



Concurrent VLF/LF lightning observations from ZEUS and LINET Networks

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The National Observatory of Athens is operating the long-range VLF ZEUS network composed of five stations located in Portugal, UK, Denmark, Romania and Cyprus, with the central processing in Athens. The University of Munich operates a network of 21 VLF/LF sensors (LINET) in the South of Germany with a small baseline in the center of the network.

We will present concurrent ZEUS and LINET lightning observations recorded during storms on July 25 and 29, 2005 over the South of Germany and neighboring countries. The LINET capability to discriminate intracloud and cloud-to-ground events is used to evaluate the ZEUS detection efficiency with respect to the two types of lightning. The high location accuracy of LINET is exploited to assess the corresponding accuracy of ZEUS. Both comparisons are performed as a function of the LINET current amplitude. Furthermore, the stroke and flash detection efficiency of ZEUS is presented as scaled by LINET observations. We will finally discuss the suitability of using ZEUS observations and corresponding scaling in order to determine useful estimates for regional lightning distributions all over Europe.