

NASA Conference Publication 2287

Refrigeration for Cryogenic Sensors

*Max Gasser, Editor
Goddard Space Flight Center*

**Proceedings of the Second Biennial
Conference on Refrigeration for Cryogenic
Sensors and Electronic Systems held at
NASA Goddard Space Flight Center
Greenbelt, Maryland
December 7-8, 1982**

NASA
National Aeronautics
and Space Administration
**Scientific and Technical
Information Branch**

1983

INTRODUCTION

This document contains the proceedings of the Second Biennial Conference on Refrigeration for Cryogenic Sensors and Electronic Systems. The Conference was held at the National Aeronautics and Space Administration's Goddard Space Flight Center, Greenbelt, Maryland, on December 7-8, 1982.

The first cryogenic refrigeration conference was held at the National Bureau of Standards, Boulder, Colorado, in October 1980. Its objective was to report and discuss the state of cryocooler technology in a temperature range below 20 K with cooling capacity below 10 K. The conference was extremely beneficial to the cryocooler community, and as a result, the participants voted unanimously to meet again.

The objectives of the second conference were similar to the first. The emphasis was to be on low temperature, closed cycle cooler technology; however, higher temperature coolers (77 K), with technology applicable to the low temperature coolers, were considered to be within the scope of the meeting.

The importance of cryocooler technology cannot be overemphasized. The utilization of superconducting and other cryogenic instruments, on the ground and in space, rests heavily on the development of reliable, compact, low-cost cryocoolers. To this end, we hope the second conference made a contribution.

The Editors

Second Biennial Conference on
Refrigeration for Cryogenic Sensors and Electronic Systems

Mr. Edgar A. Edelsack
Office of Naval Research

Dr. Martin Nisenoff
Naval Research Laboratory

Dr. Allan Sherman
NASA/Goddard Space Flight Center

Mr. Max G. Gasser
NASA/Goddard Space Flight Center

Dr. Ralph C. Longworth
Air Products and Chemicals Inc.

Dr. Peter J. Kerney
CTI-Cryogenics