



# RADSAGA

This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie-Sklodowska-Curie grant agreement number 721624.

# Dosimetry methodologies in the context of radiation effects in emerging technologies and mixed field environments – ESR 2

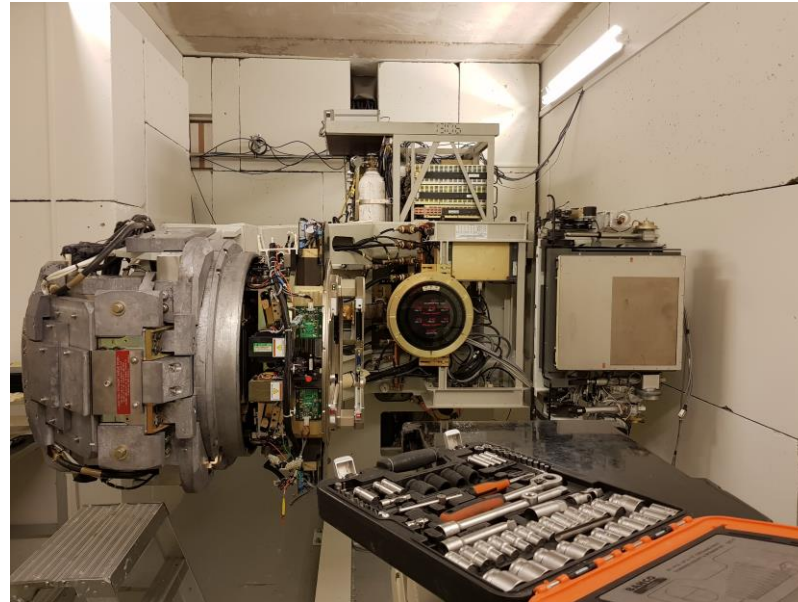
RADSAGA Training Workshop – March 2018  
Daniel Söderström



# Goals of the project

- To advance our understanding of TID in electronics
- Develop and construct an accurate dosimeter for electron and x-ray environments

Achieved primarily by means of the electron CLinac at JYU



# Advance TID understanding

- Conduct various measurements using photons and electrons on different types of components
- Planned measurements:
  - DRAM memories in collaboration with LIRMM
  - BJT-type components in collaboration with PTB
  - ...

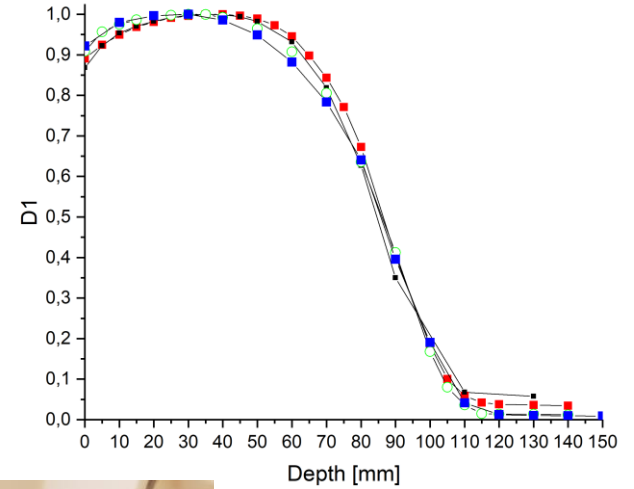
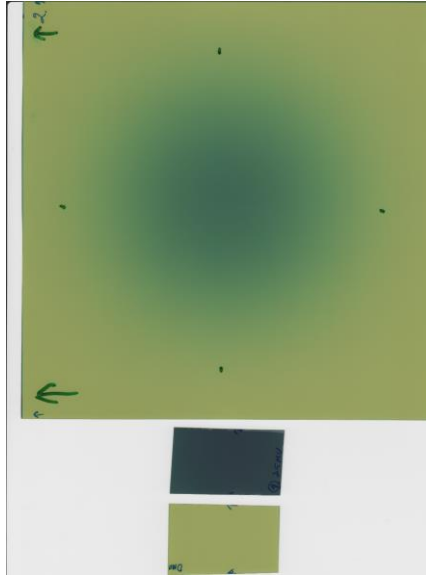
# TID testing using e-CLinac

- Investigation of the manner of TID testing with clinical accelerators
  - Geant4 simulation of the JYU CLinac
  - Better understanding of consequences of TID testing procedures

# Dosimeter for electrons and x-rays

- Fiber based dosimeter system
  - Will be tested at CHARM
  - Will be tested with electrons at (at least) JYU
- Other (possibly microelectronic) system(s) not determined yet

# Performed dosimetry



# Milestones and Deliverables

- Milestone 4: Draft analysis of test facilities and respective dosimetry systems to be presented to network; additional measurements/facilities to be decided upon
  - With Sascha Lüdeke, 1.10.2018
- Deliverable D1.3: Facility dosimetry procedure and dedicated monitors
  - With Adam Labaza, 31.9.2019