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Safety aspects concerning the operation of liquid krypton and liquid argon calorimeters in underground areas

Tuesday 23 September 2008 16:00 (25 minutes)

The operation of particle physics calorimeters using large quantities of liquid krypton or liquid argon in underground areas creates specific safety risks because of conflicting requirements. On one hand the walls of the cryostats, including electrical feedthroughs, must be as thin as possible to minimize the interaction of the particles passing through the structure, while on the other hand the risk of an eventual loss of krypton or argon must be avoided since it will give rise to an oxygen deficiency in the underground cavern.
A 10 m3 liquid krypton and a 85 m3 liquid argon calorimeter are installed at CERN in underground caverns. This presentation will focus on the measures taken to have an early detection of an eventual loss of cryogenics and on how to diminish the consequence of such a leak for its environment.

Proposed for workshop session (see call for abstracts): 1- Operation 2- Maintenance 3 - Safety 4 - Control

safety

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