



HASPIDE WP4



*Hydrogenated **A**morphous **S**ilicon **PI**xel **DE**tectors
for ionizing radiation*

Cinzia Talamonti

Collaboration Meeting
2-3/02/2023

1) *Clinical applications: Goals*

→ *demonstrate that a-Si:H sensor could be used for clinical dosimetry with results compared with reference dosimetry.*

A-Si:H as monitoring system of no clinical beams

- ***Test at Trento protontherapy center to measure low flux proton beams at various energy (synergic with WP1 and WP5).***
- ***Test at ELIBEAM facilities.***
- ***Test at ion beam facilities.***

*Tests done at Careggi Hospital, Berne Cyclotron,
Australian facilities: electron and photon beams.*

- Phantom development for clinical validation*
- access to clinical beams (approved at Careggi)*
- access to clinical beams (approved at Trento)*
- access to clinical beams (requested at UOW)*
- access to clinical beams (approved at Berne)*

- 1 year PostDoc position at FI*

GOALS

- Dosimetric characterization using electron clinical beams
- Dosimetric characterization with small fields using standard clinical beams
- Dosimetric characterization using flash photon beams
- Dosimetric characterization proton beams

Milestone 31-12-2023: Validation of prototypes performance, with respect to reference dosimetry, when exposed to both photon or electron clinical beams

PHANTOMS:

Motorized stages arrived!



They will speed up the data acquisition

PHANTOMS for skin dosimetry tests



Alderson Random Phantom

New phantom will be developed for skin dosimetry on legs

Conferences

PAST

Student Grants

RADECS is fully committed to supporting its young attendees!

RADECS 2022 is pleased to announce that the authors of the **best student abstracts** submitted to the conference will enjoy **free registration**, thanks to the support of the RADECS association and the RADSAGA and the R2E projects at CERN.

The selection has been performed by the Technical Committee and the Awards Chairs. Only papers with a student as the first author are eligible.

The selected students will be required to help with the organization of the conference, performing some small duties indicated by the organizing committee.

2022 Recipients



Keito Aoshima, University of Nagoya



Luis Angel Garcia Astudillo, Universidad Carlos III de Madrid



Matt Large, University of Wollongong



Zongru Li, University of Saskatchewan



Antoine Salih Alj, Centre National d'Etudes Spatiales

Conferences

ESTRO 2023 | 12-16 May 2023
Vienna, Austria

Oral Poster

Submitted:



Future submission:



ICDA-4

4th International Conference on Dosimetry and its Applications

24th International
Workshop On Radiation
Imaging Detectors

OSLO SCIENCE PARK
25-29 JUNE 2023

Paper on precision measurements at Australian Synchrotron for sensor characterization.

Hydrogenated Amorphous Silicon High Flux X-ray Detectors for Synchrotron Beam Monitoring Applications.

Submitted to: Physics in Medicine and Biology
PMB-114633



Thanks for your attention!!