

## WP 7 – Development of critical components for the injectors

### Task 7.1 – Development towards an H- source for SPL

- 3 out of 4 deliverables met.
- Last deliverable on schedule.



Figure 35: Left: High voltage and 2MHz RF generator. Right: Vacuum and controls racks

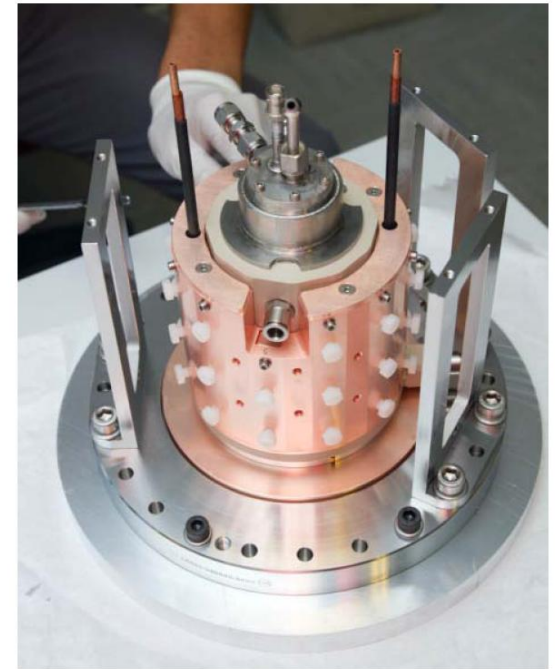


Figure 7: View of the assembled plasma chamber and ignition element.

#### 7.1.1 Finite element thermal study of the Linac4

design source at the final duty factor

#### 7.1.2 Design of a high duty factor plasma generator

#### 7.1.3 Construction of the plasma generator and subsystems

(e.g. 2MHz RF generator, hydrogen gas injection and pumping)

#### 7.1.4 Plasma generation and study of the thermal and

vacuum conditions

R M12 (Delivered)

R M18 (Delivered)

D M30 (Delivered)

R M36

## WP 7 – Development of critical components for the injectors

### Task 7.2 – Field stabilisation in pulse superconducting low beta (v/c) accelerating struct.

- Discussions CEA, INFN, at Linac2010 conference.
- 1<sup>st</sup> deliverable report is now circulating (being edited by CEA).
- RF layout simulations ongoing, aimed to have them reported by the end of the year.
- Last two milestones still foreseen for the end of the project.
- CEA Saclay limited by budget for switching between cavities. Any budget transfer possibilities?

7.2.1 In depth characterisation of the two tuners plus cavities developed in the frame of the “HIPPI” JRA , FP6 (tuner/cavity characteristics)

R M12 -> M31

7.2.2 Design of RF system architecture including modelling of RF components, simulation of the RF system and simulation of beam dynamics of the full Linac; RF system and high power modulator specifications

R M18 -> M33

7.2.3 Production of a prototype electronic system and other elements for a full system demonstration;

Definition of demonstration procedure

P M30 -> M36

7.2.4 Full test and validation of RF system. Final Report

D M36 -> M36