

# PG3: Scintillating Devices

## Pawel de Barbaro & Jimmy Proudfoot

Preparatory Group Members:

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# PG3: Working Meetings

July 2<sup>nd</sup>: Kick-off meeting set objectives for PG3:

Define progress since the last ECFA HL\_LHC meeting

Expose strengths and weaknesses of scintillation based detectors (calorimeter and trackers)

- Discussed performance requirements (granularity, time response) & technical issues such as performance of new scintillating crystals, and gain drift in SiPMs.

8 meetings of PG3: <https://indico.cern.ch/category/5736/>

Discussions included:

- Radiation levels
- Effects of irradiation on the SiPMs (relevant for both tracker and calorimeters)
- Characteristics of light production from scintillation activators used in crystals, and from intrinsically scintillating crystals
- Performance characteristics to be realized (light yield, cross talk, ..) and techniques to achieve them
- Radiation damage to plastic scintillating fibers and tiles
- New scintillation materials

# PG3: Presentations Today

**Scintillating Fibre Tracking:**

Christian Joram (CERN)

**Scintillating calorimeter systems:**

David Anthony Petyt (STFC)