4.2 CENTRIFUGE EVALUATION OF CHEMICAL BIOLOGICAL AIRCREW RESPIRATOR (CBAR)

Summary
The U.S. Navy is developing a new Chemical-Biological Aircrew Respirator (CBAR) to replace the legacy system. Prior to flight testing, the system was evaluated at ETC by subjecting human volunteers to acceleration stress to determine if the CBAR, along with a standard US military breathing regulator, provides sufficient air to perform anti-G straining maneuvers during high Gz conditions.

Ten (10) volunteers were exposed to a series of acceleration profiles in the ETC centrifuge while wearing the legacy respirator and CBAR on separate days. Mask performance, physiologic and subjective responses were recorded for comparisons.

Objectives

- To compare the performance characteristics of a new Chemical-Biological Aircrew Respirator to the legacy system during a series of high-G centrifuge acceleration profiles
- To determine if the new CBAR system provides sufficient air to perform anti-G straining maneuvers during high Gz conditions

Customer/Partner
US NAVY (PMA-202 Aircrew Systems)

Status
Complete (July – October 2011)

Future Publications

Final Report delivered to US NAVY