



ESR2 status update

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ESR2 project

- Project work so far focused on
 - / SDRAM and memory testing
 - / Fiber-based dosimetry
 - / Dosimetry methodologies and irradiation facilities



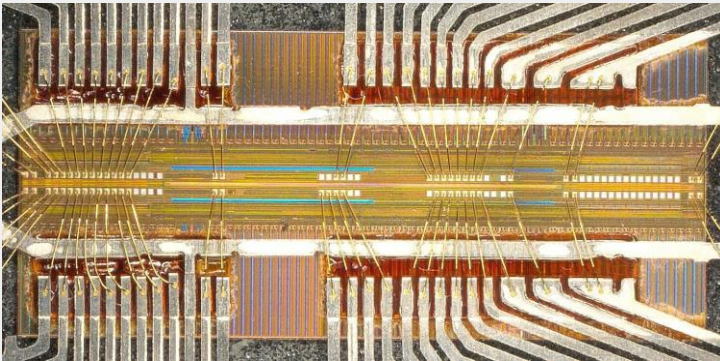
Memory testing

- Many tests done in collaboration with LIRMM
- DW paper in RADECS 2019
- Submitted paper for NSREC 2020
- Co-author paper from RADECS 2019 (A. Coronetti)

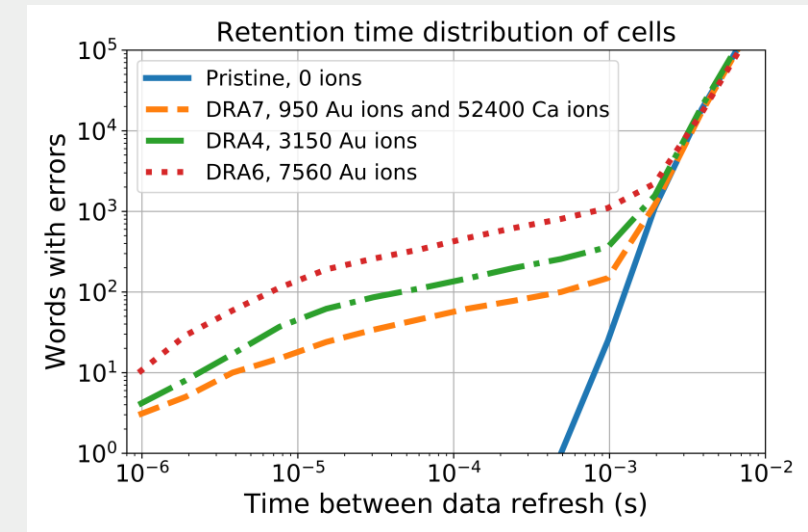


Memory testing

- Stuck bits and memory cell degradation in SDRAM
- Damage by electrons the original focus
 - / NSREC paper will cover this



Images from *Stuck and Weakened Bits in SDRAM From a Heavy Ion Microbeam*, D. Söderström et al., REDW Poster, RADECS 2019.





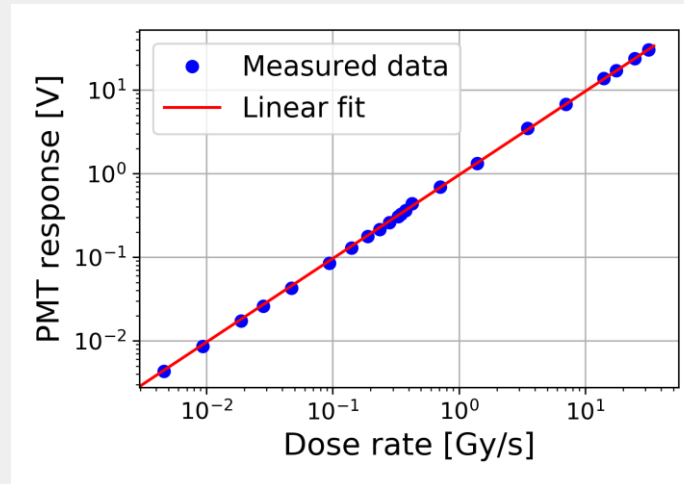
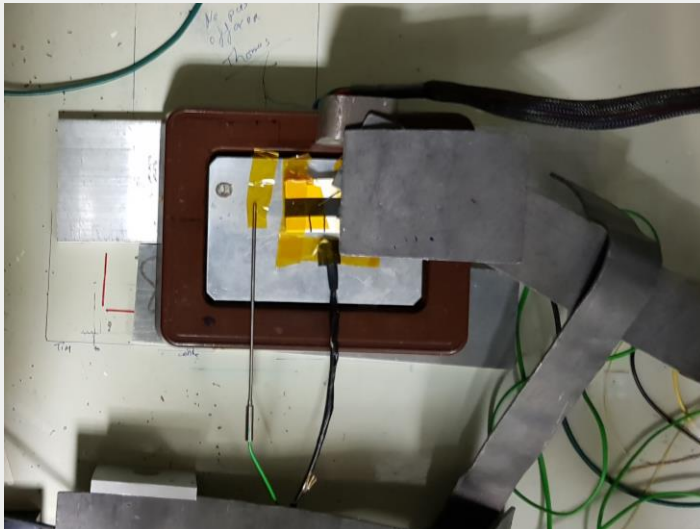
Fiber dosimetry

- Tests done at St-Étienne (and CHARM)
- Now tests are being conducted at RADEF
- Co-author paper in OSA Continuum
- Planned submission for the new data from RADEF tests when ready, perhaps RADECS 2020



Fiber dosimetry testing

- Tests with x-rays in St-Étienne
- At RADEF properties of different doped glasses (Cu, Ce, Gd) are tested with the pulsed electron beam



Data in the figure published in *Gd³⁺-doped sol-gel silica glass for remote ionizing radiation dosimetry*, H. El-Hamzaoui et al., *OSA Continuum*, Vol. 2, no. 3, 715-721, 15 March 2019.



Upcoming conferences and workshops

- RADOPT 2020 (St-Étienne)
- NSREC 2020
- RADECS 2020



Upcoming test campaigns

- ChipIR test campaign next week
- Fiber dosimetry tests at RADEF
- SDRAM tests at RADEF and/or VESPER
 - / Completing data for NSREC submission



Secondments

- Past
 - / St-Étienne, 2 weeks
 - / CERN/CHARM, 3 weeks
 - / PSI, 2 weeks
- Future? (Planned in the GA)
 - / UM: experiment at ^{60}Co facility
 - / RUG/KVI: dosimetry methodologies in clinical environments