

## Possible LCD-CERN contributions to AIDA

In order of initial priority. The priority is obviously dependent on finding partners interested in such common projects. Synergy between ILC and CLIC-related activities is preferred, where possible. We would like to collaborate on a few (not all!) of these activities within the AIDA framework. We are open to other options as well.

1. Tungsten HCAL with micromegas and/or scintillator
  - a. R&D on fast optical scintillator signal, compatible with time-stamping
  - b. Mechanical integration of scintillator plane
  - c. Purchase of tungsten
  - d. Mechanical manufacturability of tungsten stack
2. Core software development in WP2
  - a. Activity in line with conclusions of LC software workshop May 2009
  - b. EUDET-continuation of collaboration between the CERN GEANT4 team and CALICE on hadronic shower models and the optimization of the simulation of fine-grained calorimeters
3. Time-stamping
  - a. Integration of time-stamping capabilities (~10ns level for tracking, ~20 ns level for calorimetry) in one or more of the LC detector electronics developments, preferably including an activity in the pixel detector
4. S-Altro TPC electronics
  - a. Digital part of microelectronics design
  - b. Integration of compact chip
  - c. System studies, like power pulsing
5. Power-pulsing
  - a. Studies of power-pulsing in one or more of the LC detector electronics developments
6. Timepix2<sup>1</sup> development for TPC
  - a. Microelectronics design for Timepix2

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<sup>1</sup> Actually, I think that Timepix2 will be pursued in a different collaboration framework, To be checked.