

QCA Year 2000 - Ongoing / New Radiation Activities



Radiation Effects and Analysis Techniques Section

26 January 2000

ESA/ESTEC-QCA Final Presentation Day

1

Activities

- ◆ Standard Radiation Environment Monitor (SREM), Contraves Space (CH).
- ◆ SREM on STRV1-c (DERA, UK)
- ◆ Miniature Radiation Monitor (Sensys, NL)
- ◆ Study of Radiation Effects in Cryogenic Electronics and Advanced Semiconductor Materials (IMEC, B)
- ◆ RadFET dosimetry development / characterisation (NMRC, Ir)
- ◆ Biopan real time dosimeter (NMRC, Ir)
- ◆ CCD test-bench upgrade (Sira electro-optics, UK)
- ◆ Technical support to CCD evaluation programmes (EEV, UK and Thomson, F)
- ◆ Study of Proton Radiation Effects on InGaAs photodiodes and laser diodes (Young Graduate Trainee programme).



Radiation Effects and Analysis Techniques Section

26 January 2000

ESA/ESTEC-QCA Final Presentation Day

2

Activities

- ◆ In year 2000 we also intend to initiate a study for the development of an on-board (for flight opportunities) Component Technology Test Bed. Currently no funding available. External collaborators welcome.



26 January 2000

ESA/ESTEC-QCA Final Presentation Day

3

Training Opportunities

- ◆ Continuation of the proton irradiation study on InGaAs devices
- ◆ Irradiation study on novel imaging devices (APS, CCD, etc.)
- ◆ Modelling of RadFET response to radiation (proton, electron, gamma)
- ◆ Modelling of radiation induced physical effects in materials (SiO₂, Si, etc.)



26 January 2000

ESA/ESTEC-QCA Final Presentation Day

4