Comprehensive redesign of CLIC MB Injector

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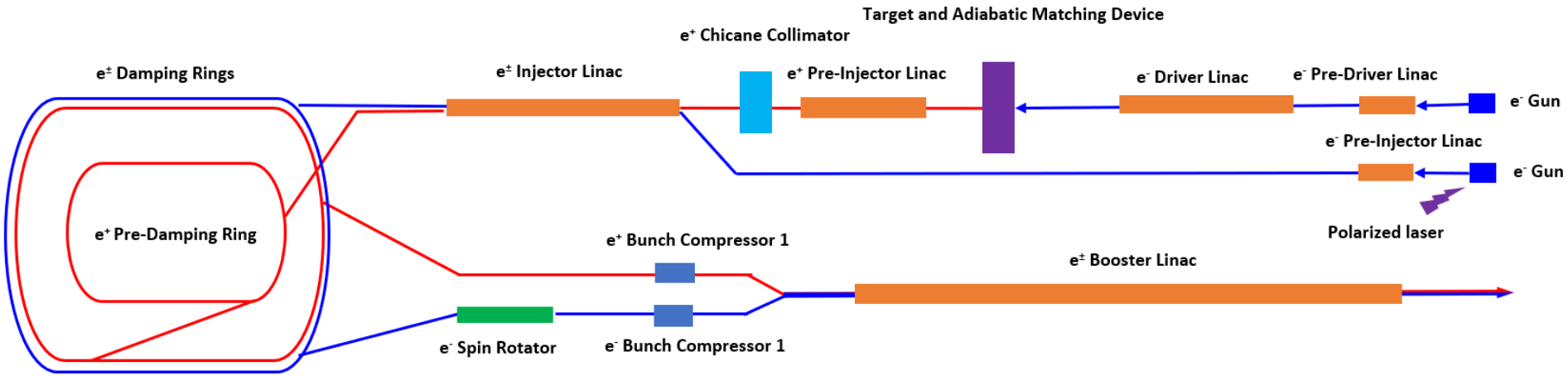
CLIC MB Injector Meeting

28/10/2024

Layout

- Current baseline layout:

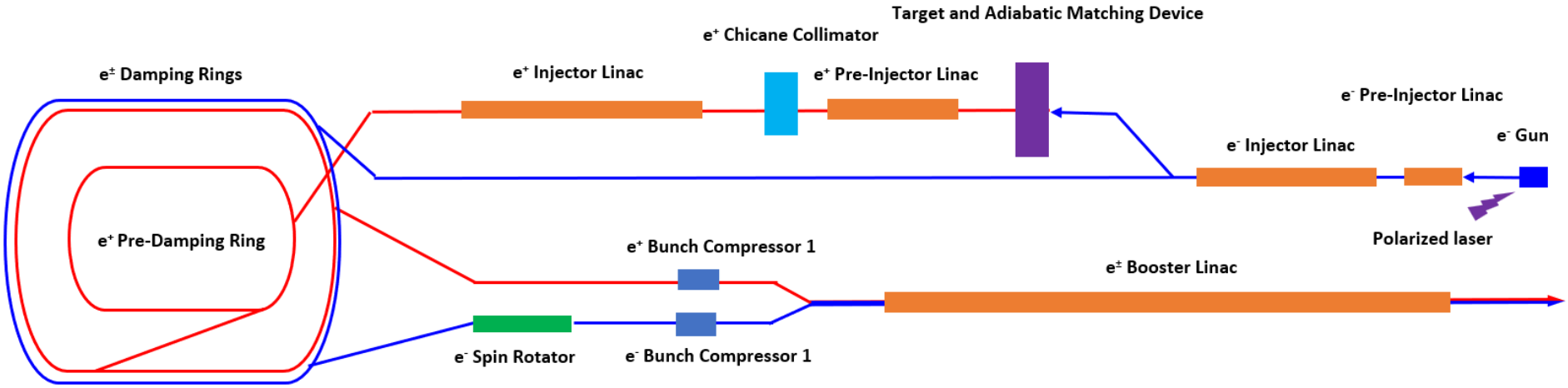


Proposed layout (in progress)

- New L-band structures to be used. Similar (3 m long), but with different iris aperture (& thickness):
  - Larger aperture (a = 22-20 mm): e+ Capture Linac, e+ (e-) Injector Linac
  - Smaller aperture (a = 17-13 mm): e- Driver Linac, e+ & e- Booster Linac

New injector design

- Question: possible to use similar layout to FCC-ee (see below)?



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Discussion

- New L-band structures to be used. Similar (3 m long), but with different iris aperture (& thickness):
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- Other open questions:
  - Possible to use smaller aperture structure for e+ (e-) **Injector Linac**, with a redesign of the linac with constant beta function (smaller beam size) at high energy part (final sections)?
  - Possible to use smaller aperture structure in **BC1 RF section**? To study (emittance growth, BBA, jitter amplification, etc.)
  - Possible to use common **BC1** for e- and e+, given that the designs are identical now?