AHS Igor I. Sikorsky Human Powered Helicopter Competition Factsheet

Competition: The AHS Igor I. Sikorsky Human Powered Helicopter Competition (or "AHS Sikorsky Prize" for short) was established in 1980 by the American Helicopter Society (AHS) International, which offered an award for the first human powered helicopter to reach a height of 3m during a one minute controlled hover flight.

Requirements: 60 second duration during which the aircraft must climb to an altitude of 3m and stay hovering over a 10m x 10m box.

Sikorsky's Involvement: The competition is named in honor of Igor I. Sikorsky, the founder of Sikorsky Aircraft Corp. and one of the founding members of AHS International. In 2009, Sikorsky Aircraft announced at the AHS International Annual Forum that they would pledge US\$250K for the winner of the AHS competition.

Competitors: Two primary competitors emerged over the last two years, the University of Maryland Gamera team and the AeroVelo Atlas team. The University of Maryland team currently holds a number of certified world records, including flight duration (65 sec) and altitude (9.4 ft).

Recent Success: On Thursday June 13, 2013, the AeroVelo team successfully met all the conditions to win the AHS Sikorsky Prize.

AeroVelo Summary: AeroVelo is a team of University of Toronto alumni, working with current students and volunteers, including friends and family. Their organization's previous endeavors included the world's first human-powered ornithopter flight, which was recorded by the Aero Club of Canada. AeroVelo also works closely with the University of Toronto Human-Powered Vehicle Design Team, creating and competing high-speed recumbent bicycles (http://www.aerovelo.com/projects/speedbikes/introduction/). The primary team members include Todd Reichert (co-chief engineer and pilot), who graduated with a PhD in Aerospace Engineering in 2011, and Cameron Robertson (co-chief engineer), who graduated with an MS in Aerospace Engineering, both from the University of Toronto. The team's core mission is to work with students to provide experience with challenging, hands-on engineering projects.

Prize Winning Flight Summary: On Thursday June 13, a little after noon at the The Soccer Centre in Vaughan, Ontario, the AeroVelo Human Powered Helicopter team began their last flight of the day. After completing low-altitude trim flights, and then higher altitude (2m) flights, with a little more than half an hour left in their testing time, Todd Reichert stepped onto the customized Cervelo bike frame and proceeded to climb vertically to over 3m within about 15

seconds. After reaching this altitude with authority and stability, the aircraft began a controlled descent, with a drift to the left that was arrested by the pilot. As the aircraft came further into ground effect, the drift was corrected, and the vehicle settled 7m from the point where it took off, approximately 65 seconds after take-off.



Photo of AeroVelo's "Atlas" by AHS International, August 31, 2012.