

Abstract Submitted
for the DPP14 Meeting of
The American Physical Society

Measurement of density fluctuations and particle transport in C-2 BIHE DENG, SCOTT AEFISKY, JOHN KINLEY, Tri Alpha Energy, Inc., TAE TEAM — In the C-2 field reversed configuration experiment [1], long wavelength density fluctuations are measured for the first time by a newly developed far infrared (FIR) laser far forward scattering diagnostics. The dynamics of the frequency spectrum, spatial distribution, scaling with density gradient and other plasma equilibrium parameters are characterized. On the other hand, density profile evolution and particle transport are measured by the multi-chord two-color CO₂/HeNe interferometer. The correlation between measured density fluctuations and particle transport will be examined.

[1] M. W. Binderbauer *et al.*, Phys.Rev.Lett. **105**, 045003 (2010).

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Date submitted: 10 Jul 2014

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