

→ COMMEMORATIVE COLLOQUIUM  
IN HONOUR OF  
GEORGE P. VAN REETH  
(1924–2010)





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**11 February 2011  
ESA Headquarters, Paris**

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### *Cover:*

George van Reeth, Reimar Lüst (DG) and Wilhelm Brado (Head of Cabinet) waiting outside the ESA pavilion for the French President, François Mitterrand, at the 36th International Aerospace Exhibition at Le Bourget, 3 June 1985.

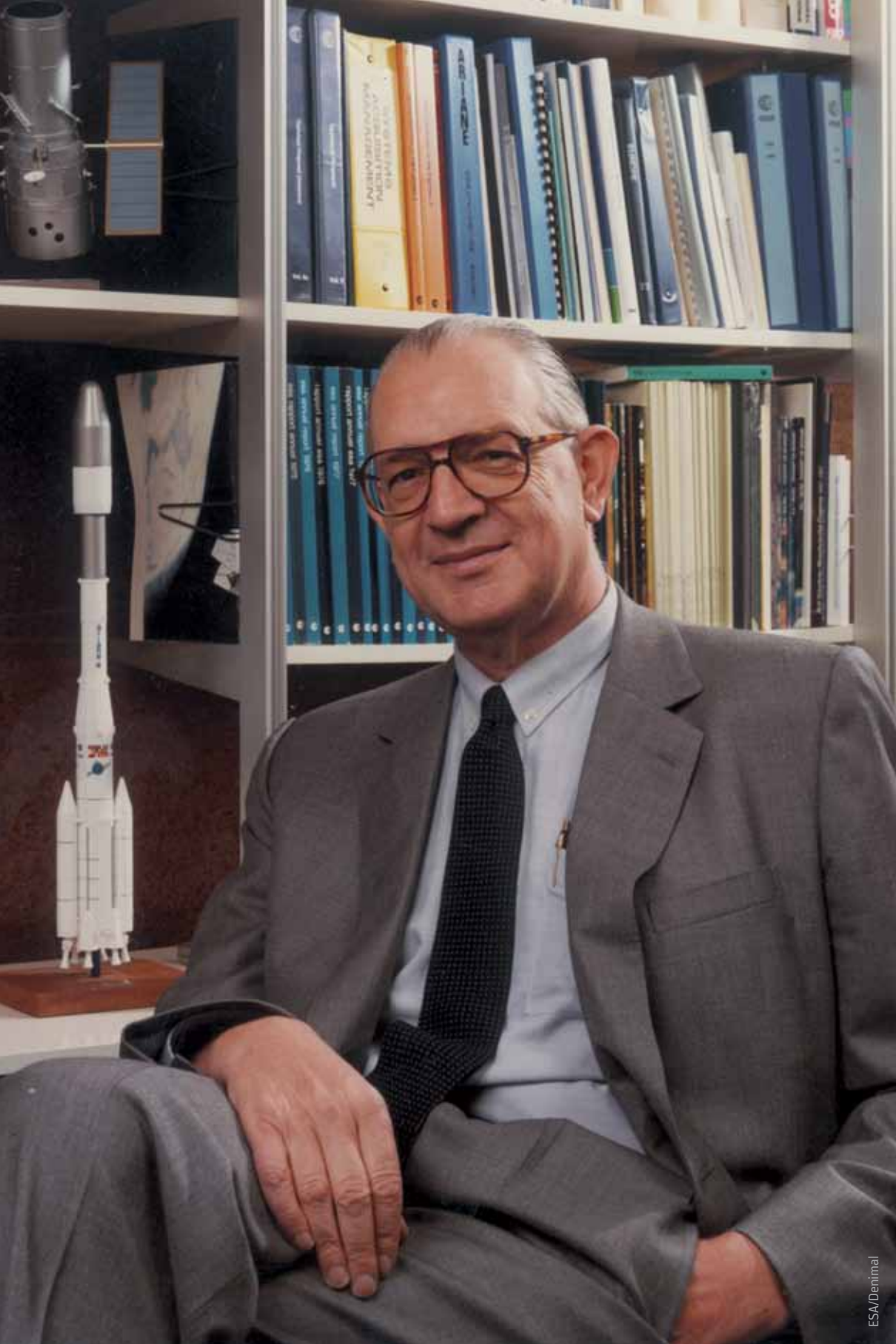
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## FOREWORD

*by Karlheinz  
Kreuzberg, Head  
of the Director  
General's Cabinet*



George van Reeth, one of the longest-serving ESA Directors, died on 25 August 2010 at his home in San Vincenti, Tuscany – four days short of his eighty-sixth birthday.

At the initiative of Professor Reimar Lüst, Director General of ESA from 1984 to 1990, the Agency organised a colloquium in Paris on 11 February 2011 to pay tribute to a man whose name has become almost synonymous with the Agency.

George, who joined the European Space Research Organisation (ESRO) in 1964, having previously been with NATO, was appointed to organise the Contracts Service at ESTEC, which had just begun operations. Later he played a significant role in building the foundations of ESA and was a key player in its development until his retirement at the end of 1991. In his capacity as Director of Administration, he was involved in all major decisions in the life of the Agency.

Having spent 27 years of his professional life in the service of ESA and of its predecessors, ESRO and ELDO (the European Launcher Development Organisation), George was considered by many to be the memory of the Agency. After leaving ESA, he became the first President of the International Space University, which he had helped to set up.

Jean Monnet, the French statesman who played a fundamental role in the construction of Europe, asserted that “without people nothing is possible, but without institutions nothing is enduring”.

Europe, including ESA in particular, now plays a visible and successful role in the exploration of space, thanks to the many people working for a common cause as individuals and teams in the space agencies, in governments, in industry and in universities; and thanks, above all, to the merit of extraordinary people like George van Reeth, and his service and commitment to the European space effort.

This booklet contains the speeches given at the colloquium by some of those who knew George well and worked closely with him during his long career at the Agency. It offers a snapshot of his personality and of his important contributions to ESA and European space cooperation.

George left an enduring mark on the Agency. His legacy and spirit will continue to inspire us.

*Karlheinz Kreuzberg*





**→ GEORGE VAN REETH,  
INSPIRING ESA  
FOREVER**



## George van Reeth, inspiring ESA forever

by Jean-Jacques Dordain  
*ESA Director General*

Yvonne, friends,

I would like to thank you all very much for having joined us. We are here to speak about George. Or 'Big George', as he was known around the world. No one knew George, everybody knew 'Big George'. 'Big' not just because of his height and his voice. More, I think, because of his character, his power, his authority vis-à-vis the staff, delegations and international partners. I would add, also vis-à-vis the four Directors General he exhausted! Because Roy Gibson, Erik Quistgaard, Reimar Lüst and Jean-Marie Luton – over the course of time, they were to come and go. But George, he stayed, guaranteeing the organisation's stability and continuity.

The initiative for this Commemoration has come from Professor Lüst. This should be recalled because when I think of Reimar and George, George and Reimar, it is very difficult for me to separate the two in my mind – indeed, right from my arrival at ESA. I shall always remember my first visit to room 405, the VIP meeting room in HQ, where I was invited to a working lunch by these two pillars of the European Space Agency: Director General Reimar Lüst and Director of Administration George van Reeth. It was more lunch than work! But during the few minutes of actual work, they tried to persuade me to join the Agency. In one sense, I would say that they failed: because

I did not join ESA; I joined *them*. Because it was impossible to resist them, resist their vision, resist their enthusiasm, resist their *joie de vivre* also. I promise we did not talk about salaries. But their arguments were strong enough to convince me to join them. And yes, I stayed here at ESA when they left. But that is another story...

I shall not recall the long career of George. I think all of you in this room know about his career. He was at ESA for 27 years, which is particularly long but not unheard of. But more than 18 years as Director – that is certainly much more rare. I think you have all



been associated with his career in some way or other. I shall not go back over the dates and so on. Instead, I should like to refer to three characteristics that defined George:

He was a doer,  
He was a European,  
He understood the need for momentum.

I shall try to explain how.

First of all, he was a *doer*, inventing and implementing the present, rather than dreaming of the future. He himself used to say that his vision was very much limited to down-to-earth matters. So he was deeply rooted in the present. Indeed, he reminds me of Antoine de Saint-Exupéry, a writer I often like to quote, who maintained: “Your task is not to foresee the future, but to enable it.”\* This is certainly what George always tried to do. His task was to enable ESA to have a future, by building up the Contracts Department at ESRO. If I have understood correctly, when he arrived he was the only one, and he went on to develop the Department by himself.

He drafted the ESA Convention, which as we all know is still in force to this day. It is one of the very last European treaties that is only 50 pages long! I think for that alone it is a masterpiece! George the doer: integrating the ELDO staff into ESA, which was not so simple; shaping the powerful Directorate of Administration to

the point that when George left, no Director General dared retain such a Directorate unchanged; negotiating the Inter-Governmental Agreements on the International Space Station; making the Agreements regarding Arianespace. As you can see, these are all matters that are still very much here with us today. On 16–17 March (2011), we shall be discussing the ISS extension to 2020. We shall also be discussing the Ariane exploitation setup with Arianespace. So these remain highly relevant subjects.

George was also a *European*, a true European, understanding from the start that there was no alternative but to cooperate within Europe. As

*The photo album presented to George van Reeth on his leaving the Agency in 1991, showing the four DGs he ‘exhausted’!*



\* From Antoine de Saint-Exupéry, *Citadelle*, 1948: “L’avenir, tu n’as point à le prévoir mais à le permettre.”

I have said many times, cooperation is difficult. Indeed, each ESA Council meeting confirms the fact that cooperation is difficult. But cooperation is also highly advantageous, in particular at project-oriented organisations like ESA. George was the inspiration for the Executive's role vis-à-vis the Delegations, achieving the best compromise between listening to the different States and forcing them to reach consensus. He did this not by exploiting the differences between them, but on the contrary by exploiting their common ground. But as we know, arriving at consensus between Member States always requires imposing some authority too, and clearly George had that authority.

In addition to this, George also *understood the need for momentum*, understanding that continuous adaptation is necessary in order to continue to be relevant in a fast-changing world. When George left in 1991, the Agency was very different to the newly-established ESA of 1975. Similarly, the ESA of today is very different to that of 1991. This is necessarily so. In my view, ESA cannot stay static. Indeed, that is my biggest fear – that it might become a dinosaur. We have to move ESA forward. This is not so simple. Moving an organisation forward when it is successful is more difficult than moving an organisation forward when it fails, because there is always a tendency to say that the recipes that succeeded in the past can be used for the future also. But this is not true. I learned a lot from George in this respect. You must have strong momentum and strong authority to move an organisation like ESA forward, given that there is a lot of resistance. George was the epitome of momentum and authority combined.

Finally, as you can see, George contributed to the golden age of space, at a time when everything was still to be invented, everything was still to be done. Everything seemed possible, but he shaped ESA for the long term. ESA has evolved considerably and has continued to be successful because the original foundations that were laid were solid. Space may seem a little less spectacular nowadays. But it is still a fantastic adventure. So I really can say that, in the minds of many, George will 'be' ESA for ever. His accomplishments will continue to be passed on to the next generation. His name will continue to be associated with ESA.

I have therefore decided that room 405, which is next door, where the Directors' Committee continues to meet regularly, will be named after George van Reeth, so that he continues to inspire current and future generations. As I am sure you will all agree, the memory of George is still very much alive.



*The new plaque in the former Room 405, now the George Van Reeth room.*

→ THE GEORGE I KNEW





# The George I knew

by Roy Gibson

*ESA Director General 1975–80*

I was very honoured to be asked to speak today, because George and I go back a long way – more than 40 years, in fact. It's really about that early period that I should like to say a few words.

There's a rather curious expression in German which I find very appropriate for my relations with George: with George one could steal horses. By that I don't mean that we did anything illegal (well, not that I remember, anyway), but this expression reflects the atmosphere of complicity and mutual reliance in which we were first working forty or more years ago. He was never dismayed by navigating in areas where there were no charts, and the enormity of a task never seemed to dismay him. There were in fact very few rules and regulations at that time, and we had to make them up as we went along. George was the ideal person for that kind of situation. Although a lawyer by training, he was always more interested in solutions than simply in the application of the law.

He once told me that, almost by accident, he was interviewed for a post in ESRO back in the mid-sixties. The interviewer asked him how he would set about writing contract regulations for satellite procurement. George at that time wouldn't have recognised a satellite if it had fallen on his foot. But he took the question as an intellectual challenge, and extemporised for ten minutes or so, during which time the interviewer furiously took notes. When George had finished, the interviewer said triumphantly: "That's great, that's exactly what we will do!" Sadly, the interviewer didn't keep his promise, and it was left to George later to translate his words into deeds.

I was recruited a little later, but in almost similar circumstances, and we met in the far-from-completed buildings at ESTEC in Noordwijk.

This is hardly the best place to say it, but our main problems were not at ESTEC but with Headquarters in Paris. In those days there were numerous staff in Headquarters whose main function was to control what went on in ESTEC. George battled valiantly



alongside me for more independence, and most of the time he managed to keep reasonably calm. But occasionally it was too much for him, and there would be an explosion of mammoth proportions. Then we would console ourselves with a couple of bottles of Bordeaux, and take the plane back to our northern retreat.

Our strivings were rewarded when Hermann Bondi arrived as DG. After assessing the situation he declared that he could appreciate that ESTEC should be for the ESTECians. After that, things started to get better.

One of George's early crusades was for 'fixed price contracts'. I remember one of our first visits to industry to explain this revolutionary concept. George laid it all out very clearly, and the Managing Director said, "I understand completely: you fix a price, and when we have spent that money we come back for more." George was not at his most diplomatic during moments like this.

The balance of power was once again changed when I was moved to Paris as Director of Administration. George took over from me in ESTEC, and I like to think that between us we were able to make progress, reducing as far as possible the duplication between Noordwijk and Paris, and considerably improving the atmosphere.

Although we worked long hours, it was certainly not a period of all work and no play. We shared three important interests: wine, food and music – preferably all together – and this continued after George came to Paris, first to ELDO and then as my successor as Director of Administration in ESA. We even found time to be present at each other's wedding.

I remember one evening at his home, his children were there – all of the same impressive size. My wife looked up at the surrounding giants and remarked that it was like having a picnic in a forest of pine trees.

George's size was an important asset. He almost unknowingly dominated meetings, and as his patience dwindled his voice rose, inviting the participants to get to the point. Most of his colleagues recognised the symptoms.

As Director of Administration in Paris, George's first major task was to find a new headquarters for us. The old Thomson tube factory in which we now are meeting did not look quite like this when he first acquired it for us. This was a job that met all his intellectual needs: discussing with architects, builders, negotiating down to the finest detail. He was in his element. He was disappointed that the Beaux-Arts Commission insisted on the white tiles on the outside of the building, which he considered made it look like the biggest *pissoir* in Paris. But this apart, I'm sure he especially enjoyed this period.

Our collaboration continued during my five or so years as DG, and I am glad to have this opportunity to recall our years together. He was

a great colleague and friend, and ESA has reason to be proud of his contribution, which, of course, extended way beyond my time with the Agency, and others will be able to talk about the continuation.

Two collaborators from the Spacelab days who are not able to be present today, Bernd Kosegarten and Hans Hoffmann, have asked me to add their names to the tributes to George, and to say that they will be with us in spirit.

Let me, finally, say a special “Thank you” to Yvonne, who did so much for George over the years.



**→ GEORGE VAN REETH:  
A PILLAR OF ESA**



## George van Reeth: A pillar of ESA

by Reimar Lüst  
*ESA Director General 1984–90*

First of all, I want to thank Jean-Jacques Dordain, our Director General, for having invited us to this Commemorative Colloquium to honour the memory of George van Reeth. I think it is quite appropriate that we are here in the very building where he worked for so many years. But being here means something more to me, since this building will forever be associated with the imprint he left both inside and outside.

When I arrived here at ESA in September 1984 to take up my duties as Director General, I was greeted by two Directors: Michel Bignier and George van Reeth. Both were very helpful in getting me off to a good start. Both already had great experience of European space activities. Michel Bignier stayed with me over a shorter period, since he retired in 1986 and passed away much too soon in 2006. Today is a timely occasion on which to remember him too.

George van Reeth worked alongside me during my entire period as Director General, but of course he actually spent a much longer time actively working in the field of space: first at ESRO, after that at ELDO and finally at ESA, which he established together with Roy Gibson. I had already met him when he started at ESRO back in 1964. If my memory serves me correctly, I was on the interviewing board when he applied for the post of Head of the Contracts Department at ESTEC.

We shall today be hearing about all his important activities at the Agency throughout the time he was involved with European space matters. From 1975 to 1991 he was ESA Director of Administration. But in addition to his holding this influential position, I regarded him as a pillar of ESA even before I arrived here – and even more so when I was Director General. Certainly, without him, I would not have been successful during my time here. I don't know how often I went down to his office to discuss difficult matters with him and seek his advice. Equally often, he would come unannounced to my office amid some crisis or to briefly exchange views.



George van Reeth was a man of remarkable abilities. Just by his physical stature, he could impress his counterpart. For me as Director General, he had two outstanding and essential qualities: he was a very skilled manager; and he was a convinced European. But that we had become friends was equally important for me.

There are numerous examples one could quote of George van Reeth acting both as an excellent manager and as a true European. I'll try to give three examples of each.

He studied civil engineering and subsequently law and political science. He was awarded a law doctorate in 1952. So he was well prepared for a managerial position.

Even before starting at ESRO and ESTEC, he had learned many a good lesson while working for NATO as a legal expert engaged in negotiating and managing aircraft contracts. When he arrived at ESTEC, he immediately had a crisis to handle: the cost explosion of the TD satellite project.

After that, he not only had to handle many crises; he also had to solve them. He was able to set up even the most complicated of contracts with European industry. He understood the technical details as well as the complicated legal aspects. Also of great help to him was the fact that he knew the key people in the European space industry very well and he could speak to them in the appropriate language.

In addition to administering the many projects at ESA, he was masterful at preparing the budget for the coming year and the Level of Resources covering a five-year period. Here he was attentive to even the fine detail and he was certainly able to answer each and every question that came up in the finance committee or finally in Council.

But in addition to his managing of contracts and budgets, he also cared about the staff. Many of the staff members he knew personally. With the help of René Oosterlinck, he was well informed about the staff, not only at Headquarters in Paris but at all the other Establishments too. I was very glad that with him I was able to introduce the yearly event of celebrating the twentieth anniversary of each serving staff member.

That he was a convinced European he showed on many occasions. One example is ESA's industrial policy. He was involved in setting up this policy; and he implemented it. Industrial policy was certainly close to his heart. I had long discussions with him about how to handle this issue, particularly the 'fair return' principle. We were both convinced that this principle was necessary in order to ensure that each Member State would participate in ESA space projects. Indeed, the notion of an industrial policy, starting at ESRO and later at ESA, is enshrined in the ESA Convention and Annexes. Certain provisions were drafted with his help.



At the symposium to celebrate twenty years of the ESA Convention, George van Reeth brilliantly explained ESA's industrial policy. I will quote a few sentences of his:

*“Some people who put forward the solution that we should get rid of what they call the ‘juste retour’ completely argue that this would go in the direction of the Single Act of the European Union. This is altogether oversimplifying things. An equitable participation for each of the Participating States in the benefits of an international venture, particularly if it is a high technology venture, is not only unavoidable; it is desirable. Human nature being what it is, everybody likes to have their fair share; and if human beings occasionally show signs of generosity towards their fellow men, governments never do.*

*“And rightly so; they are there to defend the interests of their citizens. Without the ‘fair return’ principle, there can be no stability in international cooperation. Through it, ESA has avoided critical situations which have arisen during the last twenty years leading to the withdrawal of one or more Member States, an occurrence not unknown in other international ventures.”*

The ‘fair return’ factor continued to be an important question during my term of office as Director General, in particular at the Ministerial-level meeting of the ESA Council in The Hague in November 1987. At that meeting, it was again George van Reeth who had the ability to find the right compromise solutions to the problems arising in applying the ‘fair return’ principle.

At each Council meeting, George van Reeth demonstrated that he was a convinced European. One milestone decision at such meetings was when a unanimous vote was required for approving the Level of Resources. He was able to handle the most difficult delegate and find a solution even at the very last moment.

The preparation of two Ministerial meetings of the ESA Council, in Rome in 1985 and in The Hague in 1987, provides another demonstration of how George van Reeth acted as a true European. These Ministerial meetings were very carefully prepared by the working group. In addition, George and I made many trips together, particularly to The Hague to discuss the details with the Minister there. At each Council meeting, George was sitting next to me, or just behind me, to give help in critical situations. These two Ministerial meetings were quite successful. After it had all come to an end, George and I would celebrate in the evening with a very good dinner.

This brings me to my final point: George as a close friend. We both liked sailing. From George I learned that there are only two

happy days for the owner of a sailing boat: the day you buy it and the day you sell it! We both liked to listen to classical music and we exchanged CDs. I still listen to two CDs of Mozart Piano Concertos which I got from him. But the most important thing here was that I learned from George about French cuisine. And in particular about the wines of Bordeaux. Thanks to his teaching and guidance, I am now regarded as an expert on this – at least in Hamburg!

I regret very much that I was not able to visit him at his home in Italy and taste Italian wines there with him. The last time we saw each other was here in Paris at a meeting on the history of ESA. He was a very strong supporter of the ESA History Project.

George's name is indelibly linked to the history of ESA as well as to the international space community. I will certainly remember him always with tremendous gratitude.

**→ GEORGE VAN REETH  
AND THE SETTING UP  
OF INSTITUTIONAL  
COOPERATION WITH  
INDUSTRY**



## George van Reeth and the setting up of institutional cooperation with industry

by Yves Demerliac

*Secretary General of Eurospace 1967–96*

I speak here on my own behalf, as an old friend and work partner of George's, and only for the period 1961 to 1996, when I retired from Eurospace. I think the word to be underlined in the title of my speech is 'institutional'. Of course, governments did not need Eurospace [the association of European Space Industry] to contact industry. But still they used it to do so. However, Eurospace always ruled out intervening in any manner in the contracts which its members had or wished to have with ESA. Our aim was certainly more political, perhaps more ambitious too.

I met George as soon as he joined ESRO–ESTEC in the early 1960s. ESA had not been set up at that time; formally that happened a little later. My relationship with George was extremely close and positive, though not always harmonious. It was difficult to always have harmonious dealings with George. You knew him and certainly understand what I mean. Yet we had the same objectives and very often similar opinions. The objectives were clear. At the time it appeared absolutely necessary, when ELDO was clearly coming to an end and COPERS\*–ESRO had been so successful, to merge the two into a single space agency. Certainly

one of the aims I had in common with George was to do whatever we could to encourage the merger of ELDO and ESRO into a single agency, which finally became ESA. I am sure that the role of George van Reeth was much more important than mine in this respect. Nevertheless, we pushed in the same direction and this made our relationship even closer. We thought also – looking perhaps more at the political aspects here – that it was absolutely essential for Europe to play a major role in space. This was not clear to everybody at the time. Many people thought that space was a sort of luxury which was not really necessary.



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\* COPERS: European Preparation Commission for Space Research (predecessor of ESRO)

One aspect of this was that George, like me, thought that space was not only a very high-technology oriented activity but also had the great advantage of basically not being a military undertaking. For the young engineers and scientists at that time it was very important to have this incentive of participating in high technology, although of course the strategic aspects of space were soon recognised to be very important and this we all know now.

Eurospace was created in 1961. This date is significant, as it was early on in the history of European space. I should like to pay tribute to the first President of Eurospace, Jean Delorme, who was also President of Air Liquide, and also to my brother-in-law Charles Cristofini, who used to be the President of Aérospatiale and whom certainly many people around this table know or at least have heard of. In 1961, I joined Eurospace as Assistant Secretary General, and in 1967 was promoted to the post of Secretary General of the Association.

Why did I emphasise the ‘institutional’ aspect of the title of my presentation? After all, governments can have direct contacts with industry, and at national level they make use of representative industrial associations such as BDLI [*Bundesverband der deutschen Luft- und Raumfahrtindustrie*] in Germany, GIFAS [*Groupement des Industries Françaises Aéronautiques et Spatiales*] in France, etc. However, space was a new activity, ESA was a new governmental organisation and there was something of a representation gap, there was a need for a collective European industrial institution to discuss with ESA the concerns of governments. This was the precise point at which George and I met and began our cooperation.

Our main mission at Eurospace was twofold: representation of the space industry in general terms, not with respect to specific contracts; and the promotion of space activities in Europe – more particularly European programmes, which is what members most expected from Eurospace. It went on also to promote commercial applications worldwide.

My cooperation with George involved the promotion of European programmes. At that time, in the 1960s, we in Europe were faced with competition from giants: the US and USSR. They invested a great deal in space and had many successes. There was the first Sputnik; there was Gagarin, the first man in space; there was Apollo; the first men on the Moon. Of course this all seemed very ambitious for Europe. Nevertheless it was clear to industry that we should do everything we could to catch up to a reasonable extent. How you define ‘reasonable’ is another matter.

I had very frequent meetings with George. Most of them were completely informal. Perhaps it is time to mention that George

was Belgian. When I thought of old stories when preparing this little speech, I remember that the people with whom I had most discussions at ESA belonged to what I would call the ‘Belgian clan’, that is, George, Jean Arets, René Collette.

There were two main subjects of discussion with George. The first was the drafting of Appendix V [Industrial Policy] to the ESA Convention, and one area that became an absolute priority was the ESA clauses and conditions applicable to contracts. This was a major issue for industry and proved to be a great Eurospace/ESA achievement. Winfried Thoma and Helge Weber and their team prepared the texts. They were sent to us, and then our ‘legal studies’ group, group no. 1, commented on them. And the final result was something that worked. Dr A. Cejka (BDLI), P. Stoffer (Philips), P. Monier (French Electronic Association) and H. Hoffmann (Siemens) were the leading lights of that group.

To look at this from a perhaps slightly wider angle than industrial contracts, I should speak of the support which George provided, of course completely unofficially, for some of Eurospace’s promotional activities regarding space applications. I am thinking here in particular of the contacts I established with the Soviet Union. At the time, in the 1960s, this was a very thorny subject; it was only in the late 1980s, under Gorbachev, that it became easier to exchange views with the Russians. To my surprise, contacts were promising with the Red Army in particular. General Lebed appeared to be extremely open-minded and we even envisaged a common goal: to Europeanise the Soviet Army’s GLONASS project, a sort of Soviet GPS. Of course, this was a controversial subject, and you will understand why van Reeth could not give an official opinion on that activity. Nevertheless, he was very pleased to be kept informed of developments and progress in that area. Remember that he co-chaired with Yuri Rishov a major symposium in Moscow in 1989. This can perhaps be considered one of the first steps in the Galileo project, or at least the inspiration for it, and a significant attempt to involve the European Union.

Eurospace was also very active in another part of the world: Africa. In Cameroon, first of all, we had a contract with the Ministry of Planning and Land Management to study an educational television system for the rural population using the French–German Symphony satellite, as proposed by CNES and BMFT<sup>\*\*</sup>. This was a very practical aim; we were not at all trying to be on a par with the local schools, but simply to have an impact on the price of cultural goods, health aspects, etc. Its originality was, as George underlined, that we went to Cameroon not only with representatives of Eurospace

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<sup>\*\*</sup> Bundesministerium für Forschung und Technologie

industrial members but also with a team of film specialists who tried to teach young people in Cameroon, both boys and girls, how to produce films using the very-well-made brochures that existed at the Ministries of Health, Youth and Sport, Agriculture, etc. This was our ESOPE 1 project. It was funded entirely by the Government of Cameroon. Great technical help was provided by *Télédiffusion de France* (TDF) and Siemens.

Some time later, in the early 1980s, I got in touch with the UAPT (*Union Africaine des Postes et Télécommunications*) and, with funding from the European Commission's DG VIII, a Eurospace team including Satel Conseil, Deutsche Telekom and GTS (an agent of the British Ministry of Industry) carried out a study on a communication satellite capable of covering the whole of Africa. George thought this went in the right direction and encouraged us to continue on that path. He even arranged to provide unofficial but effective technical and influential support from ESA.

Just one word regarding a particular aspect of ESA conditions applicable to contracts. One of the subjects that attracted maximum interest in industry was industrial property rights. We finally managed to reach agreement between industry and ESA on a system whereby the contractors could use information arising from their contracts with ESA freely for applications outside the space field. Industrial policy was also a major subject of interest for industry and we had the famous ESA industry workshops, organised jointly by ESA and Eurospace, where we used to meet at least once a year. Of course, George was deeply involved.

This friendship with George was a great asset and example.

Now let us look at the future. In my opinion as an ordinary Frenchman and reader of *Le Monde*, I think the role of Europe in space does not get sufficient attention. At a time when Europe and space do not appear to be considered a first priority, it would be a good thing to remind people that there is a European organisation called ESA which is a complete success story. After all, the Ariane launcher would probably not exist if there had been no ESA. We all know about the admirable role played by France and CNES, but ESA was a necessity to achieve success. And the ISS with its major German support is also a success.

I think it would be useful that a book be written, more in novel than in historical form, a book that people would enjoy reading and would even be prepared to buy. And it should be written jointly and be properly coordinated by the main actors: all the people who have spoken so well about George today around this table. Such a book would strongly beat the drum for European space cooperation in an exclusively positive manner, thus generating confidence and hope.



**→ GEORGE VAN REETH  
AND THE BUILDUP OF  
THE CONTRACTING  
RULES FOR ESRO/ESA**



# George van Reeth and the buildup of the contracting rules for ESRO/ESA

by Winfried Thoma

*Head of ESA Contracts Department 1976–98*

I started my career in 1961 as a young lawyer at the German Defence Ministry. They sent me to Koblenz to the Defence Technology & Procurement Office, where I worked on an international programme: the F-104G Starfighter. This was a project involving Belgium, Germany, Italy and the Netherlands, managed and controlled by the NATO Starfighter Management Office. George van Reeth joined this undertaking at the end of 1962. He could have given me some useful advice indeed. But I left Koblenz in 1963, when I was seconded to the Foreign Office to join the German Delegation at NATO, at its Porte Dauphine/Paris headquarters. It was there that I met Yvonne van Reeth and Anne-Marie Remondin for the first time. I left the national civil service in 1967 and joined ESRO as Contracts Officer at ESTEC. Roy Gibson and George were on the interview board. They took me on (which I think was a big mistake!).

George had joined ESRO at ESTEC in 1964. There, in the temporary building and without secretarial support, he typed out the first contracts as well as the General Clauses and Conditions for ESA Contracts. This remains a remarkable document, still used to this day. The Conditions are modern and flexible, leaving enough scope to accommodate ESA's special requirements for handling large-scale space technology development projects.

A very important innovation as far as other procurement regulations were concerned was to leave the intellectual property rights to the contractor – with the proviso that ESA and the Member States must be granted licence rights. Another interesting aspect was the introduction of provision for arbitration. At NASA, the European Union or at national level, this would be impossible. I can recall lengthy discussions on jurisdiction with NASA; I seem to recall these being on the Spacelab contract. NASA was insisting that US federal law and US jurisdiction



should apply. On the European side, we could not accept this imperialistic attitude. In the end, George proposed that, in the event of disputes arising, any final settlement should be decided jointly by the two Directors General. After much hesitation, NASA accepted this proposal. This was a typical van Reeth approach: not to stick to a rigid position, but to find a way out.

Recourse to the legal remedy of arbitration is protection for the contractor. In national courts, ESA has diplomatic immunity and therefore could have avoided this. However, in practice ESA has never had to fight a legal case with contractors in arbitration. I think that this was completely in the spirit of George's way of doing things: find workable solutions without giving up one's own objectives. He was a true negotiator.

The Contract Conditions are still the Contract Officer's Bible. As a side point, the European Commission is currently endeavouring to draft contract conditions to be applied in all 27 EU Member States. I can only wish them the best of luck! If George was still with us, he would surely be called upon to serve as advisor or consultant to help work this out.

The Contracts Department deals with three partners:

- industry,
- Member States,
- internal technical staff (initiators).

Concerning industry, George took particular interest in the use of contracts incorporating incentive clauses. These combine price, technical performance and schedule terms to form a challenging package for the contractor. We have used such clauses with great success.

The European Space Agency's relations with its Member States were placed on a new footing with the setting up of its Industrial Policy Committee. As Director of Administration, George participated actively in the decision-making process. This is sometimes difficult, because with firms in competition for the same contract there is usually only one winner.

Finally, a word on relations with technical staff. ESA is basically a technical and programmatic organisation. A learning process is necessary in order to build up an understanding of contractual and procedural matters. Why should one not just buy what one saw at last weekend's trade fair? In this context, the creation of the

Adjudication Committee\* obliged all projects and initiators to follow the rules of the game.

In 1972, George left the Contracts Department to become ESA Director of Administration. I took over from him as Head of the ESTEC Contracts Division. He always looked on Contracts as being one of his favourite 'children'. In the meantime, the children have grown up, but they remember him as being a good father.

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\* The Adjudication Committee is the Director General's internal body, composed of representatives of all Directorates, which verifies that proposed procurement actions are in conformity with the Agency's programmes and policies and that the applicable ESA rules are followed.



**→ A PERSONAL  
APPRECIATION OF  
GEORGE VAN REETH'S  
LEGACY AT ESA**





## A personal appreciation of George van Reeth's legacy at ESA

by René Oosterlinck

*ESA Director of Galileo programmes and navigation-related activities 2008–10, and Head of Personnel and Site Services Department 1984–98*

Ladies and Gentlemen,

The previous speakers have shed light on George van Reeth's career path and shared with us their recollections of their professional and personal dealings with George. This means that the past has been very well covered now. I have therefore chosen to cover the present. One question that often comes to mind, when talking about or remembering those who have left us, is this: what remains today of what they did? I think this is an important question. Important not only for those present here tonight who wish to remember George because they were close to him during his lifetime, but also for the European Space Agency. I am a firm believer in the idea that an organisation becomes stronger when its staff share not only common goals and values but also its history.

A period of 20 years has now elapsed since George left the Agency. This means that since then, a new generation of engineers, scientists and administrators has joined ESA. When we take a closer look at ESA's current population as a whole, we realise that, at the very most, some 20% would have known George when he was active,

and of them, most probably only a fraction would have met him at that time. The situation is different when we look at the higher management level, i.e. the A6 population. Roughly speaking, some 50% were in post at that time and several of them knew him – some better than others. They were either part of his Directorate of Administration or were involved with the Staff Association. It is also for the many who did not know George that I am talking today.

Since his leaving ESA, three new Directors General have headed the Agency: first, Jean-Marie Luton, then Antonio Rodotà and now Jean-Jacques



Dordain. Jean-Jacques joined ESA at a time when George was still in post and very active. Four Directors of Administration followed him: Adalbert Plattenteich, then Daniel Sacotte, then Hans Kappler and finally Ludwig Kronthaler. With all these changes, with each newcomer as usual looking to alter and adapt organisations and practices, is there anything left that can be attributed specifically to George?

Before searching to find precisely what remains of his time here, I wish to elaborate a little on this question of what lasting legacy we can attribute to George. People very often believe that events depend solely on individuals. That were it not for such and such an individual, then some things would simply not have happened. The reality is altogether different. Even for famous people, like Einstein, who made such a significant contribution to science, other scientists had paved the way beforehand – in this case Lorentz, Poincaré and Minkowski. This does not mean that Einstein did not take the decisive step, but others would probably have done the same, albeit much later. I am saying this because, in some cases, an individual may have a good idea, but lack the necessary experience or power to put it into practice, while in other cases, an individual may possess the necessary experience and power to put the ideas of others into practice. I think that George's achievements cover both categories. On the one hand, he had the ideas and could convince those who had the power to implement them; on the other hand, whenever someone else had a brilliant idea, he was prepared to do everything possible to ensure it was implemented. I am in particular thinking of his early days in the Procurement Department. At a later stage, when he was Director of Administration, he had a real feel for which ideas were feasible and worth pursuing.

So ultimately, what is George's enduring legacy?

It was difficult to put the following in order of priority, since all these achievements have their merits, but let me start with the negotiation procedure. Up until 1984, the Central Staff Association Committee, who represent staff interests, had very little influence when Administration wanted to change the Staff Rules. Realising that this needed to change, George encouraged some of his staff to put proposals to him for improving the situation. After lengthy discussions not just with the Staff Association but also with the Member States meeting in the Administrative and Finance Committee (AFC), a negotiation procedure was adopted. This procedure has now worked for some 25 years without the need for adaptation. It has been, and still is, often quoted as an exemplary model for handling staff/Administration relations.

A second important achievement was the setting up of the Young Graduate Trainee (YGT) and Advance Recruitment schemes.

Both have been copied by other organisations since. When in 1985 Professor Lüst gave fresh impetus to the Agency, leading to the need to recruit around 1000 staff over a few years, these two schemes were put in place thanks to George's convincing advocacy in the AFC and Council. Since then, over 1000 engineers, scientists and some administrative staff have gained their first professional experience at ESA through the YGT programme. It remains one of the most popular schemes for young space engineers and scientists in Europe. It is now not so much a recruitment pool for ESA as it was in the 1980s but more one for industry.

Another important role George played at ESA concerned the introduction of informatics for administrative functions, including word-processing and what is now to some extent done via Lotus Notes. In this field, many things have indeed changed. But the fact that ESA today is very well equipped in IT terms is certainly partly due to George. He was also instrumental in the development of ESRIN, although what is achieved today goes far beyond what seemed possible at that time.

The next field in which George played an important and sometimes crucial role is education. This brings me to the International Space University (ISU). When in 1987 Ian Pryke, at that time Head of ESA's Washington Office, sent me a short paper outlining the ideas for what was to become ISU, I had some doubts. Not so much with respect to the purpose, which I found very attractive, but more from a feasibility point of view. When I went to see George with the paper, he shared my opinion on the proposal's value, but he was also immediately prepared to go for it. We met the founders on the occasion of an International Astronautical Federation (IAF) event. Immediately thereafter, he prepared an action plan on how ESA could support the founding of this university. It was clear from the outset that without sponsors like ESA and NASA, the chances of success would be almost nil. Having followed ISU since the beginning, I am convinced that without George's personal involvement it would not have survived. When he retired from ESA in 1991, he became its President. This was not an obvious move: ISU was still in its embryonic phase, with enormous financial problems. So it was certainly not for the money, since there was none! But George believed in the project. He also realised that urgent steps had to be taken to convert what was primarily a summer school activity into a permanent institution awarding master's degrees in space studies. These major steps were taken by the time he left ISU.

Lastly, there is the more intangible heritage that he passed on to those working closely with him. First, his capacity to get quickly to the point by synthesising complex issues in a few phrases. In such

cases, he loved to use Latin phrases. Clearly, Latin allows one to express in a few words concepts which in most other languages would require lengthier elaboration. Let me illustrate this with two examples. The first was during a discussion with the external Audit Commission which, having challenged the cost of some furniture ESA had purchased, was requesting a price comparison, to show that Administration had paid too much. George listened carefully and then started by saying: *omnis comparatio claudicat* (comparison is not an argument). He added that comparing from the start was prejudging from the start. The matter was dropped immediately.

A more personal experience, which I will never forget, happened when I had been Head of Personnel for only a few weeks. I had sent him a request for authorisation on a certain issue and he sent it back to me with, in his own handwriting, the words: *de minimis not curat praetor*. In other words, “don’t bother me with minor matters”. What he meant was: this is now your job, not mine! The latter example was very important, since it taught me and many others that delegation of tasks is only possible if there is also delegation of power to decide. Many of us have followed this example by empowering with responsibility of their own those who used to work, or are currently working, for us.

And so to conclude this personal appreciation of George’s lasting legacy to us all, I would point to his management approach and to his love of the succinctness of Latin. I feel sure that all this remains very much alive in the hearts and minds of many.

→ **IMPROMPTU SPEAKERS**

**ariane**  
le lanceur de l'Europe  
Europe's launcher

earth observation  
**meteosat**

**éteosat**



## Impromptu speakers

### Hans Kaltenecker

*ESRO/ESA Assistant Director for International and Legal Affairs,  
1974–79*



Just to introduce myself, I am Hans Kaltenecker, former Head of Legal and International Affairs at ESA. I served for many years under both Roy Gibson and George van Reeth. Further to what Mr Demerliac said and just to refresh our memories: the rules on intellectual property rights, a matter that has been mentioned twice here, had already been established back in 1965 by a working group under the European Preparatory Commission for Space Research (COPERS). Indeed, I think it is appropriate to say a word about those very early days of the European space organisations. With Alexander Hocker as chairman and

Pierre Auger as executive secretary, we really did make significant progress in those early days which paved the way for Europe's future space programmes. I fully agree with Mr Thoma that the decision to retain licence rights but leave the intellectual property rights to industry was a good one.

When George and I last met in 1997 in Noordwijk, I asked him: What are you doing, now that you have retired? He replied: Well, I'm looking after my olives in Tuscany. We have had a lot of fun with that. Going from space to Earth – and cultivating olive trees! Well, Yvonne, now you are the guardian of the olive trees!

## Raymond Orye

*ESRO/ESA Head of Ariane Department 1973–96*



For those of you who don't know me, I am Raymond Orye. I used to be in charge of ESA's Ariane Programme. I had the privilege and pleasure of working with George van Reeth on a number of matters. But I will be very brief!

I was just looking at the photograph. Seeing Ariane 4 there, I can tell you that George really did a lot for the European launcher.

In mentioning just three things, I will start by summarising what George did regarding Intelsat. And that goes for Roy Gibson too, who was part of our joint efforts with CNES to persuade that company to buy

Ariane. This was some time ago, and it was a big fight. We got a lot of help from all the Delegations, from the European telecom people who were delegates on the company board, and of course from George. With his very considerable knowledge of contracting, he gave us sound advice that worked. I'd just like to reflect on where we stand now, where it all got us and Ariane. Incidentally, I am speaking neither on behalf of Arianespace nor CNES; I am really here to speak about what George achieved for the broader space community at large. We initially got one Intelsat launch, then we managed to get three, then another after that, and so on. Jean-Yves Le Gall reminded us that the Intelsat rep was there at the launch on 26 November 2010 and that this was the 51st Ariane launch of an Intelsat satellite; not bad. So much for George and Intelsat.

Secondly, a word about setting up Arianespace. This was initially undertaken to some extent outside the Agency. And at the beginning this was indeed a concern. Then everyone realised that things had to be done under Agency auspices. Here again, George was extremely helpful and certainly steered things in the right way. He was helpful also in discussions with our partner on drafting an ESA/Arianespace Convention. Because, after all, someone had to ensure vis-à-vis the ESA Member States that the rules were fair, that the European launch services operator had not only rights but also obligations. George certainly helped very much and we all owe him a lot.



Lastly, let me mention what we called ‘the rules of the road’. Back in 1984, a US company filed a petition with the US Government alleging Arianespace had engaged in unfair trade practices by being unduly subsidised by the French Government and ESA. The US asked us to provide full details of how things were being done: what we did finance, what we did not finance, what Arianespace had to do. George came up with this great retort: “We for our part are quite willing to do this, provided you do the same. If you disclose how you buy your launchers, how you’re going to cost your Shuttle [because they wanted to sell launchers to commercial users], then we can do that too.” We had discussions with the Americans on rules of the road. To us all, this was a great challenge. But it was also great fun. Because we ultimately got to the point where the Americans – and it was President Reagan himself who signed the letter (which I still have somewhere) – basically conceded: “What you are doing in Europe is not very different to what we are doing in America.” So he eventually said to the US company, which as I recall was Transpace (originally Arianespace’s name): “We can’t take this complaint any further, we can’t take legal action against the Europeans for what they’re doing with Ariane.”

So I would say in conclusion that the whole community is very much indebted to George van Reeth for all that he did for Ariane.



**→ EXCERPT FROM AN  
INTERVIEW WITH  
GEORGE VAN REETH  
IN 2002**



## Excerpt from an interview with George van Reeth in 2002

*This is a transcript of an interview that George van Reeth gave to Cécile Mariotte from CNES/EG in Kourou on 28 February 2002, on the occasion of the Envisat launch. In it, he reflects on his experience and involvement in space. The colloquium audience was given an opportunity to listen to this extract on 11 February 2001.\**

### Original (in French)

**...Si je vous demandais de faire un bilan de l'Europe spatiale ?  
Votre bilan...**

Un bilan ? Je crois que le bilan est certainement positif. Le bilan, ça veut dire quoi ? Si l'Europe n'avait rien fait dans le spatial, c'est inimaginable ! On ne peut même pas le penser maintenant ! Moi je crois que l'Europe, je ne suis pas seul d'ailleurs, Time Magazine a dit la même chose, que l'aventure européenne en général, spatiale, est un grand succès et comme je disais, ça n'est pas seulement moi qui l'ai dit, Time Magazine a dit que ça et Airbus sont les deux grandes choses de l'Europe, ils ont tort, parce que le CERN est quand même quelque chose aussi, mais enfin c'est plus scientifique que technique.

**Et pour vous qu'est ce que vous a apporté en fait le spatial ?**

Oh pour moi ça n'est pas possible à dire, parce que pour moi c'est ma vie. C'est ce que j'ai vécu et je n'ai à aucun moment, surtout au début quand j'étais à l'ESTEC, je m'amusais tellement à faire ce que je faisais, que j'étais étonné qu'on me payait en plus pour le faire. C'est vrai d'ailleurs et de temps en temps je me disais et en plus ils me donnent de l'argent...

Mais bon, on ne peut même pas discuter : était-ce nécessaire de faire de l'espace en Europe oui ou non, parce que c'est inimaginable qu'on ne l'aurait pas fait. Est-ce que j'ai été content d'être dedans ? Oui, pour moi ça me fait plaisir, je crois que, sans être particulièrement fier ou quelque chose, que j'ai fait un bon boulot à un certain moment ou à un autre. Maintenant les résultats : il faut distinguer – il ne faut plus distinguer parce que c'est fait – l'Europe a fait la plus grande partie, la majeure partie certainement de ces efforts

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\* George van Reeth also recorded two interviews for the ESA oral history project. These were conducted by Dawinka Laureys on 11–13 March 2002, and Nathalie Tinjod and René Oosterlinck on 19–20 September 2008. The transcripts of these interviews are online at the ESA Oral History website of the European University Institute: <http://www.eui.eu/HAEU/OralHistory/pdf/INT052.pdf> and <http://www.eui.eu/HAEU/OralHistory/pdf/INT563.pdf>

*With Cécile Mariotte,  
CNES/CSG in Kourou on  
28 February 2002*



dans l'espace en communauté, on l'a fait ensemble. C'est vrai que le CNES a fait certaines choses seule, les allemands ont fait certaines choses seuls, les anglais aussi, mais pour la plus grande partie, c'est l'Europe qui l'a fait ensemble. Alors ma façon de voir ça c'est me demander : Prenons tout l'argent que chacun des pays a investi dans l'Europe et dans l'effort spatial. Est-ce qu'il y a un qui peut dire : si au lieu de les mettre sur le plan européen et de participer à l'effort commun, j'aurais mieux fait de le faire tout seul, j'aurais eu plus de résultats et plus de succès ? Eh bien non, il n'y en pas et ça va pour tous. On peut avoir un doute sur la France, parce que la France a quand même investi pas mal, avec des résultats au plan national définitivement, on peut se rappeler le mot de Davignon si on veut, mais enfin je ne crois même pas que la France aurait eu un « cost benefit » supérieur s'ils avaient dépensé tout ce qu'ils ont dépensé tous seuls. Il est certain que, il n'est pas certain, il est probable que Ariane n'aurait pas existé telle qu'elle est maintenant parce que à nouveau, au changement entre la mort de Pompidou et le Ministre des Finances devenant Président, le sort d'Ariane a été comme ça, a été très très très douteux et on m'a dit du CNES que l'argument qui finalement avait convaincu Giscard d'Estaing de continuer était de ne pas rompre un arrangement ou un accord européen qu'il avait fait dès le début de sa Présidence donc, même là, je crois que la France a finalement profité autant, si pas autant, quand même pour une grande partie, d'avoir collaboré avec les autres, ce genre de truc ne se fait pas seul, et comme je le dis, si on le faisait seul, je ne suis pas sûr que ça marcherait mieux.

**Est-ce que vous avez une vision sur l'avenir dans le domaine spatial ?**

Si, oh si non, je n'ai pas de vision, mes visions se limitent à des choses bien terre à terre ! Je crois que, nous, ceux qui ont fait l'espace jusqu'à maintenant devront passer par une période d'adaptation fondamentale. Vous savez, on était les mecs, on était les maîtres, on était les plus grands, nous on travaillait dans l'espace, l'espace... Ah bon ? c'est ce que les russes ont fait, c'est ce que les américains ont fait et vous faites ça et vous allez lancer des... quels types formidables que vous êtes là-dedans ! Bon j'exagère, mais c'était un peu l'approche du public, de la presse et de tout le monde, qu'est ce que c'est formidable que vous faites ça... Le formidable est devenu quotidien. Les satellites de communications, tout le monde peut en faire maintenant, enfin pas tout le monde, mais on en fait, on n'a plus besoin des Agences pour faire ça. Je crois qu'on va passer par une période, ou on pourrait passer par une période ou on dit : mais au fond ces Agences on n'en a plus besoin du tout, l'industrie peut tout faire. Ça n'est pas la première fois, c'est déjà arrivé. Ce sera aussi une erreur, mais que le rôle des Agences ne sera plus le même dans les dix, vingt ans à venir, comme ça a été dans la période glorieuse quand tout le monde te saluait dans la rue en disant celui-là il travaille dans l'espace, c'est un peu exagéré, mais c'est tout de même ça, c'est un fait ça ne va pas durer ...

**Translation into English**

[...]

**If I asked you to give your overall assessment of Europe in space, how would you sum things up?**

How would I sum things up? I would say that the overall picture is positive indeed. But what does that basically mean? Well, what if Europe had done nothing at all in space? You see, it's unimaginable! One couldn't even think such a thing, nowadays. Personally, I believe – and indeed I am not alone here, as TIME magazine has said much the same thing – that, speaking generally, Europe's space endeavours to date are a huge success story. And again, I am not alone in saying so. Actually, TIME claimed that space and Airbus are the two great European achievements. Well, in fact they are wrong, because there is also CERN, although admittedly that organisation is more scientific than technical.

**And as far as you are concerned, what has your involvement in space meant to you?**

Oh, for me personally, it's just not possible to put into words, because it's my whole life. It has been a lifelong experience. I especially have in mind the early days when I was at ESTEC. I so much enjoyed doing what I was doing that it did seem amazing that, on top of it all, I was being paid for doing it. And yet it's true. And from time to time, I would say to myself: and on top of it all, they're actually paying me a salary!

But anyway, was it really necessary to do space in Europe, yes or no? It is not even a matter for discussion. Because not to have done so would have been inconceivable. Was I glad to be a part of it all? Yes, that is indeed a source of much satisfaction. Without wishing to appear particularly vain or whatever, I do believe that I did a good job at times. Now, when it comes to the results, a distinction needs to be drawn between 'national' and 'European'. Well, in fact, no longer, because this has already been done. It is Europe that has taken on the biggest part – the major part, certainly, of the efforts in space, on a collaborative basis; we have acted together. It is true that CNES has done certain things on its own. The Germans have done certain things on their own. The British too. But for the most part, it has been a joint European effort. So how do I view all of that? Well, I ask myself this: if we take all the money that each of these countries has invested in Europe and in the space effort, I wonder if there is a single one of them that can say: instead of pooling those resources at European level and taking part in that joint effort, we would have done better to go it alone, we would have had better results and greater success. The answer is no. No one is saying that. And that goes for everyone.

There might be doubt about this in the case of France, since it has after all invested a good deal, with results to show for it at national level ultimately. One might call to mind Davignon's thoughts on the subject.\*\* But after all is said and done, I don't myself believe that even France would have had a higher 'cost benefit', had it invested all it had to spend while going it alone. Certainly, well let us say probably, Ariane would not have existed as it does today. Because at the changeover between the death of Pompidou and the Finance Minister, Giscard d'Estaing, becoming President in 1974, the fate of Ariane was very much left hanging in the balance. I was told at CNES that the argument that finally clinched it and convinced Giscard d'Estaing to continue with the European launcher programme was his disinclination to break a European arrangement or agreement

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\*\* Étienne, Viscount Davignon, former vice-president of the European Commission



that he had concluded at the very start of his presidency. So, even here, I believe that France has ultimately benefited as much, or at least to a large extent, from having teamed up with all the other European players. You know, the fact is, you just don't do this sort of thing on your own. And as I say, if one did go it alone, I'm not sure that things would necessarily work out better as a result.

**Do you have a vision of the future for space activity?**

Yes and no. I do not have such a vision, because my vision of things is very much limited to down-to-earth matters! I do believe, however, that we who have been doing space up until now will have to go through a period of fundamental adaptation. You know, we used to be the guys who mattered, we used to be the ones in charge, we used to be the greatest. We were, after all, working in space, actually out there in space... "Oh, really? That is what the Russians have been doing. That is what the Americans have been doing. And you Europeans are doing that? And you are going to be doing this or that launch? Fantastic! You're really tremendous, to be doing all that!" Well, I exaggerate slightly. But that is a little how we used to be viewed, in the eyes of the general public, the press, indeed everyone. "It's so tremendous, what you are doing!"

But nowadays, what used to be seen as tremendous has become part of our everyday lives. Take telecommunication satellites. Nowadays, everyone can do this. Well, not exactly everyone. But there are now very many players in the telecoms game, and we no longer need space agencies to do this. So I believe that we could be heading for a period when people will be saying: "at the end of the day, surely we don't need these agencies any more at all, industry can do everything itself." And not for the first time. We have already been here before. Well, this will doubtless here also prove to be not entirely accurate. However, that the role of the agencies will no longer be the same in ten or twenty years' time as it used to be in that glorious past, when everyone (a slight exaggeration!) would greet you in the street, recognising you as "the space chap"... Well, I can say for a fact that big changes are definitely heading our way.  
[...]



**→ CLOSING ADDRESS**



## Closing address

by Yvonne van Reeth

Professor Lüst, Mr Dordain, Mr Gibson, ladies and gentlemen,

I am deeply touched by all that I have just heard, coming from people who, I know, were close friends of George van Reeth, my husband. Hearing all this takes me back to the past, and I remember just how much George committed himself heart and soul to the field of activity which was so dear to him: Space. From its starting point at ESRO through to his leaving the Agency in 1991, his professional career was without doubt for him the most intellectually flourishing period of his entire life.

For two more years after that, he further devoted himself to the setting up and development of the International Space University. Then he chose to retire to Tuscany – the cradle of civilisation, as he used to say – where we had bought a house a few years before. But even after his retirement, he still participated in the elaboration of the ESA History Project.

In his new life in Tuscany, George became something of a ‘gentleman farmer’, in the sense that the property had nine hectares of land, most of it being two huge fields with olive trees. These had to be completely cleaned up and planted anew. That took a few years, but finally we ended up with nearly 800 olive trees. Every November, friends would come to do the harvesting – among them René and Nathalie Oosterlinck, and Jacques Puech, and every year more

people wanted to come *per la raccolta delle olive*, with George cooking fantastic meals. The first years we were six or seven, but last November, we ended up 17, enjoying the olive-picking – even under heavy rain this year – but most of all enjoying being together, talking, laughing, eating and drinking Chianti wines, and, this time, remembering George.

Living in this isolated little village of eight or nine houses, we had the good fortune to be surrounded by people of different nationalities – Italian, American, Swiss, British – which made all our parties multilingual gatherings. A year ago we even had the honour of





*With the King and Queen  
of the Belgians, and  
Mr and Mrs K De Gucht*

being visited by the King and Queen of the Belgians, thanks to the former Belgian Minister of Foreign Affairs, Karel De Gucht, who owns a property next to ours.

George was also busy as a member of *La Lega del Chianti*, an association whose aim is to promote the Chianti region in various aspects, among them the wine production. Every month its Captain General, Il Barone Giovanni Ricasoli Firidolfi, would organise a dinner during which one of the Chianti winegrowers would be invited to come and promote his own wine. The Barone, who also produces his own wine in his Castello di Cacchiano, is a cousin of the Ricasoli family whose ancestor, Bettino Ricasoli, famously established the composition of the Chianti Classico around 1835. We thus tasted many of the best Chiantis and met some lovely people during those dinners, such as Robert Mundell who won the 1999 Nobel Prize for Economics and who owns a castle near Siena.

Life there was peaceful and pleasant. We were well accepted by the local population living in the small town nearby, where we went shopping several times a week. George was known as *l'Ambasciatore*, the Ambassador, probably because right at the beginning when we bought the house, somebody from the village saw a car with CD number plates and gave him that title. And even now, when people talk of George to me, they still refer to him as *l'Ambasciatore*.

That said, George spoke often, and with some nostalgia, of his years at ESA and of the colleagues he had worked with there and who had become his friends: Reimar Lüst, Roy Gibson, Jean-Jacques Dordain, René Oosterlinck, Mohammed Dahbi, and so many others.

When George passed away last August, nearly twenty years after leaving the Agency, I received the condolences of over 150 people, mainly from ESA, ISU, Delegations, industry, and everybody's memories of him were so fresh in their minds that it seemed as if they had last seen him only the day before.

I would now like to add a personal comment, just to say that what always fascinated me about George was that he was always at ease whatever the situation, be it a complicated meeting with industry where money was involved (he was a marvellous negotiator) or discussions on philosophy, music, history, politics, good food or good wine. He had knowledge of – and an answer to – everything. He had a very good sense of humour, he was generous, and, right up to the end, all those around him loved him.

George is buried in Italy in the small cemetery of the village where we lived, near his house and his olive fields.

Thank you so much, Professor Lüst, for having taken the initiative of organising this event to honour the memory of George. Thank you Director General, Mr Dordain, and my special thanks to Mr Gibson, who cancelled a birthday party with his great-grandchildren in order to attend. Thanks to all those who have spoken of all that he did, and indeed, my thanks to everyone who has taken part in this commemoration.

Maybe George is here, somewhere above us, looking at all his friends, thanking them and saying: OK, let's have a glass of champagne, now!

Thank you.





**→ TRIBUTES FROM  
ABSENT FRIENDS**



## Tributes from absent friends

*A number of friends and colleagues who were unable to attend the colloquium sent tributes and messages. These were displayed at the colloquium.*

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24 December 2010

For Mr Karlheinz Kreuzberg:

Thank you for your kind invitation to the ESA event February 11 2011 in honour of the late George van Reeth. I regret we will be unable to attend, as Mrs. Wood and I will be in Laos at that time. Please convey our respects and appreciation to M. Dordain, and our best wishes and condolences to Madame van Reeth. George van Reeth's contributions to the early years of the International Space University were of great value; his leadership was a significant factor in ISU's overcoming many obstacles. Mrs. Wood and I valued our friendship with the van Reeths.

Sincere regards,

Peter W Wood

*Chairman (Retired), Board of Trustees International Space University*

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29 January 2011

*Jean-Pierre Causse remercie le Directeur Général J.-J. Dordain de son invitation à participer à l'hommage à George van Reeth. Il y aurait très volontiers participé, ayant bien connu et apprécié George dès la fin des années 60, à l'ESRO comme à l'ELDO. Malheureusement, il ne sera pas à Paris ce jour là et prie le Directeur général de bien vouloir l'excuser.*

Jean-Pierre Causse

*Deputy Secretary General of ELDO 1969–1973 and Head of the Spacelab Programme 1973–74, ESRO*

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31 January 2011

Dear Mr. Oberlechner:

I just read, after two weeks out of the office, the kind invitation sent by request of Yvonne van Reeth. I would like that you transmit, please, my sincere apologies for not being able to reschedule my agenda and make it to Paris, to Yvonne, to the DG, and to all of you, members of the ESA family. Certainly George was a towering figure (and not just in the physical sense) in the organisation of space activities in Europe, and like any other important personality he had his lights and shadows, but the former outnumber the latter. I would like to add my homage to his memoir. Thank you and kind regards.

Alvaro Azcarraga  
*IAF President 1991–95*

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31 January 2011

Hallo Mr. Oberlechner!

Thank you for your mail and thank Yvonne van Reeth for inviting me to the colloquium for her late husband. Unfortunately I will be on that date in the United States. I am very sorry to miss the event which I would have liked to participate in. Because George was my colleague with General Aubiniere in the last two years of the ELDO Organization in Paris. It was a difficult time. But we were a very good team! I will never forget the good cooperation with George in the time of the creation of ESA, the development of the new launcher EUROPA III and the search for the European participation in the Post Apollo Program. Your pictures bring back a lot of memories! I wish you much success with the colloquium for George. I am also sending my best regards to Yvonne van Reeth.

From Bremen, sincerely yours

Hans Hoffmann  
*Technical Director, 1969–1973, ELDO*

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Feb.7, 2011

To. Mr. Jean Jacquesa Dordain, Director of ESA  
and Mrs. Late George Van Reeth

I appreciate very much to the invitation of Mr. Jean Jacques Dordain, Director General of European Space Agency, for the commemorative event in honour of the late George Van Reeth.

It was with a profoundest grief that I learn that Dr. Van Reeth has passed away last year, remembering who was indeed a great person promoted the Space Science activities not only in Europe, but also in all over the world, making collaborative scheme.

I discussed and have become also personally close with him at the time of the International Space University, Kita-Kyusyu in Japan, with deep impression of his personality and activities, and admiring what he has been acting.

I am now remembering nice days with himself and Mrs. Van Reeth, in Kyusyu, Tokyo, in Strasburg, and US and finally the visit to his nice home in Italy.

I have been dreaming if I could visit again to his house in Chianti, but quite regretful we lost the great person in the Space Organization in the world. Besides I regret very much that I am prevented by indisposition from attending the commemorative event with sending just my warm wishes.

With Best Wishes

Jun Nishimura  
The Former Director General, ISAS/JAXA,  
Emeritus of the Board Member of ISU.

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1 February 2011

Mr. Kreuzberg:

I am grateful for the invitation to attend the February 11 commemorative event in honour of George van Reeth, and I regret profoundly that I will not be able to attend. I greatly appreciated George on the professional level, and regarded him as very good friend. He was instrumental to Canada's successful participation in European space programmes, and there are many of us in Canada who will miss him.

Jocelyn Ghent Mallett

*Former Director General, Policy and Planning of the Canadian Space Agency, Delegate to ESA Council 1980–90*

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8 February 2011

Yvonne –

Thank you for your message and quick response. I was not aware of the commemorative event for George and do truly wish I could be there. Though, as you noted, Singapore is quite a distance away. Please let me know how the event goes and let the people I would know (Walter, Rene Oosterlinck) that I will certainly be there 'in spirit' and raise a glass to George as well,

Patrick French

*Former member of ISU*

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→ CURRICULUM VITAE





## **Curriculum vitae**

### **George P. van Reeth (1924–2010)**

George Pieter van Reeth, a Belgian national, was born on 29 August 1924 in Herselt (Belgium).

He was first educated in the classics (Greek and Latin), then studied civil engineering and subsequently law and political science at the Catholic University of Louvain. He obtained a Doctorate in Law in 1952.

#### **1953–1962**

He started his professional career as a barrister at the Antwerp (Belgium) Bar and specialised in commercial and maritime law; in this capacity he was advisor to various official bodies and firms engaged in international trade.

#### **1962–1964**

From 1962 to 1964 he was employed in the NATO Starfighter Management Office (NASMO) in Koblenz (Germany) where he negotiated and managed contracts for the purchase of electronic equipment for the Lockheed F104 Starfighter and monitored the European production of this equipment.

#### **1964–1972**

In 1964 he joined the European Space Research Organisation (ESRO) to organise and head the Contracts Service at ESTEC (the European Space Research and Technology Centre), which had just started to operate. He introduced new forms of contracts for the first ESRO satellite programmes (ESRO I and II, HEOS-1 and 2, TD-1 and 2). In particular, he adapted incentive contracts and industrial management methods as practised in the US, to a specific European environment. He was instrumental in defining and implementing an industrial policy adapted to the requirements of ESRO and later of ESA. He played an important role in the setting up of the European industrial consortia (COSMOS, MESH and STAR) which were in those years among the first European joint ventures in the area of high technology.

#### **1972–1975**

In 1972 he became Administrative Director of the European Launcher Development Organisation (ELDO) and in April 1973 its Acting Secretary General. As a result of the European Space Conference in July 1973 in Brussels, and following the resignation of Robert Aubinière as Secretary General of ELDO, he was entrusted with all formalities relating to the winding down of the Organisation, and secured the smooth integration into ESA of the ELDO staff formerly involved in the Europa programmes.

At the same time he was intensely involved in the drafting of the ESA Convention which led to the creation of a single Agency, ESA, with its Headquarters in Paris.

**1975–1991**

In 1975 he was appointed Director of Administration of ESA, based in Paris.

In addition to his duties in the administration of a large International Organisation like ESA, in particular overall responsibility for the budget and procurement, he was personally involved in all aspects of European space policy in general and notably of international relations and industrial policy, including the equitable distribution of contracts among Member States. He also played an important role in defining relations with other space organisations, such as NASA, and conducted many negotiations at international level.

He retired from ESA in December 1991 after a final participation in a Ministerial Meeting in November 1991.

**1988–1992**

He was instrumental in setting up the International Space University (ISU), by transforming the ideas of the founders into reality after meeting them at the IAF congress in Bangalore in 1988. In 1992 he was elected President for a two-year mandate.

**1991–2005**

He took part in the ESA History project.

**Affiliations**

President of the International Astronautical Federation (IAF) (1988–90)

Vice-President of the Committee on Space of the Space Law Section of the International Bar Association (IBA) (1987–89)

Member of the International Bar Association (IBA) Section on Business Law

Member of the International Academy of Astronautics (IAA)  
Associate Fellow of the American Institute of Astronautics and Astronautics (AIAA)

**Awards**

Decorated with the *Légion d'Honneur (Chevalier)* by Hubert Curien in 1993

*George van Reeth receiving the medal of 'Chevalier de l'Ordre national de la Légion d'Honneur' from Hubert Curien at a ceremony in ESA Headquarters in Paris on 5 May 1993.*



## **Publications**

Publications on:

- Contract Incentives as a Management Tool
- Large Space Programmes Management
- ESA's policy on Industrial Property Rights and Patents and, in particular, its differences from US practices
- Space and Insurance
- Reflections on the quest for International Cooperation

He participated and gave presentations in numerous colloquia and symposia organised by technical and scientific organisations involved in space activities, such as the International Astronautical Federation (IAF) and the American Institute of Aeronautics and Astronautics (AIAA), and was the ESA representative in several conferences organised by NASA, industry or insurance companies on space-related topics.

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George P. van Reeth passed away on 25 August 2010 at his home in Tuscany (Italy).

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→ PARTICIPANTS



## **Participants of the colloquium**

### **Family**

Yvonne van Reeth (wife)  
David van Reeth (son)  
Nandy Caneva-van Reeth (daughter)  
Jonathan van Reeth (son)  
Anne van Reeth (daughter-in-law)  
Christopher van Reeth (son)  
Thomas van Reeth (grandson)  
Louise van Reeth (granddaughter)  
Clara van Reeth (granddaughter)  
Betty De Raedt-van Reeth (sister)  
André De Raedt (brother-in-law)  
Agnès Mohtashami Chapelain (sister-in-law)  
Shapour Mohtashami (brother-in-law)

### **Invited speakers**

Jean-Jacques Dordain  
Roy Gibson  
Reimar Lüst  
Yves Demerliac  
Winfried Thoma  
René Oosterlinck  
Karlheinz Kreuzberg (moderator)

### **Other guests**

Raymonde Agostinis, ESA  
Georges Armand, former Head of Internal Audit Service, ESA  
Sally Babayan, formerly ESA  
Bernadette Batteux, ESA  
Eric Beka, Haut Représentant, Haute Représentation Belge pour la  
Politique Spatiale  
Anne Bennett, ESA  
Jean-Pierre Bolland, former Managing Director, ETCA SA, Belgium  
Franco Bonacina, ESA  
Roger Bonnet, Executive Director of International Space Science  
Institute, Bern (CH) and Director of ESA Science Programme  
1983–2011

Gérard Brachet, Vice President, IAF  
Laure Brissaud, ESA  
Marlène Bureau, formerly ESA  
Sabine de Bisschop, ESA  
Mohammed Dahbi, former Director General of Faugère & Jutheau,  
and his wife  
Fernando Doblas, Head of Communication Department, ESA  
Guy Duchossois, former Head of ESA's Earth Observation Mission  
Management Office  
Anne du Fretay, ESA  
Jacques Durand, Head of Ariane 5 Programme 1989–2004, ESA  
Fredrik Engström, Director of Launchers 1994–2001, ESA  
Judith Fletcher, formerly ESA  
Michel Garrouste, formerly ESA  
Hellmuth Gehrig, former Head of Management Systems Office, ESA  
Hans Kaltenecker, former Head of Legal and International Affairs,  
ESA  
Pierre Kirchner, ESA  
Sue Krein, formerly ESA  
Christian Lardier, Président, Institut Français d'Histoire de l'Espace  
(IFHE)  
André Lebeau, Deputy DG and Director of Future Programmes and  
Planning, 1975–80, ESA  
Marius Le Fèvre, Director of ESTEC 1985–96  
Mélanie Legru, ESA  
Marie-Angèle Lemoine, ESA  
Anne-Marie Leuba, former Head of Space Commercialisation Office,  
ESA  
Nathalie Meusy, ESA  
Samuele Montagna, family friend  
Eric Morel, Director for Procurement, Financial Operations and  
Legal Affairs, ESA  
Anne Nilsson, ESA  
Johann Oberlechner, ESA  
Raymond Orye, former Head of Ariane Department ESA, and his wife  
Jean-Paul Paillé, formerly ESA  
Walter Peeters, Dean ISU  
Sylvie Pepin, ESA  
Michel Praet, Member of Cabinet of the President of the European  
Council  
Jacques Puech, George van Reeth's former driver, and his wife  
Olga Quadens, physician  
Anne-Marie Remondin, formerly ESA  
Gérard Taverny, ESA



Nathalie Tinjod, ESA  
Guy Valentiny, formerly ESA  
Helge Weber, former Head of HQ Contracts Office, ESA  
Gaele Winters, Director of Corporate Reforms, ESA

*Room A*



Commemoration of George van Reeth



*R. Bonnet and Y. van Reeth*



*H. Kaltenecker, R. Gibson, M. Praet, A. Lebeau, G. Winters,  
R. Lüst, J.-J. Dordain, R. Orye*



*R. Lüst, M. Bureau, A. Bennett, J.-J. Dordain, L. Brissaud,  
S. Montagna, R. Gibson, K. Kreuzberg, Y. Demerliac*



*Three DGs: Lüst, Dordain and Gibson*



*A. van Reeth, J. Oberlechner, M. Praet, N. Tinjod, E. Beka*



*E. Beka, M. Praet, J. van Reeth, O. Quadens, Y. van Reeth,  
F. Engström, A. Lebeau, J.-J. Dordain, R. Orye, H. Kaltenecker*

Commemoration of George van Reeth



*Y. van Reeth with Jonathan, Anne and Clara van Reeth*



*G. Taverny, O. Quadens, A. du Fretay, B. de Raedt, M. Le Fèvre, L. van Reeth, L. Mounier*



*J.-P. Bolland and Y. van Reeth*





*G. Duchossois, Y. van Reeth, J. Durand*



*From left: R. Lüst, Y. van Reeth, F. Doblas, R. Oosterlinck, N. Meusy*



*R. Lüst and Y. van Reeth*

# Photo captions

All photos are copyright ESA unless otherwise stated.

- vi Giving a speech at a party for Roy Gibson, new Director of ESRO Administration, in the ESTEC canteen in 1971. (ESA/Buren)
  - 2 With Roy Gibson at the same party. (ESA/Buren)
  - 8 A visit to NASA Washington on 17 July 1975. (private collection)
  - 12 Visit of the installations of Aerospatiale at Les Mureaux, in November 1975. Also present: Roy Gibson (5th from left), Raymond Orye (9th from left) and Frédéric d'Allest (CNES, 10th from left). (Aerospatiale)
  - 14 A visit to the new Council meeting room in ESA HQ, rue Mario Nikis, in 1977. With Roy Gibson (ESA DG), Jacques Laurent, Jean Vandenkerckhove.
  - 20 With Princess (later Queen) Beatrix of the Netherlands and her husband, Prince Claus, during a visit to ESTEC in September 1977. (ESA/Buren)
  - 26 Signature in Paris of the Intelsat V launch contract, on 15 February 1979. With George van Reeth are Wilhelm Brado, Head of the DG's cabinet, and Santiago Astrain, the first DG of Intelsat. (ESA/A. Nogues, Sygma)
  - 30 Following signature by ESA and the German Banks of an agreement regarding Spacelab, in ESA HQ on 30 January 1980; with one of the representatives from Germany. (ESA/C. Laurentin)
  - 32 During the ceremony for the Signature of the Convention between ESA and Arianespace on 15 May 1981, with the ESA DG, Erik Quistgaard.
  - 38 The new French Minister of Research and Technology, Jean-Pierre Chevènement, visiting the Paris Airshow at Le Bourget in June 1981.
  - 42 Opening ceremony of an ESA exhibition at the Rijksuniversiteit in Ghent on 20 April 1983, with the Belgian Prime Minister Wilfried Martens. (ESA/S. Vermeer)
  - 44 Giving a speech during the opening ceremony of the ESA Exhibition in Ghent. (ESA/S. Vermeer)
  - 50 In Kourou for the ECS-1 launch on 16 June 1983. From left to right: George van Reeth, Henrik Grage, Frédéric d'Allest (Arianespace) and J. Feustel-Büechl (MAN Advanced Technology). (private collection)
  - 52 'Open door' day at Redu ground station in Belgium, 15 October 1983. (ESA/F. Brandwijk)
  - 56 In the Spacelab mockup at the opening of the Space 86 exhibition in Oostende, Belgium, on 10 July 1986. (ESA/J. van Haarlem)
  - 58 Official inauguration of the Large Space Simulator (LSS) at ESTEC on 14 January 1987. With Wubbo Ockels (first Dutch astronaut) and Reimar Lüst (DG). (ESA/J. van Haarlem)
  - 64 During the Silver Jubilee Celebration at the International Conference Centre in Paris on 19 April 1989. (ESA/S. Vermeer)
  - 68 During the ESA Council Meeting at Ministerial Level in Munich, Germany, 18-20 November 1991. With (right) Fredrik Engström (ESA Director of Space Station and Platforms) and (left) Jan-Baldem Mennicken (BMFT). (ESA/A. van der Geest)
  - 70 Speaking at his farewell party at ESTEC, 25 November 1991. (ESA/A. van der Geest)
- Pictures from the symposium:  
ESA/N. Tinjod and ESA/N. Imbert





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