

46th IAA HISTORY OF ASTRONAUTICS SYMPOSIUM (E4)
History of Italian Contribution to Astronautics (3A)

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SYMPOSIUM KEYNOTE: THE DEVELOPMENT AND OPERATIONAL LIFE OF SPACELAB - A
BRIEF STORY OF THE ITALIAN CONTRIBUTION TO AN INTERNATIONAL SUCCESS**Abstract**

In the history of Human Spaceflights, dominated by the American and Russian enterprises, there are some chapters, not so well known, written by the Italians engaged in challenging realizations part of International Space Programs. This is the case, in particular, of the "Pressurized Manned Modules", special space elements designed and built in Italy to be "Habitats" for supporting the presence of the Humans in the adverse extraterrestrial environment. The challenging venture was initiated forty years ago when the Europeans had been offered the possibility to participate to the US Post Apollo Program, with the responsibility to develop "SPACELAB", the Manned Laboratory to be flown on board of the Orbiter. In such a cooperative program of high strategic significance for the reinforcement of the Transatlantic Alliance, destined to open to the Europeans the presence of humans in space and leading to their participation to the future International Space Stations, the role of Italy, with the second largest contribution after Germany, has been quite relevant. Aeritalia Space System Group, now-a-days Thales Alenia Space Italy, within the Industrial Consortium headed by VFW-Fokker/ERNO, acquired the full responsibility to design, manufacture and qualify the Structure and the Thermal Control of the SPACELAB Pressurized Module. The complex story of the SPACELAB development, starting from the early phases of the International Negotiations leading to the Intergovernmental Agreements, and from the fierce competition of the Industrial Consortia for the adjudication of the prestigious contract, is briefly recalled, bringing in evidence the facts that marked the Italian role in this extraordinary venture. The main events that characterized the design and construction of the Pressurized Module, up to the maiden first mission of SPACELAB 1 on board of Columbia on 28 November 1983 are illustrated. After the first very successful mission, during which more than seventy multidiscipline experiments were performed by European and American scientists, SPACELAB has had a long operational life with fifteen additional Materials and Life Sciences International Missions. The brief story terminates with an overview of the many other initiatives, originated from the SPACELAB experience, that have seen over the last decades the Italians engaged in the study and development of "Pressurized Manned Modules" such as the Columbus, the Multipurpose Logistic Modules, the Nodes that are today integral part of the International Space Station, that brings a significant contribution of Italy.