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## The SWELL cavity development

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The Slotted Waveguide ELLiptical (SWELL) cavity promises a good response to both damp the higher-order modes efficiently to avoid beam instabilities and provide high accelerating gradient. The same cavity can be used for all five operating regimes of FCC\_ee. The proposed installation scenario foresees a gradual installation of cavities and a rather elegant reuse of the high RF power stations. The RF system evolution towards the higher energy machines leaves the door open to 'simplified' SWELL cavities (i.e. without the HOM extraction system) and to standard multi-cell high gradient elliptical cavities. The proposed four quadrant technology brings several advantages as it avoids the welding joints in the area of high magnetic field, eases the Nb coating of the machined copper quadrants and does not require any helium vessel.

**Primary author:** SYRATCHEV, Igor (CERN)

**Co-authors:** PEAugER, Franck (CERN); BRUNNER, Olivier (CERN); KARPOV, Ivan (CERN)

**Presenter:** SYRATCHEV, Igor (CERN)

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