



GAMMA-RAY BACKGROUND MONITORING OF THE NATURAL RESERVE FOREST OF MESOLA, ITALY

Leonardo BUSO¹, Lucio MONTECCHIO¹, Carlo ROSSI ALVAREZ², Nikolay
UZUNOV^{2,3}, Iliia PENEV⁴

¹TeSAF Department University of Padua ITALY

²National Laboratories of Legnaro INFN ITALY

³Department of Natural Sciences Shumen University, BULGARIA

⁴Institute for Nuclear Research and Nuclear Energy Sofia BULGARIA

e mail Nikolay Uzunov@lnl infn it

The natural reserve Forest of Mesola is situated near the delta of the river Po between Po di Goro and Po di Volano at the south-east part of province of Ferrara Italy It is characterized by unique territorial and ecological features A great part of the forest is completely protected and is left to its natural evolution

Subject of interest have been the specific activities measured for samples taken from the soils from the wetland waters of the reserve as well as from the sea water Analysis of the specific activity of samples for selected plant species has been conducted as well

A low-background gamma-ray spectroscopic system of the National Laboratories of Legnaro has been utilized to analyze the natural radioactivity of collected samples The values for the specific activity of the plant samples have been compared with the ones of the same plant species taken upstream the river Po

Keywords Radioactivity, specific mass activity, low-background gamma-ray system