Observation of electron temperature fluctuation on the J-TEXT tokamak via correlation ECE


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Turbulence is important for the transport in tokamak. An eight-channel correlation electron cyclotron emission (CECE) system has been developed based on the Joint-Texas Experimental (J-TEXT) tokamak to measure the electron temperature fluctuation. With the CECE diagnostic, the relation between electron temperature fluctuation and plasma parameters has been observed on J-TEXT. The influence of magnetic islands on the electron temperature fluctuation has also been studied on J-TEXT with the resonant magnetic perturbation (RMP) system. These results will be showed on this report.