ID contributo: **100** Tipo: **poster**

MULTI-BEAM LINEAR ACCELERATOR EVT

lunedì 14 settembre 2015 20:00 (30 minuti)

A novel multi-beam linear accelerator EVT (Electron Voltage Transformer) concerns to a class of two–beam accelerators. It comprises a common electron gun generating drive beam-lets and an accelerated beam. All beams are modulated in RF modulators and pass in accelerating structure, where interaction of beams occurs in uncoupled with each other and inductive tuned cavities. A phasing of beams is solved by choice correspond distances between centers of gaps of the adjacent cavities. The result of numerical simulation and the specification of the accelerator EVT operating in S-band, having 60 kV voltage of the gun and generating 1.1 MV accelerated beam is submitted. The high efficiency (67%) shown in numerical simulations and high design average power are suitable for use of the accelerator EVT in industrial applications.

Autore principale: Dr. TERYAEV, Vladimir E. (Omega-P, Inc., New Haven, CT 06510, USA)

Coautore: Prof. HIRSHFIELD, Jay L. (Yale University, New Haven, CT 06511, USA); Dr. KAZAKOV, Sergey Yu. (Fermilab, Batavia, IL 60510, USA)

Relatori: Prof. HIRSHFIELD, Jay L. (Yale University, New Haven, CT 06511, USA); Dr. TERYAEV, Vladimir E. (Omega-P, Inc., New Haven, CT 06510, USA)

Classifica Sessioni: Poster Session 1 (WG1-WG2-WG3-WG4) and Wine

Classificazione della track: WG3 - Electron beams from electromagnetic structures, including dielectric and laser-driven structures