IMPROVED OPERATING SCENARIOS OF THE DIII–D TOKAMAK AS A RESULT OF THE ADDITION OF UNIX COMPUTER SYSTEMS*

P.A. Henline

General Atomics, San Diego, California 92186-9784

The increased use of UNIX based computer systems for machine control, data handling and analysis has greatly enhanced the operating scenarios and operating efficiency of the DIII–D tokamak. This paper will describe some of these UNIX systems and their specific uses. These include the plasma control system, the electron cyclotron heating control system, the analysis of electron temperatures and densities measurements and the general data acquisition system (which will soon be collecting over 100 MBytes of data). The speed and total capability of these systems has dramatically affected the ability to operate DIII–D. The improved operating scenarios include better plasma shape control due to the more thorough MHD calculations done between shots and the new ability to see the time dependence of profile data as it relates across different spatial locations in the tokamak. Other analysis which engenders improved operating abilities will be described.

Paper Title: **Improved Operating Scenarios Of The DIII–D Tokamak As A Result Of The Addition Of UNIX Computer Systems**

Technical Topic Number:

Keywords:
(1)
(2)
(3)

❏ If an oral presentation is requested (rather than the standard poster presentation) indicate here

❏ Enter my paper in the "Distinguished Paper" competition. (Requires August 30 submission of full paper)

Submitted by:

Signature

Typed Name P.A. Henline

Institution/Company   General Atomics

Address   P.O. Box 85608

City, Province, State/Postal Code

San Diego, California 92186-9784

Country   USA

Phone: (619) 455-2988

Fax: 619 455-4515

E-mail: henline@gav.gat.com