



New Lepton Colliders

- High energy e^+e^- collider (Japan, CERN, China), ILC/CLIC
 - Design (esp. for ILC) in very advanced stage
 - Timescale?
- STFC-funded in 2015/2016, to re-engage with international LC
- Preparing for next round of requests for further two years

- UK efforts in
 - Silicon tracking (ex. LCFI, etc.), DAQ (ex. Calice, EUDET, AIDA)
 - Calorimetry
- Increasingly complex overlaps with future projects (FCC, etc.)
- Connected with
 - CALICE Collaboration (Tony Price, Alasdair Winter, NKW)
 - ILD and CLIC-DP detector concept groups (+CMH/KN/MFW)



Physics/Simulations

- Completed study of $H \rightarrow WW^*$, appears in
 - Higgs Physics at the CLIC Electron-Positron Linear Collider ([arXiv:1608.07538](https://arxiv.org/abs/1608.07538), EPJ C)
- Continuing with studies of $t\bar{t}$ for ILC
- Also ZH (tau final states)
 - To study physics improvements with DECAL high granularity



For Calice

- Birmingham, Sussex (Fabrizio Salvatore, +...), RAL,+
- Concentrate on niche areas where we could make some impact

- Ongoing studies of DECAL in specific areas
 - Pixel ganging (exploit tracker technology) – see also MAPS PRD
 - Start by using CHERWELL sensor
 - Because it exists
 - DECAL parts of sensor not yet tested
 - **Needs minor firmware work** – no progress from Daresbury
 - Will retrieve hardware from RAL tomorrow
 - Power consumption (duty cycle - “no harm” tests)

- UK groups will investigate “show-stoppers” for DECAL principle
- Assume no sensor we have at present would be used after 2017

Cherwell tests

Sensor on daughter board



**Firmware adaptation
required for power cycling**

