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# The Atlantis event visualisation program for the ATLAS experiment

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We describe the philosophy and design of Atlantis, an event visualisation program for the ATLAS experiment at CERN. Written in Java, it employs the Swing API to provide an easily configurable Graphical User Interface.

Atlantis implements a collection of intuitive, data-orientated 2D projections, which enable the user to quickly understand and visually investigate complete ATLAS events. Event data is read in from XML files produced by a dedicated algorithm running in the ATLAS software framework ATHENA, and translated into internal data objects. Within the same main canvas area, multiple views of the data can be displayed with varying size and position. Interactions such as zoom, selection and query can occur between these views using Drag and Drop.

Associations between data objects as well as the values of their member variables provide criteria upon which the Atlantis user may filter a full Atlas event. By choosing whether or not to show certain data and, if so, in what colour, a more personalised and useful display may be obtained. The user can dynamically create and manage their own associations and perform context dependent operations upon them.

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