

Abstract Submitted  
for the DPP10 Meeting of  
The American Physical Society

**TAE neutron detectors and some physics results** EMIL RUSKOV, MICHEL TUSZEWSKI, Tri Alpha Energy, Inc., YUBAO ZHU, WILLIAM HEIDBRINK, UC Irvine — Several neutron detectors are part of the comprehensive diagnostics set deployed in the C-2 TAE FRC machine [1]. They include a pair of very sensitive  $^3\text{He}$  counters, and a pair of plastic and ZnS scintillators. These detectors perform reliably and provide valuable insights into the properties of TAE FRC plasmas. A novel HW and SW detection scheme has been used for counting neutron pulses from the  $^3\text{He}$  detectors. Estimates of the total neutron emission from the C-2 device, and the corresponding ion temperature will be presented. The collision of two dynamically formed Deuterium FRCs leaves a distinct signature on the fast plastic neutron scintillator.

[1] M. W. Binderbauer *et al.*, Phys.Rev.Lett. *in print*

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Date submitted: 26 Jul 2010

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