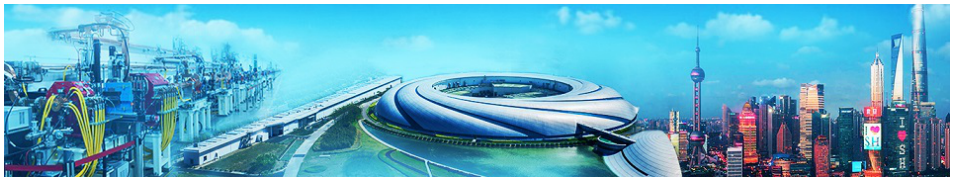

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Status of high gradient X band LINAC design for the EUPRAXIA@SPARC_LAB project and XLS accelerating structures design

Wednesday, 6 June 2018 09:25 (25 minutes)

The linac of the EuPRAXIA@SPARC_LAB project is based on an S-band Gun, three S-band TW structures and an X-band booster with a bunch compressor. The X-band technology allows reaching a high accelerating gradient and a high facility compactness, which are some of the goals of the projects. The accelerating structures are TW cavities fed by klystrons and pulse compressor systems. In the presentation, after a short introduction to the project, we illustrate the RF design of the X-band linac with a discussion on the preliminary layout of the accelerating module, open points and multi-bunch linac option. The same design criteria have been also adopted for the preliminary design of the accelerating structures of the recently approved "XLS Compact Light"design study. In the second part of the presentation we will address at these preliminary results.

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