Introduction of research and team at SINAP

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Outline

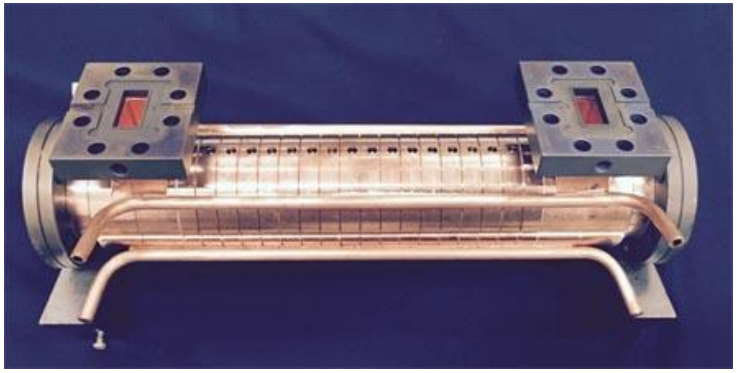
- What was done and is going?
- What's our team?
- What are our interesting areas?

X-band and C-band RF system

1. C-band RF system for SXFEL.
2. X-band RF system for SXFEL linearizer.
3. Prototype of X-band deflector for SXFEL.

X-band RF system for linearizer

X-band deflector



10 C-band RF systems for SXFEL main linac

Undergoing techniques and what can we do.

Ongoing techniques:

1. C-band and X-band spherical compact pulse compressor.
2. T24 and one-meter acc structure optimized are going to be designed and fabricated.
3. 50MW X-band klystron based high power test setup, including solid-state amplifier, modulator, NI LLRF system, it will be finished next year soon.
4. Six 0.6m X-band deflectors for SXFEL and one 0.3m deflector for CERN have been are being fabricated.

What can we do.

1. RF design of X-band accelerating structure, pulse compressor, waveguide components.
2. LLRF based NI labview development for high test setup.
3. LLRF based MTCA for large-scale RF control.
4. High power test and experiments of X-band high gradient technology.
5. RF system integration on X-band, C-band and S-band RF system for linac.
6. Modulator？

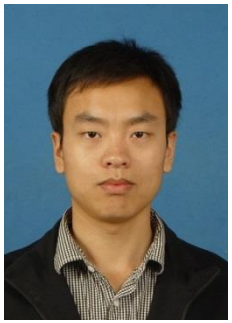
Our technique team

RF design

Wencheng Fang, staff
C-band, X-band, high power test, system integration

Jianhao Tan, staff
X-band acc, deflector, high power test

Xiaoxia Huang, staff
X-band acc, wakefield simulation



Zongbin Li,student
Types of pulse compressor

LLRF

Chengcheng Xiao, staff
LLRF of NI, high power test, system integration

Lin Li, staff
LLRF of MTCA, system integration

Interesting areas in WP4

- RF design and fabrication of one-meter accelerating structure.
- Advanced pulse compressor design.
- Load, phase shifter and adjustable power divider design.
- LLRF control development based NI labview at SINAP.
- High power test activities at SINAP.