



PARTNER

Particle Training Network for European Radiotherapy

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Scope: FP7 Initial Training Network for 25 young researchers in clinical, biological and technical developments at a pan-European level.

Coordination: CERN, Manjit.Dosanjh@cern.ch

- FP7 People
- 10 Institutes
- Start: Oct. 2008 (4 yrs)
- 20 Training workshops

Hadrontherapy uses particle beams to treat tumours located near critical organs and tumours that respond poorly to conventional radiation therapy. It has become evident that there is an urgent need for reinforcing research in hadrontherapy and it is essential to train professionals in this rapidly developing field. The project offers research and training opportunities to young biologists, engineers, physicians and physicists and is allowing them to actively develop modern techniques for treating cancer in close collaboration with leading European institutions.

Simulations, Dosimetry and Treatment Planning

Development and tuning of the physics simulation codes for their implementation in the Treatment Planning systems for hadron therapy in the clinical environment

Image Guided Hadrontherapy and PET Prototype

Application of High-tech systems for optimizing patient treatment in hadrontherapy and increasing the accuracy in localization of the tumour during the treatment protocol

Radiobiology

Biological experiments for hadrontherapy with the purpose of elucidating the underlying biological mechanisms and discovering pathways to increase the effectiveness of treatment while protecting the healthy tissue

Clinical Studies and Epidemiology

Research focusing on the effect of hadrontherapy on tumour control, overall survival and quality of life for a wide range of cancer types

Multidisciplinary PARTNERships to fight cancer



Novel Accelerator and Gantry Studies

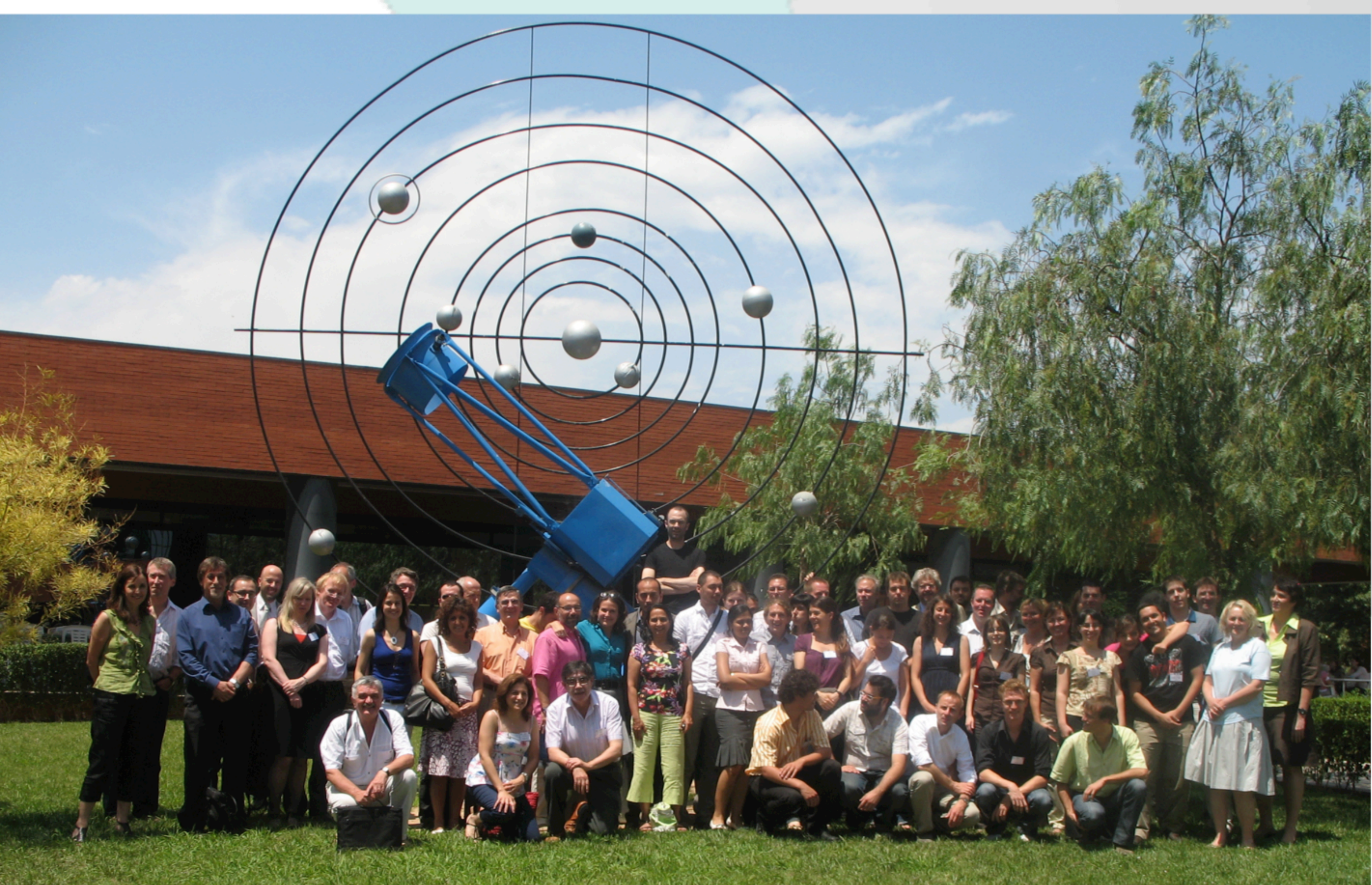
Development and design of new accelerator-related technologies with affordable cost, reduced dimensions and optimal performance for clinical requirements

Information and Communications Technologies and Networking

Research and collaboration between different European centres towards the creation of a prototype GRID test-bed for hadrontherapy and the promotion of common tools and strategies in Europe

PARTNER Training Courses:

Detectors and Accelerators (Valencia), Leadership (Guildford), Hands-on Radiobiology (Darmstadt), Hadrontherapy Today and Tomorrow/Grids (Geneva), Radiobiology (Stockholm), *Treatment Planning (Vienna), Modeling (Guildford), Clinical Trials (Pavia) ...*



1st ENLIGHT Meeting, June 2009

TRAINING FOR EUROPE

13-17 September 2010

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www.cern.ch/partner