Contribution ID: **34** Type: **poster**

Preliminary RF design of an X-Band LINAC for the EuPRAXIA@SPARC_LAB project

Monday, 25 September 2017 19:30 (1 hour)

In the framework of the upgrade of the SPARC_LAB facility at INFN-LNF, named EuPRAXIA@SPARC_LAB, a high gradient LINAC has been foreseen. One of the most suitable options is to realize it in X-Band. A preliminary design study of the accelerating structures and power distribution system has been performed. It is based on 0.5 m long travelling wave (TW) accelerating structures operating on the $2\pi/3$ mode and fed by klystrons and pulse compressor systems. The main parameters of the structures and LINAC are presented with the basic RF LINAC layout.

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Session Classification: Wine and Poster Session 1(WG1-WG2-WG3-WG8)

Track Classification: WG3 - Electron Beams from Electromagnetic Structures, Including Dielectric and Laser-driven Structures