WP9.4 Common DAQ

- Work toward a convergence (or at least a compatibility of) various DAQ systems
  - ▶ EUDET telescope (LCTPC, Atlas, ...)
  - ▶ CALICE DAQ2, DAQ1
  - ▶ Other Ad-hoc DAQs (FCAL, SiD ?)
- Software
  - ▶ Compatibility (i.e. communication)
  - ▶ Output to LCIO format → link to WP2
    - ◆ now: two steps
    - ◆ improve formats
  - ▶ Writing to GRID
- Distribution of Fast signals
  - ▶ Clocks, Busy & Trigger (+ logic)
- Adaptation for ILC like beams
  - ▶ Record of beam condition in a spill

- Interface with DESY remote control
- DCS → link to WP8 (8.5 ?)
  - ▶ Better integration of beam parameters
    - ◆ faster access to data (now ~ minute)
    - ◆ larger data
      - • beam profile histograms
      - • magnets currents
      - • collimators positions
    - ◆ standardisation CERN / DESY / PSI ???
      - • or at least common interface
- Improvement of telescope (→ WP8 ?)
  - ▶ Larger area telescope
  - ▶ Larger scintillator hodoscope (type H4)
    - ◆ standalone (calo)
    - ◆ with pixel telescope → improvement of readout speed

WP9.4 Common DAQ

(very prelim.) DEMANDS

- Software: manpower
  - ▶ Telescope: EUDAQ
    - ◆ Used at some places (TPC)
    - ◆ **MP critical**
  - ▶ CALICE: use of DOOCS, XDAQ
    - ◆ Being reviewed
  - ▶ LCIO + GRID interface
- Hardware / Firmware
  - ▶ TLU successor
    - ◆ ⊃ time stamping
  - ▶ Clock & control
    - ◆ Calice CCC exists → FW mods
  - ▶ Calice "BIF" (Beam InterFace ~= DIF for beam)
    - ◆ Modified DIF or new HW (could also be used for a fibre hodoscope)

- Detectors:
  - ▶ Adaptation or rebuild of a H4 type hodoscope
- And all things still missing
  - ▶ FCAL, SiLC,
  - ▶ non LC
  - ▶ ...