

Ultra-compact structures in galactic masers observed in the Radioastron project.

N.N. Shakhvorostova, A.M. Sobolev, A.V. Alakoz

We present estimates of brightness temperature for galactic masers in star-forming regions Orion KL, Cepheus A, W3 OH, W3 IRS5 and W49 N detected at space baselines in the Radioastron project. Very compact features with angular sizes of ~20-60 µas were detected in these regions with corresponding linear sizes of ~4-10 million km. These features represent only a few per cent of the maser flux registered with the single-dish instruments. Brightness temperatures range from 1e13 up to 1e16 K.