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ATLAS@Home: Harnessing Volunteer Computing for HEP

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A recent common theme among HEP computing is exploitation of opportunistic resources in order to provide the maximum statistics possible for Monte-Carlo simulation. Volunteer computing has been used over the last few years in many other scientific fields and by CERN itself to run simulations of the LHC beams. The ATLAS@Home project was started to allow volunteers to run simulations of collisions in the ATLAS detector. So far many thousands of members of the public have signed up to contribute their spare CPU cycles for ATLAS, and there is potential for volunteer computing to provide a significant fraction of ATLAS computing resources. Here we describe the design of the project, the lessons learned so far and the future plans.

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