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Reactor Unit Control System for Space and Terrestrial Applications

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Summary: A reactor unit control system for small space reactors

Description: A novel reactor unit control system that is based on changing the reflector properties for small space reactors has been developed. The control system includes rotating reflectors or control drums that are formed from primary reflector material and a secondary reflector disposed on a selected surface. The reflective neutron flux is regulated by rotating the reflector(s) with respect to the reactor core; increasing the reflective neutron flux when the primary reflector is disposed towards the reactor core and decreasing the reflective neutron flux when the secondary neutron reflector is disposed proximate the reactor core. The control system solves the control reactivity problem in a more efficient way, with less required power, and better safety margins that current methods. Furthermore, it does not require a cooling system such as that required for traditional designs that using B_4C sheet within the drum rotating control systems.

Main Advantages of this Invention

- Does not require a cooling system
- Required lower power
- Improved safety margins

Potential Areas of Application

- Space and terrestrial applications

ID number: 11021

Intellectual Property Status: US utility patent pending (application 14/682,679)

Opportunity: We are seeking an exclusive or non-exclusive licensee for marketing, manufacturing, and sale of this technology.

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