



Log #20089

C

**Abstract Submitted
for the DPP04 Meeting of
The American Physical Society**

Sorting Category: 6.7.0

Optimization of the Ignitor Operating Scenario at 11 MA GIUSEPPE RAMOGIDA, ANTONIO CUCCHIARO, ALDO PIZZUTO, CAMILLO RITA, MASSIMO ROCCELLA, Associazione ENEA-EURATOM sulla Fusione, C.P. 65, 00044 Frascati(RM), ITALY, GIUSEPPE GALASSO, Ansaldo Ricerche, Corso Perrone 25, 16152 Genova, ITALY, BRUNO COPPI, MIT, Cambridge, MA — A new reference 11 MA operational scenario for Ignitor has been developed in order to reduce electromagnetic loads and power supply requests, and to avoid the use of Dispersion Strengthened Copper in some of the PF coils. The analysis and a relevant simulation of a typical fast vertical disruption have been carried out with the MAXFEA code, obtaining values within the engineering constraints during the whole operating scenario. A new approach for mitigating the EM loads on the plasma chamber has also been investigated, based on the use of copper toroidal layers added to the plasma chamber in order to simulate the effects of a plasma chamber of varying thickness in the outer regions of its vertical cross section. This appears to be quite effective not only in increasing the time constant of the plasma displacement but also in reducing the vertical force and its combined effect with hoop force on the vessel.

- Prefer Oral Session
 Prefer Poster Session

Paolo Detragiache
paolo.detrage@saluggia.enea.it
ENEA

Special instructions: To be put together with other Ignitor posters.
--

Date submitted: 21 Jul 2004

Electronic form version 1.4