

LCTPC Collaboration meeting, Nov. 29,2017

ILD matters

The TPC in ILD

Integration Task Force

- An integration Task Force is set up in ILD with 20 core members, fully open to anyone in ILD (one engineer + one or two physicists per subdetector)
- Face-to-face meeting at LAL on February 2, 2018)
- Will be continued in Ichinoseki (Feb. 20 to 22) and KEK (infrastructure meeting)
- End of December 2017: convention document

Documents to be ready by end 2018

- **Technical subdetector design document** (not started for the TPC ; there exists a draft for the Si Ecal)
- **TPC interface document.** We have a draft, with many open issues. This meeting will allow discussing some of these. **Watch all kinds of interference between subdetectors** : space occupation, heat, services, EMC, mechanical support, vibrations...
- Note the last year of E-JADE is 2018. We use WG3.3 (WG3 is ILC targeted R&D)

TPC interface document

P. Colas, A. Sugiyama

Locations

- **platform** (no vibration, space reduced),
- **Additional cavern**, (facilitated accessibility for maintenance, but at more than 50 m)
- **gallery**
- **surface** (less space limitation nor safety constraints but long distance to the detector)

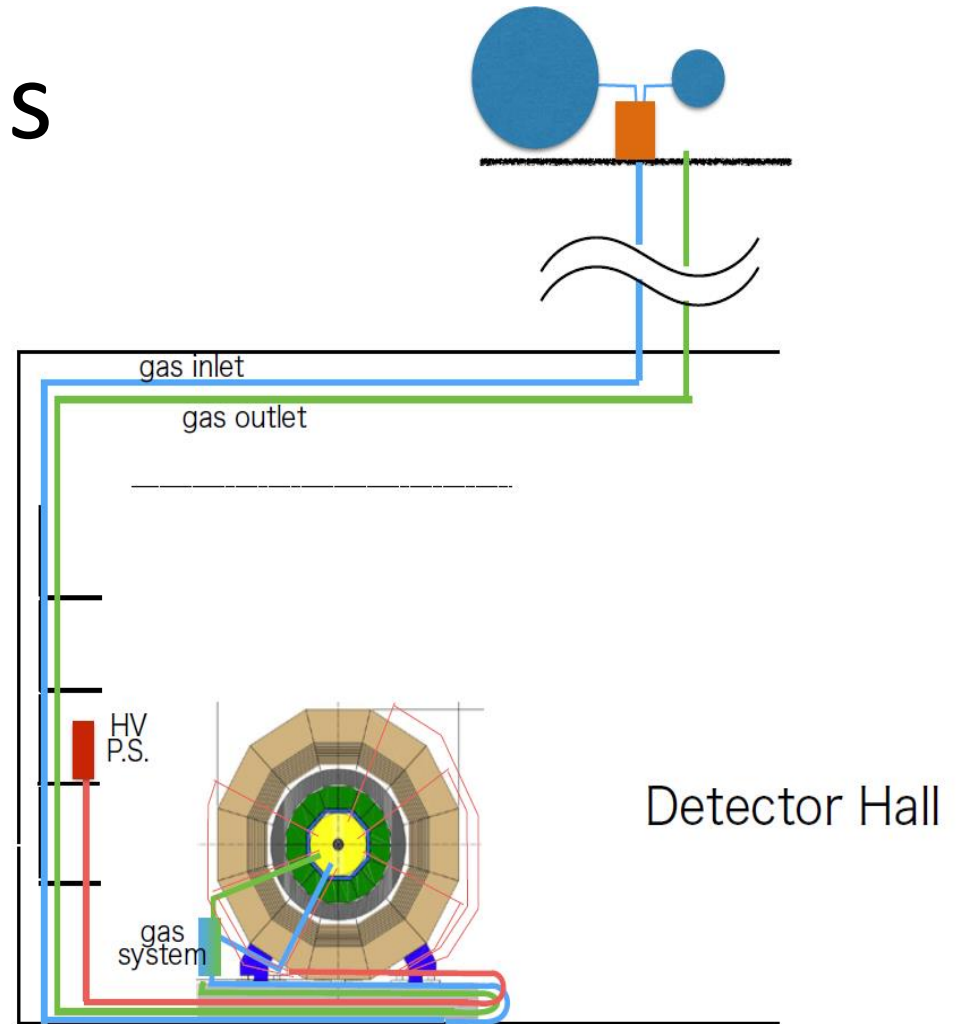
LV has to be close to the detector: platform

Gas storage and mixing: surface

Gas analysis system : same

HV : Gallery?

Backend and DAQ computers :
additional cavern



SURFACE

Gas slow control computer

UNDERGROUND

Repeated Side A and Side B

EXTERNAL DEVICES

INTERFACE REGION

ON-DETECTOR DEVICES

3V/8A power supply
for ASICs per module

0.4 to few kV power
Supply for gas
amplification

Few V power supply
For gating

DAQ computer
(farm?)
(data and DACs, clock)

6 patch panels

Optical fibre

Module
(x240)
In 6 sectors

Or supermodule (x80)