



Optimization of Radiation Protection for Medical Staff

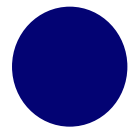
Conclusion

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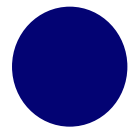
ORAMED: ACHIEVEMENTS

- A lot of systematic measurements done: both IR/IC and NM
 - Large and usefull database
 - With realistic dose values
- Estimation of influence of RP measures: quantification
- Of course some limitations:
 - Correct use of RP measures?
 - Some parameters not measured (like time in NM)



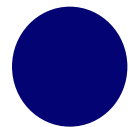
ORAMED: ACHIEVEMENTS

- A lot of systematic simulations done: both IR/IC and NM
 - Very good and extensive results
 - Influence of different parameters separately is quantified
- Eye lens dosimetry
 - $H_p(3)$ formalism, calibration phantom, conversion coefficients
 - First dedicated eye lens dosemeter



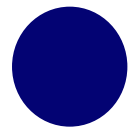
ORAMED: ACHIEVEMENTS

- Estimation of annual doses
 - Important input for monitoring requirements
- We found some very high doses
- Positive message: the doses can be much lower if proper procedures and measures are taken
- Important for NM
 - Ratio's established between dosimeter and maximum dose



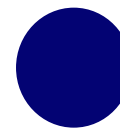
ORAMED: ACHIEVEMENTS

- Active personal dosimeters
 - Systematic tests in pulsed fields
 - Show limitations of current systems
 - Points of attention (energy, angular, dose rate)
 - Improved prototype, specially for IR/IC



ORAMED: ACHIEVEMENTS

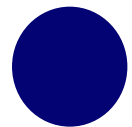
- Practical recommendations
- Training material
- Dissemination through professional societies, conferences, publications
- We will continue to disseminate the results



ORAMED: FUTURE

- ORAMED database of measurements
 - Reference for many years to come
- Use the ORAMED data for epidemiological studies
- Improved monitoring of eye lens
- Improved monitoring of extremities
- Lead to improved protection and lower doses for the staff

- More work ahead, new application for FP7?
 - Biological effects?



ORAMED: THANKS TO...

- All the hospitals where we have done measurements
- EC FP7: accepting the project (importance) and financial contribution
- Participating institutes: partially funded this project
- Partners
 - The many hours spent in hospitals following procedures
 - WP leaders

