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## **Bead-Pull of 0.2 THz Structure and Technical Issues**

*Monday 8 May 2023 16:30 (2 hours)*

We fabricated corrugated wakefield structures and did cold test of them. Since the wakefield frequency of our structure is about 0.2 THz, there are several technical issues in the bead-pull.

We present issues concerning to bead size and the wire. And issues concerning to mode converter are described as well. We manufacture a customized mode converter which change electromagnetic mode from rectangular TE<sub>10</sub> to circular TM<sub>01</sub>. The biggest issue was not only the TM<sub>01</sub> but also the TE<sub>11</sub> excited. So we suggest a method of extracting only the results by TM<sub>01</sub>. And the operating frequency of the wakefield structure was calculated with this method. The operating frequency by cold test matched well with the simulation.

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### **Footnotes**

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Yes

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