



## **Regional ZEUS lightning distribution in Europe and inferred NO<sub>x</sub> production**

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The National Observatory of Athens is operating the long-range VLF ZEUS network composed of stations located in Portugal, UK, Denmark, Romania and Cyprus. ZEUS monitors the lightning activity over Europe and the Mediterranean Sea.

ZEUS observations for 2005 have been analyzed to study the regional distributions of lightning activity over Europe. As expected, lightning activity in summer is located predominantly over land while in winter the lightning activity is located over the Mediterranean Sea. We will present regional distributions of lightning flashes as sensed by the VLF sensors and diurnal cycles per season. Intensities of the lightning activity will also be reported. We will finally propose a procedure using initial ZEUS observations and LINET-based corrections (see accompanying paper) to obtain some regional Lightning-NO<sub>x</sub> distribution.