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Panel Session V - Buenos Aires, Argentina X-Prize Competitor

Pablo DeLeon

DeLeon and Associates, X-Prize participant

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**Pablo De León
and Associates**

**Buenos Aires,
Argentina**


**X Prize
Competitor**




**Pablo De León & Associates
Argentina**

IN JANUARY 2002 WE FLEW THE FIRST LATIN AMERICAN PAYLOAD IN THE U.S. SPACE SHUTTLE ENDEAVOUR CARRYING 7 EXPERIMENTS TO THE INTERNATIONAL SPACE STATION

INTEGRATION AT NASA



PADE EXPERIMENTS IN THE KENNEDY SPACE CENTER



PADE EXPERIMENT IN SPACE

Pub. 30 2002

Spaceport News Page 7

First Latin America GAS can a success

The first Latin American GAS can mission flew aboard the Space Shuttle Endeavour on its 28th mission STS-109. Pablo De León, the program manager responsible for the payload, announced the success of the mission "GAS can" experiment.

The experiment was being led by various AASST members. The experiment is a combination of atmospheric, water, and payload research conducted in Argentina.

"We are proud to be the first Latin American payload, and we're hoping to be amongst other countries groups in Latin America to perform payload experiments," De León said.

"We had an extremely positive experience working with NASA's Cleveland, Waikanae and Kennedy representatives."

AASST is an experimental network. As part of the experiment, PADE also became an Argentine experiment payload.

"I cannot stress enough the support of the staff. PADE has the first Latin American payload in the STS-109 mission to the ISS. The project was supported by a South American team of payloaders."

PADE experiments included transport of fluids on microgravity, surface vibration of water drops, impingement of drops and bubbles in microgravity, experiment of water in space, orbital formation and growth in microgravity, maximum acceleration register and gravity level fluid movement.

The GAS can program - which is one of the Shuttle Small Payloads Program (SSPP) - was initiated in the mid-1990s to provide low-cost, low-risk missions. A total of 157 GAS can payloads have flown aboard the Shuttle since 1992.

Cleveland Space Flight Center manages the SSPP. The program team develops, tests, integrates and flies the payload.

De León manages the Shuttle Flight Center under the support of Cleveland, managed the PADE payload.

"The experiment was a great bunch of people to work with," De León said. "I could not do this without a great deal of help."

When the PADE GAS can was launched, it flew for 28 days, 16 hours, 46 minutes and 40 seconds. The payload manager is PADE.

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**Pablo De León & Associates
Argentina**

LAUNCH METHOD: Vertical launch
PROPULSION: Hybrid (Liquid/solid) rockets
LANDING METHOD: Parachute landing system



Hybrid Engine Test



Clean room operations




Artwork - Martín Domestico. Concept: Pablo De León



FLIGHT PLAN

5

**Pablo De León & Associates
Argentina**

Several High Altitude Balloons test were performed during 2001/2002 from the Patagonia


GPS Positioning, and telemetry was transmitted to Earth every second






Capsule flights were recorded in real time video and the images transmitted to Earth.

Scale Model Capsule drop test from 96,000 feet


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RESEARCH IN LIFE SUPPORT SYSTEMS



PARTIAL PRESSURE SPACE SUIT



THERMAL PROTECTION COVERALL




SPACE SUIT TESTED IN HIGH ALTITUDE AND THERMAL CHAMBER

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RESEARCH IN LIFE SUPPORT SYSTEMS










SPACE SUIT TESTED IN HIGH ALTITUDE GLIDER FLIGHTS

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A HALF SCALE ROCKET LAUNCH TEST TOOK PLACE IN MAY 2003 WITH A TOTAL LOSS OF THE VEHICLE







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NOW, STATIC TESTS OF AN IMPROVED PROPULSION SYSTEM ARE TAKING PLACE, AND A NEW TEST FLIGHT WITH CAPSULE RECOVERY WILL BE PERFORMED IN SEPTEMBER 2004



THANKS FOR YOUR ATTENTION!