



Automatic pickers performances in the case of the Emilia sequence of May-June 2012.

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The automatic processing of seismic data, whether for real-time seismic warning system or to reprocessing large amount of seismic recordings, is increasingly being demanded by seismologists especially in case of emergency as for the Emilia sequence in may-june 2012. In this study is presented a comparison between the AutoPicker (DipTeRis, University of Genova) a new method used for automatic accurate onset phase picking for both P and S wave arrival based on the Akaike's information criterion (AIC), a solid and tested picker as the STA/LTA in Antelope software and the manual pickings.

In order to construct the database used for the relocation of Emilia sequence, the RAN strong motion database has been merged with the available velocity and acceleration data extracted from the EIDA database (European Integrated Data Archive) and velocity data recorded by the Southeastern Alps Integrated Network (DMG, OGS, ARSO and ZAMG).

The fault system of the Emilia earthquake area is complex and it is not easy to assess which fault has moved. A precise localization of the sequence is essential. The manual pickings, the equivalent locations and the choice of the most appropriate velocity model ("Iside") used in this study are the results of a work done in collaboration with Università di Chieti and DPC, not described here.

The main problem of the AutoPicker and Antelope software is to discriminate events that occur very close to each other in time. The best way to solve that issue is choosing the best setup of both techniques to minimize the problem. Then we would like to implement the AutoPicker technique developed by Prof. Spallarossa on the Antelope system routinely used by UTS-DMG for the real-time data analysis.