

Colloquium

SFB 956

Conditions and Impact of Star Formation

4 December 2017 | supplementary colloquium

Monday 3:00 pm

Physikalische Institute Köln

Lecture Hall III

Zülpicher Straße 77 | 50937 Köln

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RadioAstron Maser Observations – Record of Angular Resolution

Extremely long baselines of the space-ground interferometer RadioAstron allow achieve ultra-high angular resolution. Possibility of detection of maser emission with resolutions about several micro-arcseconds was arguable before successful experiments reported in this paper. We present the results of the maser survey obtained by RadioAstron during first 5 years of operation. Extremely high angular resolution of 8 micro-arcseconds has been achieved in observations of the megamaser galaxy NGC 4258. For the galaxy at the distance about 7.2 Mpc this corresponds to linear resolution around 60 a.u. Very compact features with angular sizes about 20 micro-arcseconds have been detected in star-forming regions of our Galaxy. Corresponding linear sizes are about 5-10 million kilometers.

