Speed Poster: AN INTRODUCTION TO THE SINBAD LINAC

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SINBAD (Short Innovative Bunches and Accelerators at DESY) is a planned multi-purpose research and development facility at DESY. The SINBAD linac aims to produce low charge (0.2 - 50 pC), ultra-short (from few fs to sub-fs) and ultra-stable (arrival-time jitter less than 10 fs) electron bunches with energies up to 200 MeV, which will be used for explorations in ultra-fast science as well as Laser-driven Plasma Wakefield Acceleration (LWFA) with external injection. The SINBAD linac will consist of a compact S-band normal-conducting photoinjector, where several compression schemes are going to be explored, e.g. velocity bunching and magnetic compression with a slit. A dogleg with variable R56 will also allow the implementation of the hybrid bunch compression scheme. In addition, an X-band linearizer is foreseen to be introduced in order to further improve the bunch compression.

Primary author: Mr ZHU, Jun (DESY)

Co-authors: Dr MARCHETTI, Barbara (DESY); Dr SCHLARB, Holger (DESY); Dr FLOETTMANN, Klaus (DESY); Dr ASSMANN, Ralph (DESY); Dr BRINKMANN, Reinhard (DESY); Dr DORDA, Ulrich (DESY)

Presenter: Mr ZHU, Jun (DESY)

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