

# Towards a W HCAL Prototype

Motivation

Objective

Further goals

# Motivation

- HCALs of present ILC Detector concepts have significant energy leakage at 3 TeV

( $\lambda_{\text{int}}$  : SiD: 4.5+1 / ILD: 5.3+1  $\Rightarrow$  CLIC: 7+1)

Physics:  $E_{\text{tot}}$ ,  $E_{\text{jet}}$ , transverse missing E

- Extra iron would increase radius of solenoid coil too much

Fe  $\Rightarrow$  W

- No experience with real W-HCAL

Let's try it!

# Objectives for Prototype

- Validate simulation of W-HCAL performance

## Issues

- Resolution as function of E
- temporal shower development (neutrons!)
- Interplay with scintillator and gaseous detectors

## Further goals

- Test more detectors technologies ?
- System performance (+ ECAL) ?
- Experience with W plates
- ...