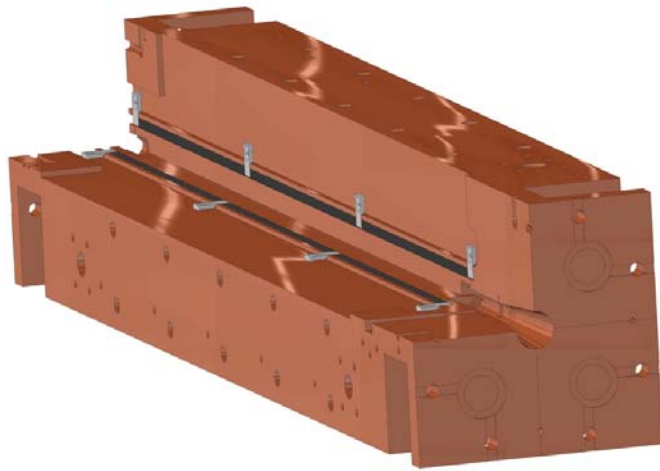
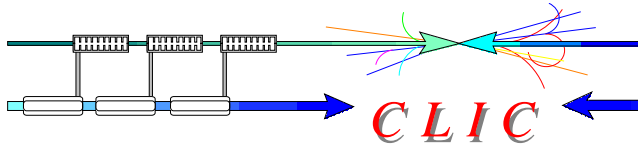


PETS status: mid-linac replacement, two-beam test stand and TBL

mid-linac replacement



Present status:

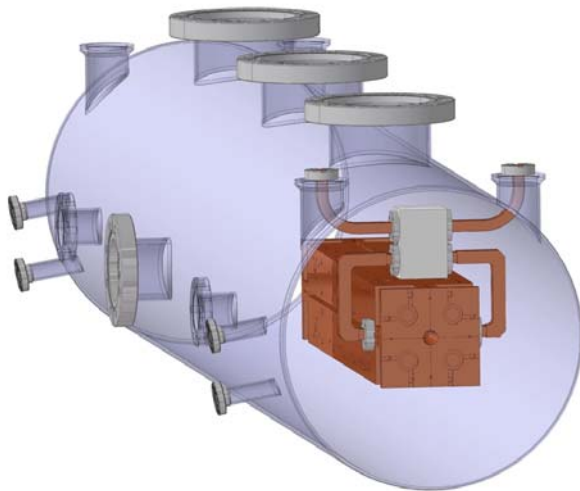
- The technical design of the CTF3 PETS is finished.
- The production company have been identified.
- The copper for whole the sectors have been received.
- The rf loads have been ordered
- The order can be placed (three month for fabrication)
- The PETS tank design have been finished

Remaining issues

- The design and fabrication of the components - square hybrids, bends and waveguides.

Critical pass

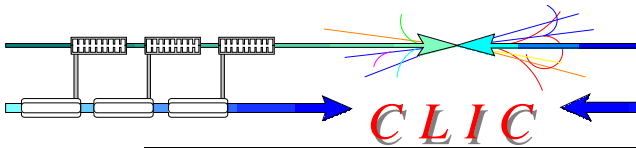
- The production period for the tank drawings - 1000 hours!



Open question.

Following the CLIC structure testing program, the rf power currently produced in CTF3 is high enough to continue the program at least for the next year. When do we really need to replace the PETS?

Do not forget it will take resources from other important activities!



Two-beam test stand and TBL



Introduction:

Following the new CLIC unit layout (2 PETS per one Quadrupole), the PETS to be used in TBTS and TBL have the same parameters as the CLIC PETS. The only difference is the length. Depending on the power to be produced (TBL) or the CTF3 current available, it will vary from 0.8 to 1.2 meter.

The PETS development follow the modern CLIC tendencies. The design for 30 GHz and 15 GHz goes in parallel following new HDS parameters that have been identified:

30 GHz CLIC PETS (15 mm aperture)

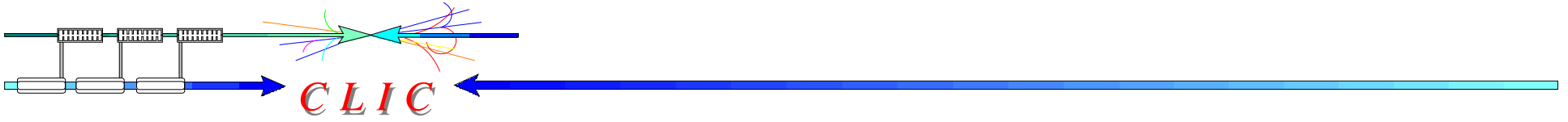
15 GHz CLIC PETS (23 mm)

The design is completed. The last simulation with HFSS and GDIFIDL of the whole assembly are under way.

The regular part design is completed. The matching section and extractor to be designed (end of next month if David will continue his work).

Frequency independent issues:

- The mechanical design and technical drawings can be started in December 2006. Need 6 month to finalize. Production period (all included) another 6 month. The first PETS can be expected at CERN at the end of next year.
- The PETS tank (both for TBTS and TBL). Following present experience is on a critical path!
- The ON/OFF mechanism. The study has been finished. The first tests were planned for 2006. Currently there is no technical drawings and the motors have not been bought. However the needs for the ON/OFF operations not earlier then 2008 (do we still have a time?).



The current PETS program is very dependent on the frequency choice. The design is not the same for different frequencies! We do not have enough resources to continue development of the few frequencies in parallel if we want to be in time!