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## The first geodetic VLBI field-test of LIFT: a 550Km long optical fiber link for remote antenna synchronization

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We present the first field-test of the implementation of a coherent optical fiber link for remote antenna synchronization realized in Italy between the Italian Metrological Institute (INRIM) and the Medicina radio observatory. The Medicina VLBI antenna participated to the Eur137 experiment carried out in September 2015, in tag along mode, using, as reference systems, both the local H maser and a remote H maser hosted at the INRIM labs in Turin, 550km far from Medicina. In order to assess the quality of the remote clock, the observed sources were split in two sets, each one has been observed with the associated H maser (local or remote). A system to switch automatically between the two references was integrated in the antenna field system. The observations were correlated in Bonn and preliminary results are encouraging since fringes have been detected with both time references along all the 24 hours of the session. The experimental set-up, the results and the perspectives for future radio astronomical and geodetic experiments will be presented.

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