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**Plasma Rotation Profile Measurements in C2 FRC** XUAN SUN, Tri Alpha Energy, Inc, DEEPAK GUPTA, MICHEL TUSZEWSKI, HOUYANG GUO, AND THE TAE TEAM — Field Reversed Configuration (FRC) holds a promising future for commercializing thermonuclear power. However,  $n=2$  rotational instability appears virtually in every FRC plasma and degrades their performance. The exact mechanism to generate and accelerate the rotation is still a puzzle. In this presentation, we attempt to investigate this puzzle by measuring the rotation profile in C2's core plasma, scrape-off layer, and exhaust region with Mach probe and Doppler spectrometer.

Xuan Sun  
Tri Alpha Energy, Inc

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