



## **Results of the modelling of the El Asnam (Algeria) earthquake of 1980**

**J. Roger, H. Hébert**

CEA-DASE, Bruyères-le-Châtel, France (jean.roger@cea.fr)

On the 10<sup>th</sup> of October 1980, the biggest African instrumentally recorded earthquake of magnitude  $M_s=7.3$  occurred near the city of El Asnam (northern Algeria) at about 60km from the sea. Some historical data and principally Spanish tide gages records reveal the arrival of long waves tens of minutes after the earthquake on five points along the South-eastern coast of Spain (Soloviev et al, 2000). Within the framework of the European project TRANSFER which aims at constraining tsunamigenic sources and hazard zones in Mediterranean sea more particularly, preliminary modelling have been conducted in order to correlate the observed waves with a so-inland earthquake. First results are encouraging since the Okada's deformation calculus used in our modelling code is able to generate a mini-tsunami which can propagate and be recorded along the Spanish coast. The fault parameters of the El Asnam earthquake are issued from the rich existing bibliography and we use the Gebco 1' world bathymetric dataset to propagate the waves. Thus we present here these results and we compare them to historical data in terms of arrival times, polarity and wave amplitudes. Then we stress the fact that earthquake-related tsunamigenic sources should be considered for coastal rupture zones not all completely located offshore.