- ARS is honored to support the International Neutron Scattering Community and the SE@NSF 2008 Workshop.
- ARS has been in the business of supplying Closed Cycle Cryocoolers for Research since 1986.
- ARS manufactures customized cryocoolers in 3 basic sizes:

CS202 Small
 CS204 Medium
 CS210 Large.

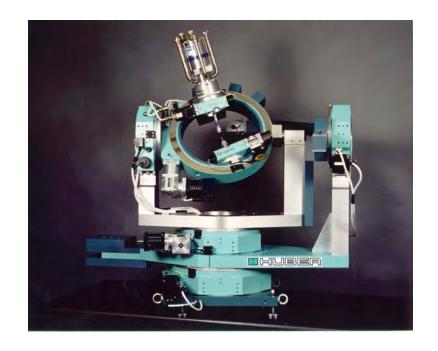
 CS302 is a specialized 3 stage cooler licensed from ILL.



ARS is located In Macungie
Pennsylvania.
At the foothills of the Pocono mountains
where the Amish farms
Are famous for their traditional style and
beauty.

## **Cryocooler Model: CS202:**

- Available as 4K, 6K and 10K.
- Inexpensive.
- Compact size for Goniometer mounting, can be installed on Huber 4 and 6 circle diffractometers.
- High Temperature option available
  - 450K
  - 700K
- Low Cooling Power. Works well for sample in vacuum applications.



Courtesy: Mr. Norman Huber.
HUBER GmbH

# **Cryocooler Model: CS204:**

- Available as 4K, 6K and 10K.
- Moderate cooling power on both stages.
- Fast Cooldown.
- Compact and Economical top loading cryostat.
- Top Loader performance:
  - Sample temperature 5-6K
  - Cooldown time ~3 Hrs.



# Advanced Research Systems, Inc.

## **Cryocooler Model: CS210:**

- Available as 4K, and 10K.
- High cooling power on both stages.
- Fast Cooldown as top loader cryostat.
- Top Loader performance:
  - Sample temperature Sub 4K
  - Cooldown time <3 Hrs.</li>
- Large in size and heavy.



SMASH – SNS Modular Adaptable Sample environment Housing

L. Santodonato, L Walker, N. Porter, M. Ruiz



### **Cryocooler Model: CS302:**

- 202 with JT 3<sup>rd</sup> stage.
  - Min temperature 1.2K to 1.7K
  - Max Temperature 325K
- Licensed from ILL.
- Compact size for Goniometer mounting, can be installed on Huber 4 and 6 circle diffractometers. Partial rotation.
- Low Cooling Power. Works well for sample in vacuum applications.
- Further development being done at ILL and ESRF with He3 recirculation system and 4K base cooler.

