



## **PRESS RELEASE**

*For Immediate Release*

### *CHAPS Pressure Suits Evaluated by Next Generation Sub-Orbital Space Flyers During Simulated Missions in Centrifuge.*

Worcester, Massachusetts — Nov. 16, 2011 — Two researchers set to fly aboard suborbital spacecraft as a part of Southwest Research Institute's next-generation suborbital research program completed another milestone on November 2<sup>nd</sup> when they evaluated David Clark Company's latest version of aerospace crew protective equipment designed for the commercial spaceflight industry. The two research scientists conducted evaluations of the Contingency Hypobaric Astronaut Protective Suit (CHAPS) during an intensive series of centrifuge runs designed to simulate the anticipated launch and entry profiles that will be experienced aboard suborbital spacecraft.

Dr. S. Alan Stern and Dr. Dan Durda traveled to the National AeroSpace Training and Research Center (NASTAR) outside Philadelphia for evaluations in the NASTAR STS-400 High Performance Human Centrifuge. Stern and Durda organized the first class of researchers that received training at NASTAR Center in early 2010. Now they are the first to have evaluated commercial pressure suits under G in the same centrifuge.

"We're breaking new ground with this type of evaluation — it's more realistic and higher intensity than any suborbital launch exercise taken previously by any person or company in the world to date," says SwRI Principal Investigator Stern.

In total, Stern and Durda, also of SwRI, undertook 20 NASTAR centrifuge runs using the suits, some reaching the 6-G accelerations that many suborbital launches will create. The CHAPS' lightweight, low-bulk restraint/exterior cover and advanced tri-laminate breathable materials kept the researchers "comfortable and cool" throughout the evaluations.

Daniel M. Barry, Vice President and Director of Research and Development for David Clark Company acknowledged the significance of the evaluation as it relates to equipment design. “Historically, the complexity of pressure suit systems was mandated by the need to address a wide range of requirements associate to traditional government/military programs. The CHAPS was developed to address the emerging requirements unique to commercial spaceflight operations. It provides fundamental contingency hypobaric protection, and incorporates advanced materials to allow for a lightweight, comfortable, and highly functional pressure suit system.”

A series of technical papers describing the goals, experiences and results of the high-G training runs by Stern and Durda will be given by SwRI, NASTAR Center and David Clark Company personnel at the 2012 Next-Generation Suborbital Researchers Conference (NRSC-2012) in Palo Alto, Calif., in late February.



For additional information on this story, please click the following links:

<http://www.nastarcenter.com/nastar-center-supports-commercial-space-pressure-suit-evaluation-in-centrifuge>

<http://swri.org/9what/releases/2011/pressure-suit.htm>

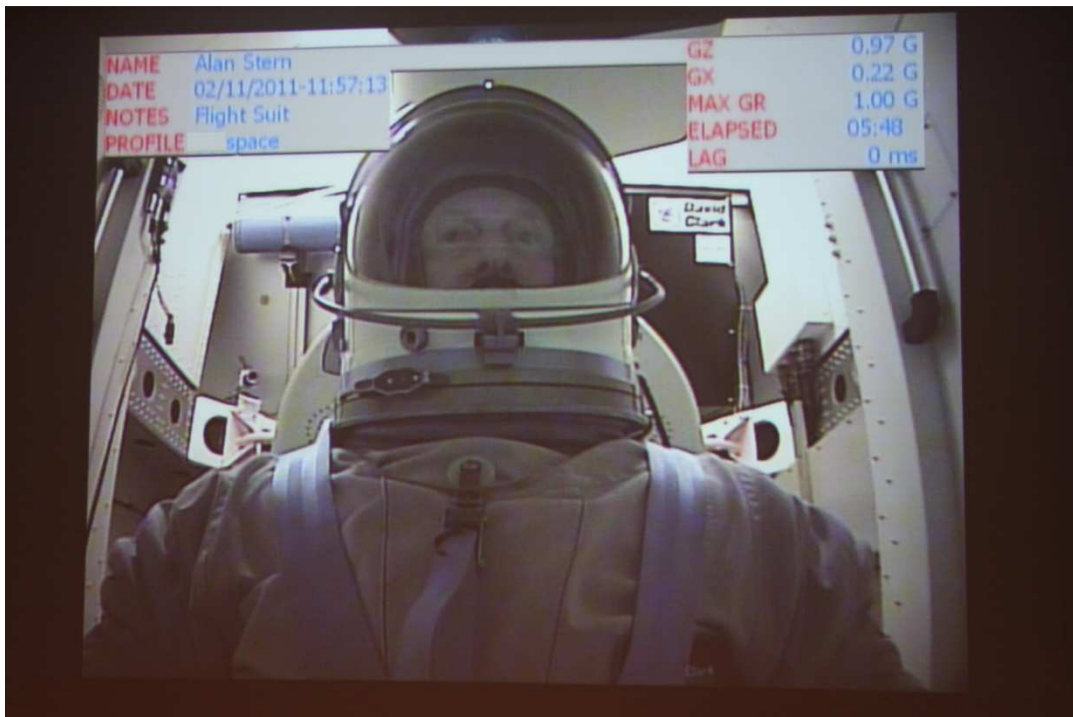
For more information on the CHAPS or David Clark Company’s air and space crew protective equipment, please visit [www.davidclark.com](http://www.davidclark.com) or contact:

- Shawn Macleod, Field Operations Manager at (281) 733-1652; email at [smacleod@davidclark.com](mailto:smacleod@davidclark.com).
- Daniel Barry, Vice President and Director of Research and Development at (508) 751-5828; email at [dbarry@davidclark.com](mailto:dbarry@davidclark.com).

For more information on NSRC-2012, go to <http://nsrc.swri.org>



*Dr. Dan Durda in CHAPS coveralls prepares to ingress NASTAR centrifuge gondola.*



*Dr. S. Alan Stern in full CHAPS ensemble begins a G-profile.*