

COOPERATING
FOR SUCCESS:
200 MEETINGS OF
THE ESA COUNCIL
1975-2008

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1. Foreword



It is June 2008 and the ESA Council is celebrating its 200th meeting, an impressive milestone that has been reached in a period spanning more than 30 years.

This gives us an opportunity both for reflection and remembrance.

I hope that as you thumb through this volume you will enjoy reading the reflections of those who, throughout the years, have contributed to the work of Council.

ESA is a quite unique body in a European context, principally because we at ESA have to produce hardware, not regulations. We know that we have to agree on most subjects. It is of course sometimes a long road that we have to take before we reach a decision, but in the end we tend to agree based on a balance between national interests and loyalty

to ESA. Around the table we respect each other in a way that really shows Europe at its best. This I would say is truly a model example of European cooperation. I believe that the ESA Council has achieved a great deal during these years on a delegate level as well as on a ministerial level. There have been a number of crises which we have successfully overcome by cooperating in an exemplary manner. ESA is built on national priorities balanced with solidarity with ESA, which we all need in order to fulfil our national objectives. The challenge is to keep the right balance between these interests.

Through the years a lot of strong personalities have taken part in ESA Council proceedings. You will see here the full list of participants and find what I hope you will agree are some very interesting contributions.

I really hope that you will find this effort worthwhile and wish you an enjoyable read.

Per Tegnér Acting Chair of Council

2. Introduction



"The organs of the Agency shall be the Council, and the Director General assisted by a staff." Those words, taken from our Convention, go to the heart of how ESA operates.

The Director General's job, again according to the Convention, is to submit proposals concerning policy, programmes and activities, and execute decisions of Council. The Council provides guidelines to the Director General, debates his proposals and takes the relevant decisions, including provision of the appropriate resources. It is the Agency's decision-making organ, delegating some authority as necessary to the various subordinate bodies created by it.

Inevitably, the respective roles of Director General and Council produce differing emphases. Ambition tempered by realism, on the one hand: realism infused with vision, on the other. But the middle path emerging from the dialogue between them is rarely a straightforward trade-off. For the Council delegates bring to the debate a deep knowledge of the complex area of activity in which we work. To submit a proposal to the Council is to invite creative adjustments, new insights and powerful alternatives. Of course, the exchanges may be tough - diplomatic niceties have never been part of the Council culture.

Cooperation is a difficult thing. Substantial national interests are at stake and conflicts at times seem intractable. But a solution is always found. When the Agency has faced really critical issues, interaction among Member States within Council has consistently proved effective. I think for example of the Ariane flight 517 failure in 2002 or again the challenges arising from the Columbia accident a few weeks later. On such occasions, the Member States have moved quickly to take the right decisions. In the final instance, solidarity always outweighed specific interests. Indeed, the outcome of votes in Council is a good sign of this effective interaction. A majority of decisions do not require unanimity. And yet only a small minority of decisions are taken other than unanimously.

The interaction between Council and the Executive has been one of the keys to a fantastic mission success story, one which has placed Europe in a leading position in some of the most important space domains: space science, Earth science, global Earth observation, meteorology and launch services. This record of success has made ESA a reliable, capable and respected partner on board the International Space Station and a welcome partner in future exploration. The Council and the Executive have changed over the years, but the Agency spirit is solid, built on difficulties and success, and is our best asset for the future. A broader managerial span for the Agency is accompanied by a deepening relationship with the European Union

in particular. The years ahead will thus be years of consolidation for ESA. As this process accelerates, it is reassuring for me as Director General to benefit from the experience, dedication and team-building of the ESA Council.

Jean-Jacques Dordain
ESA Director General



3. Reminiscences of participants at Council

Roy Gibson ESA Director General, 1975–80



The opening
Council meetings in
1975 were marked
by a generalised
feeling of relief
- verging on
disbelief - that
the long period of
gestation for ESA

was over. It took several meetings for both Delegations and Executive to assume their new roles and responsibilities. It would be an exaggeration to describe this as a honeymoon period – unless these are nowadays more turbulent than we are led normally to believe – but there was certainly a will to help get the new Agency up and running.

National interests, never far from the surface in the governing bodies of international organisations, were not forgotten, but there was a collective effort not to allow them to hinder progress after the rather sterile years of preparation. Delegates, one felt, supported the creation of the Agency and wanted to see it succeed. It is correct to say 'delegates' rather than 'delegations' or 'Member States', because progress was made mainly by a handful of delegates who invested themselves in ESA, sometimes beyond the knowledge of their parent authorities. Indeed, once the ESA Convention had been agreed, governments in general seemed to lose

interest in their new creation, and it was left to delegates to carry it forward.

That the merger of ELDO with ESRO was successfully consummated, and the resultant ESA was able to achieve so much in the first five years, owe much to the efforts of these 'pioneer' Council delegates. It could all so easily have come apart in those first years, but Council managed to hold it together.

Wolfgang Finke Chair of Council, 1975–78

Chair of Council, 1975–78

Original German text follows in italics



When the plenipotentiaries of the Federal Republic of Germany, the Kingdoms of Belgium, Denmark, Sweden and the Netherlands, Spain, the French

Republic, the Italian Republic, the Swiss Confederation, and the United Kingdom of Great Britain and Northern Ireland signed the Convention for the establishment of a European Space Agency on 30 May 1975 in Paris, they were conscious that they had just taken a momentous step that would improve scientific and technical cooperation in the areas of space research and space technology.

They were also well aware that at that time Europe was lagging far behind the

USA and the Soviet Union in precisely those areas. However, even the greatest optimists among those gathered together that day in Paris could not have foreseen the very different position Europe's space sector would find itself in relative to its international rivals just 33 years later.

The birth of the Convention of 30 May had not been unproblematic. Six weeks before, at the Brussels ministerial meeting at which final discussions on the draft text were held, the problem of future funding for Kourou once again looked set to unravel all the painstakingly negotiated compromises. As far back as November 1968, at the European Space Conference in Bonn, Belgium, seizing on a Dutch proposal, suggested setting up a unified European space agency.

Yet it was another four years before the European Space Conference on 20 December 1972 decided to form a new organisation called the European Space Agency (ESA) out of the European Space Research Organisation (ESRO) and the European Launcher Development Organisation (ELDO). This decision was confirmed on 31 July 1973. It then took almost two years for the actual signing of the new Convention and yet more years until the final instrument of ratification was deposited, if my memory serves me correctly, by France in Paris.

However, this had no impact whatsoever on the new organisation's work programme, set forth in detail earlier in the 'Package Deals'. In the first of these, the ESRO Programme, previously restricted to research projects, was in December 1971 expanded to include the development of applications satellites, but only in the framework of voluntary participation to be negotiated by the interested ESRO Member States. It was on this basis that the Meteosat project came into being in 1972 and then OTS in 1973.

The second Package Deal, reached at the European Space Conference at the end of July 1973, went much further. It contained a French proposal to renew attempts to develop a three-stage launch vehicle, a plan to contribute to America's post-Apollo programme, and one to develop, for maritime purposes, a special satellite based on the OTS platform. What was new in all of this was that for each of the three projects a single country would assume a clear leading role. For LIII-S (later Ariane), it would be France; for Europe's contribution to NASA's post-Apollo programme, later the Spacelab project, it would be Germany; and for MAROTS, the United Kingdom. When ESA began work officially on 30 May 1975, activities continued uninterrupted on these projects, albeit now under its umbrella.

Again, continuity was the watchword when it came to staffing of the new organisation and the location of its facilities: ESTEC in Noordwijk, ESOC in Darmstadt and ESRIN in Frascati. The headquarters remained in the Paris region, initially in rather cramped offices in Neuilly,

before moving not long after to the current location in rue Mario Nikis. The first ESA Director General was Roy Gibson, who had previously served as Acting Director General of ESRO. The Directors of the new Agency were no newcomers to the space business either. Most were from the predecessor organisations, ESRO and ELDO. Equally, the ESA Council was for the most part made up of the same people who in the preceding years had sat on its ESRO equivalent. I too had represented my country on the ESRO Council since 1973. I now found myself elected to the Chair of the ESA Council for a year, and was subsequently re-elected twice.

From the outset a good atmosphere reigned at Council; there was a feeling of mutual trust combined with a readiness to work together constructively. Each one of us was determined to finally make a success of this new start after the many turbulent episodes we had been through in the past, the unsuccessful Europa rocket programme and the earlier wrangling over priorities for individual projects. This all made my job much easier — which is not to say that we didn't have our fair share of problems. Needless to say, the national interests of Member States, or at least what their representatives took to be their national interests, did not simply go away overnight.

Increases in project costs and the funding problems of individual Member States remained a constant concern. The absence of a European currency and the differing inflation rates in the various countries brought additional difficulties. We were helped, however, by the fact that we agreed to meet in restricted number prior to official Council meetings for preliminary discussions on the positions of the various delegations and to work together to seek compromise solutions in advance.

These discussions within what we then referred to as the 'Bureau' were. in addition to the Chair and usually the Director General, attended only by Heads of Delegation, so initially no more than a dozen people who, moreover, had known each other for a long time. Not only did this limit the chances of nasty surprises being sprung in the official meeting, but it also meant that in the informal discussions after Bureau sessions one could more accurately gauge the chances of securing specific compromise solutions and sometimes even bring about a change of opinion, at least obtaining an 'ad referendum', or prevent a proposal from being blocked. The practice of convening the Bureau before the Council meeting was later discontinued, largely due to the increasing number of participants as time went on.

According to the ESA Convention, Council is composed of representatives of the Member States and meets as required at delegate or at ministerial level (Article XI, 1 and 2). During my time, the delegates were generally government officials of the various Member States, also responsible domestically for their countries' space

involvement. They therefore had a good grasp of the subject, but limited room for manoeuvre politically. At times, when decisive measures had to be taken, this was insufficient and ministers would be consulted. This had already become the tradition prior to 1975 when dealing with European space matters.

July 1966 saw a first such ministerial conference take place in the framework of ELDO, with a second being held in April 1969. Before that in Paris there had been the first in a whole series of European Space Conferences, the second being in July 1967 in Rome, the third in mid-November 1968 in Bonn-Bad Godesberg, the fourth in July 1970, which, like all subsequent ones, was held in Brussels, the fifth in December 1972, the sixth at the end of July 1973 and the seventh and final one on 15 April 1975.

For ESA, following the signing of the Convention on 30 May 1975 in Paris, the first Council meeting at ministerial level was held in February 1977 under the chairmanship of the Italian Minister Mario Pedini, also in Paris. These ministerial gatherings did not always result in breakthroughs or even in significant progress being made. Often, one could almost say, their sole advantage was that the ministers would at least spend a number of hours earnestly grappling with the subject at hand before eventually confirming what had previously been negotiated. But at times — with the right preparation — they were truly decisive and set genuine milestones. Not infrequently also, Chairs, eager to point to a personal success, would go significantly further than what they had previously considered the minimum essential, further even than they themselves had instructed their delegation to go. The outcome tended to be progress for ESA.

When the ESA Council assembles for its 200th meeting on 18–19 June in Paris, it will be operating in a world so dramatically altered from that which existed at the time of its first meeting in the early summer of 1975 that one can barely even compare the two. In space matters Europe has certainly come of age in the intervening 33 years. When discussions took place in Rome in January 1985 on extending European autonomy to space, the objective may have seemed ambitious indeed, yet today the objective has largely been achieved.

European space research – always one of our strengths – is among the best in the world. European weather and Earth observation satellites have become an everyday part of our world. Europe's disastrous early attempts at launcher development are now forgotten and its independence in that area has long been a given. Columbus, having been firmly attached to the International Space Station, is now one of its key elements. The Jules Verne ATV, with its tonnes of cargo, is now docked to the Station and will be used to reboost it to a higher orbit. Galileo, it would now appear, is well on the way to also making Europe independent of foreign systems in the areas of positioning and navigation.

Taking all of this into account, Europe is in a stronger position as a partner for increasingly extensive international cooperation than it has ever been. In my statement to the US House of Representatives Subcommittee on Space Science and Applications on 17 May 1978, I bemoaned, "It is one of the basic difficulties of any collaboration with the United States in space that for the others it is almost always uphill fighting." This can no longer be said to be true. Partnership with Russia is also now a reality. In that previous era, cooperation with the Soviet Union would have been quite unthinkable.

Future projects will require that we cooperate with both of those partners, but they too will need Europe. The question remains open as to what these future projects may be. Some of the proposals go very far indeed, perhaps too far at times. In its history so far, ESA has consistently managed to plot a successful course. I am convinced that this will also remain true of its future.

Als die bevollmächtigten Vertreter des Königreichs Belgien, des Königreichs Dänemark, der Bundesrepublik Deutschland, der Französischen Republik, der Italienischen Republik, des Königreichs der Niederlande, des Königreichs Schweden, der Schweizerischen Eidgenossenschaft, Spaniens und des Vereinigten Königreichs

Großbritannien und Nordirland am 30. Mai 1975 in Paris ein Übereinkommen zur Gründung einer Europäischen Weltraumorganisation unterzeichneten, war ihnen bewusst, einen wichtigen Schritt zur besseren wissenschaftlichen und technischen Zusammenarbeit auf dem Gebiet der Weltraumforschung und der Raumfahrttechnik besiegelt zu haben. Nicht unklar war ihnen aber auch, dass Europa auf eben diesen Gebieten damals meilenweit hinter den Vereinigten Staaten von Amerika und der Sowjetunion zurücklag. Was jedoch selbst die größten Optimisten unter den seinerzeit in Paris Versammelten nicht ahnen konnten, war, in welcher anderen Situation sich Europa im internationalen Vergleich mit seinen Weltraumaktivitäten dreiunddreißig Jahre später befinden würde.

Das Übereinkommen vom 30. Mai war eine schwere Geburt gewesen. Noch sechs Wochen vorher, Mitte April 1975, schien beim Ministertreffen zur abschließenden Behandlung des Vertragsentwurfs in Brüssel das Problem der künftigen Finanzierung von Kourou noch einmal alle mühsam ausgehandelten Kompromisse in Frage zu stellen. Dabei hatte schon im November 1968 auf der Europäischen Weltraumkonferenz in Bonn Belgien einen niederländischen Vorschlag aufgegriffen und vorgeschlagen, eine einheitliche europäische Weltraumorganisation zu schaffen. Doch erst vier Jahre später beschloss die Europäische Weltraumkonferenz am 20.

Dezember 1972, aus der Europäischen Weltraumforschungs-Organisation (ESRO) und der Europäischen Organisation für die Entwicklung und den Bau von Raumfahrzeugträgern (ELDO) eine neue Organisation mit dem Namen Europäische Weltraumorganisation (ESA) zu bilden. Dieser Beschluss war am 31. Juli 1973 bestätigt worden. Aber noch einmal vergingen knapp zwei Jahre, bis es wirklich zum Abschluss des neuen Übereinkommens kam, und auch dann dauerte es noch einmal Jahre, bis auch die letzte Ratifikationsurkunde – es war, wenn ich mich recht erinnere, die französische – in Paris hinterlegt war.

Auf das Arbeitsprogramm der neuen Organisation hatte das keinen Einfluss mehr. Es war mit den sogenannten "Package Deals" schon vorher weitgehend festgelegt worden. Im ersten von ihnen wurde im Dezember 1971 das bis dahin nur Forschungsprojekte umfassende ESRO-Programm erweitert und sollte in Zukunft auch, aber nur im Rahmen einer jeweils auszuhandelnden freiwilligen Beteiligung der interessierten ESRO-Mitgliedstaaten, die Entwicklung sogenannter Anwendungssatelliten einschließen. Auf dieser Grundlage kam es 1972 zum Projekt Meteosat und 1973 zum OTS-Projekt. Der zweite "Package Deal", der auf der Europäischen Weltraumkonferenz Ende Juli 1973 abgeschlossen wurde, ging noch wesentlich weiter. Er enthielt den französischen Vorschlag, einen neuen Anlauf zur Entwicklung einer dreistufigen

Trägerrakete zu unternehmen, die Absicht, sich am amerikanischen Post-Apollo-Programm zu beteiligen, und für maritime Zwecke einen speziellen Satelliten auf der Basis der OTS-Plattform zu entwickeln. Das Neue daran war, dass für jedes der drei Vorhaben jeweils ein Land eine klare Führungsrolle übernehmen sollte. Für LIIIS, die spätere Ariane, war das Frankreich, für die Beteiligung am Post-Apollo-Programm der NASA, das spätere SPACELAB-Projekt, Deutschland und für MAROTS Großbritannien. Als die ESA de facto am 30. Mai 1975 ihre Arbeit aufnahm, ging die Arbeit an diesen Vorhaben unter ihrem Schirm ohne Unterbrechung weiter.

Kontinuität war das bestimmende Element auch für die personelle Ausstattung der neuen Organisation und für die Standorte ihrer Einrichtungen: ESTEC in Noordwijk, ESOC in Darmstadt und ESRIN in Frascati. Die Hauptverwaltung blieb in Paris, zunächst und ziemlich beengt in Neuilly, bald aber an ihrem jetzigen Platz in der rue Mario Nikis. Erster Generaldirektor der ESA wurde Roy Gibson, der vorher kommissarischer Generaldirektor der ESRO gewesen war. Auch die Direktoren der neuen Organisation waren keine Neulinge in Weltraumangelegenheiten. Die meisten kamen von den beiden Vorgängerorganisationen ESRO und ELDO. Gleiches galt für den ESA-Rat. Im Wesentlichen waren es dieselben Mitalieder, die in den letzten Jahren schon Mitglied des ESRO-Rats gewesen waren.

Auch ich hatte schon seit 1973 unser Land im ESRO-Rat vertreten. Nun war ich für ein Jahr zum Vorsitzenden des ESA-Rats gewählt worden und wurde danach noch zweimal wiedergewählt.

Von Anfang an herrschte im Rat eine gute Atmosphäre, gegenseitiges Vertrauen und die Bereitschaft zu konstruktiver Zusammenarbeit. Jeder von uns war bestrebt, dem Neuanfang nach den oft so kritischen Phasen der Vergangenheit, dem Scheitern der EUROPA-Rakete und dem früheren Gerangel um Prioritäten für einzelne Projekte endlich zum Erfolg zu verhelfen. Das hat mir meine Arbeit sehr erleichtert. Probleme gab es dennoch genug. Die nationalen Interessen der Mitgliedstaaten oder das, was deren Vertreter dafür hielten, waren selbstverständlich nicht über Nacht verschwunden. Kostensteigerungen bei den Projekten und Finanzierungsprobleme einzelner Mitaliedstaaten blieben ständige Sorgenkinder. Das Fehlen einer europäischen Währung und unterschiedliche Inflationsraten in den einzelnen Ländern brachten zusätzliche Schwierigkeiten. Hilfreich war es dabei, dass wir uns darauf geeinigt hatten, die Positionen der einzelnen Delegationen vor der offiziellen Ratssitzung in einer Vorbesprechung im kleinen Kreis zu erörtern und gemeinsam schon vorab nach Kompromissmöglichkeiten zu suchen. An diesen Vorbesprechungen, wir nannten das damals "das Büro", nahmen außer dem Vorsitzenden und meist auch dem Generaldirektor nur die Leiter der

einzelnen Delegationen teil, anfangs also nicht mehr als ein Dutzend Leute, die sich zudem seit langem kannten. Das verhinderte nicht nur weitgehend, dass es in der offiziellen Sitzung unangenehme Überraschungen gab, es ermöglichte auch, in persönlichen Gesprächen nach dem "Büro" die Chancen bestimmter Kompromissformeln genauer auszuloten und manchmal sogar, wenigstens ad referendum eine Meinunasänderuna zu hewirken oder eine Blockade zu verhindern. Die Praxis des "Büros" vor der Ratssitzung ist später nicht fortgesetzt worden. Die größere Anzahl der zu Beteiligenden hat dazu im Laufe der Zeit wesentlich beigetragen.

Der Rat hesteht nach dem FSA-Übereinkommen aus Vertretern der Mitgliedstaaten und tritt nach Bedarf auf Delegierten- oder Ministerebene zusammen (Artikel XI Absätze 1 und 2). Die Delegierten waren zu meiner Zeit in aller Regel Regierungsbeamte der einzelnen Mitgliedstaaten, die zugleich zuhause für die Raumfahrtengagements ihres Landes verantwortlich waren. Sie kannten sich also in der Materie aut aus, aber ihre politische Manövriermasse war beschränkt. Für entscheidende Weichenstellungen reichte das zuweilen nicht aus. Dann waren die Minister gefragt. Das hatte in europäischen Raumfahrtangelegenheiten schon vor 1975 Tradition. Im Juli 1966 kam es im Rahmen der ELDO zu einer ersten solchen Konferenz der Minister, gefolgt von einer zweiten im April 1969. Schon vorher kam

es in Paris zur ersten einer ganzen Serie Europäischer Weltraumkonferenzen, mit der zweiten im Juli 1967 in Rom. der dritten Mitte November 1968 in Bonn-Bad Godesberg, der vierten im Juli 1970; sie fand, wie alle folgenden, in Brüssel statt, die fünfte im Dezember 1972, die sechste Ende Juli 1973 und die siebte und letzte am 15. April 1975. Für die ESA folgte auf die Vertragsunterzeichnung am 30. Mai 1975 in Paris eine erste Ratstagung auf Ministerebene im Februar 1977 unter der Leitung des italienischen Ministers Pedini in Paris. Nicht immer wurden bei diesen Zusammenkünften der Minister Durchbrüche oder auch nur große Fortschritte erzielt. Oft bestand ihr besonderer Vorzug beinahe nur darin, dass sich die Minister wenigstens für Stunden überhaupt ernstlich mit der Materie befassten und schließlich bestätigten, was vorher ausgehandelt worden war. Aber manchmal waren sie – gehörige Vorbereitung vorausgesetzt - wirklich entscheidend und setzten echte Meilensteine. Es kam auch vor. dass zumindest der Vorsitzende im Bestreben, einen persönlichen Erfolg vorweisen zu können, nicht selten ganz erheblich über das hinausging, was er vorher für unabdingbar gehalten und seinen Leuten als Weisung auf ihren Weg mitgegeben hatte. Dem Fortschritt des Ganzen kam das zugute.

Wenn der Rat der Europäischen Weltraumorganisation ESA am 18./19. Juni in Paris zu seiner 200. Sitzung zusammentritt, wird er in einer Welt

agieren, die sich von der ersten Sitzung im Frühsommer 1975 so wesentlich unterscheidet, dass es schwer fällt, beide noch aufeinander zu beziehen. Europa ist auch in Sachen Weltraum in diesen dreiunddreißig Jahren mündig geworden. Was in den Diskussionen im Januar 1985 in Rom noch als hehres Ziel erschien. auch bei den Weltraumaktivitäten europäische Autonomie zu erreichen. ist heute weitgehend Realität. Die europäische Weltraumforschung, schon immer eine unserer Stärken, zählt zur Spitzengruppe. Europäische Wetterund Erdbeobachtungssatelliten sind selbstverständliche Bestandteile unserer Welt geworden. Das Debakel des Anfangs der europäischen Trägerentwicklung ist vergessen und Europas Eigenständigkeit hier längst unbestritten. Columbus ist fest mit der Internationalen Raumstation verbunden und zu einem wichtigen Element von ihr aeworden. Das ATV Jules Verne hat mit Tonnen von Nutzlast dort angedockt und wird die ganze Station wieder auf eine höhere Umlaufbahn schieben. Galileo ist, wie es nun aussieht, auf gutem Wege, Europa auch in Sachen Ortsbestimmung und Navigation von fremden Systemen unabhängig zu machen.

Mit all dem ist Europas Position als Partner weiterreichender internationaler Kooperationen stärker denn je geworden. In meiner Rede vor dem Unterausschuss "Weltraumwissenschaft und Anwendungen" des Wissenschaftsund Technologieausschusses des

amerikanischen Repräsentantenhauses hatte ich am 17. Mai 1978 noch beklagt: "It is one of the basic difficulties of any collaboration with the United States in space that for the others it is almost always uphill fighting". Davon kann heute keine Rede mehr sein. Auch eine Partnerschaft mit Rußland ist heute Wirklichkeit. Damals war eine Zusammenarbeit mit der Sowjetunion noch ganz unmöglich gewesen. Für künftige Vorhaben werden wir die Kooperation mit beiden Partnern brauchen, wie auch umgekehrt sie Europa brauchen werden. Worin diese künftigen Vorhaben bestehen werden, ist noch weitgehend offen. Manche der Vorschläge gehen sehr weit und einige vielleicht zu weit. In ihrer bisherigen Geschichte hat die Europäische Weltraumorganisation bewiesen, dass sie ihren Weg finden und erfolgreich sein kann. Ich bin überzeugt, dass dies auch für die Zukunft gültig bleiben wird.

Harry Atkinson Chair of Council, 1984–87



ESA is a remarkable and, in many ways, unique organisation. It has brought together European scientists and industry to form a powerful body

with great achievements: in advancing knowledge of the universe from the 'Big Bang' on, and in developing spacecraft and space transport systems for many practical purposes from remote sensing to communications. Europe has thus been able to compete and cooperate with the rest of the world. No single country in Europe could have done this alone.

The seeds of the Agency were both political and scientific. After 1945, French and German leaders sought ways of binding Western European countries together so that war between them could never happen again. At the same time key European scientists (such as Amaldi, Auger and Massey) knew that only in cooperation could they mount missions for better understanding the Earth and the Cosmos. Science had won the war - and politicians were sure it could win the peace. These scientists were used to cooperation, including with NASA, and formed a remarkable 'mafia' each able to influence their own politicians.

An early step towards these objectives was the European Space Research Organisation, formed in 1964 and GDP-funded. ESRO worked quite well initially, but soon saw the need for practical space applications. Here, the major countries had quite different objectives with different financial demands: France wanted 'autonomy', and therefore launchers; Germany wanted to work with the US (Spacelab); and Britain

wanted communications satellites (and a comprehensive space agency).

After several years of discussion, and a number of meetings at ministerial level, an inspired solution emerged in 1973 at the Palais d'Egmont (at which I was present). An R&D agency would be created with a core of science and technology (GDP-based and enshrined in the Convention despite the wishes of some delegations regarding a science programme), plus optional à la carte programmes funded according to national interest. The latter included applications satellites and space transport systems, and an industrial policy with juste retour, partly to encourage industry in smaller countries. This 'package deal' was brilliantly conceived and had been largely implemented, despite the substantial additional resources needed, by the time of the ministers' meeting in Rome in 1985 (when I was Council Chairman).

The 'Spirit of Rome' was intoxicating. The ministers, celebrating past successes, developed a great rapport. Wonderful new ideas emerged: from France, Hermes and from Britain, HOTOL. Man in space was promoted. But governments were increasingly faced with economic realities and this concept of a bright new world could not be fully sustained in succeeding years.

A great strength of ESA has been its strong Council, with meetings at

ministerial level only when major political or financial problems demanded. I found chairing the Council fascinating: each delegation often seemed to conform to its national stereotype, but with a strong dedication to the common cause.

A final word: a highlight of my period as Chairman was the Giotto mission to Halley's Comet. I remember particularly being at Darmstadt in 1986 for the encounter: a truly worldwide occasion including key representatives from the US, USSR and Japan, all of whom had contributed to its success. ESA had truly come of age.

Peter Creola

Swiss Delegate, ESRO and ESA Council, 1971–80 Vice Chair of Council, 1987–90 Head of Swiss Delegation, 1988–2002



After the ESA
Convention had
been signed, it took
several years for it
to be ratified in all
the Member States.
Pending the entry
into force of the
ESA Convention, the
legal framework

for the execution of the programmes which had been determined by the second Package Deal was provided by ESRO. In legal terms, this was a practical and efficient solution. However, it had

the major disadvantage that, for several precious years, ESA would remain unknown to the public.

I consulted the ESRO Convention and found an elegant solution to the problem in the wording of Article 1. The article did not say 'The European Space Research Organisation is hereby established' but 'A European Space Research Organisation is hereby established'. By using this wording, the ESRO Convention did not in fact ascribe a name to the organisation of which it was speaking, but simply described its nature. My conclusion was that the ESRO Council was therefore free to change the name at any time.

Hence, the Swiss Delegation proposed that ESRO's name be changed to 'ESA'. This proposal was accepted unanimously. It was thus that ESA was able to begin its activities in 1975, despite the fact that its legal basis remained that of ESRO until the ESA Convention finally came into force in 1980. The first meeting of the ESA Council, the governing body of the organisation, was therefore able to take place in June 1975, and to address the many pressing issues on its agenda. Also, the first official ESA satellite, the cosmic ray observatory COS-B, was launched only weeks later, on 9 August. Five precious years, in terms of image-building, had been gained.

Reimar Lüst ESA Director General, 1984–90



I don't know how many Council meetings I have attended, first as Scientific Director of ESRO and as a German delegate from 1961 to 1971 and later, from 1984 to 1990, as

ESA Director General. Some of these meetings were easy, some more difficult. The most difficult ones were those with points on the agenda requiring a unanimous vote. On one occasion I exploded, and remarked that dealing with Council was more difficult than dancing with an octopus. However, at the end of each Council meeting I felt relief since in most cases Council had accepted all the important points.

Ministerial Council meetings are the most demanding. They always have to be prepared very carefully. In my period as Director General, two Ministerial Council meetings took place, in 1985 in Rome and in 1987 in The Hague.

In Rome, the important issue was the scientific budget. I had proposed a yearly increase of 7%. The UK Delegation with Minister Geoffrey Pattie at its head was the most outspoken against this. After lengthy discussions, particularly in the evening, Geoffrey Pattie was ready to

accept a 5% increase on condition that the new launcher concept from the UK, HOTOL, was included in the future plan. When the final vote with the 5% increase and including HOTOL was taken, Minister Hubert Curien, the Head of the French Delegation, raised his hand and stated: "I accept HOTOL but we should call it Ariane-6."

At the Hague Ministerial meeting, the UK Delegation was led by Kenneth Clarke. He was strictly opposed to the space station and even more so to Hermes. At the dinner on the evening before the meeting, he asserted that Council would be mad to accept the Director General's proposals.

The next day, Heinz Riesenhuber, the German Minister, was elected Chairman. The normal procedure at the start of the meeting is that each delegation makes an opening statement. I suggested to the Chairman that he should not start as normally with the beginning of the alphabet, namely with Belgium, but that he should instead start with the end of the alphabet, with the UK. So Clarke made his forceful statement at the beginning and was unable to react to the statements of the other delegates. Finally the Director General's proposal was accepted, with the only dissenting vote coming from the UK. The day after the Hague meeting, I got a personal letter from President Mitterrand. thanking me for my successful pursuit of European interests.

The ESA Council with its delegates has

always impressed me. Each delegate has a two-fold duty: representing the interests of their Member State and, on the other hand, striving, within ESA, for European cooperation. The delegates are very proud to be members of the 'club' known as the ESA Council.

Carlo Buongiorno

Head of Italian Delegation, 1985-89



It is with great enthusiasm that I have turned to the task, at the invitation of the Director General of ESA Jean-Jacques Dordain, of writing a small piece on some of my

memories of my time as Head of the Italian Delegation to the ESA Council from 1985 to 1989. Indeed I consider this period to be one of the most important and exciting of my very long space career, because I was fortunate enough to make my contribution to the definition and initial development of a series of highly ambitious programmes aimed at allowing Europe's space efforts to be spoken of in the same breath as those of the USA and the Soviet Union.

During those years, which I like to think of as ESA's 'Roaring Eighties', the Italian Delegation made continuous efforts at Council and on the various Boards to pursue as final goals a Scientific Programme of great value – the Giotto mission to Halley's Comet was an example – as well as a substantial and wide-ranging technology programme allowing Europe to cooperate in the International Space Station through Columbus and to enhance European capabilities in the domain of space transportation with Ariane-5 and Hermes. This Italian Delegation policy was strongly supported by Minister Luigi Granelli, who believed profoundly that cooperation in space activities was the best means of cementing European political unity and transatlantic cooperation.

In this context I recall the initiative to invite to Italy, for a working weekend, the Heads of Delegation of France, the UK and Germany to discuss and comment on the final programmatic document prepared by Reimar Lüst. I chose as venue for the meeting the 14th century Villa La Massa near Florence. It was April 1987, the weather was very mild and the Tuscan landscape was beautiful. The participants were Frédéric d'Allest and Daniel Sacotte for France, Roy Gibson and Jack Leeming for the UK, Jan-Baldem Menniken and Hermann Strub for Germany and Alessandro Minuto Rizzo and myself, of course, for Italy. We spent the entire day Saturday discussing in a very thorough yet informal way all the main critical points regarding costs, national industrial return, who would perform the leading roles and the principal political issues such as the largest Member State contributions and international cooperation.

The meeting ended on the Saturday night with a dinner in the main reception room of the Villa La Massa to which ladies were also invited. During the dinner, the electrical system unexpectedly failed. The waiters immediately brought two large chandeliers and we were able to continue our pleasant dinner and discussions in a very romantic candlelit atmosphere that was greatly appreciated by the ladies. This event proved the perfect means of securing a successful meeting at which a true European spirit was the key element. On the Monday I was able to call Reimar Lüst to tell him that we fully agreed with his document. The following Council at ministerial level in The Hague turned out to be a success and a great ESA was born.

Alessandro Minuto

RizzoItalian Delegate, 1986–92



I remain a great supporter of the Agency and consider it to be the most modern of the various international organisations I have dealt with in my career.

People working at ESA do not sufficiently appreciate the advantages of a decision-

making process based in substance on a majority vote. The importance of being able to take decisions is enormous and in the end it saves a lot of money.

A second feature I like is the non-ideological nature of the environment and the open mentality that usually prevails.

If you ask me what I like less, I would say that the other side of the coin of intellectual honesty is an occasional inability to publicise its scientific achievements well enough.

I have not many anecdotes to report in spite of having made many friends there. What is more important is the memory of a good group of people of a high intellectual standard working together to achieve common goals in a pleasant environment.

I was a member of Council for six years and chaired the AFC and many common bodies, largely exceeding the normal tour of duty. It was difficult for my authorities to extract me from the Agency as I had come to take such an enormous interest in space affairs.

Henrik Grage Chair of Council, 1987–90



My term as Chair of Council coincided with Professor Reimar Lüst's time as Director General. For both of us this was a period characterised by the mantra that 'teamwork must

be the standard for ESA'. This is still as valid today and, I believe, still a prerequisite for the success and future development of our organisation.

Looking back on these years, I recall a quite turbulent chairmanship – actually not such a big surprise considering the decisions taken on issues such as:

- an increase in the Level of Resources 1988–92;
- a new method of calculating return coefficients;
- the ground segment associated with in-orbit infrastructure operations.

This is just to mention a few of the difficult questions. There was also the insistence by delegations at every Council meeting on keeping the balance right between infrastructure and user programmes. These were difficult subjects requiring political will and flexibility. Not always so easy: the Council meeting at ESTEC in June 1989 forced me to concede that for delegations to

understand the correct interpretation of 'teamwork' I needed to make frequent and enthusiastic use of my hammer.



Heinz Riesenhuber

Chair of Council at Ministerial Level, The Hague, 1987 Original German text follows in italics



1985 and 1987 were without doubt years of huge significance for the European space sector. In each of those years, an ESA Council meeting at ministerial level took place at which

crucial decisions were taken, the effects of which, with respect to Europe's space efforts, are felt to this day. After attending the Rome ministerial conference of 1985 as Head of the German Delegation, two years later I was accorded the great privilege of being selected by the European delegates to chair the conference.

In the mid-1980s the European space sector was at a crossroads. The 1970s European space programmes having come to an end, a fresh course had to be set for the future. Building on the experience acquired from the Ariane-4 and Spacelab programmes, a plan gradually took shape to produce a European space programme that would bring autonomy and serve to consolidate western European political and economic independence.

In the early 1980s, in a number of global economic summits discussions took place on fundamental questions relating to space before in 1984 then US President Ronald Reagan invited Europe to participate in America's Space Station 'Freedom' initiative. The following year, ESA's Rome Ministerial Council tasked the Agency with drawing up a 'European Long-term Space Plan' for the period until 2000. This Long-Term Plan was presented to ministers of ESA Member States for decision two years later in 1987 at their conference in The Hague.

The principal objective of the plan was to obtain autonomy for Europe in space. Together the community of ESA Member

States wanted to launch new space programmes that would establish it alongside the United States and the then Soviet Union as the third power in the continued exploration and utilisation of space. The 1987 conference can therefore be described, without exaggeration, as a crucial milestone in the history of Europe's space endeavour. It was the hour of Ariane-5's birth, but also that of the 'Columbus'* programme, for a European in-orbit infrastructure with an element designed to count as Europe's participation in the International Space Station, and lastly that of the Hermes crewed space plane. These three elements were intended to be the cornerstones of a 'coherent European space infrastructure'. In addition to these major programmes, the new space scenario also envisaged a European Data Relay Satellite (DRS), an astronaut training centre, launch and flight control facilities, mission control centres and finally centres to provide support to users from industry and science.

Today, some some twenty years on, Europe can with a degree of pride survey the fruits of the seeds sown at that time. In Ariane-5, Europe has at its disposal one of the most reliable, most powerful and most successful launchers in the world. ESA is now an important and acknowledged partner in the International Space Station, and in the Columbus module Europe possesses one of the most modern and versatile research laboratories on the ISS. In

addition, with the successful first mission of its space freighter to the International Space Station, the ATV *Jules Verne*, Europe has given a striking demonstration of its technological capabilities. With ESA now having established a single, unified European Astronaut Corps, the European Astronaut Centre training facility, Europe's Columbus and ATV control centre as well as user support facilities in many of its Member States, much of what in 1987 still seemed visionary is now impressive reality.

This is not to say that getting there was easy. Indeed, just two years after the 1985 ministerial conference. ESA under its then Director General Reimar Lüst, for whom I have the greatest respect, presented me and my fellow ministers with an overall programme whose costs had more than doubled since the scenario had been presented in Rome. Not only had the Hermes space plane become vastly more expensive, so too had the two other major programmes, Ariane-5 and Columbus. To many of my fellow ministers at the time — to say nothing of my own reaction this could only be described as a veritable cost explosion. For me personally as Chair of that crucial Ministerial Council, it put me in a very awkward position but I had both a political and naturally a personal interest in steering the conference towards a successful conclusion.

The conference was under further pressure due to a change in the position held by the UK: while in Rome it had

taken a positive view of ESA's new plans for a coherent space programme, two years later in The Hague it distanced itself clearly from its earlier stance and had already begun to scale back its funding of these new programmes. I think it is fair to say that my esteemed British opposite number, Kenneth Clarke, did not exactly make things easy for us. He felt that the tempo proposed for human spaceflight programmes was too high, and made clear that the UK did not wish to take part under such conditions. Consequently, the UK chose not to participate in any of the three big infrastructure programmes: Ariane-5, Columbus and Hermes. I am convinced that Kenneth Clarke, looking back now after twenty years, now views that decision in an entirely different light.

The situation with the Hermes space plane had become critical. As in Rome two years previously, opinions were divided on the subject. It was only shortly before the Hague meeting, one week before as I recall, that breakthrough came with agreement between France and Germany. While France had from the outset seen Hermes as a priority with a view to securing European autonomy and overall coherence, Germany wished, in addition to Ariane-5, then considered beyond discussion, to give priority to the Columbus programme - Europe's contribution to the Space Station. It needed this agreement between France and Germany to smooth the way for a decision on all three programmes: Ariane-5. Columbus and Hermes.

The decisions taken in The Hague on a space infrastructure programme made up of three really major projects demanded quite a lot of ESA Member States at that time, not least from a financial perspective. It is worth remembering in this regard that drastic budgetary restrictions were then in place in some of the Member States. Consequently, the ministers followed my suggestion of reducing the costs of the overall programme by 15-20% and carrying out the work over an extended timeframe. Another matter given consideration was that of pressing the private sector to deliver cost reductions.

The space infrastructure programme was without doubt the most important subject under discussion at The Hague. Besides that, however, ministers also decided on an expansion of the science programme and on a policy framework for the telecommunications, Earth observation and microgravity research programmes.

Somewhat more than twenty years have gone by since The Hague. Looking back, not everything that was discussed and planned at the Rome and Hague conferences was actually put into practice. Some programmes did not survive the reviews that, by agreement, followed completion of their preliminary phases. Thus, for example, the Hermes development project was halted in 1992 after its pre-development phase. Another

project to suffer this fate was the Man-Tended Free-Flyer (MTFF) laboratory element

Despite this, what did come out of the 1985 and 1987 conferences as a result of Europe's joint efforts is impressive indeed and has been instrumental in moulding the ESA we know today. The decisions taken at that time helped provide a platform from which to exploit more fully the enormous potential offered by space and to leave options open for the future. For those spacefaring nations gathered under the ESA banner, it was and remains essential to work together on the exploration and utilisation of space, as much in view of their scientific, technological, economic and societal interests as for environmental, foreign and security policy reasons. In 1987, I and my fellow ministers recognised and exploited space as an opportunity.

I find it fascinating to look on, more than twenty years later, as European ministers once again prepare to meet in The Hague, a city that serves as a symbol for what Europe can achieve in space. The upcoming Ministerial Council meeting will see crucial measures being taken on the future of Europe's space sector that will set the pattern for space activities for the years and even decades to come. As in the 1987 Ministerial Council meeting, so in 2008, the order of the day will be to pull together to set new challenges without losing sight of what can realistically be achieved.

Let us set ourselves the challenges, and together exploit space as an opportunity.

Die Jahre 1985 und 1987 waren ohne Zweifel sehr bedeutend für die europäische Raumfahrt. In beiden Jahren fanden ESA-Ratssitzungen auf Ministerebene statt, deren Beschlüsse die europäische Raumfahrt bis zum heutigen Tag maßgeblich und nachhaltig prägen. Nachdem ich als Leiter der deutschen Delegation bereits an der Ministerratskonferenz 1985 von Rom teilgenommen hatte, wurde mir zwei Jahre später anlässlich der Ministerkonferenz von Den Haag das große Privileg zuteil, von den europäischen Delegierten zum Vorsitzenden der Konferenz gewählt zu werden.

Mitte der achtziger Jahre des letzten Jahrhunderts befand sich die europäische Raumfahrt in einem Wandel. Nach dem Ende der europäischen Weltraumprogramme der 1970er Jahre galt es, die Weichen für die Zukunft neu zu stellen. Aufbauend auf den mit den Programmen Ariane-4 und Spacelab gesammelten Erfahrungen reifte der Entschluss, ein auf Autonomie ausgerichtetes europäisches Raumfahrtprogramm aufzulegen, das der Stärkung der politischen und wirtschaftlichen Unabhängigkeit Westeuropas dienen sollte. Anfang der achtziger Jahre wurden auf mehreren Weltwirtschaftsgipfeln grundlegende Fragen zur Raumfahrt diskutiert und 1984 folgte die Einladung

des amerikanischen Präsidenten Ronald Reagan an Europa, sich an der amerikanischen Raumstation "Freedom" zu beteiligen. Im darauf folgenden Jahr erteilte der auf Ministerebene in Rom tagende ESA-Rat der Europäischen Weltraumorganisation ESA den Auftrag, einen "Langfristigen Europäischen Weltraumplan" auszuarbeiten, der den Zeithorizont bis zum Jahr 2000 abdecken sollte. Dieser Langfristplan wurde zwei Jahre später, im Jahr 1987 den Ministern der ESA-Mitgliedstaaten in der Konferenz von Den Haaq zum Beschluss vorgelegt.

Kernziel dieses Plans war die europäische Autonomie in der Raumfahrt. Gemeinsam wollte die ESA-Staatengemeinschaft neue Programme auflegen, um eine Leistungsfähigkeit in der Raumfahrt zu erreichen, die sie neben den Vereinigten Staaten und der damaligen Sowjetunion als dritte Kraft bei der weiteren Erschließung und Nutzung des Weltraums etablieren sollte. Die Konferenz von 1987 kann man daher ohne Übertreibung als historischen Meilenstein in der Geschichte der europäischen Raumfahrt bezeichnen. Sie war die Geburtsstunde der Ariane-5, des Columbus-Programms für eine europäische In-Orbit-Infrastruktur mit einem Element zur europäischen Beteiligung an der Internationalen Raumstation und des bemannten Raumgleiters Hermes. Diese drei Elemente sollten zu den Grundpfeilern der damals anvisierten "kohärenten europäischen Weltrauminfrastruktur" werden. Neben diesen Großprogrammen sah das neue europäische

Weltraumszenario noch einen eigenen Datenübertragungssatelliten (DRS), ein Astronautenausbildungszentrum, Start- und Flugkontrolleinrichtungen, Missionskontrollzentren und schließlich auch Zentren für die Unterstützung der Nutzer aus Industrie und Wissenschaft vor.

Mit einigem Stolz kann Europa heute, etwa zwanzią Jahre später, auf die Früchte der damals gelegten Saat blicken: Mit Ariane-5 verfügt Europa über eine der zuverlässigsten, stärksten und erfolgreichsten Trägerraketen der Welt. Bei der Internationalen Raumstation ISS ist die ESA ein wichtiger und anerkannter Partner und mit dem Columbus-Modul besitzt Europa eines der modernsten und vielseitigsten Forschungslabore der Internationalen Raumstation, Zudem hat Europa seine technologische Leistungsfähigkeit und Kompetenz mit der erfolgreichen ersten Mission des Raumfrachters ATV "Jules Verne" zur ISS nachhaltig unter Beweis gestellt. Mit dem Aufstellen eines eigenen europäischen Astronauten-Corps, eines eigenen Astronauten-Trainingszentrums (EAC), eigener Missionskontrollzentren für Columbus und ATV und eigener Nutzerunterstützungseinrichtungen in vielen der ESA-Mitgliedstaaten, wurde vieles, was 1987 noch visionär erschien, zur beeindruckenden Realität.

Doch der Weg dorthin war nicht einfach.

So legte die ESA unter ihrem von mir sehr

geschätzten damaligen Generaldirektor Reimar Lüst nur zwei Jahre nach der Ministerkonferenz von 1985 meinen Ministerkollegen und mir in Den Haag ein Gesamtprogramm vor, dessen Kosten sich im Vergleich zum Szenario von Rom etwa verdoppelt hatten. Nicht nur der Raumaleiter Hermes war drastisch teurer geworden, sondern auch die beiden anderen Großprogramme Ariane-5 und Columbus. Vielen meiner damaligen Ministerkollegen – wie auch mir selbst – erschien dies als "Kostenexplosion". Für mich als Vorsitzenden dieser wichtigen Ministerratstagung ergab sich daraus eine schwierige Situation, hatte ich doch ein politisches und natürlich auch ein persönliches Interesse daran, die Konferenz zu einem Erfolg zu führen.

Belastet wurde die Konferenz zudem noch durch eine veränderte Position Großbritanniens, das noch in Rom den neuen Plänen der ESA zu einem kohärenten Weltraumprogramm positiv gegenüber stand, sich jedoch zwei Jahre später in Den Haag deutlich distanzierter äußerte und bereits begonnen hatte, die eigenen Mittel für diese neuen Programme zu reduzieren. Ich kann sagen, dass mein hoch geschätzter damaliger britischer Minister-Kollege Kenneth Clarke es uns nicht gerade leicht gemacht hat. Seiner Ansicht nach war das eingelegte Tempo bei den Programmen der bemannten Raumfahrt zu hoch. Diesem Tempo wollte Großbritannien nicht folgen. Das Ergebnis war, dass Großbritannien sich an keinem der drei

großen Infrastrukturprogramme Ariane-5, Columbus und Hermes beteiligte.

Ich bin mir sicher, dass auch Kenneth Clarke in der Retrospektive der Ietzten zwanzig Jahre die damalige Entscheidung heute in einem völlig anderen Licht sieht.

Kritisch stand es damals auch um den Raumaleiter Hermes. An ihm schieden sich wie schon zwei Jahre zuvor in Rom die Geister. Erst kurz vor der Den Haager Tagung, ich glaube es war nur eine Woche vorher, gelang der Durchbruch mit einer Einigung zwischen Frankreich und Deutschland. Während Frankreich den bemannten Raumaleiter Hermes in Hinblick auf die europäische Eigenständigkeit und Kohärenz der Raumfahrt von Beginn an als prioritär ansah, legte Deutschland neben der unstrittigen Ariane-5 zunächst den Schwerpunkt auf das Columbus-Programm bzw. die europäische Beteiligung an der Raumstation. Erst mit der Einigung zwischen Frankreich und Deutschland war der Weg für die Entscheidung über alle drei Programme Ariane-5, Columbus und Hermes geebnet.

Die Beschlüsse von Den Haag über ein Weltraum-Infrastruktur-Programm bestehend aus drei wirklichen Großvorhaben verlangte den ESA-Staaten zur damaligen Zeit Einiges ab, insbesondere in finanzieller Hinsicht. Man muss sich hierbei in Erinnerung rufen, dass in einigen der Mitgliedstaaten damals drastische Haushaltsbeschränkungen vorlagen. So folgten die Minister meinem Vorschlag, die Kosten des Gesamtprogramms um 15-20% zu reduzieren, was unter anderem durch die zeitliche Streckung erreicht werden sollte. Darüber hinaus wurde ins Auge gefasst, den privaten Sektor zur Kostenreduktion stärker in die Pflicht zu nehmen.

Das Weltraum-Infrastruktur-Programm war zweifelsfrei der thematische Schwerpunkt der Konferenz von Den Haag. Doch darüber hinaus beschlossen die Minister einen Aufwuchs des Wissenschaftsprogramms sowie die politischen Leitlinien für das Telekommunikations-, das Erderkundungsprogramm und das Programm zur Forschung unter Schwerelosiakeit. Seit Den Haag sind mittlerweile etwas mehr als zwanzig Jahre vergangen. Rückblickend ist festzustellen, das nicht alles, was in den Konferenzen von Rom und Den Haag angedacht und geplant wurde, in den Jahren danach auch verwirklicht wurde. Einige Programme haben der vereinbarten Überprüfung nach Abschluss ihrer Vorphasen nicht standgehalten. So wurde beispielsweise das Vorhaben zur Entwicklung des europäischen Raumgleiters Hermes nach Abschluss der Vorentwicklungsphase 1992 abgebrochen. Auch das geplante zeitweise bemannte, frei fliegende Labor, der "Man Tended Freeflyer (MTFF)", wurde nicht verwirklicht.

Doch das, was in gemeinsamer europäischer Anstrengung aus den Konferenzen von 1985 und 1987 hervorgegangen ist, ist beeindruckend und hat maßgeblich die ESA, wie wir sie heute kennen, geprägt. Die damaligen Beschlüsse haben dazu beigetragen, eine Grundlage zu schaffen, um das große Potential, das sich aus der Raumfahrt ergibt, verstärkt nutzen zu können und um Optionen auf die Zukunft offenzuhalten. Für die in der ESA zusammengeschlossenen Raumfahrtnationen war und ist es von der wissenschaftlichen, technologischen, wirtschaftlichen und gesellschaftlichen Interessenlage her ebenso wie aus umwelt-, außen- und sicherheitspolitischen Gründen unerlässlich, auch in Zukunft an der Erschließung und Nutzung des Weltraums mitzuwirken. Meine Ministerkollegen und ich haben 1987 die "Chance Weltraum" erkannt und genutzt.

Für mich ist es faszinierend zu beobachten, wenn mehr als zwanzia Jahre später die europäischen Minister erneut in dem für die Raumfahrt symbolträchtigen Den Haaq zusammenkommen. Von dieser kommenden Ministerratstagung werden wichtige Weichenstellungen für Europas Raumfahrt ausgehen, die das Raumfahrtgeschehen der nächsten Jahre und sogar Jahrzehnte prägen werden. Wie in der Ministerratstagung von 1987 so gilt es auch im Jahr 2008, sich gemeinsam neuen Herausforderungen zu stellen, ohne dabei das Augenmaß für das Realistische zu verlieren.

Stellen wir uns den Herausforderungen. Nutzen wir gemeinsam die "Chance Weltraum"

Yvan Ylieff

Chair of Council at Ministerial Level, Toulouse, 1995, & Paris, 1997 Original French text follows in italics.



In October 1995, having served as Belgium's Minister for Science and Space Policy for only a few weeks, I was invited to chair the ESA Council meeting at ministerial level

in Toulouse and found myself abruptly drawn into the orbit of a European space sector eager to make grand strategic choices, decide on the cost of them and to plan the resultant programmes for the years to come.

Coming as it did soon after the troubled Granada council of 1992 and the abandonment of the Hermes project, the Toulouse meeting was clouded in a great deal of uncertainty.

Everyone at ESA was acutely aware of this and feared the failure of the upcoming ministerial meeting, which, by the autumn of 1995, could be put off no longer.

The specialist press added to these

worries with headlines such as 'Turbulent times for the European Space Agency' or by highlighting the question marks over Europe's participation in the planned International Space Station. 'No station, no ESA' rang the headlines in some quarters.

The Council session was opened by France's current Prime Minister, François Fillon, then responsible for French space policy. He began by proposing that I chair the meeting. It seemed to him that a Belgian minister, surely born into such a role, and condemned by virtue of his function to endlessly seek compromise and consensus, would be the ideal Chair to conduct the proceedings at a Council meeting at which, it was universally agreed, the future of Europe's space community hung in the balance, while also at stake were the continent's importance and influence in a world then embracing globalisation.

But though I was grateful for the honour and the confidence shown in me, I never once lost sight of the fact that this honour would be of little comfort were I to fail ignominiously, reflecting that the saying with its origins in ancient Rome, 'the Tarpeian Rock is close to the Capitol' seemed particularly apt at that time in Toulouse.*

All steps had to be taken to avert a failure that would have spelled disaster for the European space community, but what was also required was a Council meeting resulting in clear, bold and ambitious decisions that enjoyed unanimous support. Agreement had to be reached on a wholehearted participation by ESA in the International Space Station and on the subscriptions of the various Member States. In addition, we needed to reaffirm our intention to preserve our freedom and gain autonomous access to space, participating fully in its conquest by means of the Ariane launcher. Last of all, we had to redefine our industrial policy and each country's share in it.

The first two challenges in Toulouse – ISS and Ariane – having been dealt with in the course of an interminable night of discussions, confabs and governmental consultations, the third was deferred until a special Council meeting under the same chairmanship in Paris in 1997. This too ended in success after another long night of fruitful negotiations and exchanges on the expansion of Europe's space sector, whose latest achievement – the ATV – can lay claim to being one of its most illustrious standard-bearers, one which was decided on in Toulouse almost 13 years ago.

En octobre 1995, alors que j'étais Ministre de la Politique scientifique et spatiale belge depuis quelques semaines, j'ai été appelé à présider le Conseil de l'ESA au niveau ministériel à Toulouse et me suis aussitôt et sans coup férir retrouvé sur l'orbite d'une Europe spatiale pressée de confirmer ses grands choix stratégiques, de les chiffrer et de les programmer pour les années à venir.

Venant directement après le difficile Conseil de Grenade (1992) et l'abandon du projet Hermès, celui de Toulouse s'annonçait des plus incertains. Chacun, à l'ESA, en était conscient et redoutait l'échec de cette réunion ministérielle qu'il n'était plus possible, à l'automne 1995, de postposer encore.

La presse spécialisée ajoutait encore à l'inquiétude en titrant sur « l'Agence spatiale européenne dans la tourmente » ou encore en montant en épingle les interrogations sur la participation européenne à la Station spatiale internationale en projet. « Pas de station, plus d'ESA; no station, no ESA » publiaient en manchettes certains journaux.

C'est l'actuel Premier ministre de la France, François Fillon, alors en charge de la politique spatiale française, qui ouvrit le Conseil et me proposa immédiatement à la présidence. Un ministre belge – bon sang ne peut mentir – condamné par nature à la recherche incessante de compromis et en quête permanente de consensus, apparaissait comme le président tout désigné pour conduire les débats d'un Conseil considéré unanimement comme périlleux pour l'avenir de l'Europe spatiale et en définitive de son poids et de son influence dans un monde en voie de globalisation.

Mais bien que reconnaissant de l'honneur et de la confiance dont j'étais gratifié, je m'efforçai tout au long de ce Conseil de ne pas oublier un seul instant que la roche tarpéienne est proche du Capitole, même et surtout alors à Toulouse.

Il fallait tout faire pour éviter un échec qui aurait été une véritable catastrophe pour l'Europe spatiale mais il fallait aussi un Conseil qui débouche sur des décisions claires, fortes, ambitieuses et unanimement partagées.

Nous devions nous mettre d'accord sur la participation résolue de l'ESA à la Station spatiale internationale et sur les souscriptions des différents pays membres. Mais nous devions aussi réaffirmer notre volonté pleine et entière de conquérir notre liberté et notre autonomie d'accès à l'espace pour participer pleinement à la conquête de celui-ci avec les lanceurs Ariane.

Il fallait enfin redéfinir notre politique industrielle et la part de chacun dans celle-ci.

Les deux premiers challenges de Toulouse — l'ISS et Ariane — ayant été acquis au terme d'une interminable nuit de discussions, de conciliabules et de consultations gouvernementales, le troisième fut ajourné à un Conseil spécial qui se tint sous la même présidence à Paris en 1997 et qui connut le même succès à l'issue d'une autre longue nuit de négociations et d'échanges fructueux pour l'essor de l'Europe spatiale dont le dernier nouveauné — l'ATV — est l'un de ses plus éclatants fleurons... déjà programmé à Toulouse il y a près de 13 ans.

Gaele WintersChair of Council, 1993–96



The period of my chairmanship, 1993–96, was certainly not the most relaxed in the history of ESA's Council. Among the various important issues that had to be tackled by

Member States, the most prominent was undoubtedly Europe's contribution to the International Space Station: in a complex and somewhat confused international environment, Europe had to take a firm decision on major endeavours like participation in the ISS programme with the Columbus laboratory and the Automated Transfer Vehicle.

While preparing for these substantial commitments, the Member States were at the same time looking for savings on other programmes, and questions were also raised about the functioning and efficiency of ESA's organisation. This last point created serious concern among ESA staff and culminated in a silent protest at ESTEC on the occasion of a Council meeting there: I — and my delegate colleagues, I am sure — can still vividly recall the awkward sensation of walking to the meeting through a phalanx of silent people!

Because of the impact and complexity of the decisions to be taken, in those days many Council meetings, Head of Delegation meetings, splinter meetings, etc., were necessary, often interrupting the Council for difficult, dedicated sessions. We probably organised a record number of Council meetings, but at the time we preferred to think about them, and count them, as Council meeting part I, II, III and so on.

Looking back, these complexities and difficulties were clearly the sign of a committed and dynamic European space community: the Toulouse Council at ministerial level in 1995, for example, was able to take crucial programmatic decisions that shaped the European space landscape for at least the next decade. Although the meeting got off to a difficult start (I am sure those involved will never forget the sleepless night of hectic work between the first and second days!), Europe was then able to take decisions of which we are today seeing the results, namely the success of Columbus and the ATV.

Hugo Parr Chair of Council, 1996–99



I presided the ESA Council from 1996 to 1999. This was an honour, a pleasure and certainly also a challenge! I had barely been elected chairman when, in June 1996, I witnessed in Kourou the launch of the first Ariane-5 prototype. Along with several hundred people in festive mood, I watched from the roof terrace of the control centre. Everything went fine for 40 seconds. Then, a collective gasp was heard as the rocket veered sharply to the right. A few more seconds, and 400 tons of burning metal rained over the jungle, in an extremely expensive *feu d'artifice* which also destroyed the four Cluster satellites.

The next six months were tough, but we succeeded in getting the programme back on track. The main challenge for Council was to find the extra money needed; the solution was a major collective effort by governments and industrial contractors. And, as we know, Ariane went on to be a big success.

In October 1997, NASA and ESA launched the Cassini-Huygens spacecraft, heading for Saturn and Titan. As a physicist, I was impressed by the ingenious way of gathering speed to take this mighty payload all the way to Saturn. Cassini-Huygens made no less than four gravity assists: twice with Venus, once with Earth itself in August 1999, and once with Jupiter. In this process, it saved 68 tons of fuel! When Huygens landed with great precision on Titan, on 14 January 2005, I was watching from the Norwegian Space Centre, and was filled with an almost religious feeling. Surely, this had to be one of the major technical feats of mankind. As I write this, Cassini continues to gather exciting data, including major new results on the moons Rhea and Enceladus, as well as on Titan.

Each Chair has the privilege of inviting Council to meet in their own country once during their tenure. We Norwegians decided that our Arctic island of Svalbard would be the ideal place, in Longyearbyen where we had opened the Svalsat satellite tracking station in 1997. At first, the ESA secretariat was sceptical about the idea, but then warmed to it. ESA chartered a jet which flew from Paris to Oslo, and then direct to Longyearbyen. The meeting in April of 1999 was a big success, both in terms of Council decisions and of arctic adventure.

Alain Bensoussan

Chair of Council, 1999-2002



To be Chair of the ESA Council is a wonderful opportunity to learn about the differences in culture and tradition among

the European nations. I was surprised to realise that we cannot even speak of homogeneous groups within European countries. It would be a mistake for instance to consider that even Scandinavian nations are all that similar. They are not. So it is the challenge facing the Chair to pay the greatest attention to these differences when seeking consensus and compromise.

Antonio Rodotà was my DG. Our relations were excellent, and I was

pleased to see that Antonio would consult me and was interested in my advice. It is the responsibility of the Chair to meet with ESA staff representatives. I did that in the presence of the DG, of course. These meetings were quite pleasant. I was impressed by the constructive attitude of the people I was meeting with and by their strong commitment to European construction.

I proposed to Antonio Rodotà that we make systematic visits to space ministers, independently of Ministerial Councils, to show how much we were interested in their vision. This initiative was very well received by the national agencies conveying our requests for meetings. The ministers were interested in this informal exchange. I really enjoyed it and learned a lot.

I also proposed to delegates that we hold more ESA Councils outside Paris headquarters. Traditionally Chairs hold one Council in their own country. In my case, the choice was obvious: I proposed Kourou. Curiously, very few Heads of Delegation had visited the spaceport, in spite of the fact that ESA contributes substantially to its budget. It was also very useful to ask the local authorities from French Guiana to address Council. I must say I was very lucky. By coincidence an Ariane launch had been delayed and finally took place on the eve of the Council meeting. It was a great success. Since few Heads of Delegation had

visited Kourou before, not surprisingly even fewer had seen a launch on the site.

I also proposed a Council at ESRIN, and the Canadian Space Agency also hosted one during my time. These two experiences were great. I wished I could have held more of them outside rue Mario Nikis but I had to be realistic. The costs increase when a Council takes place outside Paris.

During my time, the Galileo and GMES projects were in the process of being fleshed out. The Commission representatives were quite active, beginning with Commissioners Philippe Busquin and Loyola de Palacio. A promising era was getting under way, with the involvement of the European Union.

Incidentally, since I have been in the US, when people refer to my previous life, they introduce me as a former ESA Council Chair. In spite of the fact that it is not an operational responsibility, I can see that this position carries with it some considerable prestige. I feel extremely fortunate, and proud, to have had this honour.

Edelgard Bulmahn

Chair of Council at Ministerial Level, Edinburgh, 2001, & Paris, 2003 Original German text follows in italics



The fact that the ESA Council has now arrived at its 200th meeting underlines the extent to which ESA has transformed itself to become a vital player

in the global space business. In the final analysis, the history of ESA is a remarkable success story, though one not without its setbacks. In the 33 years since the Agency's founding, Europe has succeeded in many areas of space exploration and exploitation, catching up with the major spacefaring nations, the US and Russia, and gaining acceptance as a recognised partner. Not only that but ESA has developed into one of the world's great pioneering space powers. In the areas of space science, Earth observation, telecommunications and launchers in particular, it has entered new territory and set standards that others must now match.

As Germany's minister for research from 1998 to 2005, and especially as Chair of the ESA Ministerial Council from November 2001 to August 2005, I had the opportunity to play a direct role in the creating and shaping of Europe's

space policy. For me it was an exciting and eventful time. I will never forget the interesting discussions with my colleagues, and the conversations with scientists and technical experts, which taught me a great deal; neither will I forget tremendous experiences such as witnessing the transmission of the breathtaking images from Europe's Mars Express probe.

One could never take success in Ministerial Council meetings for granted. They were characterised by difficult negotiations on what the focus of activities should be, on the sharing of competence and work or on the available funds and how they would be shared out. One would constantly return to the theme of safeguarding national interests. Diplomacy, a great deal of discussion, sometimes deep into the night, staunchly defended positions, but above all a will on all sides to have a strong European space sector, were ultimately the decisive factors ensuring the success of meetings.

Among the key decisions taken at the ministerial conferences of 2001, 2003 and 2005 one would have to mention closer cooperation and the establishment of institutional links between ESA and the European Union. As Chair of the ESA Ministerial Council, one of my main preoccupations was to achieve significant progress in those areas. I was and remain convinced that the European Union must assume more responsibility

in space matters. As a result, space has successfully made itself part of European Union policy and, with the EC–ESA Framework Agreement of 25 November 2003, will remain so. The European Commission attaches great importance to space. ESA's Ministerial Council and the EU Competitiveness Council meet regularly within the European Space Council to discuss fundamental issues relating to Europe's space efforts. In addition, the European space community enjoys broad support both in the European Parliament and in national parliaments.

This EU involvement in space affairs is not in any sense indicative of ESA having become superfluous. It is set to continue its function as the body that devises and implements joint European—EU space projects. Its task will continue to be to develop landmark space technologies and systems and further space-based scientific research. The Agency's role in these areas must continue to be strengthened, so that ESA's management capabilities can be exploited for the benefit of Europe as a whole. Thus, ESA will also have a service provider role vis-à vis European policies.

The two most important cooperative projects jointly conducted by ESA and the EU are Global Monitoring for Environment and Security (GMES) and Galileo. For Europe as an economic area, an independent, generally accessible traffic guidance system is a vital factor in

its competitiveness. It is for that reason that the Galileo navigation system forms an essential core element of ESA–EU cooperation. The GMES project is above all concerned with areas such as changes to the global environment, natural and man-made disasters, environmental pollution and adherence to obligations under international law. It takes into account the changed security situation and the persistent ecological threat to our planet.

In 2003 the ESA Ministerial Council proved that it was able to act and take decisions even in the most critical of situations. The failure of the Ariane-5 launch on 11 December 2002 brought about an extremely difficult situation for ESA. There was a danger of severe damage being done to the European launcher industry — even its total collapse could not be ruled out. We therefore agreed a reordering of Europe's Ariane launcher system.

The responsibilities were clearly defined and bundled together under a single industrial partner, which also assumed overall responsibility for the proper functioning of the launcher. Financial backing was provided for a recovery plan to restore Ariane to flight readiness, with industry required to make a significant contribution of its own. In addition, a fixed price was agreed with industry of €136 million per launch. And last of all, ESA took full control of the programme.

To safeguard European independent access to space in the years ahead, we also agreed to conduct a special programme from 2005 to 2009, whose aim was to broaden the potential uses of Ariane-5 and therefore strengthen its competitiveness. We further decided to prepare development of the next generation of launch vehicles to improve European competitiveness in the ever more hotly disputed space launch market.

It was the common political and economic interest in securing European access to space that made this success and the surmounting of national interests possible. That common interest helped restore the competitiveness of Europe's launcher system and thus safeguard Europe's independence as a space power.

Another fraught subject in the Ministerial Council negotiations was that of the European contribution to the International Space Station. In 2001, after the 'Task Force' set up by NASA to scrutinise the ISS programme pointed to mismanagement and major cost overruns, fundamental questions were raised in the US about the country's involvement in the Station. This was the background against which in Edinburgh we blocked part of the necessary funds until the American partner had confirmed that it would abide by the commitments it had entered into, thus demonstrating that Europe was willing to cooperate, but not at any price. We further agreed to release a first tranche

of the blocked funds for ISS operations for time-critical activities, most notably relating to the operational readiness of ESA's Automated Transfer Vehicle (ATV) and the European ISS ground segment. In the intervening period, the docking of Europe's Columbus space laboratory and the flight of the ATV to the Space Station have underlined that this strategy was ultimately the right one and was successful.

Last of all, the decisions taken at ministerial conferences have done much to increase the room for manoeuvre ESA now enjoys. Our decisions have served the objective of exploiting the opportunities that space offers, for obtaining new scientific knowledge as well as for widespread use in global communications and Earth observation. A modern environmental, security and communications policy can no longer be envisaged without a highly capable orbital and terrestrial infrastructure. Our aim was also to strengthen the competitiveness of European space technology and Europe's space industry and to step up the transfer to other areas of technologies developed in the space sector.

Die anstehende 200. Sitzung des Rates der ESA unterstreicht, dass sich die ESA zu einer tragenden Säule der weltweiten Raumfahrtaktivitäten entwickelt hat. Die Geschichte der ESA ist – trotz mancher Rückschläge - letztlich eine außergewöhnliche Erfolgsstory. In den 33 Jahren seit ihrer Gründung ist es Europa gelungen, auf vielen Gebieten der

Erforschung und Nutzung des Weltraums zu den großen Raumfahrtnationen US und Russland aufzuschließen und zu einem anerkannten Partner zu werden. Mehr noch: Die ESA hat sich zu einem der großen Raumfahrtpioniere weltweit entwickelt. Insbesondere bei der Weltraumwissenschaft, der Erdbeobachtung, der Telekommunikation und den Raumfahrzeugträgern hat sie Neuland betreten und Maßstäbe gesetzt.

Als deutsche Forschungsministerin von 1998 bis 2005 und insbesondere als Vorsitzende des FSA-Ministerrats von November 2001 bis Herbst 2005 hatte ich die Gelegenheit, die europäische Raumfahrtpolitik unmittelbar mitzugestalten und mitzuprägen. Für mich war es eine spannende und bewegte Zeit. Unvergesslich sind für mich die interessanten Diskussionen mit meinen Kolleginnen und Kollegen, die informativen Gespräche mit Wissenschaftlern und Technikern, aber auch packende Erlebnisse wie die Übertragung der atemberaubenden Bilder der europäischen Sonde Mars Express.

Die Sitzungen des Ministerrats waren nie Selbstläufer. Sie waren geprägt von schwierigen Verhandlungen über die zu setzenden Schwerpunkte, über die Kompetenz- und Aufgabenverteilung oder über die zur Verfügung stehenden Finanzmittel und deren Aufteilung. Stets ging es auch um die Wahrung der jeweiligen nationalen Interessen. Diplomatie, viele Gespräche, manchmal

bis tief in die Nacht, Hartnäckigkeit, besonders aber der gemeinsame Wille aller, die europäische Raumfahrt stark zu machen, waren schließlich entscheidend für den Erfolg der Sitzungen.

Zu den entscheidenden Weichenstellungen der Ministerratskonferenzen von 2001, 2003 und 2005 gehörte sicherlich die engere Zusammenarbeit und institutionelle Verknüpfung von ESA und Europäischer Union. Als Vorsitzende des ESA-Ministerrats war es für mich eines der zentralen Anliegen hier zu wesentlichen Fortschritten zu gelangen. Für mich stand und steht außer Zweifel, das die Europäische Union mehr Verantwortung in der Raumfahrt übernehmen muss. Im Ergebnis hat die Raumfahrt erfolgreich in die Politik der Europäischen Union Einzug gehalten und dieser Einzug erweist sich mit dem Rahmenabkommen vom 25.11.2003 zwischen ESA und EU als nachhaltig. Die Europäische Kommission misst der Raumfahrt große Bedeutung zu. Der Ministerrat der ESA und der Wettbewerbsrat der EU treffen sich regelmäßig im European Space Council zu Beratungen über grundlegende europäische Raumfahrtfragen. Und die europäische Raumfahrt erfährt breite Unterstützung im Europaparlament und in den nationalen Parlamenten.

Mit dem Einstieg der EU in die Raumfahrt ist die ESA keineswegs überflüssig geworden. Sie sollte auch weiterhin als die Agentur zur Erarbeitung und Umsetzung von gemeinsamen europäischen und EU-Raumfahrtvorhaben tätig werden. Es ist auch künftig ihre Aufgabe, wegweisende Raumfahrttechnologien und -systeme zu entwickeln und die weltraumgestützte, wissenschaftliche Forschung voran zu bringen. In dieser Rolle muss sie auch weiterhin gestärkt werden. Es geht darum, die Managementfähigkeiten der ESA für ganz Europa zu nutzen. Damit wird die ESA auch zum Dienstleister europäischer Politiken.

Die beiden wichtigsten Projekte der Zusammenarbeit von ESA und EU sind das Global Monitoring for Environment and Security (GMES) und Galileo. Für den Wirtschaftsraum Europa ist ein unabhängiges, allgemein zugängliches Verkehrsleitsystem ein entscheidender Wettbewerbsfaktor. Deshalb ist das Navigationssystem Galileo wesentliches Kernelement der Zusammenarbeit von ESA und EU. Das Projekt für globale Umwelt- und Sicherheitsüberwachung (GMES) befasst sich vor allem mit Themen wie globaler Wandel, natürliche und vom Menschen verursachte Katastrophen, Umweltbelastung sowie der Einhaltung völkerrechtlicher Verpflichtungen. Es trägt der veränderten Sicherheitslage und der anhaltenden ökologischen Gefährdung unseres Planeten Rechnung.

2003 hat der ESA-Ministerrat bewiesen, dass er auch in äußerst kritischen Situationen handlungs- und entscheidungsfähig ist. Nach dem Fehlstart der Ariane-5 am 11. Dezember 2002 war eine äußerst schwierige Situation für die ESA entstanden. Es bestand die Gefahr eines dramatischen Einbruchs, wenn nicht sogar Zusammenbruchs, der europäischen Trägertechnologieindustrie. Wir verständigten uns deshalb darauf, das europäische Trägertechnologiesystem Ariane neu aufzustellen.

Die Verantwortlichkeiten wurden klar geregelt und bei einem einzigen industriellen Partner gebündelt, der zugleich die Gesamtverantwortung für die Funktionstüchtigkeit der Träger übernahm. Mit einem Recovery Plan wurde die Wiederherstellung der Flugfähigkeit der Ariane finanziell unterstützt, zugleich aber auch erhebliche Eigenleistungen der Industrie verlangt. Weiterhin wurde mit der Industrie ein Festpreis von 136 Millionen Euro pro Start vereinbart. Die ESA erhielt schließlich die volle Kontrolle über das Programm.

Um Europas eigenständigen Zugang zum Weltraum weiterhin sicher zu stellen, vereinbarten wir darüber hinaus, von 2005 bis 2009 ein Sonderprogramm durchzuführen, das die Anwendungsbreite der Ariane-5 und damit deren Wettbewerbsfähigkeit verstärken sollte. Ferner beschlossen wir, die Entwicklung der nächsten Generation von Raumfahrzeugträgern vorzubereiten, um Europas Wettbewerbsfähigkeit auf dem immer härter umkämpften Trägertechnologiemarkt zu verbessern.

Das gemeinsame Interesse von Politik und Wirtschaft an einem gesicherten, europäischen Zugang zum Weltraum machten diesen Erfolg und die Überwindung der jeweiligen nationalen Interessen möglich. Sie halfen die Wettbewerbsfähigkeit von Europas Raumfahrzeugträgersystem wiederherzustellen und damit die Eigenständigkeit Europas als Weltraummacht zu bewahren.

Ein weiteres schwieriges Thema der Ministerratsverhandlungen bildete der europäische Beitrag zur internationalen Raumstation ISS. 2001 hatte eine Untersuchunaskommission in den USA Missmanagement und hohe Kostenüberschreitungen im ISS-Programm festgestellt, so dass in den US das ISS-Engagement grundsätzlich in Frage gestellt wurde. Vor diesem Hintergrund haben wir in Edinburgh einen Teil der dafür notwendigen Mittel bis zur Bestätiauna durch den amerikanischen Partner, dass er zuvor eingegangenen Verpflichtungen nachkommen werde, gesperrt und damit signalisiert, dass Europa zur Zusammenarbeit gewillt ist, aber nicht zu jedem Preis. Wir kamen zugleich überein, einen ersten Teil der gesperrten Mittel für das ISS-Einsatzprogramm für zeitkritische Tätigkeiten vor allem in Bezug auf die Einsatzbereitschaft des Automatischen Transferfahrzeugs (ATV) der ESA und des europäischen ISS-Bodensegments freizugeben. Die inzwischen erfolgte Ankoppelung des

europäischen Raumlabors Columbus und der Flug des ATV zur Raumstation unterstreichen, dass diese Strategie letztlich richtig und erfolgreich war.

Letztlich haben die Entscheidungen der Ministerratskonferenzen den Handlungsspielraum der ESA wesentlich erweitern können. Unsere Entscheidungen dienten dem Ziel, die Chancen, die die Raumfahrt bietet, für neue wissenschaftliche Erkenntnisse wie auch für eine breite Anwendung in der weltweiten Kommunikation und Erdbeobachtung zu nutzen. Eine moderne Umwelt-. Sicherheits- und Kommunikationspolitik ist ohne Raumfahrt, ohne eine leistungsfähige orbitale und terrestrische Infrastruktur nicht mehr denkbar. Außerdem wollten wir die Wettbewerbsfähigkeit der europäischen Raumfahrttechnologie und -Industrie stärken und den Transfer von Raumfahrtentwicklungen in andere Technologiebereiche intensivieren.

Colin Hicks
Head of UK Delegation, 1999–2006



The 10th ESA
Council meeting
at ministerial
level was held in
November 2001
in Edinburgh,
Scotland. The
Ministerial Chair
was Frau Edelgard

Bulmahn, who had a reputation as a tough Chair. She expected the meeting to run on time. Failure to meet her deadlines for completion of an item of business might mean that she would impose a solution.

During the course of the meeting I was appointed to chair a working group to resolve a particularly tricky issue. Although we worked as hard and as fast as we could, a solution remained elusive. I found myself heading back to the table faced with apologising to the Chair for not having completed our task on time. I decided to try to charm my way into being given more time.

When called upon to report, I said, "Madam Chair, I am afraid we have not yet reached a conclusion but I promise you that we shall do so within the next two hours or you may do with me as you wish."

For a moment Frau Bulmahn looked nonplussed, then smiled, nodded, and gave us the extra time we needed without fuss or complaint. Fortunately for me (or was it?) we completed our task within the next two hours and my pledge was never called in!

Laurens Jan Brinkhorst

Chair of Council at Ministerial Level, Berlin, 2005



Being Chairman of the ESA Council meeting at ministerial level in Berlin was a great pleasure. It was a successful conference at which we reached

important new decisions. We made a start with GMES and with a new programme for the exploration of Mars. We also made significant progress on the evolution of European launcher policy. When the going got tough, I organised a closed 'ministers only' session, a novelty for ESA.

German hospitality was exemplary. I recall a wonderful evening party organised around vintage cars. The strategic importance was made clear of an increased European role in scientific, industrial and technological space activities, as described in the DG's work plan for discovery and competitiveness in space. Furthermore, ESA and the EU entered into a new phase in their cooperation for the benefit of both organisations.

Sigmar Wittig Chair of Council, 2005–07



What are the necessary initial and boundary conditions – to state the question in mathematical terms – for the successful completion of a Ministerial Council?

If we take the Berlin Council with its far-reaching results on funding for the science area, budgetary support for launcher research and development, confirmation of the programmes in human spaceflight and exploration, organisation and framework of GMES – just to mention a few central decisions – it is obvious: the keys are vision, strategy, tactics, perseverance, mental and even physical strength. In addition, it is necessary to convince personalities from different backgrounds, with different qualifications and interests to work towards a common goal.

If we try to understand the full meaning and significance of these words by consulting a dictionary, we frequently find references to the sporting arena. And there is probably no other team sport more widely accepted than football. It fascinates both young and old, moves millions of people and generates billions of euros.

Obviously, this is precisely what ESA needs and indeed does. Maybe subconsciously that is the reason why the ESA Council in recent years chose to elect formerly active football players and presently active fans of the sport to direct ESA and chair its Council. This is the only conflict of interest I observed throughout all these years: Olympique Lyon or Bayern Munich playing in the Champions League may shorten late-night meetings and influence the scheduling.

The DG knows them all: Ajax, Inter Milan, Real Madrid, Manchester United, Benfica. He leaves no doubt as to where his sympathies lie but in order not to embarrass his guest, the Council Chair manages to organise a match between the French and German national teams in the impressive Stade de France with a draw as the final result.

Some of us were present in the Space Station Processing Facility at the Kennedy Space Center in Florida in the summer of 2006 when the DG suddenly jumped up, not to announce a new technological breakthrough, but that Germany had just won its World Cup quarter final. In such conditions the use of a mobile phone was not deemed an offence since the information had an important official character: all the semi-finalists were from Europe. The DG's conclusion was convincing: that a team that wants to become world champion has to come from an ESA Member State.

And indeed, skills and expertise, mutual

understanding and the drive to pursue accepted scientific technological and not least cultural goals, are characteristic of the European space programme as defined by the Lisbon Treaty. The success of recent missions – Mars Express, Envisat, Columbus, Ariane and the ATV, to name but a few – provide impressive testament to that. To summarise the analysis recently provided by Michael Griffin, the NASA Administrator:

ESA is a partner in the Champions League of space. Consequently, the ESA Council faces the challenge of shaping a fascinating future. The Ministerial Council 2008 will determine what form this future takes.

Ida Russell-Augustin

Interpreter, Svalbard, 1999

After a rather rough landing (I learnt much later how dangerous it really was) we were taken to our comfortable hotels amidst a very stark but majestic landscape. Next morning the bus took us to the community centre where the Council meeting took place. In the entrance hall, where you could leave your coats, we were all invited to take our shoes off (warm Nordic socks were provided). Everybody did so, some happily, some laughingly, some reluctantly.

The two-day meeting in stocking soles (Chair, Director General, technician and interpreters alike) had a different flavour somehow. Contemplating the entrance hall, my own question was, "Will everybody find their shoes?"

But at the elegant dinner later I realised that everybody had. There is a rule in Svalbard not to wear one's shoes indoors. This tradition has historical and practical reasons. Since the coal dust used to stick to the miners' boots, footwear was always taken off before entering a house.

Veronika de Montesquieu

Interpreter, ESTEC, 1995

The 123rd Council meeting took place at ESTEC on 13–14 December 1995. There was an unforeseen obstacle for all those coming from Paris: no flights at all and no trains due to a massive strike. The only way to get to ESTEC was by bus all the way from Paris. A seemingly endless trip, with snow on the autoroute to Lille. Mr Reuter, Council Secretary, distributed little lunch bags during the journey, which helped us a lot, enabling us to arrive in good shape for the meeting.

Bernadette Batteux

Council Secretariat, The Hague, 1987, and Munich, 1991

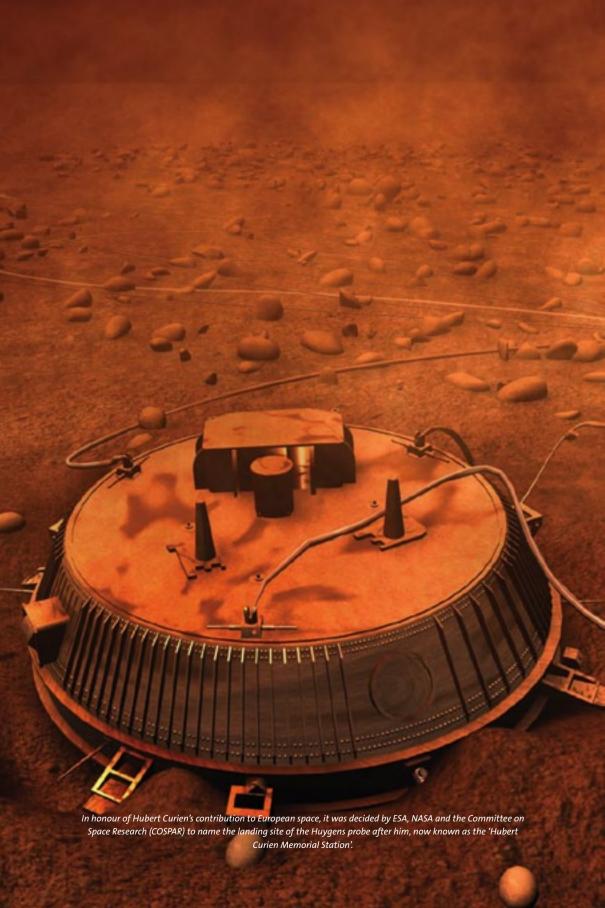
The Hague Ministerial was a baptism of fire in my first year at ESA. The meeting room adjoined the ESA Secretariat and when it came to typing the final Declaration dictated by the Head of Publications at the time, there was quite a crowd of delegates and Executive in the Secretariat.

I distinctly remember the Minister chairing the meeting standing over my shoulder, listening intently and scrutinising the text. Matters weren't helped by trying to decipher messages in Dutch flashing up on the Philips word processor. It was a rather unnerving experience, which might explain why, when numerous members of the ESA Executive, both senior and junior had been called upon, all hands on deck to hastily staple the finished piece, somebody suddenly noticed that a vital paragraph inserted to appease a certain delegation was missing!

Ministerials from that point onwards were organised with the Secretariat clearly separated from the meeting room with restricted access, armed with their own PCs transported over from the office.

We had come to expect night shifts at ministerials. During the Munich conference a text had finally emerged out of a nocturnal working group ready to be run off in the early morning. By this time, however, the technician was a little the worse for wear. And the photocopier was not the most sophisticated on the market.

I remember spending the dawn hours with an eye on the watch trying to persuade the gentleman that kicking and cursing the machine would not speed up the process. I think it was at this ministerial that our now Director General remarked that the success of a ministerial depended partly on the quality of its photocopiers. Arrangements are more sophisticated these days!



4. Sadly no longer with us

Hubert Curien (1924–2005) Chair of Council, 1981–84



Professor Hubert Curien was a crystallographer (he gave his name to a mineral, 'curienite', discovered in 1968). In parallel to his teaching activities, which he never

interrupted, he occupied several key positions of responsibility both in France and at European level: Director General of the French national research agency CNRS in 1973, General Delegate to Scientific and Technical Research (DGRST) from 1973 to 1976, President of the Centre National d'Etudes Spatiales (CNES) from 1976 to 1984, and of course, ESA Council Chair from 1981 to 1984, at which point he was called by President François Mitterrand and Prime Minister Laurent Fabius to become Minister for Research and Technology, a position that he held first between 1984 and 1986 and then from 1988 to 1993, when he was also Minister for Space.

As Minister, Hubert Curien succeeded in ensuring high priority was given to research in the successive governments in which he participated. Between 1984 and 1986, public science budgets were increased, attaining a rise of 15% in absolute terms between 1988 and 1993. In his time at CNES and as Minister for

research and space, France achieved a remarkable string of successes: the first Ariane launch, which gave Europe independent access to space, and the beginning of the SPOT programme for the observation of the Earth. These successes led him to initiate the first commercial space companies in Europe: Arianespace and Spotimage. Even though his actions were inspired by a strong desire to give Europe its rightful place between the two superpowers of the time, the USA and USSR, he was constantly concerned to maintain the best possible relationships with them. With the Soviets, he negotiated the flight of the first French spationaute, Jean-Loup Chrétien in 1982, and with the Americans, that of Patrick Baudry, who flew on board the Space Shuttle in 1985.

One cannot but notice that the two periods in which he was a Minister also correspond to the most significant advances witnessed in space research in Europe. At the ministerial meeting of the ESA Council in Rome in January 1985 where he represented France as Minister, Curien, a born diplomat, spared no effort in negotiating the final consensus to increase the ESA science budget by 5% every year in real terms for ten years. That decision made it possible to continue the Giotto comet mission, Ulysses, the European contribution to Hubble, and to launch subsequent ambitious projects such as Hipparcos, ISO, SOHO, Cluster, XMM-Newton, Integral, Mars Express, SMART-1, Rosetta, and, of course, the

Huygens probe on board Cassini, while starting the Herschel–Planck infrared tandem and Venus Express. This is by no means coincidental since Curien led and oriented space research as nobody before him was able to do because of his unique and pragmatic approach to the management of programmes, inspired by vision, prudence and the careful evaluation of risks.

The profound dedication of Hubert Curien to science and to human relations explains the unique quality of the ties and complicity he managed to establish with all his partners, colleagues and friends at his university, among his students, the staff at CNES and ESA, his fellow ministers. and even those in opposition. Indeed, it would not be overstating things to say that he was a friend to everyone. The entire scientific and industrial world owes him immense respect and esteem. 'His feet firmly on the ground', he contemplated with youthful enthusiasm the prospect of sending humans to Mars. Asked why he would support such an initiative, he responded, "Oh pour le sport." This exceptional blend of humanism and realism explains why he attracted such a high degree of respect from the political world. It also explains why he was so successful in giving Europe its prominent and decisive role in space.

Roger Bonnet President of COSPAR and ESA Director of the Science Programme, 1983–2001

Jan Stiernstedt (1925–2008) Chair of Council, 1978–81



Space became
Jan Stiernstedt's
lifelong interest. From 1959,
working for the
government, he
became involved in
Sweden's emerging space activities. From 1963 he

was COPERS delegate, later Head of Delegation at ESRO/ESA. From 1972 he chaired the Swedish Board for Space Activities (SBSA), becoming Director General in 1979, before retiring in 1989 after 25 years' commitment to space: "I was drawn into the magic circle of space, from which I have never wanted or been able to escape since."

Recalling his accidental first encounter with the European space community, Stiernstedt has described how he had received only one instruction: to protect the budget for the planned soundingrocket launch site, Esrange, in northern Sweden, as the Italians wanted to use that money for their Salto di Quirra launch site. "As I did not understand their arguments, I had to just take a hard grip of the edge of the table and just say, 'no, no, no'. [...] That was my start, and when I went home I was rather happy that – as I believed – I would never see these people again. But destiny sometimes plays odd tricks on us, and in fact I was back in September when

I attended my first meeting of the COPERS administrative working group."

Esrange was always key to developing the Swedish space programme. In the early 1960s, Stiernstedt became, together with Bengt Hultqvist, a strong advocate of the Kiruna rocket range. The international scientific community became interested in launches north of the Polar Circle. For the Swedish Space Research Committee, it was clear that Sweden had a unique opportunity here.

Support was forthcoming from scientists, but crucially Stiernstedt also convinced key politicians in Sweden and Europe. However, at home, official policy excluded anything with even the slightest military connection. Prime Minister Tage Erlander had declared that Sweden was 'greatly interested in European economic cooperation', but only if it could retain its non-alignment policy. Negotiating became easier once ESRO uncoupled from ELDO. Sweden later strongly supported ESA launcher activities.

The main competitor was Norway of course, but the northern Swedish location, also in the auroral zone, had the advantage. Land-based, well suited to payload recovery, there was also excellent scientific link-up with the Kiruna Geophysical Observatory. The 1964 Esrange Agreement prompted construction of the first European launch facility, inaugurated in 1966. Sweden finally had its entrance ticket to space.

When ESRO halted its sounding-rocket programme, Esrange was handed over to Sweden in 1972. Stiernstedt recalled: "Finally, the conditions had been met for Sweden not to be excluded from the future exploitation of space as a natural resource and as a vision." With over 500 rockets launched, Esrange is now run by the Swedish Space Corporation. Under the Esrange/Andøya Special Project, nine European countries initially joined Sweden and Norway to use their launch sites.

A complete success story? Not entirely! But vision and persistence are clearly needed to open up a new field in competition with others: Stiernstedt had both, plus diplomacy.

Since the 1959 advent of the Swedish Space Research Committee, there have been many ups and downs in battling for government to take an interest in and fund a national space programme. In 1964 an ambitious rocket programme proposal was rejected by the government. A first national campaign from Esrange was carried out in 1968, but in 1971, the successor of the Space Research Committee, faced with impossible budget constraints, resigned en masse.

Stiernstedt realised that meaningful space activity was impossible unless two conditions were fulfilled: "A coherent organisation and more money for a national programme which comprised not only fundamental research but also applications. Now I had to convince the

government of that. I could not do it alone. My hope lay with the Ministry of Industry."

The new set-up since 1972 consisted of the Swedish Board for Space Activities (later the Swedish National Space Board), responsible for planning, policy and resource allocation, plus the independent state-owned Swedish Space Corporation with full executive functions, including the management of Esrange. Stiernstedt became the first SBSA Chair and from 1979 also DG.

A new era was beginning. Science had paved the way. Now it was time for applications. This required a new financial set-up. With his successfully teaming up with industry, Ministry funding close to tripled after Parliament passed a Space Bill.

The small science satellite Viking was the first beneficiary. Launched in 1986, it proved a great success: operation time twice design lifetime, data galore, research goal achieved, industrial development promoted. The larger Tele-X was also designed in parallel with Viking.

Low cost, high reliability and fast turnaround would characterise future projects of that type. Tapping Viking's experience, Freja was completed at even lower cost, but with a much higher data transmission rate. The concept also attracted international attention and was further developed in conjunction with Germany, Canada and the USA. From 1992 Freja quadrupled its design lifetime, a major scientific, technological and concept success.

Sweden is a founding member of ESA. Since COPERS, throughout ESRO and since the ESA Convention's signing, Sweden has been an active supporter of Europe in space. Many ups and downs, at home, internationally, tough negotiations along the way, yes. But those involved always sought constructive solutions. The watchwords: European solidarity and independence. Sweden's space activity is mainly geared to ESA: 60% to 80% of the total Swedish space budget. This indicates how important international cooperation is, including in determining our national programme.

In July 1978, with the experience of 15 years as Head of the Swedish Delegation, Stiernstedt took over as Chair of the ESA Council. That July, GEOS-2 was launched. In 1979, Austria became an Associate Member, Norway following in 1981. Keeping track of thirteen Member and two Associate States – each having their own vision and home constituency – demanded his special skills.

The late 1970s were dominated by Ariane, the launcher programme spearheaded by France. On Christmas Eve 1979 we witnessed the successful first test flight (Lo1). The second (Lo2) failed. Both Lo3 and Lo4 succeeded. One much-discussed issue was a second launch site for Kourou, and in 1981 Council decided to build ELA-2.

The Chair's job in an international organisation consists of much more than what is recorded in official minutes: dialoguing with delegates, understanding their problems, finding acceptable compromises. Stiernstedt was a master mediator. With diplomacy and a low-key authority, he found sustainable solutions to carry the Agency's programme forward.

On 2 January 2008, Baron Jan Stiernstedt passed away. Ever noble, he never drew attention to himself, always focusing on the issues. We remember with respectful gratitude that rare combination: his genuine passion for space and dedicated public service.

Kerstin Fredga Head of Swedish Delegation, 1989–98

Francesco Carassa

(1922–2006) Chair of Council, 1990–93



Francesco Carassa was born in 1922 in Naples and obtained a degree in Electrical Engineering from the Politecnico di Torino in 1946. From 1947 to 1962 he

was at the Magneti Marelli Central Radio Laboratory in Milan, and was its Director from 1955 to 1962. In 1962 he left industry for university, becoming Professor of Electrical Communication at the Politecnico di Milano, where he formed the Italian national research council's Centro di Studio per le Telecommunicazioni Spaziali.

In 1967 he proposed a 12–18 GHz satellite experiment which became Sirio. The Sirio satellite was launched in August 1977, and in more than five years of experiments was notably able to acquire rain attenuation, distributions, depolarisation, joint attenuation distributions, and variation of attenuation statistics with frequency and from location to location.

He was Rector of the Politecnico di Milano, from 1969 to 1972, and President of the European Society for Engineering Education in 1979–80.

Professor Carassa received many honours, among them the 9th Marconi International Fellowship in 1983, the Italgas prize for Communication in 1989 and the 1992 IEEE Award in International Communication.

He took over the chairmanship of the ESA Council at a very difficult time, when the Agency was confronted with major challenges arising from the profound changes in the international political landscape.

Council's major preoccupation during his chairmanship was to devise a strategy adapted to the new circumstances and

redirect the Agency's priorities given that the political climate and priorities of Member States had changed since the Hague Ministerial Council in 1987.

to him for his support and friendship.

Jean-Jacques Dordain ESA Director General, 2003–

Antonio Rodotà (1935–2006) ESA Director General, 1997–2003



Antonio Rodotà brought much to the Agency and it is difficult in just a few words to sum up six very full years that boosted ESA into the 21st century. He of course brought his

personality and charisma, coupled with a wealth of industrial experience and a commitment to effective management. Over and above the successes registered by ESA in his six years as Director General, he also cleared the way for the emergence of a stronger Agency, one that is more accessible, and more firmly tied to Europe. He did this by laying the basis for ESA's relationship with the European Union and breathing life into that relationship with the start-up of the Galileo Programme, by expanding ESA with the accession of Portugal and partnerships with the countries of Central and Eastern Europe, but also by working for more effective cooperation with national agencies within the Network of Technical Centres. The Agency can be grateful to him for his strong legacy and I personally am grateful

Michel Bignier (1926–2006) Head of French Delegation, 1975–76 Member of ESA Executive 1976–86



Michel Bignier was one of the pioneers of the French and European space adventure. He represented France in various delegate bodies in ESRO and the European Space Conference as

well as in the ESA Council and was a strong supporter of European and international space cooperation.

After having spent a large part of this long and successful career at CNES, of which he was Director General from January 1972 to June 1976, he joined ESA in November 1976 as Director of the Spacelab programme, and was later entrusted with more extensive responsibilities as Director of Space Transportation Systems, which he exercised until his retirement in October 1986.

He was held in very high esteem as an unusually competent, reliable and openminded colleague by those who had the privilege of working with him.



The original text of the ESA Convention, as kept in the French Ministry for Foreign Affairs in Paris, and Final Act of the Conference of Plenipotentiaries (open at the signature page).

5. Major milestones in the lifetime of ESA

5 April **ESRO Council**

> appoints Roy Gibson (UK) as ESA

Director General.

Belgium, Denmark, 30 Мау

France, Germany

Republic), Italy,

the Netherlands, Spain, Sweden, Switzerland and the

United Kingdom sign the Convention in Paris establishing ESA.

9 August Launch of COS-B.

the first ESA mission to study gamma-ray sources.

Ireland signs the

ESA Convention.

1976

31 December

October ESA moves into its

> newly-acquired headquarters building in Paris.

22-23 November Council meets for

the first time in the Agency's new headquarters.

1977

14-15 February ESA Ministerial Council meeting in Paris (passed inter alia

> a Declaration to undertake an overall communications satellite programme and a Resolution creating the Earthnet programme).

20 April Launch of GEOS-1 by Delta rocket.

30 June Establishment of Eutelsat (European Telecommunications

Satellite Organisation), an intergovernmental organisation, by

P&T administrations in Europe.

Unsuccessful launch of OTS-1, due to Delta rocket failure. 13 September

Successful launch of ISEE-B satellite by Delta rocket. 22 October

23 November Meteosat-1 launched by a Thor Delta rocket.

12-14 December Council approves launch of GEOS-2.



Roy Gibson and Mario Pedini at the Ministerial meeting in Paris in 1977.

COS-B, launched in 1975.





Launch of OTS-2. 11 May

Launch of GEOS-2 by Delta rocket. 14 July

1979

1 January The first five-year Cooperation Agreement

between Canada and ESA comes into effect.

17 October Signing of Agreement formalising Austria's

association with ESA, in Vienna.

19 December Council appoints Erik Quistgaard (DK) to

> the post of Director General of ESA. He takes up his duties on 15 May 1980.

24 December The first Ariane-1 is launched from the

Guiana Space Centre.

1980

26 March Creation of Arianespace, the world's

first commercial space transportation

company.

Failure of Ariane's second test flight (Lo2), 23 May

causing loss of German Firewheel

satellite.

3 July Decision taken to upgrade Ariane to

Ariane-3, designed to launch two

satellites into GTO.

30 October Entry into force of the ESA Convention. 10 December

Ireland becomes a full member of ESA.

1981

Agreement signed by Norway to become 2 April

an associate member of ESA.

Work starts on a second Ariane launch site (ELA-2 at Kourou). August

1982

10-11 February Approval of the development of Ariane-4.

9 September Loss of Marecs-B and Sirio-2 satellites due to failure of first

Ariane operational flight.



Erik Quistgaard



The first Ariane launch.

28 November

First Spacelab launch with Ulf Merbold (D), ESA's first astronaut, on board the US

Space Shuttle.

Ulf Merbold

4 August

1984

Launch of ECS-2 by Ariane-3 (Flight 10; first

launch of an Ariane-3).

1 September 9 November Reimar Lüst (D) takes office as Director General of ESA.

Launch of Marecs-B2 by Ariane-3 (Flight 11).

1985

30-31 January

Ministerial Council meeting in Rome: ministers approve the start of preparatory work on the Ariane-5 launch vehicle and the start of the Horizon 2000 science programme, granting the science programme a 5% increase over a period of five years (subsequently extended for another five years at the end of this period); they took note, with interest, of the French decision to undertake the Hermes crewed space plane programme and the proposal by France to associate in the detailed studies its European partners within ESA interested in the programme.

30 October

Wubbo Ockels (NL) flies on Spacelab D1 mission.

1986

28 January

US Space Shuttle Challenger accident.

13–14 March Historic encounter of the Giotto probe with Comet Halley.



Comet Halley's nucleus as seen by the Giotto spacecraft.

19 June

The Eumetsat Convention entered into force as an agreement amongst 16 European states.

19 September Finland signs an Association Agreement.

1987

1 January Austria and Norway become the 12th and 13th ESA Member

States. Finland becomes an associate member.

9–10 November Ministerial Council meeting in The Hague: the Resolution on

the European Long-Term Space Plan and Programmes is adopted, and the development programmes for Ariane-5, Columbus and

Hermes are approved.

1988

15 June Ariane-4 launched for the first time (payloads: Meteosat P2 &

Amsat III).

29 September Memorandum of Understanding on cooperation in the design

and development of Space Station Freedom signed by ESA and

NASA in Washington.

First Intergovernmental Agreement (IGA) on Space Station

signed by European countries, US and Canada.

1989

8 March Launch of MOP-1 (renamed Meteosat-4) by Ariane.

19 April Celebration of 25 years of European cooperation on space in Paris.

12 July Launch of Olympus by Ariane. 8 August Launch of Hipparcos by Ariane.

1990

24 April Launch of the Hubble Space Telescope.

4 May Inauguration of the Galileo Programme Office in Brussels in the

presence of European Commission Vice-President Loyola de

Palacio.

10 May Signing of Host Agreement by the Agency and the Federal

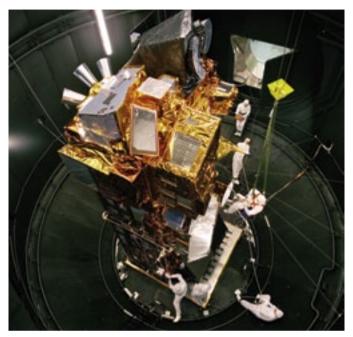
Republic of Germany establishing the European Astronaut

Centre.

1 October Jean-Marie Luton (F) succeeds Reimar Lüst as Director General of

ESA (until 1997).

6 October Launch of the Ulysses mission.



Envisat being made ready for thermal testing at ESTEC.

17 July Launch of ERS-1.

18–20 November Ministerial Council meeting in Munich (decisions on

reorientation of major infrastructure programmes, Columbus

and Hermes).

1992

22 January STS-42 mission with Ulf Merbold.

31 July STS-46 mission with Claude Nicollier (CH) and Eureca, the European

Retrievable Carrier.

9–10 November Ministerial Council meeting in Granada, Spain: go-ahead given

to develop Envisat-1 and, in cooperation with Eumetsat, initiate

MetOp and startup of MSG.

1993

20 November Launch of Meteosat-6.

2-13 December First Hubble Space Telescope servicing and repair mission, with

participation of Claude Nicollier.

1994

3 October-

4 November Euromir '94 long-duration mission with Ulf Merbold.
3–14 November STS-66 ATLAS-3 mission with Jean-François Clervoy (F).

1 January Finland becomes 14th ESA Member State.

20 April Launch of ERS-2.

3 September Euromir '95 long-duration mission, with Thomas Reiter (D), -29 February 1996 who spends 179 days in space as flight engineer on the ISS.

18–20 October Ministerial Council meeting in Toulouse, France: ministers agree on the funding of Europe's contribution to the ISS. They

subscribed, with immediate effect, the Declaration covering the development of the Columbus Orbital Facility (COF), and the Automated Transfer Vehicle (ATV) to be launched by Ariane-5. They also approved definition studies for a Crew Transport Vehicle (CTV) and preparation activities for Station utilisation. Ministers also subscribed with immediate effect three

Declarations covering the Ariane-5 Evolution Programme, the Ariane-5 Infrastructure Programme and the Ariane-5 ARTA

Programme.

17 November Launch of ISO.

1996

22 February STS-75 mission with Claude Nicollier, Maurizio Cheli (I) and

Umberto Guidoni (I).

4 June Ariane-5's first test flight (Flight 501) fails, leading to the loss of

four Cluster spacecraft.

24 July Portugal and ESA sign a framework cooperation-type Agreement.

1997

4 March Ministerial Council meeting in Paris: follow-up to Toulouse;

important decisions taken on the reform of ESA's Industrial Policy through the introduction of more flexibility in the placing

of contracts with industry.

20 March Council appoints Antonio Rodotà (I) as next Director General of

ESA. He takes over from Jean-Marie Luton on 1 July.

15 May STS-84 mission with Jean-François Clervoy.15 October Cassini-Huygens launched from Cape Canaveral.

30 October First successful launch of Ariane-5 (Flight 502).

29 January Signing of the Second Intergovernmental Agreement (IGA) on

Space Station Cooperation by 15 countries and of the Memorandum of Understanding between ESA and NASA in

Washington.

25 March Council approves the proposal to set up a unified European

Astronaut Corps by merging existing national astronaut

programmes with the ESA programme.

22 June Ceremony in Brussels to mark the 25th anniversary of the 1973

European Space Conference which laid the foundations of ESA.

23–24 June 136th ESA Council meets in Brussels and approves funding for:

the first step of the Global Navigation Satellite System;

 the definition and startup of activities relating to the Earth Observation 'Living Planet Programme';

 the first step in the development of a more powerful version of Ariane-5, named Ariane-5 Plus; and

preliminary work necessary to develop a small launcher called Vega.

In addition, Council adopts a Resolution on the reinforcement of the synergy between ESA and the European Community. This document was adopted in parallel by EU Research Ministers on 22 June.

29 October 20 November 20 December STS-95 mission with Pedro Duque (E) as Mission Specialist. First element of ISS (Zarya) is launched from Baikonur. Celebration of the 20th anniversary of the ESA/Canada

Cooperation Agreement.

1999

20 February Jean-Pierre Haigneré (F) begins 188-day mission to

Mir Space Station.

7–9 April The 139th Council meeting held in Longyearbyen, Svalbard,

Norway, at the invitation of Hugo Parr (N), Council Chair.

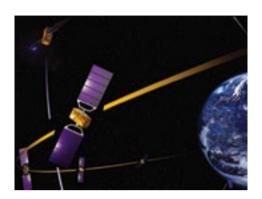
11–12 May Ministerial Council meeting in Brussels approves investments

in major new programmes in the areas of telecommunications,

navigation, including the definition phase of the Galileo programme, and Earth observation.

23–24 June Council elects Alain Bensoussan (F) as its new Chair as from 1 July

1999. He takes over from Hugo Parr.



Artist's impression of part of the Galileo satellite navigation constellation.

10 December First operational flight of Ariane 5 carrying ESA's X-ray

observatory, XMM-Newton.

15 December Signing of accession agreement with Portugal.

19 December Third Hubble servicing mission (STS-103) with Claude Nicollier

and Jean-François Clervoy.

2000

11 February STS-99 mission with Gerhard Thiele (D). 21–22 March ESA Council meets at the CSG, Kourou.

17 May 10th anniversary of the European Astronaut Centre.

21 June ESA and Canada renew cooperation agreement in Paris in the

presence of the Canadian Prime Minister, Jean Chrétien.

16 July–9 August Launch of Cluster mission (3D space plasma investigation).

14 November Portugal becomes ESA's 15th Member State.

15 December Approval of the Vega small launcher development and

P8o Advanced Solid Booster programmes.

2001

17 January Signing of a Framework Cooperation Agreement with Greece in

Athens.

21–22 March Council adopts a Resolution on the implementation of

measures concerning the European Cooperating States (ECS).

19 April—1 May STS-100 mission with Umberto Guidoni. He becomes the first

European to visit the International Space Station.

21–31 October Andromède mission to ISS with Claudie Haigneré (F).

14–15 November Ministerial Council meeting in Edinburgh: investments in new

programmes amounting to nearly €8 billion are approved, including some €500 million for the development of Galileo.

2002

28 February Launch of Envisat by Ariane-5.

25 April Robert Vittori (I) flies on Marco Polo Soyuz taxi mission to ISS.

12 June Council elects Per Tegnér (S) as its Chair from 1 July.

28 August Launch of MSG-1 by Ariane-5. 6 September 35th anniversary of ESOC.

17 October Launch of Integral from Baikonur.

30 October Frank De Winne (B) flies on Odissea Soyuz mission to ISS.

11 December Failure of the first flight of the new Ariane-5 ECA (Flight 157).

11–12 December Council appoints Jean-Jacques Dordain (F) as ESA's next

Director General. He takes up his post on 1 July 2003, succeeding

Antonio Rodotà.

Council also approves the creation of the European Space Policy

Institute (ESPI), to be located in Vienna.

2003

1 February Loss of US Space Shuttle *Columbia*.

11 February Signing of the Agreement between ESA and

Russia on

Cooperation and Partnership in the Exploration and Use of Outer Space for Peaceful Purposes, in Paris in the presence of the Russian Foreign Minister, Igor

Ivanov.

15 February Last flight of an

Ariane-4 after 116

flights.

7 April Signing of ECS

Agreement with

Hungary.



Launch of last Ariane-4.

26 May ESA Member States reach an agreement on their participation in

 $the\ development\ and\ validation\ phase\ of\ the\ Galileo\ programme.$

27 May Ministerial Council meeting in Paris: important decisions taken

on the restructuring of the Ariane launcher sector; ministers also freed funds for the ISS and adopted a Resolution on the

strengthening of the relations between ESA and the EU.

2 June Mars Express, Europe's first mission to the 'Red Planet', launched

from Baikonur.

11 June Council meeting at ESTEC on the occasion of its 35th anniversary.
27 September SMART-1, Europe's first Moon mission, launched by Ariane-5.

18 October Pedro Duque flies on Cervantes Soyuz mission to ISS. 24 November Signing of ECS Agreement with the Czech Republic.

25 November Signing of the Framework Agreement between ESA and the

European Community in Brussels.

2004

4 February Approval of the

programme to build a complex at

the Guiana
Space Centre for
commercial Soyuz

launches.

2 March Launch of Rosetta

from Kourou.

19 April André Kuipers (NL)

flies Delta Soyuz mission to ISS.

25 November First ESA—EU 'Space

Council' in Brussels.



The first image returned by high-resolution camera on Mars Express.

2005

14 January Historic landing of Huygens probe on Titan.
 12 February First successful launch of Ariane-5 ECA.
 9 March Greece becomes 16th ESA Member State.
 15 April Roberto Vittori flies Eneide Soyuz mission to ISS.



Participants of the Ministerial Council in Berlin, 2005.

21–22 June Council elects Sigmar Wittig (D) as its next Chair as from 1 July

2005. He takes over from Per Tegnér.

30 June Luxembourg becomes 17th ESA Member State. 8 October Loss of CryoSat due to Rockot launcher failure.

9 November
 5-6 December
 Venus Express launched from Baikonur on a Starsem Soyuz Fregat.
 Ministerial Council meeting in Berlin: Ministers took decisions

concerning the Level of Resources for 2006–2010 for the scientific and basic activities; on the continuation of ongoing optional programmes (EOEP, ISS Exploitation Period 2 and ELIPS

Period 2); on launcher evolutions; on ARTES and on new

programmes (GMES Space Component and Aurora, comprising its first Exploration mission ExoMars and a Core programme to prepare for future exploration missions). They also approved an

overall European launcher policy.

28 December Launch of first Galileo test satellite (GIOVE-A).

2006

17 February Signing of ECS Agreement with Romania.

22 June Council renews Director General Jean-Jacques Dordain's

mandate until 1 July 2011.

3 July 20th anniversary of Eumetsat.

4 July Thomas Reiter flies to ISS for six-month mission (STS-121).



Sigmar Wittig greets ESA astronaut Christer Fuglesang (S) after the return of STS-116.

19 October Launch of MetOp-A from Baikonur.

9 December Christer Fuglesang flies on Space Shuttle mission STS-116.

27 December Launch of COROT (a CNES-led project dedicated to the search for

exoplanets), involving ESA and various Member States.

2007

26 February Inauguration of Soyuz launch pad at Kourou.
27 April Signing of ECS Agreement with Poland.

22 May 4th ESA-EU Space Council, Brussels: 29 Ministers adopt the

European Space Policy, creating a common political framework

for space activities.



Participants of the 4th Space Council, Brussels, 2007.

27 September The States participating in the GMES programme approve the

transition to Phase 2 of Segment 1 of the GMES Space

Component Programme that covers the first three dedicated Sentinel GMES satellites and their related ground segment.

23 October STS-120: Launch of Italian-built Node 2 (Harmony) with ESA

astronaut Paolo Nespoli (I).

29 November European Transport Ministers reach agreement on Galileo (& 3 December) procurement structure and governance (Council's conclusions

adopted unanimously) following ECOFIN Council's decision

on the funding of the project.

2008

15 February

7 February Launch of Columbus laboratory and two ESA astronauts

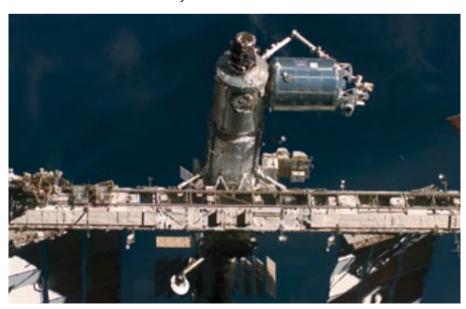
– Léopold Eyharts (F) and Hans Schlegel (D) – to the International

Space Station.

Inauguration of the European Space Astronomy Centre (ESAC) in the presence of HRH the Prince of Asturias.

Council approves the Agreement between the European

Community and ESA on GMES.



ESA's Columbus laboratory now an integral part of the ISS.

9 March Launch of the *Jules Verne* ATV, the largest payload to date for an

Ariane-5 (the first European resupply mission to the ISS,

performed by the most complex spacecraft ever produced in Europe).

12-13 March Council meeting at ESRIN adopts Enabling Resolutions on

Meteosat Third Generation and Space Situational Awareness Programmes and decides to go ahead with phase C/D of

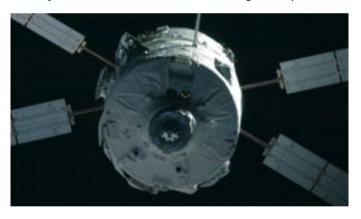
Financial Management Reform.

Council also elects Maurici Lucena (E) as its next Chair, who

will take office on 1 July 2008.

3 April Jules Verne ATV successfully docks with International

Space Station: a major first for European space, demonstrating mastery of automatic rendezvous and docking techniques.



Close-up view of ESA's ATV Jules Verne in orbit.

7 &24 April The EU Transport Council and the European Parliament adopt

the regulations that make it possible to kick off Galileo's

industrial procurement process.

14 April ESA and Thales Alenia Space sign a €305 million contract to

provide the first Sentinel-3 Earth observation satellite, devoted to oceanography and land-vegetation monitoring, as part of the

European GMES programme.

17 April ESA and Astrium sign a €195 million contract to provide the first

Sentinel-2 Earth observation satellite, devoted to monitoring the land environment, as part of the European GMES programme

27 April Launch of GIOVE-B, the second experimental Galileo satellite,

from Baikonur.

18–19 June 200th ESA Council meeting, in Paris.



6. Photographs



The European Space Conference held at the Palais d'Egmont, Brussels, on 15 April 1975, which approved the final draft of the ESA Convention.





Signature of the ESA Convention and of the Final Act of the Conference of Plenipotentiaries, Paris, 30 May 1975.





Accession of Austria and Norway to the ESA Convention, Paris, 12 December 1985 (at table, left to right: Heinz Fischer, Austrian Minister for Research, Gabriel Lafferranderie, ESA Head of Legal Affairs, Reimar Lüst, ESA Director General and Petter Thomassen, Norwegian Minister of Industry).







Ministerial Council, Rome, 1985 (left to right, Hubert Curien, Roger Bonnet, Daniel Sacotte and Frédéric d'Allest).





Henrik Grage, Reimar Lüst and Heinz Riesenhuber share a toast at the Ministerial Council in The Hague, 1987.



Ministers at the Ministerial Council in Toulouse, 1995.





Council Delegates in Kourou, French Guiana, 2000.

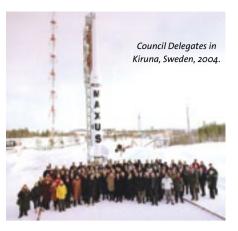




Antonio Rodotà, Romano Prodi and Edelgard Bulmahn at the Ministerial Council in Edinburgh, 2001.



Jean-Jacques Dordain, Antonio Rodotà and Edelgard Bulmahn at the Ministerial Council in Paris, 2003.





Lord (David) Sainsbury and Colin Hicks of the UK Delegation, Berlin, 2005.

Laurens Jan Brinkhorst, Jean-Jacques Dordain and Stefania Barbieri, Head of ESA Legal Department, at the Ministerial Council in Berlin, 2005.





Heads of Delegation, Dresden, June 2007.



7. Behind the scenes at Council



The Director General's Cabinet team: (left to right) Karlheinz Kreuzberg, Johann Oberlechner, Gudrun Deixonne, Sabine de Bisschop.



The Official Documents Management team: (left to right) Clara Klener, Marcel Meunier, Verania Vignon, Nathalie Tinjod, Sabine de Bisschop, Pascal Langlois (not shown, Jürgen Scholz and Philippe Schweiger).



Legal Affairs team: (left to right, front to back) Stefania Barbieri, Frank Riemann, Jean-François Schoonejans, Ines Denais, Gisela Suss, André Farand, Ulrike Bohlmann, Caroline Videlier-Gutmann, Catherine Baudin, Marco Ferrazzani, Barbara Pozzoni, Thierry Herman, Luc Mounier, Mickael Torrado, Anna Maria Balsano, Luz Becker, Nadia Vigna (not shown, Annelie Schoenmaker).



ESA Translation Division: (left to right, front to back) Laure Brissaud, Myriam Julia, Isolde Lupi, Sylvain Dionnet, Paul Reilly, Petra Bartilla, Géraldine Buisson-Boudou, Michelle Tran, Andrea Gruber Caro, Pascale Molina-Raymond, Geraldine McFadden, Colin McKinney, Evelyne Ron, Françoise Habay, Isabelle Delpech, Marie-Thérèse Lachiheb, Frédéric Jamain, Myriam Flambard, Anthony Blend, Oliver Jarchow (not shown Markus Driesch, Isabelle Picou).



The print shop team: (left to right) Pascal Langlois, Camel Cherfi, Marcel Meunier, Gérard Guérin, Laurence Burnel, Frédéric Petit, Stéphane Company.



8. Not forgetting the lighter side

Glossary of terms used in Council

Clarify *v* To fill in the background so that the foreground goes underground.

Compromise 1. *v* To divide a cake in such a way that everybody believes they got the biggest piece. 2. *n* An agreement whereby both parties get what neither of them wanted.

Conference *n* The confusion of one person multiplied by the number present.

Crisis 1. When you can't say, "Let's forget the whole thing." 2. *n* Any situation you want to change.

Diplomacy *n* The art of letting someone else get your way.

Negotiate *v* To seek a meeting of minds without knocking together of heads.

Progress *n* What you get when each mistake is a new one.

Sacrifice *n* Something somebody else is obliged to make.

Strategy *n* A plan for getting from here to where the Director General wants you to be.

Tomorrow *n* One of the greatest laboursaving devices of today.

Decoding Council-speak

A number of different approaches are being tried. - We are still grasping at straws.

Close project coordination - **We know who** to blame.

Give us your interpretation. - I can't wait to hear this.

It is in progress. - It is so wrapped up in red tape that the situation is almost hopeless.

Please read and initial - Let's spread the responsibility for this.

The entire concept will have to be abandoned. - *The only person who understood the thing left*.

Under consideration - Never heard of it.

Under active consideration - We're looking in the files for it right now.

We will look into it - Forget it, we have enough problems already.

We will advise you in due course. - If we figure it out, we'll let you know.

What is your present thinking? - We'll listen to what you have to say as long as it doesn't interfere with what we've already decided to do.

Delegates under the magnifying glass



The argumentative one

Gets out of bed the wrong side every morning. Will pick a fight with anyone, on anything.

The reasonable one

Calm, with a positive, can-do attitude.

The 'know-it-all'

Clever clogs. Has the answer to everything.

The talker

Blah, blah... and as I said to such and such. Please let me finish. I didn't interrupt you... And another thing...

The shy one

The quiet type. Not keen on the spotlight.

The obstructive one

An immovable obstacle. No, over my dead body! Thou shalt not pass!

The disinterested one

Yawn, heard it all before!

The 'fence-sitter'

Yes, but on the other hand, we should not move too hastily. Oh, I don't know. My hands are tied. I can't commit to anything at this stage.

The question master

Answers questions with another question. But have you also considered...?

Useful quotes

"A pessimist sees the difficulty in every opportunity; an optimist sees the opportunity in every difficulty." (W.S. Churchill)

"Small opportunities are often the beginning of great enterprises."

(Demosthenes)

"When written in Chinese, the word 'crisis' is composed of two characters. One represents danger, and the other represents opportunity." (J.F. Kennedy) "Les problèmes sont comme le thé. S'ils sont trop chauds, il faut les laisser refroidir." (M. Bignier)

"The whole is more than the sum of its parts." (Aristotle)

"If politics is the art of the possible, research is surely the art of the soluble."

(P. Medawar)

"The secret of success is constancy to purpose."
(B. Disraeli)

Chronology of ESA Council meetings, 1975-2008

Council session	Date	Venue	Chair
1975			
ıst	24-25 June	Neuilly-sur-Seine	M. Lévy (F)
2nd	31 July – 1 August	Neuilly-sur-Seine	
3rd	2 October	Neuilly-sur-Seine	
4th	19-20 November	Neuilly-sur-Seine	
5th	16-17 December	Neuilly-sur-Seine	
J	,	,	
1976			
6th	26 February	Neuilly-sur-Seine	W. Finke
7th	10-11 May	Neuilly-sur-Seine	W. Finke
8th	30 June	Neuilly-sur-Seine	W. Finke
9th	28-29 July	Neuilly-sur-Seine	W. Finke
10th	7-8 October	Neuilly-sur-Seine	W. Finke
11th	4 November	Paris	A. Goedhart (NL)
12th	22-23 November	Paris	W. Finke
13th	16-17 December	Paris	W. Finke
1977			
14th	28 January	Paris	W. Finke
CM*	14-15 February	Paris	M. Pedini (I)
15th	16 February	Paris	W. Finke
16th	27 April	Paris	W. Finke
17th	25-26 May	Paris	W. Finke
18th	30 June-1 July	Paris	W. Finke
19th	26-27 July	Paris	L. Azcarraga (E)
20th	3-4 October	Paris	W. Finke
21st	21-22 November	Paris	W. Finke
22nd	12-14 December	Paris	W. Finke
1978			
23rd (part I)	28 February-1 March		W. Finke
23rd (part II)	6-7 April	Paris	W. Finke
24th	25-26 April	Paris	W. Finke
25th	22 June	Paris	W. Finke
26th	26-27 July	Paris	J. Stiernstedt (S)
27th	7-8 November	Paris	J. Stiernstedt
28th	12-13 December	Paris	J. Stiernstedt
1070			
1979	27. 29 Eobruses	Paris	J. Stiernstedt
29th	27-28 February	Paris	
30th	3-4 April	Paris	J. Stiernstedt
31st	15-16 May	Paris	J. Stiernstedt
32nd	28-29 June	Paris	J. Stiernstedt
33rd	25-26 July	Paris	J. Stiernstedt

Council session	Date	Venue	Chair
	.	ъ.	
34th	10-11 September	Paris	J. Stiernstedt
35th	10-11 October	Paris Paris	J. Stiernstedt J. Stiernstedt
36th	23 October		
37th	27-28 November	Paris	J. Stiernstedt J. Stiernstedt
38th	18-19 December	Paris	J. Stiernsteat
1980			
39th	23-24 January	Paris	J. Stiernstedt
4oth	24-25 March	Paris	J. Stiernstedt
41st	20 May	Paris	J. Stiernstedt
42nd	26 June	Paris	J. Stiernstedt
43rd	22-23 October	Paris	J. Stiernstedt
44th	25 November	Paris	J. Stiernstedt
45th	15-16 December	Paris	J. Stiernstedt
1981			
46th	5 March	Paris	J. Stiernstedt
47th	29 April	Paris	J. Stiernstedt
48th	21 May	Paris	J. Stiernstedt
49th	29-30 June	Paris	J. Stiernstedt
50th	27-28 October	Paris	H. Curien (F)
51st	9-10 December	Paris	H. Curien
1982			
52nd	10-11 February	Paris	H. Atkinson (UK)
53rd	27-28 April	Paris	H. Curien
54th	22-23 June	Paris	H. Atkinson
55th	26-27 October	Paris	H. Curien
56th	8-9 December	Paris	H. Curien
1983			
57th	23-24 February	Paris	H. Curien
58th	13-14 April	Paris	H. Curien
59th	8-9 June	Paris	H. Curien
6oth	19-20 October	Paris	H. Curien
61st	7-8 December	Paris	H. Curien
1984			
62nd	23-24 February	Paris	H. Curien
63rd	10-11 May	ESTEC	H. Curien
64th	27-28 June	Paris	H. Curien
65th	17-18 October	Paris	H. Curien
66th	12-13 December	Paris	H. Atkinson
	-		

Cou	uncil session	Date	Venue	Chair
198	85			
67tl	h CM	30-31 January	Rome	G.M.V. van Aardenne (NL)
68t	h	27-28 February	Paris	H. Atkinson
69t	h	24-25 April	Paris	H. Atkinson
70tl	h	10-11 June	Paris	H. Atkinson
71st	:	23-24 October	Paris	H. Atkinson
72n	d	12-13 December	Paris	H. Atkinson
198	36			
73rc	1	5-6 March	Paris	H. Atkinson
74th	h	26-27 June	Paris	H. Atkinson
75th	า	21-23 October	Paris	H. Atkinson
76tl	h	15-16 December	Paris	H. Atkinson
198	3 7			
77th	า	3-4 March	Vienna	H. Atkinson
78tl	h	22-23 June	Paris	H. Atkinson
79tl	h	21-22 October	Paris	H. Grage (DK)
8ot	h CM	9-10 November	The Hague	H. Riesenhuber (D)
81st	İ.	15-16 December	Paris	H. Grage
198	88			
82n	d	17-18 March	Paris	H. Grage
83rd	d	28-29 June	Paris	H. Grage
84t	h	19-29 October	Paris	H. Grage
85tl	h	15-16 December	Paris	H. Grage
198	39			
86t	h	13-14 March	Paris	H. Grage
87tl	h	28-29 June	ESTEC	H. Grage
88t	h	18-19 October	Paris	H. Grage
89t	h	13-14 December	Paris	H. Grage
199	90			
9ot	h	20-21 March	Paris	H. Grage
91st	t	27-28 June	Paris	H. Grage
92n	ıd	7-18 October	Paris	F. Carassa (I)
93rd	d	12-13 December	Paris	F. Carassa
199	91			
Spe	cial Council	7-8 February	Sta Margherita	F. Carassa
94t	h	20-21 March	Ligure Paris	F. Carassa F. Carassa

Council session	Date	Venue	Chair
95th	27 June	Paris	F. Carassa
96th (part I)	19 July	Paris	F. Carassa
96th (part II)	17 October	Paris	F. Carassa
97th CM	19-20 November	Munich	C. Aranzadi (E)
98th	11-12 December	Paris	F. Carassa
1992			
99th (part I)	12 February	Paris	F. Carassa
99th (part II)	19-20 March	Paris	F. Carassa
99th (part III)	30 April	Paris	H. Grage
99th (part IV)	25 May	Paris	F. Carassa
100th	24-25 June	Paris	F. Carassa
101st	15-16 July	Paris	F. Carassa
102nd	8 September	Paris	F. Carassa
103rd (part I)	15 October	Paris	F. Carassa
103rd (part II)	23 October	Paris	F. Carassa
103rd (part III)	8 November	Granada (E)	F. Carassa
104th CM	9-10 November	Granada	H. Curien
105th	15-16 December	Paris	F. Carassa
1993			
106th	4 February	Paris	F. Carassa
107th	24-25 March	Paris	F. Carassa
108th	4 May	Paris	F. Carassa
109th	23-24 June	Paris	F. Carassa
110th	13-14 October	Paris	G. Winters (NL)
111th (part I)	15-16 December	Paris	G. Winters
1994			
111th (part II)	18 January	Paris	G. Winters
111th (part III)	31 January	Paris	G. Winters
111th (part IV)	15 February	Paris	G. Winters
112th	22-23 March	Paris	G. Winters
113th (part I)	22-23 June	Paris	G. Winters
113th (part II)	19 July	Paris	G. Winters
114th	19-20 October	ESTEC	G. Winters
115th	14-15 December	Paris	G. Winters
1995			
116th	22 February	Paris	G. Winters
117th	23 March	Paris	G. Winters
118th	21-22 June	Paris	G. Winters
119th	19-20 July	Paris	G. Winters

Council session	Date	Venue	Chair
120th	31 August	Paris	G. Winters
121st (part I)	8 September	Paris	G. Winters
121st (part II)	11 October	Paris	G. Winters
121st (part III)	17 October	Toulouse	G. Winters
122nd CM	18-20 October	Toulouse	Y. Ylieff (B)
123rd	13-14 December	ESTEC	J. Wautrequin (B)
			/G. Winters
1996			
124th (part I)	26 February	Paris	G. Winters
124th (part II)	20-21 March	Paris	O. Zellhofer (A)
124th (part III)	14 May	Berlin	G. Winters
125th	25-26 June	Paris	G. Winters
126th	24-25 October	Paris	H. Parr (N)
127th	17-18 December	Paris	H. Parr
1997			
128th	26 February	Paris	H. Parr
129th CM	4-5 March	Paris	Y. Ylieff
130th	19-20 March	Paris	H. Parr
131st	24-25 June	Paris	H. Parr
132nd	21-22 October	Paris	H. Parr
133rd	16-17 December	Paris	H. Parr
1998			
134th	24-25 March	Paris	H. Parr
135th	4 June	Paris	H. Parr
136th	23-24 June	Brussels	H. Parr
137th	21-22 October	Paris	H. Parr
138th	15-16 December	Paris	H. Parr
1999			
139th	7-9 April	Longyearbyen,	
		Svalbard	H. Parr
140th	10 May	Brussels	H. Parr
141st CM	11-12 May	Brussels	Lord Sainsbury (UK)
142nd	23-24 June	Paris	H. Parr
143rd	20-21 October	Paris	A. Bensoussan (F)
144th	14-15 December	Paris	A. Bensoussan
2000			
145th	22-23 March	Kourou	A. Bensoussan
146th	20-21 June	Paris	A. Bensoussan

147th 19-20 October Paris A. Benso	ussan
148th CM 16 November Brussels Lord Sain	sbury
149th 19-20 December Paris A. Benso	ussan
2001	
150th 21-22 March ESRIN A. Benso	ussan
151st 20-21 June Paris A. Benso	
152nd 10-11 October Paris A. Benso	ussan
153rd 13 November Edinburgh A. Benso	
154th CM 14-15 November Edinburgh E. Bulma	hn (D)
155th 19-20 December Paris A. Benso	٠,
2002	
156th 20-21 March Paris A. Benso	uccan
157th 13 April Paris A. Benso	
159th 12-13 June Saint-Hubert,	иззан
Montreal A. Benso	uccan
158th**(session 1) 12 December Paris P. Tegnér	
2003	
162nd 26-26 February Paris P. Tegnér	
163rd 20 March Paris P. Tegnér	
164th 25 April Paris P. Tegnér	
158th (session 2) 26 May Paris P. Tegnér	
165th CM 27 May Paris E. Bulma	hn
166th 11-12 June ESTEC P. Tegnér	
167th 8-9 October Paris P. Tegnér	
168th 12 November Paris P. Tegnér	
169th 17-18 December Paris P. Tegnér	
2004	
170th 24-25 March Kiruna P. Tegnér	
171st 16-17 June Paris P. Tegnér	
172nd 13-14 October Paris P. Tegnér	
173rd 16 November Paris P. Tegnér	
174th CM 125 November Brussels E. Bulma	
175th 15-16 December Paris P. Tegnér	
2005	
176th 17 March Paris P. Tegnér	
177th 26 May Paris P. Tegnér	
178th CM 17 June Luxembourg E. Bulma	hn
179th 21-22 June ESOC P. Tegnér	

 $^{^{\}ast\ast}$ The meeting was initially planned to be held on 29 April 2002.

Council session	Date	Venue	Chair
18oth	13-14 October	Paris	S. Wittig (D)
181st	3 November	Paris	S. Wittig
182nd	15 November	Paris	S. Wittig
183rd CM1	28 November	Brussels	G. W. Adamowitsch (D)
184th	4 December	Berlin	S. Wittig
185th CM	5-6 December	Berlin	L. J. Brinkhorst (NL)
186th	14 December	Paris	S. Wittig
2006			
187th	15-16 March	Paris	S. Wittig
188th	21-22 June	Paris	S. Wittig
189th	11-12 October	Paris	S. Wittig
190th	13-14 December	Paris	S. Wittig/P.Tegnér
2007			
191st	15 February	Paris	S. Wittig
192nd	14-15 March	Paris	S. Wittig
193rd	9 May	Paris	S. Wittig
194th CM ¹	22 May	Brussels	M. van der Hoeven (NL)
195th	13-14 June	Dresden	S. Wittig/P. Tegnér
196th	10-11 October	Paris	P. Tegnér
197th	11 December	Paris	P. Tegnér
2008			
198th	15 February	Paris	P. Tegnér
199th	12-13 March	ESRIN	P. Tegnér
200th	18-19 June	Paris	P. Tegnér
	3 * * *		3

¹ Council meeting at Ministerial level as part of the ESA/EU Space Council

EUROPEAN SPACE AGENCY

COUNCIL

First Session

The first Session of the Council will take place on 24 and 25 June 1975 in Conference room A (5the floor), 114 Avenue Charles de Gaulle, Neuilly-sur-Seine. The meeting will start at 1000 hours on 24 June.

A restricted meeting will be held during the Session

Draft Agenda

1.	Adoption of the Agenda	ESA/C/OJ/1, rev.1
2.	Approval of minutes of 74th and 75th Sussions and matters arising therefrom	ESRO/C/MIN/74 ESRO/C/MIN/75 + Add.1
	Pinance matters	ESHOYC/HIN/75 + Add.1
	3.1 Programme review	
	a) AFC Resolution	ESA/AF/I/Res.1
	b) New proposals by the Director General	ESA/C(75)7
	c) Financial management - Interim report by the Director General	
	Reference documents:	ESRO/AF(75)51 + corr.1 & add.1
	3.2 Possible new definition of the Unit of Account	ESA/C(75)5
	Reference	ESRO/AF(75)42
	3.3 New scale of contributions to the General and Scientific Satellite Programme Budgets for 1976	ESRO/AF(75)46
	3.4 ELDO Accounts and Audit	ESA/C(75)6
4.	Personnel matters	
	4.1 Staff rules relating to the Appeals Board	ESRO/C(75)15 + add.1
	4.2 1974 General review of salaries	ESA/C(75)3
	4.3 Exceptional review of the remuneration of staff serving in Belgium, Germany, Italy and United Kingdom	ESA/C(75)4

5. International matters

5.1 Declarations of acceptance by the Convention on International liability of the United Nations

ESA/C(75)10*

5.2 Request for an SDS terminal by Morocco ESA/C(75)2

5.3 Canada - Observer Status ESA/C(75)8

Use of ESA as Logo (abbreviation) ESA/C(75)11*

7. Structure of the Committees ESA/C(75)1

8. Election of Chairmon of Delegate Bodies ESA/C/I/Res. (draft)

9. Other matters

9.1 Calendar of meetings ESA(75)1, rev.1*

9.2 Any other business

Documents not included in 'ESA/C/OJ/1

AGENCE SPATIALE EUROPEENNE

CONSEIL

Première Session

Liste des participants

Président : Professeur M. Lévy (France)

ALLEMAGNE

M. Finke Délégué
M. Loosch Délégué
M. Jordan Conseiller

M. Sauer Conseiller

BELGIQUE

M. de Reuse Délégué
M. Bousse Délégué

DANEMARK

M. Knudsen Délégué
M. Winther Conseiller

ESPAGNE

Gen. Azcarraga Délégué
M. Sanz Aranguez Délégué

FRANCE

M. Bignier Délégué
M. Mollaret Délégué

M. Louet Délégué suppléant

Mme Hiéronimus Conseiller
M. Chamoux Conseiller
M. Kaiser Conseiller
Mme Naugès Conseiller
M. Morel Conseiller
M. Jacques Conseiller

M. Le Thomas Conseiller

ESA/C/MIN/1 Annexe I page 2

ITALIE

M. Broglio Délégué
M. de Porto Délégué
M. Garcea Conseiller
M. Roméi Conseiller
M. di Veglia Conseiller

PAYS BAS

M. Goedhart Délégué
M. Kroesen Délégué
M. Flinterman Conseiller

ROYAUME UNI

M. Robinson

M. Atkinson

Délégué

M. Cavanagh

M. Loebell

Conseiller

Conseiller

SUEDE

M. Stiernstedt Délégué
M. Häkansson Délégué
M. Anggård Conseiller

SUISSE

M. Creola Délégué
M. Peter Délégué
M. Quinche Conseiller

OBSERVATEUR - AUTRICHE

M. Ortner

SECRETARIAT

MM. Gibson, Lebeau, Trella, Van Reeth

M. Kenedi et d'autres membres du Secrétariat

EUROPEAN SPACE AGENCY

ESA/C/I/Res. 2 Neuilly, 25 June 1975 (Translated from French, 25 June)

COUNCIL

Resolution

on the Structure of the ESA Committees

(adopted by the Council at its first session)

The Council,

Having regard to Resolution no. 3 annexed to the Final Act of the Conference of Plenipotantiaries and relating to the subordinate bodies of the European Space Agency,

Considering that, under the terms of Resolution no. 1 annexed to the Final Act of the Conference of Plenipotentiaries and relating to the "de facto" functioning of the European Space Agency, the provisions of the Convention for the establishment of the Agency should be taken into account, to the greatest possible extent, as from the day following the date of the signature of the Final Act.

Considering, consequently, that it is necessary to review the present committee structure in order to see that it conforms to the spirit of Article XI of the ESA Convention.

Noting, however, that such a restructuring can only be effected by taking into consideration the provisions of the ESRO Convention — which forms the legal basis for the "de facto" functioning of the Agency until the entry into force of the ESA Convention — and the provisions of the Arrangements relating to the optional programmes,

- <u>Finds</u>, consequently, that the Administrative and Finance Committee (AFC) should continue to carry out the attributions and exercise the powers conferred on it by the Financial Protocol annexed to the ESRO Convention;
- 2. Confirms the terms of reference of the AFC together with the delegation of powers previously conferred on it, subject, on the one hand, to the modifications which may subsequently be made to them when the terms of reference of the Industrial Policy Committee referred to in paragraph 5a below have been defined, and, on the other hand, to the decisions which may be taken later as regards the detailed management of programmes;

 Decides, going by the spirit of Article XI.8(a) of the ESA Convention, to maintain the Science Programme Committee (SPC) set up by Resolution ESRO/C/LII/Res. 2 and confirms its terms of reference;

Start of Vic

- <u>Decides</u> to bring the activities of the Joint Programmes and Policy Committee (JPPC) to an end as from 1 July 1975;
- Decides to set up, as subordinate bodies, in pursuance of Article X.7 of the ESRO Convention:
 - (a) An Industrial Policy Committee (IPC), which it invites to submit to it, in the light of the present situation of the Agency as regards industrial policy, draft terms of reference taking into account the provisions of Annex V to the ESA Convention;
 - (b) An International Relations Advisory Group (IRAG), which it invites to submit to it draft terms of reference taking into account the provisions of Articles II(a) and XIV of the ESA Convention;
- 6. <u>Finds</u> that the Programme Boards for the optional programmes should continue to fulfil the attributions and to exercise the powers assigned to them under the various Arrangements relating to these programmes, currently in force;
- 7. Requests, nevertheless, the Communication Satellite Programme Board, the Maritime Satellite Programme Board and later the Aeronautical Satellite Programme Board to meet jointly as a "Joint Board on Communication Satellite Programmes";
- 8. Requests the various bodies referred to above to adopt their respective rules of procedure or, in the case of the existing bodies, to adapt them to their new operating conditions; leaves it to these various bodies to confirm or set up, as appropriate, any sub-committees or working groups that they consider necessary for the proper performance of their missions;
- 9. <u>Invites</u> its Chairman, when he convenes the Bureau referred to in Article X.3 of the ESRO Convention and Article XI.3(b) of the ESA Convention, to invite the Chairmen of the AFC, SPC, IPC, Joint Board on Communication Satellite Programmes and of the Meteorological Satellite, Aeronautical Satellite, Ariane Launcher, and Spacelab Programme Boards to take part in the Bureau meetings.
 - These meetings of the Bureau should be limited to the practical preparation of the Council's discussions and to coordinating the work of the bodies referred to above.
- 10. <u>Invites</u> its Chairman to convene meetings of the duly authorised representatives of each delegation in connection with all questions on the Council's agenda which in his opinion are of especial importance and call for prior distussion among the delegations.

EUROPEAN SPACE AGENCY

ESA/C/I/Res. '3 Neuilly, 25 June 1975 (Translated from French 25 June 1975)

COUNCIL

RESOLUTION

ON THE CHAIRMANSHIP OF THE DELEGATE BODIES OF ESA

(adopted by the Council at its first session)

The Council,

Having regard to the Resolution ESA/C/I/Res. 2.

Having taken cognizance of the Bureau's proposals regarding the chairmanship of the delegate bodies of ESA,

Decides to appoint the following for a period of one year: 1.

Chairman of the Council:

Dr W. Finke,

Vice-Chairman:

Gen. L. Azcarraga,

Vice-Chairman: Mr J. Stiernstedt;

Recommends the delegate bodies of ESA to consider the following candidates for their chairmanship, for a term of office of one year:

Administrative and Finance Committee:

Mr A.L. Goedhart,

Science Programme Committee:

Prof. M. Lévy.

Industrial Policy Committee:

Mr P. Creola,

Joint Board on Communication

Satellite Programmes:

Mr D. Cavanagh.

Meteorological Satellite Programme Board: Prof. H.L. Knudsen,

Ariane Launcher Programme Board:

Mr J. van Eesbeek,

Spacelab Programme Board:

Prof. L. Broglio,

Aeronautical Satellite Programme Board: Gen. L. Azcarraga;

- Agrees that, notwithstanding the provisions of Rule 5.1 under the ESRO Council's Rules of Procedure, the term of office of the Chairman and Vice-Chairmen appointed in accordance with paragraph 1 above shall begin on 1 July 1975;
- Recommends the ESA delegate bodies referred to in paragraph 2 above to adopt the same decision as regards the term of office of their respective Chairmen and Vice-Chairmen.

ESA Council Chairs, Directors General and Council Secretaries 1975-2008

Council at delegate level

Maurice Lévy	France	1975 (first meeting)
Wolfgang Finke	Germany	1975-78
Jan Stiernstedt	Sweden	1978-81
Hubert Curien	France	1981-84
Harry Atkinson	United Kingdom	1984-87
Henrik Grage	Denmark	1987-90
Francesco Carassa	Italy	1990-93
Gaele Winters	The Netherlands	1993-96
Hugo Parr	Norway	1996-99
Alain Bensoussan	France	1999-2002
Per Tegnér	Sweden	2002-2005
Sigmar Wittig	Germany	2005-2007
Per Tegnér	Sweden	2007-2008

Directors General

Roy Gibson	United Kingdom	1975-80
Eric Quistgaard	Denmark	1980-84
Reimar Lüst	Germany	1984-90
Jean-Marie Luton	France	1990-97
Antonio Rodotà	Italy	1997-2003
Jean-Jacques Dordain	France	2003-

Council Secretaries

Georges Kenedi	France	1975-1978
Wilhelm Brado	Germany	1978-1988
Karl-Egon Reuter	Germany	1988-1999
Brian Walker	United Kingdom	1999-2000
Roger Elaerts	Belgium	2000-2004
Karlheinz Kreuzberg	Germany	2004-

ESA Council meetings at ministerial level

Adopted Resolutions

Date	Venue	Chair
14-15 February 1977	Paris	M. Pedini (I)
No. 1	Resolution on the Ear	rthnet Programme
No. 2		pean Remote Sensing Satellite Programme
No. 3		ency and Operational Systems
No. 4	Resolution on the Ag	ency and its External Relations
30-31 January 1985	Rome	G. van Aardenne (NL)
No. 1	Resolution on the Lor	ng-Term European Space Plan
No. 2	Resolution on Partici	pation in the Space Station Programme
9-10 November 1987	The Hague	H. Riesenhuber (D)
No. 1	Resolution on the Eur Programmes	ropean Long-Term Space Plan and
No. 2	•	pation in the Space Station Programme
18-20 November 1991	Munich	C. Aranzadi (E)
No. 1	Resolution on the Eur and Programmes	ropean Long-Term Space Plan 1992-2005
No. 2	•	mmes for Observation of the Earth and
	its Environment	
9-10 November 1992	Granada	H. Curien (F)
No. 1		plementation of the European Long-Term
M	Space Plan and Progr	
No. 2	Resolution on Interna	·
No. 3	Resolution on Space	Cooperation with the Russian Federation
18-20 October 1995	Toulouse	Y. Ylieff (B)
No. 1	Resolution concernin	g Decisions on Agency Programmes and
No. 2	Resolution on Directi programmes	ons for the Agency's policy and future
4-5 March 1997	Paris	Y. Ylieff
No. 1	Resolution on the Eu	ropean Space Agency's industrial policy
No. 2	Resolution on the Review of the Agency's System for calculating	
	the Scale of Contribu	tions for the Mandatory Activities

Date	Venue	Chair	
11-12 May 1999	Brussels	Lord Sainsbury (UK)	
No. 1	Resolution on Shapin	g the Future of Europe in Space	
No. 2	Resolution on the Age	ency's Evolution and Programmes	
No. 3	Resolution on the Lor	ng-Term Space Policy Committee	
16 November 2000	Brussels	Lord Sainsbury	
No. 1	Resolution on a Europ	pean Strategy for Space	
14-15 November 2001	Edinburgh	E. Bulmahn (D)	
No. 1	Resolution on Direction "Space Serving Europ	ons for the Agency's Evolution and Policy: ean Citizens"	
No. 2	Resolution on the Age	ency's Programmes	
No. 3	Resolution on the CSC	G (2002-2006)	
No. 4	Resolution on the Inte	ernational Space Station Programme	
27 May 2003	Paris	E. Bulmahn	
No. 1	Resolution on the Res	structuring of the Ariane Launcher Sector	
No. 2	Resolution on the Unblocking of the International Space Station		
	Exploitation Programme Period 1, Sub-envelope 2002-2004		
No. 3	Resolution on Relations between the European Space Agency		
N	and the European Un		
No. 4	Sector	erspectives for the European Launcher	
5-6 December 2005	Berlin	L. J. Brinkhorst (NL)	
No. 1	Resolution on the Age	ency's Long-Term Plan for Discovery and	
	Competitiveness	, ,	
No. 2	-	rel of Resources for the Agency's Mandatory	
	Activities 2006-2010	,	
No. 3	Resolution on the Evo	olution of the European Launcher Sector	
No. 4	Resolution on the CSC	G-Extension until end 2008	
No. 5	Resolution on the Evolution of the Agency		
No. 6	Resolution on the International Space Station Programme		

ESA/EU Space Councils

Date	Venue	Chair			
25 November 2004	Brussels	E. Bulmahn (D)			
First Orientations on	the preparation of the	European Space Programmes			
7 June 2005	Luxembourg	E. Bulmahn			
Orientations from the	Orientations from the 2nd Space Council				
28 November 2005	Brussels	G. W. Adamowitsch (D)			
Orientations from the 3rd Space Council on GMES					
22 May 2007	Brussels	M. van der Hoeven (NL)			

Resolution on the European Space Policy

ESA Council delegates and advisers 1975-2008

Austria (Member State since 1987	7)	Nijskens, Jacques	1995-
		Poncelet, Lionel	2007-
Draxler, Klaus	1979-85	Praet, Michel	1987-92
Jankowitsch, Peter	1978-99	Rémy, Vincent	1992-93
Kleinsasser, Andrea	1995-	Reusse, Jean de	1975
Kneucker , Raoul	1991-95	Simon, Paul	1998-2005
Krenn, K.	1984	Snoecx, Anni	1987-92
Lennkh, Georg	1982-93	Thibaut, Georges	1993-94
Ortner, Johannes	1975-98	Van Eesbeek, Jan	1975-78
Pompl, Margarethe	1996-97	Vanlersberghe, Jacques	1993-98
Posch, Harald	2003-	Verbeelen, Hendrik	2004-07
Pseiner, Klaus	1998-	Ver Elst, Mariëlle	2003-
Rainer, Gerhard	1994-96	Wagner, Monique	1992-
Schaedler, Ingolf	2004	Wautrequin, Jacques	1989-1998
Schmitzer, Eva-Maria	1997-2002		
Schramek, Karl	1999-2002	Canada	
Stacher, Ulrich	2003-		
Unterer, Ulrike 19	88-96; 2002	Baker, Ralph	1978-80
Wagner, Gerhard	1988-89	Beaulieu, Paul J.	1990-92
Wielander-Faustenhammer, J.	2002-04	Béland, Sylvie	2004-
Wild, Christian	1985-92	Bergeron, Laurent A.	1990-93
Zellhofer, Otto	1982-96	Berlinguet, Louis	1980-82
		Boisvert, Larry J.	2007
Belgium		Bronstein, Leon	1985-87
		Bujold, Guy	2008
Beka, Eric	1992-	Burbidge Mark	2005-
Bleeker, Roger de	1976-86	Chambers, Jack.	1994
Bousse, J.	1975-76	Chapman, John H.	1976-79
Eltges, Thierry	1987-89	Dohoo, Roy	1975
Fontaine, F.	1977-79	Doré, Roland	1992-94
Fonteyn, Dominique	2006-	Elliott, John	1977-78
		Evans, W. M. (Mac)	1983-84;
Haine, Bernard	1991-93		1994-2001
Jacob, Max	1979	Franklin, Colin A.	1977-84
Laurent, Jacques	1976-90	Garneau, Marc	2001-05
Lemaître, Olivier	2003-05	Ghent Mallett, Jocelyne	1980-90
Limbourg, Marie-Claude	1995-99	Gilbert, Hugues	1996-99;
Mayence, Jean-François	1999-		2005-
Morel, Eric	1986-87	Giroux, Michel	1979-2005

Guertin, Florian	2000-05	Jauho, Pekka	1987-92
Jha, Virendra	1997-	Joensuu, Antti	1990-
Kerwin, Larkin	1990-92	Kanto, Kimmo	2007-
Kostash, Janis	1985-87	Kekkonen, Timo	1996-99
Lacombe, Carole	2006	Kienanen, Timo	1992
Leclerc Gilles	1994, 1997-	Kuusi, Juhani	1994-95
Lessard, Stéphane	1996-99	Mäenpää, Martti	1993-97
Lindberg, Garry M.	1986-94	Mäkelä, Pauli	1992-93
Low, David. I. R.	1981-85	Mäklin, Martin	1996-97
Marchand, J. Raymond	1975-81	Murto, Charles	1987-89
Shisko, Andrew	1993-97	Panula-Ontto, Esa	2001- 06
Tremblay, Jean-Yves	1990-92	Peltonen, Petri	1997-99
Wagner, S.	1976-80	Sandell, Hakan	1989-92
-		Slotte, Per-Håkan	1988-91
Denmark		Tilli, Kari	1987-
		Toivola, Yrjö	1992-95
Bloch, Charlotte	2001-03		
Dalgaard, Jens Ulrik	1995-2000	France	
Grage, Henrik	1975-		
Chair	1987-90	Allest, Frédéric, d'	1982-88
Gudmandsen, Preben	1977-94	Amigues, Louis	1981-85
Knudsen, Hans Lottrup	1975-81	Barbier, E.	1980-82
Pedersen, Laurids	1984-93	Barre, Joël	1998-2001
Petersen, Gorm	2002-	Beau, Laurence	2002-05
Prahm, Lars	1996-99	Bellouard Patrick	2005
Rosengreen, Birgit	1994-96	Ben Aïm, Hélène	2003-04
Sode-Mogensen, Birgitte	1991-95;	Bensoussan, Alain	1996-97,
	2000-	Chair	1999-2002
Sőndergaard, Carsten	1987-88	Bescond, Pierre	1993-94
Tychsen, John	1994-96	Bignier, Michel	1975-76
Winther, Erik	1975-86	Bonnal, Patrice	2005
		Bonneville, Richard	2008
Finland		Brachet, Gérard	1981; 1994-2002
		Brintet Damien	2005
Diehl, Gösta	1987-88	Brudieu, Patrice	2000-05
Eriksson, Bo-Göran	1987-91	Carré, Philippe	1990-93
Herland, Einar-Arne	1999-2001	Cerf-Mayer, Eric	2004-
Immonen, Jorma	1995-2004	Chamoux, R.	1975-76
Jääskeläinen Juhani	1995-96	Chappe Alain	1992

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Chasseriaux Michel	1977	Renaux, D.	1997
Curien, Hubert	1976-81;	Rey, H.	1977-80
Chair	1981-84	Roch-Meyrand, Mme	1982-84
Defline, L.	1979	Rousseau	1975
Dejumne Patrice	1985-91	Sacotte, Daniel	1986-93
Drogoul, Hélène	1994-98	Sillard, Yves	1977-78
Escatha, Yannick, d.	2003-	Spiero, François	2004
Faivre, Didier	1990-98	Sussel, Jean Jacques	1984-85
Ferrand, Renaud	2001-04	Thibaut, Jean-François	1989-95
Filliol, S.	1976-80	Traizet, Michel	1986-89
Gotlieb, Bernard	1985-87		
Guitton, J. P.	1977	Germany	
Hieronimus, Anne-marie	1975-76		
Jacques, Y.	1975-77	Bachem, Achim	1997-2005
Janichewski, Stéphane	2001-	Baumgarten, Ludwig	1995, 1997 & 1999,
Kreiss, Blandine	1991-93		(MC); 2002-
Lataillade, Xavier, de	1997-2000	Beck, Jürgen B.	1984-94
Lebeau, André	1995-96	Becker, Horst	1979
Le Chatelier, Gilles	2001	Berge, Klaus	1990-97
Le Fèvre, Marius	1976-82	Blaesing, Karl-Christoph	1983
Le Franc, Jean-Pascal	1992 (MC);	Buschbeck, Konrad	1977-82
	2004-	Densing, Rolf	2003-
Le Gall, Jean-Yves	1991 (MC);	Diehl, Herbert	1999-2001
	1996-98	Döllinger, Walter	1995, 1997(MC);
Lévy, Maurice	1975-76		2004-
Lévi, Jean-Daniel	1990-95	Drescher, Olivia	2003-
Louet, Philippe	1975-80	Eikenberg, Henning	1988-90
Luton, Jean-Marie	1978-89	Engelhard, Helge	2002-05
Mattei, M. A.	1984-90	Finke, Wolfgang	1978-79; 1982-86;
Mollaret, Louis	1975-76	Chair	1975-1978
Mutin, Jean	1977-90	Frenzel, Dietmar	1989-91
Nicoullaud, F.	1981	Friske, Dieter M.	1986-94
Nutten, Bernard	1988-89	Fulda, Gerhard	1992-97
Paranthoen, Zénaïde	1992-95	Gerstenlauer, Manfred	1991-2000
Parpex-Dumas, Dominique	1984-99	Grillo, Wolfgang	1989-93
Pellat, René	1992	Grümann, Roswitha	2006-
Pellerin, François	2007-	Jordan, Hermann Ludwig	
Plum, Marc	1998-2001	Kappler, Hans	1990-93
Rebillard, Yves	1979-97	Kiehne, Norbert	1997-2000
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Knoerich, Volker	1975-77	Ireland	
Kröll, Walter	1987-2001		
Langer, M.	1979	Aylward, Agnes	1987-89
Liebig, Volker	1999-2004	Buckley, Peter	1999-2001
Loosch, Reinhard	1975-90	Burrows, Gordon	1979-87
Mennicken, Jan-Baldem	1986-89,	Chamberlain, Seamus	1993-97
	1993-97	Considine, Con	1991
Miczaika , Thomas	1997-2004	Coyle Peter	1994
Muermans, Hans	1994-2003	Ellison, Brendan	1988-1992
Nagel, Karl-Friedrich	1995-	English, Michael	1987-1989; 2004
Oesberg, Rolf-Peter	1993-2005	Fahy, Michael Francis	1992-1998
Otterbein, Manfred	1995	Finucane, Brendan	1976-82
Pabsch, Wiegand	1988	Grace, Ann-Marie	2004
Patermann, Christian	1982-88	Hayes, Val	2004-
Rami, Bernhard	1993-99	Hennessy, Páraig	2004-06
Richter, Werner	2006-	Hodson, Aidan	2006-
Römer, Herbert	1979-83	Kearney, Dennis	1982-84
Sauer, H. K.	1975-78	Lalor, Eamonn	1976-85
Scholtyssek, D. H.	1975	McCabe, Mattie	1981; 1998-2001
Seipel, Heinz G.	1996	MacCafferty, Ellen	2006
Stoewer, Heinz	1990-95	MacLiam, Nial	1977
Strub, Hermann	1975-90	Manahan, Michael C.	1976-86
Urban, Dieter	1995-2001	McDonald, Tony	1998-
Von Kameke, Claus	1978-84	Molloy, Rody	1991-93
Von Wagner, Adolph	1976-90	Murphy, C.	1979
Wehner, Jörg	2003-05	O'Connor, Tom	1988-93
Wild, Wolfgang	1989-93	O'Donnell, Brian	1984-2000
Wittig, Sigmar	2002-05;	Pender, Michael	1993-95
Chair	2005-07	Power, Oliver	1989-91
Wörner, Johann-Dietrich	2007-	Shanagher, Martin	2002
		Shanahan, Brendan	2001-04
Greece (Member State since 2009	5)		
	_	Italy	
Krimigis, Stamatios	2006-		_
Nanopoulos, Dimitris	2006-	Ago, Pietro	1980
Papadakis, Ioannis	2005-	Bacchetti, Fausto	1979
Tsoukalas, Ioannis	2004-	Benedetti, Giovanni	1980
Zerefos, Christos	2004-	Bignami, Giovanni, Fabriz	io 2007

Bova, Mario	1982-84	Sabatini, Marcello	1995
Broglio, Luigi	1975-82	Sciubba, F.	1975-79
Buongiorno, Carlo	1985-89	Sessi, Ugo	1988-
Calamia, Mario	1903 09	Soria, Nicola	1984
Cammarano, Giovanni	1978-79	Tenenbaum, Alexander	1987-
Carassa, Francesco	1990	Uguccioni, Bernardo	1978
Chair	1990-93	Vattani, Umberto	1979-80
Casini, Silvano	1995-96	Vetrella, Sergio	1999-2007
Cassese, Fabio	2006	veticiia, sergio	1999 2007
Castaldo, Amedeo	1982	Luxembourg (Member Stat	te since 2005)
Cavallo, Giacomo	2007-	Luxenibudig (Member Star	te since 2005)
Cedola, Mario	1993-94	Berger, Eugène	2004-07
Cramarossa, Augusto	1993 9 4 2003-	Decker, Pierre	2004 07
D'Auria, Eugenio	1992-97	Serres, Marc	2004
De Julio, Sergio	1992 97	Jerres, Mare	2000
De Leo, Mario	1977-87	Netherlands	
De Lillis, Arturo	2003-	Netherlands	
De Luca, Vincenzo	2003	Buijink, Chris	1989-91
Di Lisio, Remo	1995	Cadee, Roel	1983-84
Ferrari, G.	1975	De Boer, Nico	1978-87
Fiocco, Giorgio	1994-95	De Bruïne, Frans	1983-89
Formica, Gianni	1979-87	De Groene, Hans	2001-
Garcea, B.	1979 07	De Pater, Koen	1990-92
Guerriero, Luciano	1980-93	Driedonks, Ad	2001-05
Infante, Giovanni	1985-88	Flintermann, Jan	1975
La Tella, Guido	1997-2000	Förster, Harry	2005-06
Loria, Alberto	1992-96	Gathier, Roel	1988-96
Magliano, M.	1977-78	Goedhart, Ad	1975-81
Mantovani, Aldo	1985-88	Heijs Francine	1997-99
Marchéi, Francesco	1975-76	Huysmans, F. O.	1981-86
Mazzuca, Francesco	1986-92	Katerberg, Cor	2007-
Minuto Rizzo, Alessandro	1986-92	Kooyman, Jan	1979-83
Mittiga, S.	1978-84	Kroesen, Fred	1975
Morsillo, Giuseppe	2004-05	Linssen, Peter	1987-95
Pernice, Bartolomeo	1996-2003	Marks, John	1996-97
Puccio, Francesco	1985	Lindeman, Johan	2001-
Puppi, Giampiero	1993-95	Nieuwpoort, Ger	2006-
Purificato, Benedetto	1979-85	Roos, Ruus	1996-2000
Rebichini, Antonio	2007	Schuddeboom, F.	1975-80
Resiemii, Amonio	2007	5c	19100

Siskens, Theo.	1980-92	Sørensen, Pål	1988-1998
Tiemersma, Florette	1993-96	Stava, N. O.	1988
Van Acker, Robert	2003-	Stornaug, A.	1983
Van de Donk, Jan	1992-2003	Syvertsen, Bjørn P.	1981-82
Van der Wees, Gerrit	1992-2005	Thestrup, G.	1983
Van Duyvendijk, Bert	1987-89; 1993-2001	Thoresen, Tor Jørgen	1980-82
Van Eldik, A. C.	1975-76	Tobiassen, S.	1978-80
Van Enst, Joris	1999-2005	1001833611, 3.	1978-80
Wakker, Karel	2004-06	Portugal (Member State since 2	1000)
Winters, Gaele	1991-93	rortugar (Member State Since 2	2000)
Chair	1993-96	Carvalho, Maria da Graça	2002-02
Citali	1993-90	Condessa, Rodolfo	2002-03
Norway (Member State	cinco 10 97)	Corrêa, Virgínia	2004-07 2003-
Norway (Member State	since 190/)	Lã, João Rosa	2003-
Andersen, Bo	1998-	Mathias, Leonardo	2004-00
Annexstad, Eirik	2007-		2000-01
Arnesen, Tor	1985	Ponte, Ana	2007-
Christensen, H.C.	1985	Trigo de Abreu, Armando	2007-
Eriksen, Th.	1984	ingo de Abreu, Armando	2000-02
Farberg, Jan	2000-03	Spain	
Göthe, Odd	1980-87	Spain	
Hovmork, Geir	2001-	Alonso Burón, Mariano	1980-83
Ihlen, Nils-Claus	1991-2006	Azcárraga Pérez-Caballero, L	
Jensen, Runar	1991-2000	Bassols Delgado, María	1999
Landmark, Bjørn	1977-93	Buergo Bandera, Emilia	1987-2000;
Mathisen, Erik P.	1981	bucigo banucia, Emina	2002-03
Mathisen Magnus	2002-07	Carvajal Salido, Antonio de	1988-90
Midttun, Harald Svang	•	Álvarez de Eulate, José María	
Mortensen, Andreas	1980-95	Fernández Fábregas, Francis	
Nesmoen, A.	1981	Fernandez Trigo, Juan	2000-01
Nord, Haakon	1978-81	Franco Iribarnegaray, Carlos	1977-
Parr, Hugo	1988-96;	Gómez Domínguez, Vicente	1986-2004
Chair	1996-99;	Jiménez Abascal, Aníbal Julio	-
Chan	1999-2000	Larrauri Arconada, José	1990-91
Rosenberg, Georg	1993-94	Leceta García, José Manuel	1997-99;
Sagen, Knut E.	1989-94	Leceta Garcia, 303e Manaci	2002-04
Skår, Rolf	1995 (MC);	Lomba Ferreras, Jorge	2002 04
Jan, Roll	1993 (MC), 1998-2006	López-Aguilar, Juan María	1989-93
Skeie, Nicolai	1980-88	Lucena Betriu, Maurici	2004-
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Marina I D	4077	Ctranshade Dotor	2002 2007
Maura, L. P. Matres Manso, José	1975 1997-98	Strömbäck, Peter Tegnér, Per	2003-2007
Monet Antón, Ricardo	1997-98	Chair	1998- 2002-05; 2007-08
Montero de Pedro, José	1977-82	Thorslund, Oskar	2002-05, 2007-08
Muñoz de Laborde, Juan Luis	2008-	morsium, Oskar	2002 00
Obregón Caracho, Jesús Marí		Switzerland	
Oyarzábal Marchesi, Antonio		JWICZEIIGIIU	
Román Ramos, José Enrique	1992-94	Abplanalp, Balz	2007-
Ruiz Molero, Enrique		Archinard, Natalia	2007-
Salazar Serantes, Gonzalo de	1995-97 2001	Berthet, Stéphane	2002-02
Sánchez Terán, Pablo		Bertschi, Marc	1994-2006
Sanz Aranguez, Segismundo	1993-95 1975-86	Christen, Victor	1986-91
Sierra Toral, Mercedes	2005-	Creola, Peter	1975-2002
Sodupe Roure, Jaime	1986-88	De Faveri, Lino	2007-
Triana García, Eugenio	-	Fürst, Daniel	•
Vidal i Comas, Gabriel	1992 1998-99	Gottret, Michel	2003-
Yturriaga Barberán,	1979-80	Greber, Anton, Amb.	1991-94
José Antonio de	1979-80	Hofmann, Roland	1995 1991-98
Jose Antonio de		Joseph, Jean-Claude	1979-86
Sweden		Kamer, A.	1978-80
Sweden		Kanner, A. Kaufmann, Johannes	2002-05
Änggård, Klas	1075 91	Knopf Peter	1999 (CM)
Englund, Björn	1975-81 1985-93	Kilopi retei	2001-07
Engström, Fredrik	1975-85	Neuenschwander, Danie	
Fredga, Kerstin	1987-1998	Peter, Charles	
Håkansson, Hans	1975-86	Piffaretti, Patrick	1975 1989-2005
Klevby, Bertil	1980-85	Quinche, J. O.	1975-78
Larsson, Thorwald	2001-	Ruder, Jean-Pierre	1984-2004
	8; 1986-2006	Vinard Pascal	2001-06
Martin-Löf, Johan	_	VIIIaiu Fascai	2001-00
Nilsson, Maria	1975	United Kingdom	
Nobinder, Per	2004- 1976-2000	Oniteu Kinguom	
Råland, Birgitta	1994-2002	Atkinson, Harry	1075 94.
Renlund, Stefan		Chair	1975-84; 1984-87
Sidenbladh, Thomas	2007- 1978-84	Canniff Robert	
Sjögren, Sven		Catlow, Ian	2005-
Stiernstedt, Jan	1993-1995 1975-89;	Catiow, iaii Cavanagh, D.	1996-97
Chair	1975-09;	Cavanagn, D. Cooper, Alan	1975-76
		•	1997-2004
Strömberg, Silja	1987-2005	Corbett, Ian	1990-94

Davis, Derek	1993-98
Evans, Hugh	1994-96
Freedman, Paula	1999-2008
Gibson, Roy	1985-87
Hawkes, J.C.	1979-81
Hicks, Colin	1999-2006
Hodges, Joanne	1992-94
Iddon, Carol	1984-85
Inglis, Ken	1987-94
Jude, Roger J.	1990-95
Leadbeater, David	1997
Leeming, Jack	1984-88
Loebell, J.B.	1975-80
Lumley, David	1996-98
MacDonald, Alistair	1985
Mallett, Ted	1976-79
Nicholas, A. Clifford	1981-90
Perriment, Tom	1998-2005
Pounds, Ken	1994-96
Pryor, Arthur J.	1988-93
Roberts, Trevor	1982-85
Rissone, Robin	1975-81
Robinson, Patrick	1994-95
Sivalingam, Raj	2004-
Southwood, David	1994
Thomas, Jim	1993-94
Williams, Paul	1979-80
Williams David	2006-

Council facts and figures

Between 1975 and June 2008...

200 (official) Council meetings were held, of which:

- 12 at ministerial level;
- 4 'Space Councils'.

There have been:

- 12 Chairs at delegate level and 10 at ministerial level;
- 6 Directors General:
- 6 Council Secretaries.

Council has adopted:

443 Resolutions, of which:

- 35 at ministerial level (record for one Council; six, in Berlin);
- 1 Act in Council.

Council has approved approximately 350 international agreements.

Issued for Council:

- around 5000 Council documents from 1975–2005 (original language only);
- in 2007, 189 documents were listed on the agenda of the unrestricted Council.

Council has created:

- 49 Council Working Groups;
- 28 subordinate bodies (PBs and Committees).

Council has nominated 38 persons to various Director posts.

Approximately 500 delegates and advisers since 1975 (not including those who only took part sporadically or once or twice).

1st meeting: delegations of 10 Member States and one observer (Austria). 200th meeting: delegations from 17 Member States plus Canada, and EU as observer.

Delegates who took part in the first meeting and still involved in 2008:

1 - Henrik Grage (DK)

BR-272

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