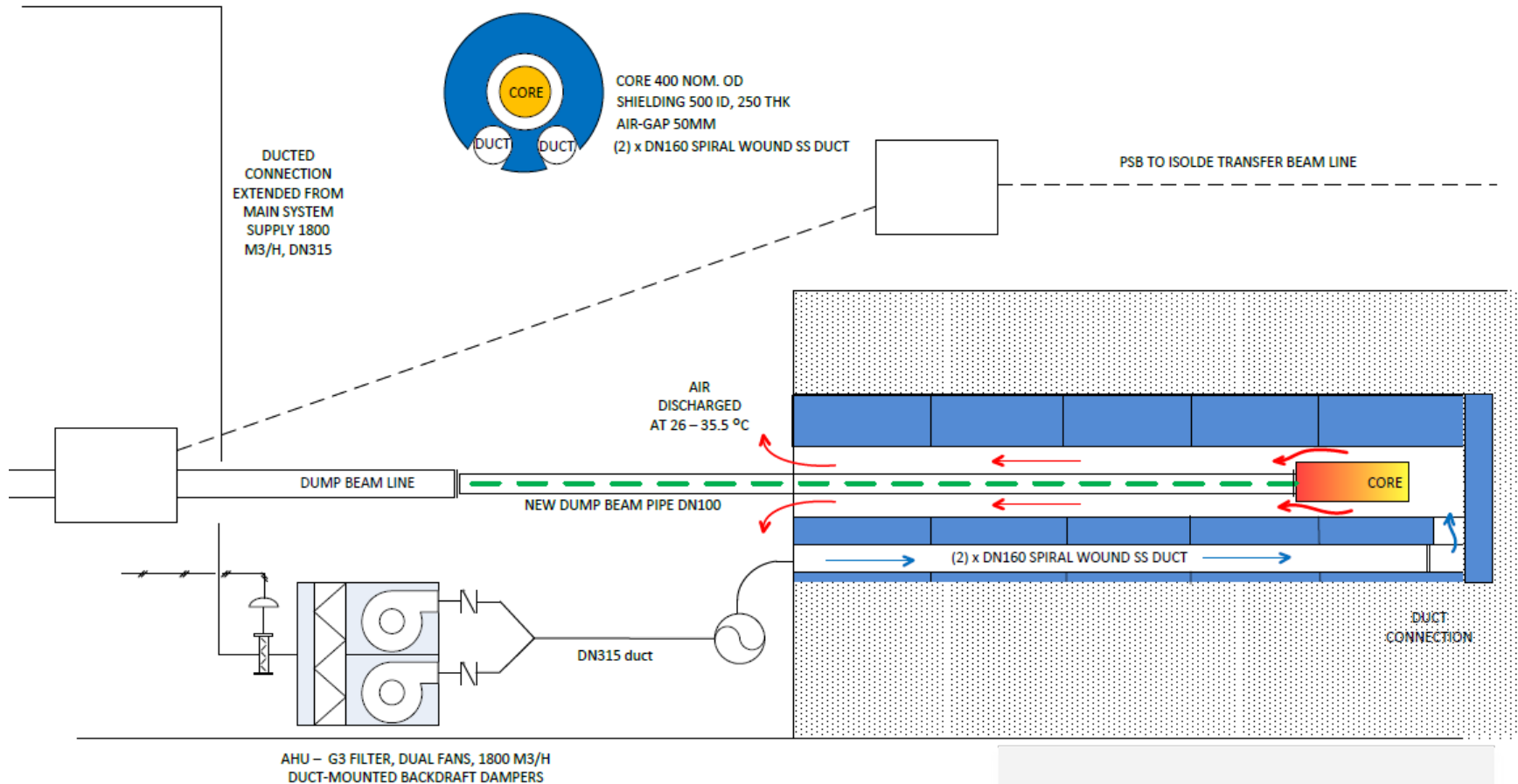




PSB Beam Dump Cooling Radiation WG

Glen Mason EN-CV

- ▶ PSB Dump Cooling System
- ▶ Radiation
- ▶ Instrumentation

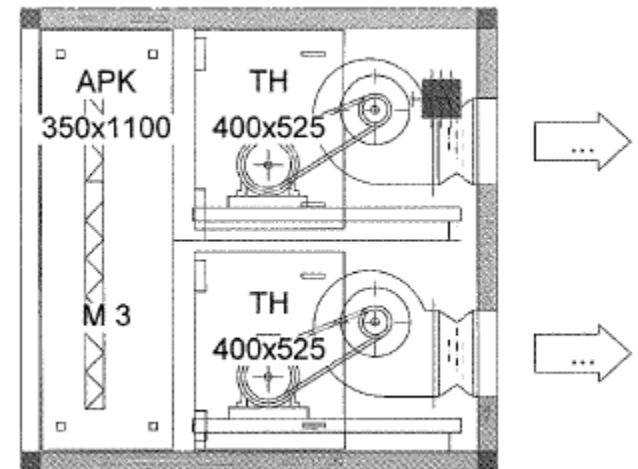


PSB Dump Cooling System

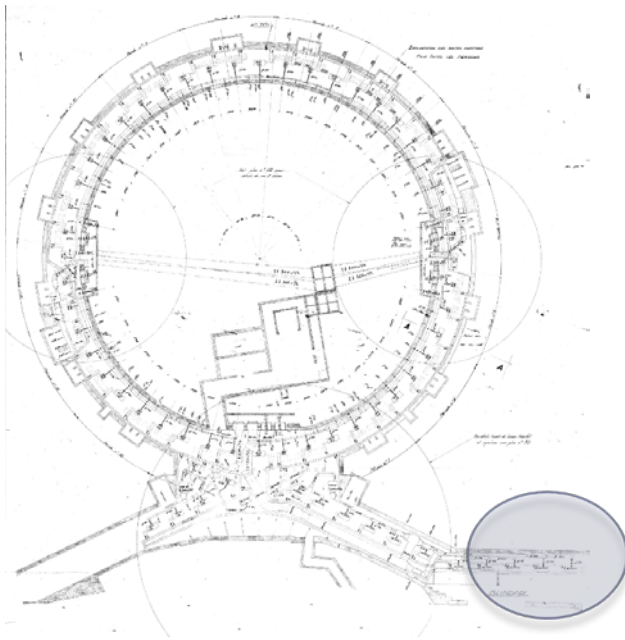
- ▶ Dump cooling system supplies 1,800 m³/hr of air from the existing ventilation system

- ▶ Air Handling Unit

- ▶ filter & dual fans – no coil
 - ▶ Located under the stairs

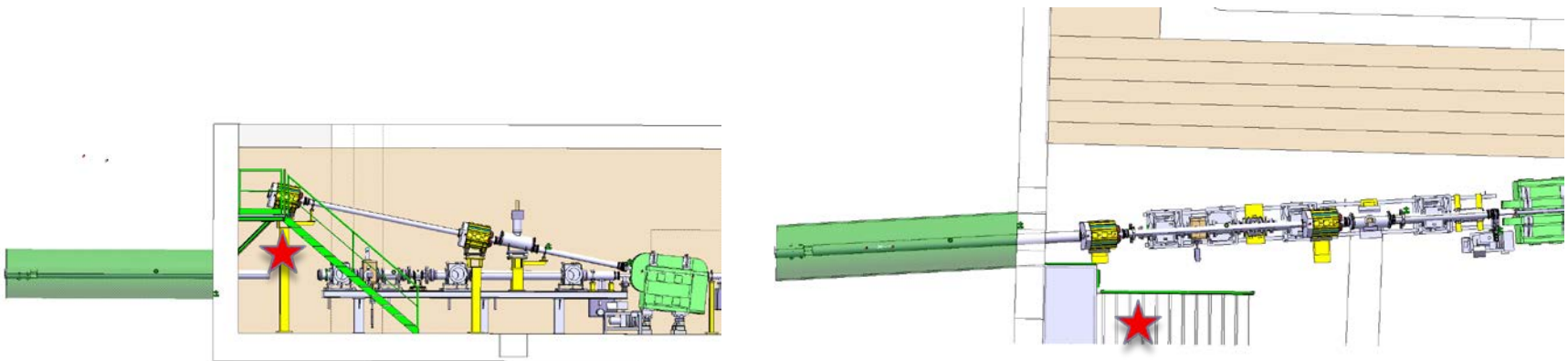


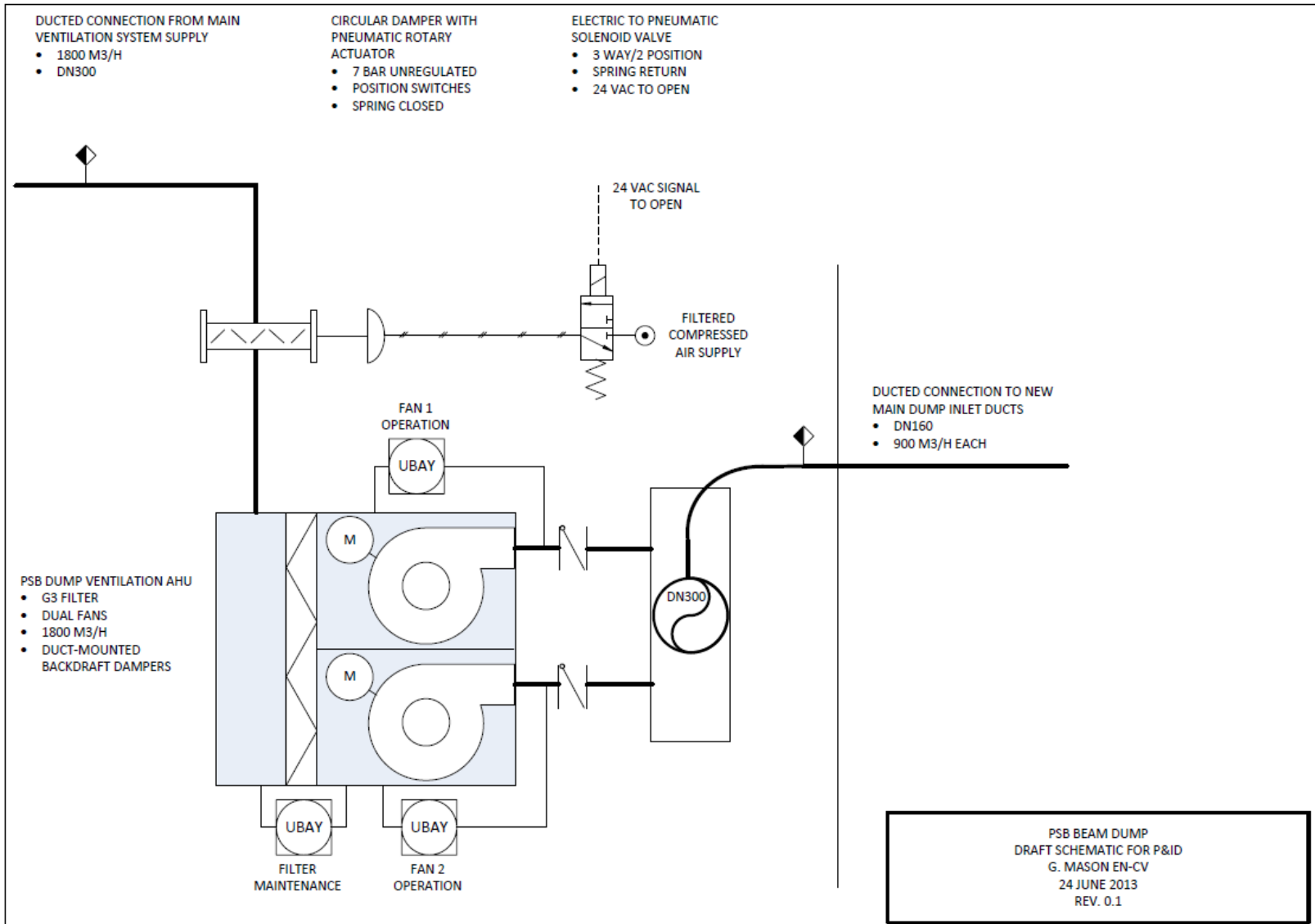
- ▶ Minimal controls design – conditioning of the air occurs in the main ventilation system in b.36 I.



▶ Marco Calviani

- ▶ The dose level at the level of the AHU is projected to be in the order of $\sim 150\text{-}200\text{ Gy/year}$... I would like to stress that – in addition to the total ionising dose effects – due to the particle spectra expected in the dump area, the consequences of single event upsets has to be taken into account if active electronics is supposed to be placed there or close-by.





- ▶ UDAY - Dungs LGWA pressure switches
 - ▶ filter monitoring
 - ▶ fan status, fail detection
 - ▶ Housing: polycarbonate IP54
 - ▶ Diaphragms: NBR
 - ▶ Switching contacts: silver, goldplated Ag
- ▶ Solenoid Valve – Festo or Asco
 - ▶ Aluminium Body w/ zinc, steel parts
 - ▶ NBR seals
 - ▶ Duroplast solenoid bobine, Cu coil
- ▶ Actuator – Mecatork Pneumatic
 - ▶ Aluminium with NBR seals

