

The cavity was designed as „Proof-of-Principle-Experiment “ (R&D), not for standard operation during beam time.

Limitations (that cannot be changed soon)

- Access SIS18 required before & after operation to remove short-circuit
- Impedance without shortcut about 500 k Ω → only low beam current
- Conditioning required, warming-up & cooling-down time (hours) → bad vacuum in S11
- Local operation in BG 1.016 (turning on/off, tuning, all ramps, ...)
- Fixed frequency - no synchronization with particle energy
- Fixed ramp times triggered by EVT_EXTR_START_SLOW (46/2E)



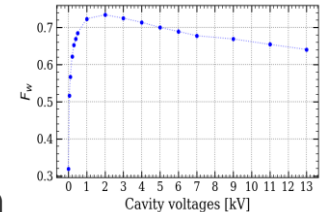
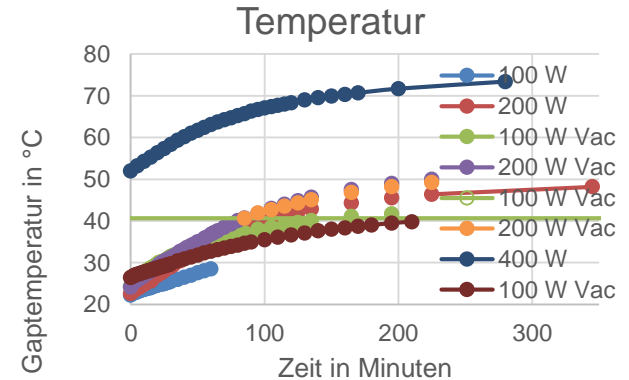
Longtime-Test not recommended by RRF

Risks

- No experience with unsupervised operation
- Not enough interlocks
- Risk of ceramic break due to thermal stress
- Full reflection not tested

Minimum safety measures

- Limitation to 2 kV
- Continuous observation of the oscilloscope, camera und vacuum
- Immediate change of machine in case of failure (to switch off amplitude ramp)
- Not included in On-Call Services



- Before “long time test”
 - Cavity operated by RRF
 - High priority
- conclusions of practical relevance from evaluation by experimenter

Requirements

- Data acquisition also to see, if 2 kV are sufficient
- Setup of appropriate ramp (length)
- Test of at least two virtual machines with and without the cavity
- 2 shifts to allow for conditioning
- Fix dates for experiment, removal of short-circuit, ...

Open topics

- Reconnect amplifier after HITRAP renovation
- Transfer of oscilloscope screen and installation of camera software in HKR

Reasons for local operation

- Temperature gradient interlock not available
 - Sensor not appropriate for high fields
 - Risk of ceramic break due to thermal stress
- Control system integration not yet developed (FESA, LSA, SPS, Dev. Control)