



PRESS RELEASE
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APOLLO XI UNDER THE SEA

ESA astronaut Jean-François CLERVOY and ESA astronaut trainer Hervé STEVENIN simulate the first manned lunar mission on the seafloor at the Marseilles subsea analogue site of COMEX.

Marseilles, September 4th, 2013: **ESA astronaut Jean-François Clervoy and astronaut trainer Hervé Stevenin slipped into the roles of Neil Armstrong and Edwin Eugene (Buzz) Aldrin for a subsea simulation of the historic lunar mission on the sea floor of the Mediterranean.** Training astronauts underwater, in pools, is an effective way of familiarizing astronauts to the sensations of working in orbit under weightlessness conditions. This week the concept has been extended by the French deep-sea specialist COMEX to simulate a lunar mission in reduced gravity (lunar gravity of 1/6th Earth gravity) on the sea floor of a lunar analogue site in Marseille, France. The objective of the mission called **APOLLO XI UNDER THE SEA** is to recreate operations and procedures that have been performed by the NASA astronauts on the Moon 44 years ago. Doing this at the bottom of the sea has two advantages: reduced gravity such as the one on the Moon can be simulated underwater by modifying the buoyancy of the diver and because of the natural terrain of the selected site: it delivers a morphology that is comparable to the surface of the Moon. COMEX has already performed similar simulations in the past for future asteroid missions.

The company is using a specially designed spacewalk training suit named GANDOLFI which was initially designed for training astronauts of the former European Space-plane HERMES. During the mission, several soil samples were collected with tools similar to those used on the Moon surface. As a symbol, a European flag was also planted on the underwater test site.

Among the observer Didier Schmitt, scientific expert from the European Commission was present knowing that the next steps for astronaut training in Europe will be co-financed by the European Union in the frame of the MOONWALK project. The strategy of the Marseilles based company is to deliver subsea training capabilities for future space missions to the Moon, Mars and asteroids.

COMEX was founded by Henri-Germain Delauze in 1962. It has developed a unique world class expertise in deep-sea diving for the benefit of offshore industrial activities. The company is involved in several space projects such as MOONWALK and SHEE (both financed by the European Commission). COMEX maintains a fleet of research vessels, submarines and subsea robots that can be used for underwater simulations of space missions.

For further information please contact:

Dr. Peter WEISS, APOLLO XI Project Manager

36, Bvd des Océans,

13009 Marseilles, France

E-mail: p.weiss@comex.fr

Telephone: +33 4 91 29 75 36 / Mobile: +33 (0)7 86 28 15 45

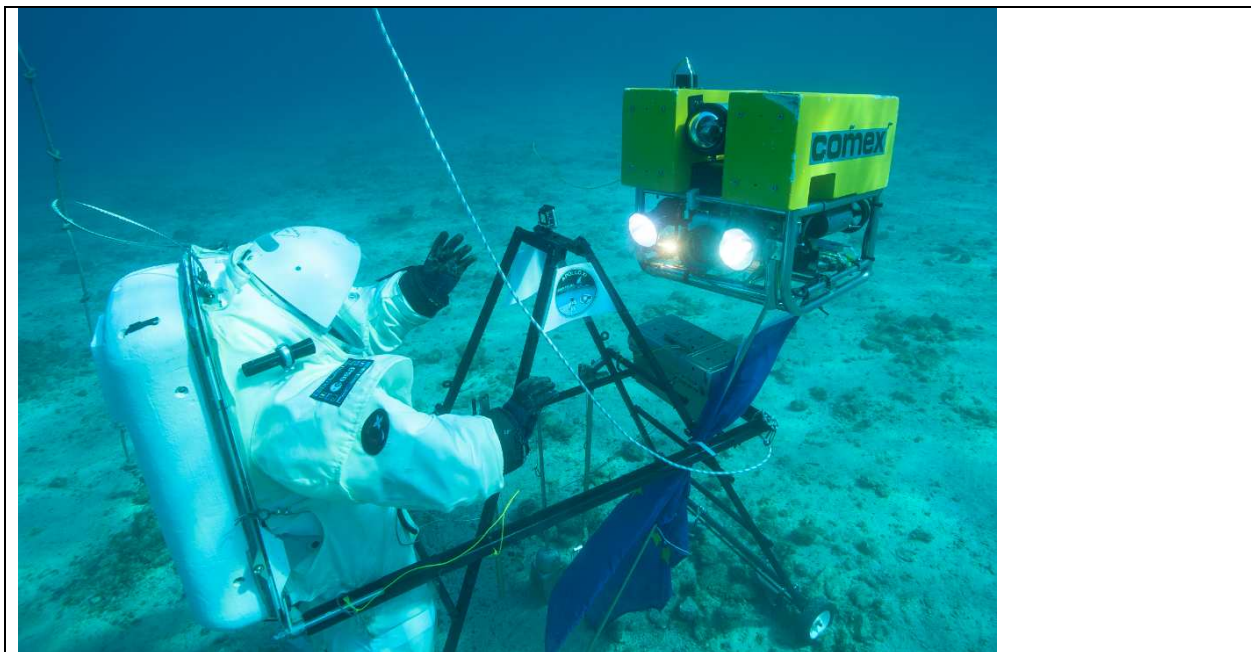


Figure 1: Subsea simulation of the APOLLO XI mission at the Marseilles subsea analogue site
[Photo: copyright Alexis ROSENFELD]



Figure 2: Planting of a flag during the APOLLO XI UNDER THE SEA mission
[Photo: courtesy COMEX]



Figure 3: APOLLO XI mission preparation onboard the MINIBEX at the subsea analogue site in Marseilles
[Photo: courtesy COMEX]



Figure 4: ESA astronaut Jean-François Clervoy (left) and ESA astronaut trainer Hervé Stévenin with the GANDOLFI training suit onboard the COMEX vessel MINIBEX [Photo: courtesy COMEX]