

Power supplies

On-going maintenance procedure works well

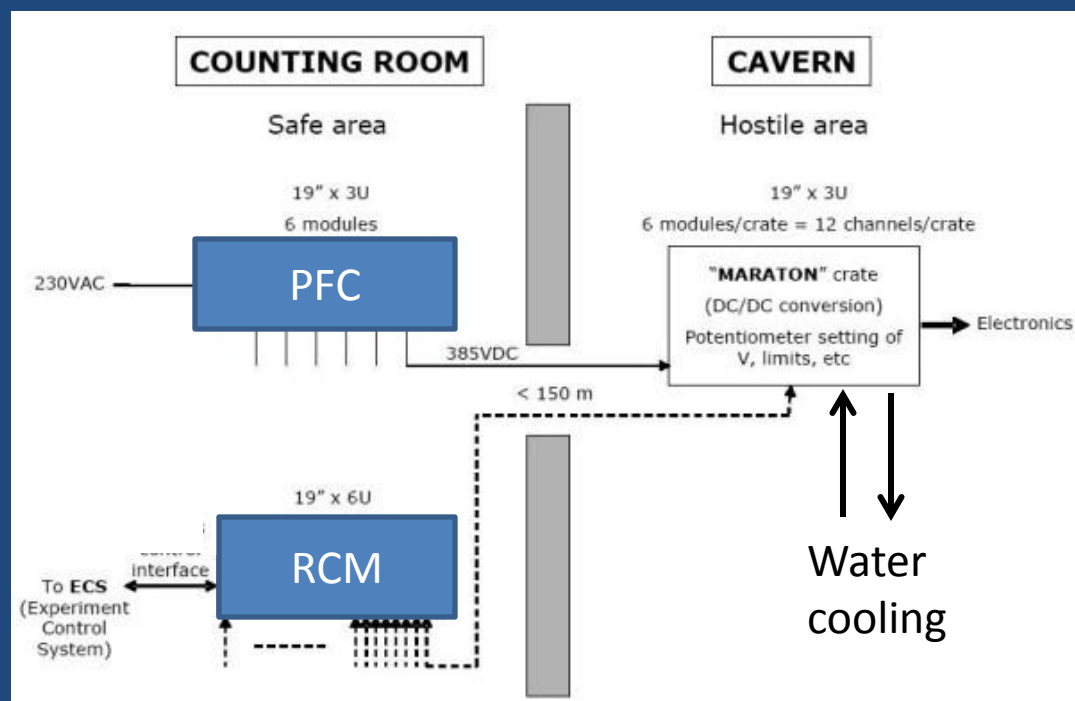
Statistics compiled by PH-ESE:

Very few 'front-end' power supplies have required repairs.

PFCs have highest failure-rate

(but easily accessible in counting room, we have many spares)

Example:
Maraton LV system



Potential Problems

Mechanical issues:

Solder joints

Fans (already replaced)

Connectors (eg oxidation?)

Electrical components:

Electrolytic caps

**(lose electrolyte, R goes up, efficiency goes down):
temperature dependent!**

Treat them with care!

We must take care of the power supplies we have!!!!

Maintain cooling

=> component degradation is very temperature dependent

**=> triggered 'pipe-cleaning' campaign at pit
(Laurent et al)**

Analysis of components in power supplies

=> recommendation from suppliers for fan replacement

=> triggered replacement campaign (on-going)

Power supplies - sharing

VELO

Pile-Up

VELO

RICH

RICH

TT

UT

IT OT

SciFi

ECAL &
HCAL

PS & SPD

Calo

Muons

Muons

Urgent issues

Does each sub-detector have enough power supplies for the upgrade????

If not, do they need:

More of the existing supplies?

New types of supply?

Beware of obsolescence (eg CAEN SY1527)

Purchase/maintenance contract until 2018

Will be extended (somehow.....)