

# The ESA History Project



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**A**t the end of the eighties, the space age was still relatively young and had largely been ignored in terms of academic historical research. This was especially true in Europe, which was not a competitor in the high-profile space race that took place in the 1960s. The European Space Agency, and its Director General Prof. Reimar Lüst, therefore responded enthusiastically when, in 1989, three historians came forward with a proposal to write an independent authoritative history of ESA and its precursor organisations ESRO and ELDO, which have been coordinating Europe's space endeavours for more than forty years.

Following the initial contact made during a scientific symposium in Palermo, a feasibility study was undertaken in the first half of 1990. The positive outcome of that study prompted ESA to give its full support to the proposed History Project. After the ESA Council had formally given its approval for the Project, work got under way with the signing of a study contract on 27 November 1990.

## The Approach

A preparatory task of decisive importance when assessing the feasibility of undertaking the ESA History Project was the transfer of the Agency's archives to the European University Institute in Florence (I). This had already started in 1989, which meant that professionally prepared document collections were available for consultation right from the outset. The catalogue for this collection of texts, which contains a complete set of internal ESA records up to the end of the 1980s, plus correspondence and some personal archives, can be consulted at the Institute's web site (<http://www.arc.iue.it/>).



To ensure a successful outcome to the Project, and in line with the proposals set out in the feasibility study, it was decided to base the project planning on the following three cornerstones:

- Firstly, the research was to be the work of three independent professional historians. Dr John Krige, who had already been the driving force behind the CERN history project over a number of years, agreed to lead the project. Professor Arturo Russo from the University of Palermo (I) and Professor Michelangelo de Maria from the University of Rome (I) were appointed

project researchers and made a significant contribution to the work. Prof. De Maria later withdrew for personal reasons and was replaced in 1993 by Dr Lorenza Sebesta from the University of Bologna (I).

- Secondly, the Project was to be based at an independent academic institution. With ESA's archives having been sited since 1989 at the European University Institute in Florence, it seemed the most appropriate place at which to carry out the work, with Dr Krige being appointed to a research post there. The Rector of the Institute accepted this proposal and stated his willingness to oversee the Project in collaboration with ESA.
- Thirdly, an ESA History Advisory Committee was to be set up to oversee the progress of the research work and to advise ESA on administrative and academic questions. The membership included a number of ESA pioneers (Michel Bignier, Peter Creola, George van Reeth) and distinguished European historians (Prof. Paolo Galuzzi from Florence, Prof. Guido Gambetta from Bologna, Prof. Svante Lindqvist from Stockholm, Prof. Dominique Pestre from Paris, and Dr Walter Rathjen from Munich). Former ESA Director General Reimar Lüst, having been actively involved in European space activities from the very beginning and having been the initial driving force behind the

Project, was appointed to chair the Advisory Committee.

### The Results

The ambitious project to write up ESA's history was completed in 1999. The results, which are most visibly measurable in terms of the range and quality of the resulting publications, are impressive in their scope. Because of the very large amount of material available, from 1992 onwards ESA began publishing a series of History Study Reports, 24 of which have been issued in all (see accompanying panel). The complete history itself was published in two volumes (462 and 703 pages, resp.) as an ESA Special Publication (SP-1235). The first volume covers the history of ESRO and ELDO, and the second the history of ESA up to 1987. Supplementing this two-volume history, a smaller work has been published on the history of European space activities from 1960 to 1973 (ESA SP-1172), as well as numerous articles in the relevant specialist journals. A series of Symposia and Seminars on European space-history topics have also been organised as part of the History Project.

The culminating highlight of the Project was an International Symposium, jointly hosted by ESA and the Science Museum in London from 11 to 13 November 1998. This attracted leading figures from



## ESA History Study Reports

HSR-#	Date	Title	Author
1	July 1992	The Prehistory of ESRO 1959/60	J. Krige
2	October 1992	ESRO's First Scientific Satellite Programme 1961-1966	A. Russo
3	November 1992	Choosing ESRO's First Scientific Satellites	A. Russo
4	January 1993	The Early Activities of COPERS and the Drafting of the ESRO Convention (1961/62)	J. Krige
5	March 1993	Europe in Space: Edoardo Amaldi and the Inception of ESRO	M. de Maria
6	March 1993	The Definition of a Scientific Policy: ESRO's Satellite Programme in 1969 - 1973	A. Russo
7	March 1993	The Launch of ELDO	J. Krige
8	May 1993	Europe into Space: The Auger Years (1959 - 1967)	J. Krige
9	May 1993	The Early Development of the Telecommunications Satellite Programme in ESRO (1965 - 1971)	A. Russo
10	September 1993	The History of ELDO Part 1: 1961 - 1964	M. de Maria
11	January 1994	Reflections on Europe in Space	J. Krige & A. Russo
12	January 1994	The Origins of the Federal Republic of Germany's Space Policy 1959 - 1965: European and National Dimensions	P. Fischer
13	February 1994	ESRO's Telecommunications Programme and the OTS Project (1970 - 1974)	A. Russo
14	July 1994	United States - European Cooperation in Space During the Sixties	L. Sebesta
15	February 1995	United States - European Cooperation in the Post-Apollo Programme	L. Sebesta
16	February 1995	The Scientific Programme Between ESRO and ESA: Choosing New Projects (1973 - 1977)	A. Russo
17	February 1996	The Aeronautical Satellite System: An Example of International Bargaining	L. Sebesta
18	September 1996	The Availability of European Launchers and Europe's Decision 'To Go It Alone'	L. Sebesta
19	August 1997	Big Technology, Little Science: The European Use of Spacelab	A. Russo
20	September 1997	The Definition of ESA's Scientific Programme for the 1980's	A. Russo
21	October 1997	Spacelab in Context	L. Sebesta
22	March 1998	The European Meteorological Satellite Programme	J. Krige
23	September 1998	The Third Phase of the Telecommunications Programme: ECS, Marecs and Olympus	A. Russo
24	May 1999	ESA's Scientific Programme Towards the Turn of the Century	A. Russo

European government, industry and research, all of which have made important contributions to the development of European space activities. Speakers included the former Chairman of the ESA Council at Ministerial Level Lord Sainsbury (UK), and former Ministers such as Michael Heseltine (UK), Hubert Curien (France) and Antonio Ruberti (Italy). The Proceedings were also issued as an ESA Special Publication (SP-436).

Without this rich harvest of publications resulting from the painstaking scientific approach on the part of the team of professional historians, many key but often little-known facets of European space activities over the years would otherwise have remained part of a forgotten past.

### Extension of the Project

The ESA History Project concentrated mainly on the intergovernmental collaborative effort in space made under the patronage of ESRO, ELDO and ESA. The national space programmes of the Member States were not included as topics for research. However, the success of the ESA Project and the resources that it had made available for further research aroused strong interest in several Member States. As a result, there are now a growing number of national-level archival and history projects, which should help safeguard this important part of the national heritage and promote wider appreciation of national space achievements.

At the London Symposium, the Director General had indicated the Agency's willingness to support such initiatives. The idea was subsequently put to the ESA Council that December (1998), and also received strong backing from the Advisory Committee, chaired by Prof. Lüst, at its final meeting in March 1999.

An informal gathering of Member State representatives on 20 April 1999 took stock of any ongoing projects for writing up national space histories. Also discussed was an extension of the History Project, with a view to covering national activities in a second phase. That meeting was attended by delegates from the United Kingdom, France, Germany and Italy, and strong interest was also expressed by four

*"A sense of history is important for any organisation: it both binds members together and helps to identify where we are heading..... The key role that ESA has played since its inception in 1975, and above all its ability to adapt to changing circumstances, stand the Agency in good stead to play a key role in this future".*  
Lord Sainsbury, UK Science Minister, speaking at the London Symposium

## ESA HISTORY COMMITTEE

Status: July 2004

<i>Chairman:</i>	Karl-Egon Reuter
Austria	Johannes Ortner Bruno Besser
Belgium	George van Reeth Dawinka Laureys Rober Halleux
Canada	Florian Guertin
Denmark	Preben Gudmandsen
Finland	Risto Pellinen Hanna Lappalainen
France	Louis Laidet Michel Bignier Hervé Moulin
Germany	Helmut Trischler
Italy	Lorenza Sebesta Michelangelo de Maria
Netherlands	Daniel de Hoop
Norway	Per Torbo
Spain	Manuel Serrano
Sweden	Jan Stiernstedt
Switzerland	Peter Creola
United Kingdom	Douglas Millard
Consulting Scientist	John Krige
ESA	Bruce Battrick Roger Elaerts Johann Oberlechner Nathalie Tinjod

other countries whose delegates were unable to attend that day (Belgium, Finland, Norway and Sweden).

Those present discussed a variety of documentation and research projects, some planned and some already under way, designed to place on record and highlight the histories of national space programmes. They were insistent that ESA should play a key role in coordinating the various activities, so as to capitalise on the results of the original History Project, make the most effective use of the limited resources available, and foster synergy between individual projects.

With this prior clarification, the ESA Executive was able to put to Council a proposal for continuing the History Project into a second phase, to be devoted exclusively to the history of national space activities. Council unanimously approved this proposal at its 23/24 June 1999 meeting. Since then, of course, Portugal has joined the ESA family, and the accession of Greece and Luxembourg was given the go-ahead at the March 2004 Council meeting. Their space histories are therefore now just beginning!

Even before the Project extension was approved, it was already clear that work in such a second phase needed to be organised differently from the writing up of the purely ESA history. It is, therefore, headed by an ESA project leader, who announces opportunities for national history projects and acts as interlocutor within ESA. In support, an academic project scientist was appointed – and here we were able to persuade Dr John Krige, who led the original Project, to come back and supervise the scientific progress of national projects and be responsible for their coordination. ESA is providing the necessary administrative support.

As decided by Council, an ESA History Advisory Committee was again set up to serve as a consultative body, its membership being drawn from the Member States participating in the Project (see accompanying panel). This Committee has examined all project proposals submitted by the Member States, assessed their quality, and estimated the financial support required, having regard

first to available resources and competing proposals. Dr John Krige also sits in an advisory capacity on this Committee, which usually meets twice per year, with ESA providing the Secretariat.

## The Results of Phase 2

In contrast to the original History Project, which was only concerned with ESA's multinational space activities, the second phase, which is still ongoing, is progressing much more slowly. This is due firstly to the very different structures of the groups concerned with space history in the various Member States. In many countries it was necessary first to apply to appropriate academic groups or institutes before the actual historical research could be started. A second obstacle to a prompt start was the increasingly apparent lack of suitable archives for the historians to draw upon. It was not therefore uncommon for the start of work to involve laborious searching and recording of the necessary documents prior to beginning the actual writing-up process.

When it transpired that the preparatory activities in most Member States would require more time than had originally been allowed, the Advisory Committee recommended applying a step-by-step approach. Before a complete national space history was drafted, each ESA Member State was first to produce a concise overview of the historical development of its space policy, describing the milestones and turning points in that history. This was supplemented by some smaller project tasks, which either served to identify and compile archive material or to describe specific areas of national space programmes.

Despite the initial difficulties, Phase 2 of the ESA History Project has already yielded a rich harvest, with the overview reports on the national space activities of ten Member States and Canada. These have also been published in the ESA History Study Reports series (see accompanying panel). The reports from five other Member States are nearing completion, with publication expected in the second half of 2004.

The state of preparation of the longer space histories of each of the ESA Member

States still varies greatly from country to country, and will place a considerable strain on the Project as it moves towards its conclusion, given that Phase 2 has to be completed no later than the end of 2005. The accompanying panel summarizing the progress of the individual national projects shows what still remains to be done to bring the project to a successful conclusion. While the work in Germany and Finland in the respective national languages has been completed, the final versions are not expected until some time in 2005 or 2006. Five countries are missing from the table. For Denmark, Ireland and the Netherlands, the Advisory Committee has agreed that the 'shorter' space histories already completed provide an extensive overview of these countries' space activities, making a second longer work unnecessary. The same applies to the report on ESA's cooperation with Canada. Of all the ESA Member States, France has by far the most extensive national space programme, dating back beyond the founding of ESRO and ELDO, and often involving a military component. This means that the existing archives may well be scattered or even inaccessible. Our French colleagues, who have teamed up at the Institut Français d'histoire de l'espace, are therefore faced with a Herculean task of archive searching, verification and processing, ruling out any hope of producing a national space history within the time frame of Phase 2 of the ESA History Project.

## Conclusion

The Latin American philosopher George Santayana urged his readers to bear in mind that *"those who do not learn the lessons of history will be forced to repeat them"*. This maxim is particularly relevant to the fast-changing space domain, in which experience already gained can all too often be quickly forgotten. We certainly cannot afford to reinvent the wheel every few years in such high-cost multinational projects. Writing up of the academic histories of cooperation on technology – especially for endeavours in space – is therefore especially important for Europe and should definitely be seen as an ongoing task.

## SHORT HISTORIES

Status: 7 July 2004

Country	Title	Author	Status
<b>PUBLISHED:</b>			
Austria	Austria's History in Space	Bruno Besser	HSR-34, January 2004
Belgium	Belgium's Participation in the European Space Adventure	Dawinka Laureys	HSR-29, February 2003
Canada	Canada and ESA - Three Decades of Cooperation	Lydia Dotto	HSR-25, May 2002
Denmark	ESRO/ESA and Denmark - Participation by Research and Industry	Preben Gudmandsen	HSR-33, September 2003
Finland	Finland and the Space Era	Ilkka Seppinen	HSR-32, April 2003
Germany	The 'Triple Helix' of Space - German Space Activities in a European Perspective	Helmuth Trischler	HSR-28, December 2002
Italy	Italy in Space	Michelangelo de Maria Luca Orlando Filippo Pigliacelli	HSR-30, February 2003
Netherlands	An Overview of Space Activities in the Netherlands	Joost van Kasteren	HSR-27, November 2002
Norway	Norwegian Space Activities 1958-2003 - An Historical Overview	Ole Anders Røberg John Peter Collett	HSR-35 (in preparation)
Spain	Spain in Space	José M. Dorado et al.	HSR-26, August 2002
Switzerland	Switzerland in Space - A Brief History	Peter Creola	HSR-31, March 2003
<b>TO BE COMPLETED:</b>			
Ireland	TBC	Leo Enright	Expected delivery: October 2004
United Kingdom	UK and Space	Doug Millard	Expected delivery: September 2004
Sweden	Sweden in Space	Jan Stiernstedt	Expected delivery Second half 2004
France	La France dans l'Europe spatiale	TBC	First draft expected: Autumn 2004

## LONGER HISTORIES

Status: 7 July 2004

Country	Project	Historian(s)/Author(s)	Due for completion
Austria	The Austrian History in Space	Bruno Besser	December 2004
Belgium	La Belgique et l'Espace	Dawinka Laureys	December 2004
Finland	The History of Finnish Space Activities	Ilkka Seppinen	Finnish version published May 2004 English version October 2004
Germany	Deutsche Raumfahrtspolitik 1923-2002	Niklas Reinke	German version published by Oldenbourg May 2004 English translation to be completed by May 2005
Italy	Italy in Space, 1957-1975	Michelangelo de Maria (leader) Maria Pia Bumbaca Giovanni Paoloni Filippo Pigliacelli Lucia Orlando Lorenza Sebesta Alberto Traballese	end July 2004
Norway	Participation in the Joint Swedish-Norwegian Project on Nordic Space Cooperation	John Peter Collett Ole Anders Røberg	See under Sweden
Spain	Spain in Space Five essays for Phase 2 Five essays for Phase 3	José Manuel Sàncnes-Ron José M. Dorado Pedro Sanz-Arànguez José Rivacoba Miguel Angel Sabadell	Phase 2 completed Phase 3 to be completed December 2004
Sweden	The Nordic Dimension of Space Cooperation Four essays	Nina Wormbs Jan Stiernstedt	2 <sup>nd</sup> quarter 2004?
Switzerland	A Place in Space – The History of Swiss Participation in European Space Programmes 1960-2000	Stephan Zellmeyer	September 2006
United Kingdom	British Sounding Rocketry: Skylark and ESRO 1957-71	Matthew Godwin	September 2004