



Contribution ID: 619 Contribution code: WEPB108

Type: **Poster Presentation**

## A TM020-mode cavity with choke geometry for Super Tau-Charm Facility

*Wednesday 4 June 2025 16:00 (2 hours)*

To meet the requirements of collider rings of Super Tau-Charm Facility (STCF) with a beam current of up to 2 A, a TM020-mode cavity with improved performance is designed in this paper. In order to address the issues of leakage of accelerating mode into the slots which has dampers inside, a choke geometry is introduced for this cavity. Through optimizations on this choke, the accelerating mode is fully reflected back into the cavity and all of harmful modes can be heavily suppressed. In addition, the nose shape and frequency tuner are also optimized in detail.

### Footnotes

### Paper preparation format

### Region represented

Asia

### Funding Agency

**Author:** WANG, Chengzhe (University of Science and Technology of China)

**Co-authors:** SUN, Li (University of Science and Technology of China); HUANG, Zhicheng (University of Science and Technology of China); WEI, Yelong (University of Science and Technology of China)

**Presenter:** WANG, Chengzhe (University of Science and Technology of China)

**Session Classification:** Wednesday Poster Session

**Track Classification:** MC7: Accelerator Technology and Sustainability: MC7.T06 Normal Conducting RF