

Resolving a decades-long transient: an orphan long gamma-ray burst or a young magnetar nebula?

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The source FIRST J1419+3940 was recently discovered as a slow transient that has been fading for the last 30 years. The radio light-curve is consistent with an orphan long gamma-ray burst. However, our interest arises when comparing its host to the one where the Fast Radio Burst FRB 121102 is located: inside a low-metallicity star-forming region in a dwarf galaxy. Both sources show comparable compact radio emission and similar environments. We thus believe that FIRST J1419+3940 can be a potential host for FRBs, and could make a connection between long GRBs and FRBs. In this talk we present the results from observations conducted with the European VLBI Network (EVN) which allowed us to study the compactness of the source to unveil its origin. These results allowed us to discard several scenarios for the fading source, and to establish comparisons with the persistent counterpart of FRB 121102.

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