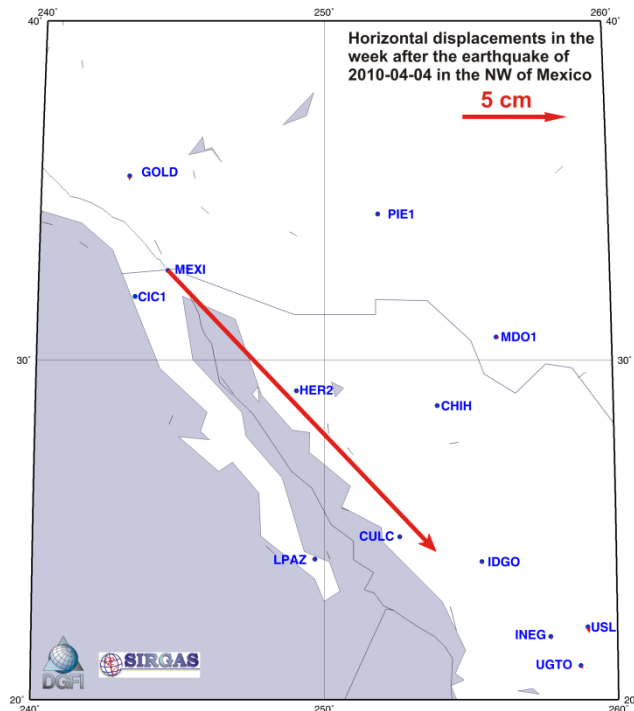




SIRGAS and the earthquake of April 4, 2010 in Baja California, Mexico

*L. Sánchez, W. Seemüller, H. Drewes
Deutsches Geodätisches Forschungsinstitut (DGFI)
Munich, May 5, 2010.*

On April 04th, 2010, at 22:40 UTC (03:40 pm local time) an earthquake (magnitude 7.2) shook the north-western part of Mexico. The epicentre was located at 32.128°N and 115.303°W in a depth of about 10 km. In order to estimate the impact of this earthquake in the SIRGAS Reference Frame, daily station positions between March 31st and April 7th, 2010 were computed for selected continuously operating SIRGAS stations. Since the earthquake occurred in the NW limit of the geographical region covered by SIRGAS, this processing included 13 additional IGS stations located in North America. Results show a displacement of 23 cm in the SE direction of the reference station MEXI (Mexicali).



The other SIRGAS stations located in the region present position changes less than 4 mm. Unfortunately, the station CIC1 (Ensenada), the nearest to the earthquake zone after MEXI, is out of operation and therefore, it has not been possible to estimate, if it is affected by the earthquake.

These computations were carried out by the SIRGAS Analysis Centre at DGFI (*Deutsches Geodätisches Forschungsinstitut*) and are based on the observation data provided by the IGS (International GNSS Service, www.igs.org) and the Instituto Nacional de Estadística y Geografía - INEGI- of México (www.inegi.gob.mx), which contributes to the continuously operating network SIRGAS-CON (www.sirgas.org) through the Red Geodésica Nacional Activa (RGNA). We deeply acknowledge this support.