

ATLAS Patch Panel 01 (PP1) Services, Mechanics and Eddy current effects

Monday, 17 May 2021 15:20 (30 minutes)

The ATLAS PP1 patch Panel 01 is one of the most critical element in the ITK detector that has to guarantee the services interface, the gas tightness of the detector volume and the Faraday cage requirement. This talk presents the services design of manifolds and harnesses as well as the integration procedure. The sealing techniques and data-feedthrough leakrate measurements are presented and discussed.

To maintain the Faraday cage, the patch panel must be made of electrical conductive material and than it is subject to the eddy current effect in case of magnet quench. The FEA of the PP1 to study the effects of the eddy current in term of forces and power loss are presented and discussed.

Primary authors: TOMASSINI, Sandro (INFN-LNF); ROSATELLI, Filippo (INFN e Laboratori Nazionali di Frascati (IT)); ORECCHINI, Dario (INFN e Laboratori Nazionali di Frascati (IT)); DANE', Emiliano (INFN e Laboratori Nazionali di Frascati (IT))

Presenter: TOMASSINI, Sandro (INFN-LNF)