



## **GPS measurements in the northwestern Caribbean: Implications for the North America-Caribbean plate boundary zone**

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We have conducted a four-year campaign of GPS measurements in southeastern Mexico. Our objective is to trace the North America-Caribbean plate boundary into Mexico. We established a network of ten stations, two in continuous mode and eight were occupied at one-year intervals between 2002 and 2005. Our results show a general displacement of about 1 cm/yr in a NNE direction, when calculated with respect to North America. We interpret these vectors as reflecting the interaction between the overriding North America and the subducting Cocos plates. When calculated in a fixed reference frame (ITRF2000), displacement vectors are also in the order of 1 cm/yr, but the general direction is NW. These results are more difficult to interpret. However, when combined with results obtained by french colleagues in Guatemala, they suggest a counterclockwise rotation of the Maya block, right to the north of the Motagua-Polochic fault system. So far, GPS measurements do not show any indication of a probable continuation of the Polochic fault into southern Mexico, as proposed in many models, although further and better measurements are needed to confirm or reject this suggestion.