

work, Heliodor pellets of 5 mm diameter and 1 mm thickness have been produced and investigated using thermoluminescence (TL) to evaluate its potential for use as gamma ray's dosimeter. The results show that the pellets exhibited a prominent TL peak at 205 °C that grows linearly with dose when irradiated from 1 Gy to 1000 Gy. Deconvolution of the TL peaks was carried out using CGCD (Computerized Glow Curve Deconvolution) method. The peak positions were determined using the T<sub>m</sub>/T<sub>stop</sub> method described in McKeever (1985). Samples were stored in dark room at room temperature for 21 days to evaluate the fading of the TL signal, the main TL peak at 205 °C did not show any decrease in intensity.

Acknowledgments: This work was carried out with FAPESP (proc 15/21707-0 and proc 14/03085-0) financial support and Faculdade Estácio de Santo André support by Research and Productivity grant.

## ID\_024

**Title of the abstract:** Brazilian aeolian sediments dating using tl, osl and esr.

**Corresponding author:** Lucas Sátiro do Carmo (Instituto de Pesquisas Energéticas e Nucleares (IPEN), Avenida Prof. Lineu Prestes, 2242 - São Paulo, Brazil.)

**All Authors:** Lucas Sátiro do Carmo (Instituto de Pesquisas Energéticas e Nucleares), Shiguo Watanabe (Instituto de Pesquisas Energéticas e Nucleares), Regina DeWitt (East Carolina University)

**Abstract:** In this work, a dunefield known as Dama Branca (Brazil) has been dated using the following techniques: Optically Stimulated Luminescence (OSL), Thermoluminescence (TL) and Electronic Spin Resonance (ESR). They are part of what is called “trapped charge dating technique”. Sediments have been collected from several points to study age distribution throughout Dama Branca. These ages are related to events of sediment transportation and stabilization. For Dama Branca specifically, variables related to weather such as rainfall and wind power are suspected to be responsible for its formation. OSL results were obtained applying the SAR protocol. TL and ESR results were obtained using the Multiple Aliquot Additive Dose protocol (MAAD). With respect to ESR measurements, the Ti-Li center was chosen for dating since it can be completely bleached by sun light exposure, which makes it suitable for aeolian sediment dating. The Ti-Li center is strongly dependent upon preheat, its stability has been assessed and a preheat temperature of 180 °C was selected. OSL ages are within 0.05 kyears and 2.05 x kyears. TL ages agree with OSL ages for samples collected from the dune base, however there are discrepancies between OSL and TL ages for the DBM2BASE sample, suggesting that it underwent a quicker burial process. ESR results are satisfactory for two samples, 2DB10 and 2DB11 (they follow OSL and TL results). The ages were compared to a simplified morphological study. In recent works about the weather in the Cabo Frio region it has been seen that the studied areas were formed under influence of arid conditions and cold water, variables that control sediment transportation in the region. Keywords (max. 5): TL, ESR, OSL, quartz, sediments dating.

Acknowledgements: To FAPESP (2015/21707-0 and 2014/03085-0) for the financial support and to Faculdade Estácio de Santo André for the financial support via Research and Productivity grant.

## ID\_026

**Title of the abstract:** OSL signal of electronic components from portable radios for radiation accident dosimetry

**Corresponding author:** Céline Bassinet (Institut de Radioprotection et de Sûreté Nucléaire (IRSN), BP17, 92292 Fontenay-aux-Roses cedex, France)

**All Authors:** Simon Fleuriot (Institut de Radioprotection et de Sûreté Nucléaire (IRSN), Céline Bassinet (Institut de Radioprotection et de Sûreté Nucléaire (IRSN))

**Abstract:** When a radiological accident occurs, the dose absorbed by the victims must be assessed quickly and accurately in order to select an appropriate medical treatment. In emergency situations where