



**Astronautics Corporation of America**

Post Office Box 523, Milwaukee, Wisconsin 53201-0523  
Tel. (414) 449-4000 Fax. (414) 447-8231

21264SLR:rst  
5 March 2009

Honorable Tammy Baldwin  
U.S. House of Representatives  
2446 Rayburn Building  
Washington, DC 20515

Honorable Tammy Baldwin,

On behalf of Astronautics Corporation of America (Astronautics), I am requesting your continued support of our ongoing development of magnetic refrigeration (MR) technology with the U.S. Navy's Office of Naval Research and that you request that \$6,700,000 be added to the FY10 Department of Defense Appropriations bill. I am pleased to report to you that Astronautics' MR development efforts at our Madison-based technology center are making excellent progress. Our continued technical progress will allow us to meet the cooling requirements of the U.S. Navy as it moves to an "all-electric ship".

MR is a cooling technology, offering significant potential for high-energy efficiency, low weight, compact size, and reduced maintenance. Moreover, unlike conventional cooling technologies, MR is environmentally benign, using a solid refrigerant and water-based heat transfer fluids. Preliminary estimates indicate that MR technology achieves a 50% reduction in weight and volume and a 35% improvement in efficiency compared to currently deployed naval chillers. Astronautics has made significant investments in the development of MR technology since transitioning it in 1985 from Los Alamos National Laboratory. The U.S. Navy, Department of Energy and the National Institute of Standards and Technology have also funded development of this high-risk high-reward technology.

Again, on behalf of Astronautics and specifically our technology development team in Madison, I want to thank you for your leadership in the U.S. Congress and the tireless support you provide to the Madison high-technology business community.

Very truly yours,

ASTRONAUTICS CORPORATION OF AMERICA

Dr. Steven L. Russek  
Director Systems Engineering &  
Director Astronautics Technology Center  
414-449-4240 (voice)  
414-331-5573 (mobile )  
E-mail: [s.russek@astronautics.com](mailto:s.russek@astronautics.com)