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## **Aurora Wins NASA Contract for Autonomous Control of Space-Nuclear Reactors**

Cambridge, MA, May 12, 2009 - Aurora Flight Sciences announced today that the company has been selected for a NASA Phase II award to develop technology to support autonomous control and protection of space-based nuclear reactor systems.

Aurora will be developing an advanced reactor instrumentation and control system (RICS) for robotic and manned space vehicles and planetary surface systems. This new architecture is compatible with a number of different space reactor types, and will contain the same stringent safety features used to protect reactor installations on earth, but with much lower mass and volume, making it ideal for space applications.

In Phase I Aurora base-lined a quadruple-redundancy architecture for the space design, and demonstrated the feasibility of adapting the hardware and algorithms comprising a terrestrial reactor to those suitable for space applications. Under a previous NASA SBIR, Aurora developed a space-based, digital wide-range neutron detector, the primary measurement device for the fission process. "The RICS system, in conjunction with the previously-developed digital WRND, comprises a complete solution for closed-loop control of space-nuclear reactors with much lower mass, volume and power requirements than has been achievable with legacy space systems", stated Mr. John Merk, Aurora's Principal Investigator for the program. A ground-based evaluation unit, suitable for demonstrating the full system, will be produced during Phase II.

The contract is in collaboration with Black River Technology of Valparaiso, Indiana, a subsidiary of INVAP. For more than 20 years INVAP and BRT have built and installed nuclear research reactors and reactor instrumentation systems in countries around the world.

### **About Aurora Flight Sciences**

Aurora Flight Sciences designs and builds robotic aircraft and other advanced aerospace vehicles for scientific and military applications. Aurora is headquartered in Manassas, VA and operates production plants in Bridgeport, WV and Columbus, MS and a Research and Development Center in Cambridge, MA. To view recent press releases and more about Aurora please visit our web site at [www.aurora.aero](http://www.aurora.aero).

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