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OPERATING CONTROLS AND DYNAMICS FOR FLOATING REFRIGERANT LOOP FOR HIGH HEAT FLUX ELECTRONICS

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OAK RIDGE NATIONAL LABORATORY
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OPERATING DYNAMICS

- **STABLE**
 - Steady Operation of Floating Loop
 - Transient Start-Up of A/C with Loop
- **CONDITIONALLY STABLE**
 - Steady Operation of A/C and Floating Loop
 - Depends on inventory balance
 - Instabilities dependent on component performance
- **UNSTABLE**
 - Transient Shut-Down of A/C with Loop

OPERATING CONTROLS

- **Steady Operation of A/C and Floating Loop**
 - Inventory balance monitored by automatic valving and switches
- **Transient Shut-Down of A/C with Loop**
 - Boost loop inventory prior to compressor shut-down

Thermodynamic Behavior