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X PRIZE Competition Kicks Off With Scaled Composites' SpaceShipOne!



*Commemorating 20 Years of
Commercial Space
Transportation*

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MOJAVE, CA - - SEPTEMBER 29 - - Scaled Composites (Scaled) plans to conduct its first launch in its bid to win the X Prize Competition. The launch will take place from the Mojave Civilian Aerospace Test Center in California. FAA issued a launch site operator's license to the Mojave Airport on June 17th. Scaled will launch the historic SpaceShipOne with a pilot and the equivalent weight of two passengers to 100 km. A second launch is planned for as early as October 4th. Scaled conducted the first successful test flight of SpaceShipOne on June 21st. Dr. George Nield, Deputy Associate Administrator for Commercial Space Transportation will attend the first launch and Patricia G. Smith, Associate Administrator for Commercial Space Transportation, will attend the second launch. Throughout the two-week period, AST will join other organizations exhibiting at the X Prize Expo, a two-week event to celebrate the historic X PRIZE competition.



SpaceShipOne



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To learn more about Scaled Composites, visit
<http://ScaledComposites.com>

To learn more about the X PRIZE, visit
<http://www.xprize.org>



Training in AST

AST takes training seriously. As part of AST's training efforts, both staff and guests deliver lunchtime "Expert Lectures." These lectures provide AST staff with a 1-hour introduction to various subjects of interest and have garnered enthusiastic attendance. A focus this year has been on system safety analysis methods and perspectives on system safety, including the following:

- Preliminary Hazard Analysis (PHA): a safety analysis approach that produces a line item tabular inventory of non-trivial system hazards and the risks associated of those hazards.
- Failure Modes, Effects, and Criticality Analysis (FMECA): a safety/reliability analysis approach used to explore the ways or modes in which each system component can fail, and the risks associated with those failures.
- Fault Tree Analysis (FTA): a system safety/reliability tool that estimates the probability that a top-level event will occur and systematically identifies all possible causes leading to the top event.
- Fault Tree Analysis (FTA): a system safety/reliability tool that estimates the probability that a top-level event will occur and systematically identifies all possible causes leading to the top event.
- Event Tree Analysis (ETA): A system safety/reliability analysis technique that explores responses

to an initiating event and enables assessment of the probabilities of unfavorable or favorable outcomes.

- Cause-Effect (Fishbone) Diagrams: a root cause analysis technique that graphically represents the relationships between a problem (effect) and its possible causes. High-Reliability Organizations and Normal Accident Theory: two schools of thought from the social sciences that explain the organizational causes of accidents with complex technologies.

In addition to the weekly lunchtime lecture series, AST staff members have prepared several courses of approximately 8 hours each designed to provide the staff a familiarity and working knowledge of particular subject areas. Examples of recent courses include:

- Introduction to Systems Engineering
- Mobile Range Safety Systems (providing range safety telemetry, tracking, and command system)
- Pressure Vessel Design and Testing

AST has also arranged familiarization visits to the Eastern Range for groups of AST safety inspectors. The purpose of this training is to elevate and enhance the level of knowledge and proficiency of AST's safety inspectors. Included is an in-house half- day seminar prior to



on-site training at Cape Canaveral Air Force Base and the near-by Patrick Air Force Base, Florida. The 45th Space Wing at Patrick Air Force Base provides a one-day safety briefing. There are two days of on-site visits and briefings for specified facilities. AST has arranged for three separate groups of safety inspectors to participate in this training. Plans are to provide this training to the entire technical staff. The effort is to ensure that AST safety inspectors are exposed to real-world work environments in safety-critical areas at the Eastern Range.



Terry Hardy, AST-300, conducting an AST Expert Lecture



Peggy McGunigal, AST-300 conducting a session on Systems Engineering (Above)

Sherman Council, AST-300, conducting training on Mobile Range Safety Systems (Right)



Upcoming Meetings and Events

The Commercial Space Transportation Advisory Committee will convene its regular fall meeting on October 27 in the Orville Wright Building from 8:00 am until 5:00 pm. The meeting will be chaired by John W. Vinter, president and Chief executive officer, International Space Brokers, Inc., Rosslyn, Virginia. Visit <http://ast.faa.gov/COMSTAC> for meeting information.



AST Licensed Launches*	2001	2002	2003	2004	SUM
ELVs**	6	7	8	8	162
RLVs***	0	0	0	3	3

**Sums are the cumulative number of licensed launches that have occurred since the first launch in 1989. Launches are through September 11, 2004. In addition to licensing launches, AST licenses commercial launch sites. To date, five such sites have been licensed.*

***Expendable Launch Vehicles*

**** Reusable Launch Vehicles*



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**Visit AST's website at
<http://ast.faa.gov>**



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