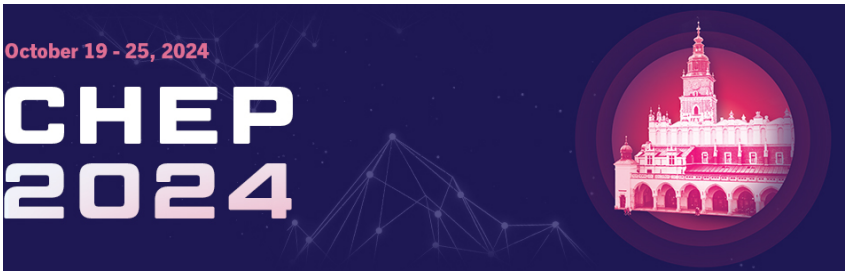

Contribution ID: **259** Type: **Talk**

Updating the software description of the ATLAS Detector

Thursday 24 October 2024 15:00 (18 minutes)

The software description of the ATLAS detector is based on the GeoModel toolkit, developed in-house for the ATLAS experiment but released and maintained as a separate package with few dependencies. A compact SQLite-based exchange format permits the sharing of geometrical information between applications including visualization, clash detection, material inventory, database browsing, and lightweight full simulation. ATLAS simulation, reconstruction, and other elements of standard ATLAS offline workflows are now being adapted to ingest the geometry files which are prepared using platform independent modular geometry plugin code. This represents a major transformation of the ATLAS detector description software, impacting even the development procedures, for which new roles have been invented. During these integration activities, both the GeoModel geometry kernel and the GeoModel toolkit have seen improvements, including volume calculation, material blending, helper classes for simpler memory management, and and a richer collection of supported geometrical objects. This talk reports on these activities.

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