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COLD Cool copper Operation Linac Demonstrator and preliminary studies for a 6GeV injector Linac at ESRF.

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The ESRF mid-term plan for the upgrade of the injection complex foresees a full energy linac option. Given the space limitations of the site, compactness is a strong design constraint and high gradient technology is a potential candidate to fulfill this goal. Beam dynamics simulations have been performed for several different accelerating structures in the S-, C- and X-band frequencies to define the best candidate. A demonstrator for this technology will be installed at ESRF.

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