From Madrid-Apollo station to Europe's only Lunar Museum

for safeguarding both tangible and intangible Heritage.

Juan F. Cabrero-Gómez^a *, Fernando Villa-Rodríguez^b.

^aIngeniería de Sistemas para la Defensa de España (ISDEFE), C/ Beatriz de Bobadilla 3, 28040, Madrid, Spain. As external contractor of Instituto Nacional de Técnica Aeroespacial (INTA)

^bAirbus SAS, P^o John Lennon s/n, Getafe. 28906, Spain. <u>fernando.villa-rodriguez@airbus.com</u>

*Corresponding author: J.F. Cabrero Gómez, ifcabrero@isdefe.es

"Museo Lunar" was inaugurated after the commemoration of the 40th anniversary of the first men to walk on the Moon surface by the first Spain-born astronaut Miguel Lopez-Alegría, in order to show how was the Apollo-Madrid station which tracked lunar module "Eagle" to the Moon on the historic flight of Apollo 11.

That Historic milestone was able thanks to the effort of the whole Apollo international staff working in the ground stations: NASA chose to establish their main Tracking Stations in different sites around the world, i.e. Goldstone (California, USA), Honeysuckle Creek (Camberra, AUS), and Fresnedillas de la Oliva (Madrid, SPA). These three most powerful primary stations were equipped with 26-meter diameter tracking antennas and were joined in the conformed NASA Manned Space Fight Tracking Network (MSFN) by 11 other ground locations also classified as primary but featuring smaller 9-meter antennas. Later they became part of the Spaceflight Tracking and Data Network (STDN).

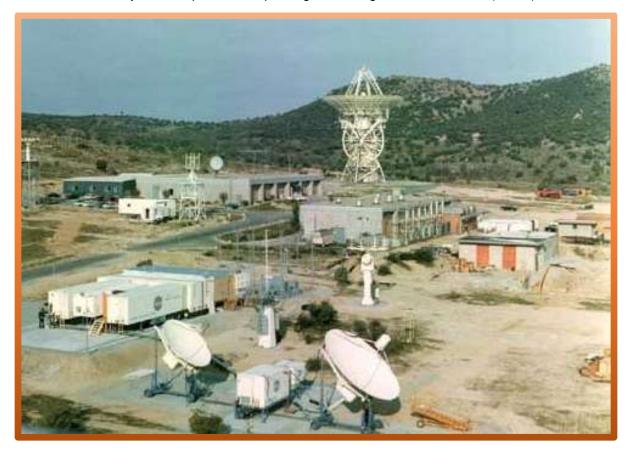


Figure 1. Fresnedillas-Madrid MSFN Station with the 26m antena

The *Madrid-Apollo*, in NASA terminology, was operated under the American Goddard Space Flight Center (GSFC) in cooperation with the Spanish Nat'l Aerospace Institute (INTA). The station was hosted by a multidisciplinary variety of workers who not only supported the 2nd most popular Armstrong quoted: "*Houston, Tranquility base here, the Eagle has landed*" on the Moon surface; but they also received the first images of our planet and the live television broadcasting of the lunar landscape as seen by men from the Moon on Christmas Eve 1968. The history of *Madrid-Apollo* station did not finish with the Apollo program, another missions such as Apollo-Soyuz, Skylab or the first Space Shuttle flights with Columbia were operated from 1965 to 1985, when its 26-meter antenna "*Dino*" was deactivated.

The success of those Apollo missions were not only a technological overwhelming achievement but also a paradigm shift in the socio-cultural aspect because they enabled us to view our planet from a never before seen perspective.

For all of those reasons and coinciding with the upcoming 50th anniversary of the Apollo 11, "Museo Lunar" started to propose a global "Apollo Heritage Conservation Consortium" on the past IAC congresses by means of a sisterhood between the three aforementioned communities, all of which played an important role in supporting Apollo Project. Today, we can look back, proud of the role these cities played in these historic events and in harmony with the collaborative spirit that carried man to the moon on that Space Race-era. This initiative aspires to be one more demonstration of the human capacity to carry out challenges despite differences in language and culture that is inherent in all great achievements. The sisterhood that we proposed was an affirmation of and testimony to the will and capacity for cooperation that continues to be a valued principle of which we are proud to carry on in Fresnedillas. On these days we seek to pave the way for establish a path to interchange and collaboration between our three cities and extend it to the rest of the Apollo-linked cities and organizations with the main purpose of safeguarding that cultural immaterial heritage, and also the material original items including the 26m antennas as one of the main objectives.

Agreements with INTA begun to recovered some of the old ground station masterpieces and technical stuff to build the Lunar Museum during the 40th anniversary. And continue today for make the germination of the museum's conservation project possible "which are of outstanding universal value from the point of view of history, art or science in order to maintain legacy from the past, what we live with today, and what we pass on the future generations" (UNESCO)

The authors, as Lunar Museum volunteers, are working within INTA Scientific Culture area collaborating and managing different Spanish and Int'I events as <u>European Researchers' Night (NIGHT)</u>, Spanish Science week; the <u>International Observe the Moon Night</u>, Space World Week,... to spread this idea in order to remember stations old-workers memorial as a tribute to those men and women who made one of the most awe-inspiring event possible

More info at:

museo.fresnedillasdelaoliva.es

City Council. Plaza de la Constitución 1, 28214 Fresnedillas de la Oliva, Spain.

turismo@fresnedillasdelaoliva.es