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Abstract:

The recent observation of ZTF J1406+1222 implicates that this source may be a black widow system. It has an orbital period of 62-min, which is the shortest for all black widow systems. The pulsed radio emission of this system was not detected with NASA DSN radio telescopes, and the upper limit of the source was estimated to be 0.1 mJy at L-band. FAST is perfectly capable of detecting the radio pulse with such low intensity, and the possibly detected radio pulse would significantly affect the evolution cognition of the black widow.