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Motion of the Adria plate inferred from GPS observations

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Movement of stations derived from the three GPS campaigns within the Croatian and Slovene Geodynamic Network differs very clearly from the known north-west motion of the Africa plate and suggests that Adria is an independent microplate. The greatest movement (8-10 mm/yr) occurs in central Adria between the Gargano zone and the central Dinarides. A fragmentation of Adria into subblocks linking the Gragano zone to the central Dinarides cannot be clearly proved.

The movement of stations located along the coast of Albania is almost east-west oriented. The difference between the motion of stations in Albania and the northeast-oriented movement of stations in southern Croatia raises the question of whether the area that includes the stations in Albania is part of Adria or the coastline of Albania is located along a plate boundary. Movement of stations and values of the principal strain rates determined on the basis of analytical surface deformation theory suggest that Adria is divided into three different deformation zones (northern, central, and southern).