

---

The Space Congress® Proceedings

2004 (41st) Space Congress Proceedings

---

Apr 27th, 8:00 AM

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

Pablo DeLeon

*DeLeon and Associates, X-Prize participant*

Follow this and additional works at: <https://commons.erau.edu/space-congress-proceedings>

---

### Scholarly Commons Citation

DeLeon, Pablo, "Panel Session V - Buenos Aires, Argentina X-Prize Competitor" (2004). *The Space Congress® Proceedings*. 9.

<https://commons.erau.edu/space-congress-proceedings/proceedings-2004-41st/april-27/9>

This Event is brought to you for free and open access by the Conferences at Scholarly Commons. It has been accepted for inclusion in The Space Congress® Proceedings by an authorized administrator of Scholarly Commons. For more information, please contact [commons@erau.edu](mailto:commons@erau.edu).


**EMBRY-RIDDLE**  
Aeronautical University™  
SCHOLARLY COMMONS



**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

Feb. 28, 2002

SPACEPORT NEWS

Page 7

### First Latin America GAS can a success

The first Latin American payload aboard the Space Shuttle Endeavour on its last mission STS-109, Pablo De León, the program manager responsible for the payload, announced the Space Shuttle Endeavour mission the successful "GAS" experiment.

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

"It is proud to be the first Latin American payload, and we're hoping to be the first to launch other groups in Latin America to space payload experiments," De León said.

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

AASV is an experimental network. As part of the experiment, PADE, also known as the Argentine Experiment Package.

Members since South American payload for a month aboard the Shuttle in the past. PADE has the first Latin American payload to be launched with payloads developed and operated by a South American organization.




PADE experiments included a number of fluid and microgravity research activities of water drops, impingement of drops and bubbles in microgravity, experiments of water in space, crystal formation and growth in microgravity, microgravity acceleration register and gravity level fluid movement.

The GAS can program, which is one of the Shuttle Flight Payload (SFP), was installed in the payload bay in the aft field stowage bin. A total of 157 GAS payloads were flown aboard the Shuttle since 1982.

Cleveland Space Flight Center manages the SFP. The program team develops tests, integration and they select appropriate to ensure that the Shuttle Flight payload carrier - GAS, the Houston-based & operations (NASA-CR22) - payload payload supplied to NASA, with US air carriers space, air-traffic, load, weight, dynamic characteristics and performance.

The carriers can support payloads that weigh as much as 10 pounds or 4.5 kg. The PADE payload weighed about 10 pounds. The total payload is integrated into the Shuttle depending on how much space is left once other primary payloads are also integrated.

Doris Wingo, acting flight operations manager for the Shuttle Flight Center under the supervision of Leonardo, manager of the PADE payload.

"The experiment was a great bunch of people to work with," Wingo said. "I could not do the program without a great deal of help."

When the PADE GAS can was launched, it was the first Latin American payload to be launched in the Shuttle. The payload was launched on January 28, 2002, at the Kennedy Space Center. It was the first Latin American payload to be launched in the Shuttle.

**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 - Maria Demonte. Concept: Pablo De León



**FLIGHT PLAN**

**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




Scale Model Capsule drop test from 96,000 feet

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


Pablo De León & Associates 

**Argentina**


RESEARCH IN LIFE SUPPORT SYSTEMS



PARTIAL PRESSURE SPACE SUIT



THERMAL PROTECTION COVERALL



SPACE SUIT TESTED IN HIGH ALTITUDE AND THERMAL CHAMBER

Pablo De León & Associates 

**Argentina**

RESEARCH IN LIFE SUPPORT SYSTEMS










SPACE SUIT TESTED IN HIGH ALTITUDE GLIDER FLIGHTS

Pablo De León & Associates 

**Argentina**









Pablo De León & Associates 

**Argentina**

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










Pablo De León & Associates 

**Argentina**



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!