



Contribution ID: 181

Type: poster

## Photon beamline for a soft x-ray FEL driven by high gradient acceleration at EuPRAXIA@SPARC\_LAB

*Wednesday, 27 September 2017 19:30 (1 hour)*

We are proposing a facility based on high gradient acceleration via x-band RF structures and plasma acceleration. We plan to reach an electron energy of the order of 1 GeV, enough to drive a Free Electron Laser in the so called “water window”(2-4 nm). At the end of the beamline we will have a user end station where we plan to do coherent imaging, laser ablation and pump-probe experiments. We present the design of the photon beamline, from the expected photon beam coming from the undulators to the user experimental chamber, mainly focusing on diagnostic, manipulation and transport of the photon beam.

**Primary author:** VILLA, Fabio (LNF)

**Co-authors:** MARCELLI, Augusto (LNF); Dr MASCIOVECCHIO, Claudio (Elettra-Sincrotrone Trieste); STELLATO, Francesco (ROMA2); GIANNESI, Luca (ENEA & ST); CORENO, Marcello (LNF); MORANTE, Silvia (ROMA2); LUPI, Stefano (ROMA1); DABAGOV, Sultan (LNF); MINICOZZI, Velia (R)

**Presenter:** VILLA, Fabio (LNF)

**Session Classification:** Wine and Poster Session 2 (WG4-WG5-WG6-WG7)

**Track Classification:** WG4 - Applications of Compact and High-Gradient Accelerators