



Contribution ID: 91

Type: Oral presentation (in person)

## Addressing technological challenges on sensor-electronics hybridization for compact silicon tungsten electromagnetic calorimeters.

*Tuesday 9 July 2024 09:00 (30 minutes)*

Highly compact and granular sandwich silicon tungsten calorimeters are part of the detector concepts proposed for all future Higgs Factories and for strong-field-QED (LUXE) or Dark Matter search experiments. This contribution discusses some of the technological challenges of sensor-electronics hybridization for this type of calorimeters. Different alternatives have been explored and used in the past, e.g. tab-bonding and epoxy-silver glue dots, with limited success. A joint R&D effort by different groups to study this technology's long-term viability. It comprises ageing studies, careful monitoring of PCB mechanical properties, the validation of different industrial choices for the epoxy-silver product and the optimization/automation of the process by different institutes. The challenges and status of these activities are discussed in this contribution.

### Apply for poster award

**Primary authors:** IRLES, Adrian (IFIC (CSIC/UV) Valencia); ZERWAS, Dirk (Université Paris-Saclay (FR)); BEN-HAMMOU, Yan (Tel Aviv University (IL))

**Presenter:** IRLES, Adrian (IFIC (CSIC/UV) Valencia)

**Session Classification:** Calorimetry, Muon detectors

**Track Classification:** Physics and Detector: Calorimetry, Muon