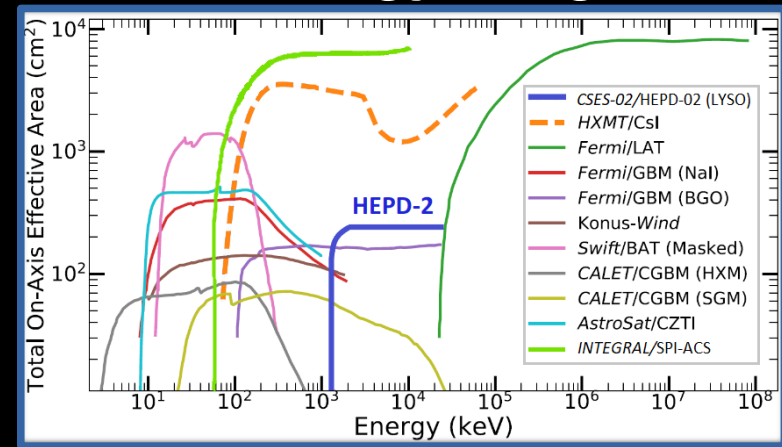


- $^{176}\text{Hf}^*$  relaxation produces 3 X-rays
- LYSO radioactivity upper limit 1.5 MeV

# HEPD performance for GRBs detection



- GRBs detection is possible for energy greater than 1.5 MeV with 1 Hz background rate
- HEPD-02 will be able to detect GRBs in the 2-20 MeV energy range



Thank you  
for the attention!