

The Co-located arrangement of microwave imaging diagnostics on EAST tokamak

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Electron Cyclotron Emission Imaging (ECEI) and Microwave Imaging Reflectometry (MIR) diagnostics systems have been applied on EAST for 2D temperature and density fluctuations imaging. Both of ECEI and MIR require large-aperture quasi-optical systems to obtain high spatial resolution. Here the details of ECEI/MIR co-located configuration are presented. This arrangement will not only help to save limited window resources but also benefit to the simultaneous measurements of density and electron temperature fluctuations at same toroidal position, which will provide advanced research opportunities for electron heat transport and other important issues. Here the details of the co-located ECEI/MIR configuration on EAST tokamak are presented, including the layout, imaging optics combination, beam-splitting arrangement and the preliminary results.

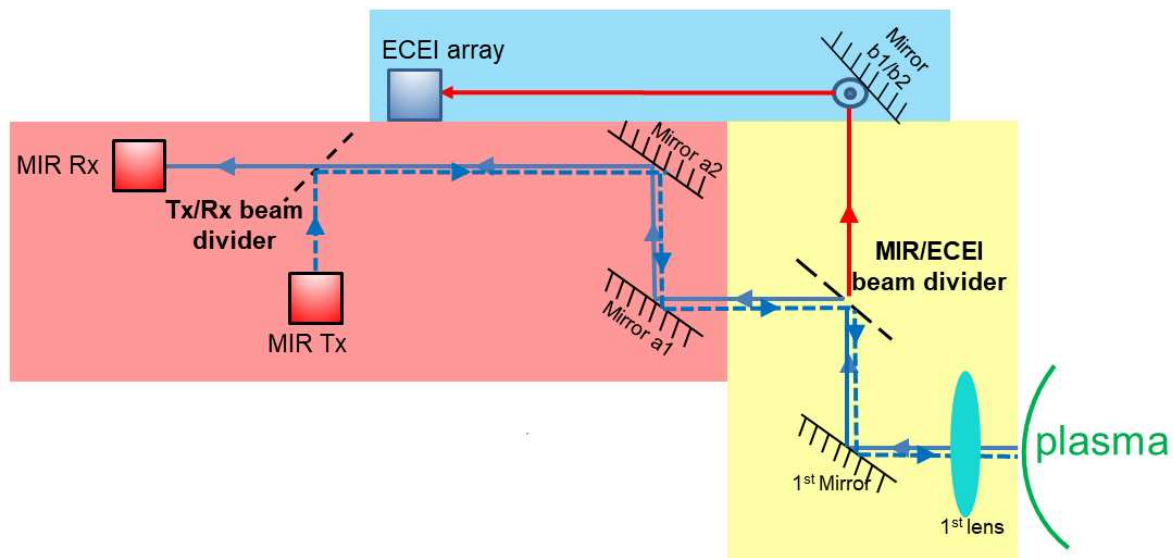


Figure 1. The optical scheme of MIR/ECEI combination.

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