

Project name :Fast radio burst searches and multi-wavelength observations

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Fast radio bursts (FRBs) are a new type of mysterious astrophysical transients discovered in 2007. This key project aims at monitoring and observing known and potential FRB sources taking advantage of the high sensitivity of FAST. Simultaneous multi-wavelength observations will be coordinated. We plan to perform observations in the following four directions. 1. Regularly monitor known repeating FRB sources (such as FRB 121102 and 180301); 2. Monitor new repeating sources (such as the ones discovered by FAST and other telescopes such as CHIME); 3. Observe other one-off FRB sources that have not repeated yet, trying to search for possible repeated bursts; 4. Monitor some sources that could be potentially FRB emitters, including soft gamma-ray repeaters (SGRs), nearby star burst galaxies, and GRB/SLSN remnants. When feasible, multi-wavelength observations will be carried out during FAST observing windows. The goal of the key project is to collect essential information to understand the origin, bursting mechanism and radiation mechanism of FRBs.