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A browser based multi-user working environment for physicists

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Many programs in experimental particle physics do not yet have a graphical interface, or demand strong platform and software requirements. With the most recent development of the VISPA project, we provide graphical interfaces to existing software programs and access to multiple computing clusters through standard web browsers. The scalable client-server system allows analyses to be performed in sizable teams, and disburdens the individual physicist from installing and maintaining a software environment. The VISPA graphical interfaces are implemented in HTML, JavaScript and extensions to the Python webserver. The webserver uses SSH and RPC to access user data, code and processes on remote sites. As example applications we present graphical interfaces for steering the reconstruction framework OFFLINE of the Pierre-Auger experiment, and the analysis development toolkit PXL. The browser based VISPA system was field-tested in bi-weekly homework of a third year physics course by more than 100 students. We discuss the system deployment and the evaluation by the students.

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