$[BoldFont = LinLibertine_RB.otf, ItalicFont = LinLibertine_RI.otf, BoldItalicFont = LinLibertine_RBI.otf, Path = /opt/indico/.venv/lib/python2.7/site-packages/indico_fonts/] [BoldFont = LinBiolinum_RB.otf, ItalicFont = LinBiolinum_RI.otf, Path = /opt/indico/.venv/lib/python2.7/site-packages/indico_fonts/] [BoldFont = LinBiolinum_RB.otf, ItalicFont = LinBiolinum_RI.otf, Path = /opt/indico/.venv/lib/python2.7/site-packages/indico_fonts/] [BoldFont = LinBiolinum_RB.otf, ItalicFont = LinBiolinum_RI.otf, Path = /opt/indico/.venv/lib/python2.7/site-packages/indico_fonts/] [BoldFont = LinBiolinum_RB.otf, ItalicFont = LinBiolinum_RI.otf, Path = /opt/indico/.venv/lib/python2.7/site-packages/indico_fonts/] [BoldFont = LinBiolinum_RB.otf, ItalicFont = LinBiolinum_RI.otf, Path = /opt/indico/.venv/lib/python2.7/site-packages/indico_fonts/] [BoldFont = LinBiolinum_RI.otf, Path = /opt/indico/.venv/lib/python2.7/site-packages/indico_fonts/] [Bol$

HTPD 2018



Contribution ID : 303

Type : not specified

14.43 Zeff Measurements and Spectroscopic Impurity Survey on the C-2W Field-Reversed Configuration Plasma

Thursday, 19 April 2018 10:31 (120)

In C-2W, an elevated impurity concentration, or the presence of high-Z impurities, can account for significant energy losses through radiation. To gauge plasma contamination from impurities, the effective ionic charge (Zeff) can be determined from measurements of Bremsstrahlung continuum radiation over a small spectral range free from line radiation. To this end, an integrated diagnostic system including visible and near-infrared Bremsstrahlung detectors, as well as Blamer-alpha (D \boxtimes) neutral detectors for pollutant removal, will be deployed in C-2W for improved estimates of time-dependent radial distributions of Zeff. The system is complemented by an array of survey spectrometers which enable full-range spectroscopic measurements of impurity emission lines from the vacuum ultraviolet to the near infrared, providing a good picture of the plasma composition. Here, the design scheme for this integrated diagnostic system is presented and discussed.

Primary author(s): NATIONS, Marcel (TAE Technologies, Inc.)

Co-author(s) : GUPTA, Deepak (TAE Technologies, Inc.); BOLTE, Nathan (TAE Technologies, Inc.); THOMP-SON, Matthew C. (TAE Technologies, Inc.)

Presenter(s): NATIONS, Marcel (TAE Technologies, Inc.); GUPTA, Deepak (TAE Technologies, Inc.); BOLTE, Nathan (TAE Technologies, Inc.); THOMPSON, Matthew C. (TAE Technologies, Inc.)

Session Classification : Session #14. Thursday Morning Poster Session