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**Experimental Observation of Microtearing Modes in the RFX-mod Reversed Field Pinch Plasma** MATTEO ZUIN, SILVIA SPAGNOLO, ITALO PREDEBON, FABIO SATTIN, FULVIO AURIEMMA, ROBERTO CAVAZZANA, ALESSANDRO FASSINA, EMILIO MARTINES, ROBERTO PACCAGNELLA, MONICA SPOLAORE, NICOLA VIANELLO, Consorzio RFX — The results of the experimental analysis of quasi-coherent magnetic activity during quasi single helicity (QSH) states of a reversed field pinch plasma are presented. A system of in vessel coils, measuring the fluctuations of the three components of the magnetic field at the edge of the RFX-mod plasma column, allows to determine the spectral properties of such fluctuations with good resolution both in terms of frequency and wavelength. Quasi-coherent modes, propagating in the plasma with the electron diamagnetic velocity with associated wavelengths of the order of the ion Larmor radius, are observed to be correlated with the steep temperature gradients forming in the plasma. A comparison of the experimental results with the predictions of dedicated gyrokinetic calculations suggests an interpretation of the electromagnetic instabilities as microtearing modes.

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