

Abstract Submitted  
for the DPP00 Meeting of  
The American Physical Society

Sorting Category: 4.0.0

**STAR Power, an Interactive Educational Fusion CD  
with a Dynamic, Shaped Tokamak Power Plant Simulator<sup>1</sup>**

J.A. LEUER, R.L. LEE, A.G. KELLMAN, General Atomics, G.C. CHAPMAN, E. NUTT, JR., G. HOLLEY, IMAGIX Studios, T.A. LARSEN, Scripps — We describe an interactive, educational fusion adventure game developed within our fusion education program. The theme of the adventure is start-up of a state-of-the-art fusion power plant. To gain access to the power plant control room, the student must complete several education modules, including topics on building an atom, fusion reactions, charged particle motion in electric and magnetic fields, and building a power plant. Review questions, a fusion video, library material and glossary provide additional resources. In the control room the student must start-up a complex, dynamic fusion power plant. The simulation model contains primary elements of a tokamak based device, including a magnetic shaper capable of producing limited and diverted elongated plasmas. A zero dimensional plasma model based on ITER scaling and containing rate based conservation equations provides dynamic feedback through major control parameters such as toroidal field, fueling rate and heating. The game is available for use on PC and Mac computers. Copies will be available at the conference.

<sup>1</sup>Work supported by U.S. DOE Grant DE-FG03-97ER54402.

Prefer Oral Session  
 Prefer Poster Session

J.A. Leuer  
leuer@fusion.gat.com  
General Atomics

Date submitted: July 12, 2000

Electronic form version 1.4