

## RADON GAS AND INCREASING INTENSITY OF GAMMA RADIATION NEAR GROUND LEVEL INTERFACE ON 2011 IN SÃO JOSÉ DOS CAMPOS, SP, BRAZIL

I. M. MARTIN<sup>1</sup>, ANATOLY A. GUSEV<sup>2</sup>, THIAGO A. SANTOS<sup>3</sup> & BOGOS N. SISMANOGLU<sup>4</sup>

<sup>1,3,4</sup> Aeronautical Technological Institute ITA, São José dos Campos, SP, Brazil
<sup>2</sup>Space Research Institute of the Russian Academy of Sciences, IKI-Russia

## ABSTRACT

During the year 2011, the ongoing work of monitoring the intensity of gamma radiation (30 keV to 10 MeV), some of this radiation surges increasing were observed. There were no lightning or electrical dischargesover the instrument of measures in the period time and area. As was observed strong wind arriving from the southeast and after also heavy rains coming. A typical case described in this paper was witnessed by the authors on November 28, 2011 at 17:46 local time, with a sudden and sharp increase in gamma radiation intensity on site. The vertical electric field intensity in the region is monitored and that increase period was observed through rapid variations but small intensities. It is suggested that the source responsible for producing this abrupt increase of gamma radiation at the site is the presence of radon gas (Rn-222), coming up with the intense rain in the region of São Jose dos Campos in State of São Paulo, Brazil.

KEYWORDS: Radon Gas, Gamma Radiation, Monitoring, Rainfalls