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## **APS cavity design for ILC E-driven positron capture linac**

*Wednesday 10 July 2024 12:00 (20 minutes)*

We present the design of an APS cavity for the capture linac of the ILC E-driven positron source. It is required to accelerate a high-current multi-bunch positron beam in this positron source. Therefore, beam loading compensation and managing the heat load exceeding 10 kW due to electromagnetic showers generated at the target are important issues. We have designed a 21-cell APS accelerator, comprising 11 accelerating cells and 10 coupling cells with sufficient space for cooling channels. This presentation will report on the current status of the APS cavity design.

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**Session Classification:** Sources

**Track Classification:** Accelerator: Sources