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ECE Temperature Fluctuations associated with EDA H-Mode discharges in Alcator C-Mod[1] P.E. PHILLIPS, Univ. of Texas, Fusion Research Center, A.G. LYNN, Univ. of New Mexico — Alcator C-Mod exhibits an ELM-free H-mode with "*enhanced D alpha*" emission accompanied by a quasi-coherent mode (QCM) edge relaxation mechanism. This steady state H-mode lowers the peak heat load to the diverters which is advantageous for reactor operations. A high-resolution heterodyne electron-cyclotron-emission (ECE) radiometer with 32 channels ($\Delta R \sim 7mm$) and a bandwidth up to $1MHz$ covering the full radius of C-Mod has observed spatial resolved temperature fluctuations that are highly correlated with the edge QCM mode. The QCM mode is also directly observed by the edge ECE channels though the changes in optical depth due to the large density fluctuations in the QCM ($\sim 30\%$). Details of these measurements will be presented in this poster.

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