



21CR Project 610-10040

Evaluating the Performance of Thermoacoustic Cooling

Updated 21 December 2001

Objectives:

- (1) Evaluate the performance of a prototype thermoacoustic unit developed at Purdue University
- (2) Validate a computer simulation model of the unit against experimental data
- (3) Compare the performance of the Purdue thermoacoustic cooler with conventional technologies

Information/items expected to result from this project:

- (1) Computer simulation model validated against experimental data
- (2) Performance comparison of thermoacoustic cooling with conventional air conditioning and refrigeration technologies

How are the results likely to be applied:

The results will be used by HVAC&R equipment manufacturers to assess the potential benefit of thermoacoustic cooling.

Research subcontractor:

Purdue University, West Lafayette, IN (Principal Investigator: James E. Braun, Ph.D.)

Status:

This project was concluded in the fourth quarter of 2001 and a final report approved for release. The final report is available for free downloading from ARTI's website.

Responsible 21CR Subcommittee: Alternative Equipment