



Contribution ID: 1071 Contribution code: TUPA170

Type: **Poster Presentation**

Thermal and deformation analysis of a 750 MHz IH-DTL prototype for medical applications

Tuesday, 9 May 2023 16:30 (2 hours)

This article presents an IH-DTL prototype, capable of accelerating carbon ion beams from 5 MeV/u to 5.5 MeV/u, for manufacturing and assembling validation in a hadrontherapy linac injector. A multi-physics study is made in CST Studio concerning steady-state thermal, stress and deformation analysis. Convenient water-cooling circuits close to drift tubes are simulated to evaluate field errors and frequency detuning as they can affect directly to beam dynamics.

Funding Agency

HAZITEK program - R&D projects in strategic sectors. IKERTUI: ZE-2018/00034 and IKERTUII: ZE-2021/00050

Footnotes

I have read and accept the Privacy Policy Statement

Yes

Primary authors: MORENO, Gabriela (Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas); GINER NAVARRO, Jorge (Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas)

Co-authors: CALVO, Pedro (Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas); GAVELA, Daniel (Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas); LEON LOPEZ, Miguel (Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas); RODRIGUEZ PARAMO, Angel (ESS Bilbao Consortium); OLIVER, Concepcion (Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas); PEREZ MORALES, Jose (Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas); CARMONA, José Miguel (Added Value Solutions); Ms ALVARADO MARTIN, Maria (Added Value Solutions); LOMBARDI, Alessandra (European Organization for Nuclear Research)

Presenter: OLIVER, Concepcion (Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas)

Session Classification: Tuesday Poster Session

Track Classification: MC4: Hadron Accelerators: MC4.A08: Linear Accelerators