Contribution ID: **150** Type: **Invited talk**

EuPRAXIA

Wednesday, 21 September 2022 16:00 (20 minutes)

EuPRAXIA (European Plasma Research Accelerator with eXcellence In Applications) is an ESFRI project for a compact European infrastructure with 5 GeV electron beams based on plasma accelerators. It will soon enter its Preparatory Phase, recently approved and funded by the European Union. The EuPRAXIA project is supported by a large consortium and foresees two main construction sites. One site is focused on beam-driven plasma acceleration (PWFA) at the Laboratori Nazionali di Frascati (INFN-LNF) in Italy. This site had already received construction funding from the Italian government. The second site will be based on laser-driven plasma acceleration (LWFA) with candidate sites in Czech Republic, United Kingdom and Italy. Centres of excellence planned for Portugal, France, the United Kingdom, Germany, Hungary and the Czech Republic, will support both construction sites. Major technical building blocks of EuPRAXIA include advanced photo injectors, X band RF technology, high power lasers, plasma accelerators, high resolution instrumentation and application beamlines. The EuPRAXIA concept will be presented and target parameters introduced. The foreseen EuPRAXIA user applications and their specific advantages will be shortly discussed. Finally, the next steps and the path to full implementation will be described.

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Session Classification: Special Topic