

this seemed natural from a diplomatic point of view. It is also to be understood in this context, that the basic text of the Convention should be the French one, particularly after the withdrawal of Great Britain [24].

Most of the French governments of those years were short-lived as a consequence of internal political division of the country, and on top of this, the Algerian independence movement made great demands on the successive cabinets from the year 1954 until independence was agreed in March 1962. The other major partner in the ESO effort, the German Federal Republic, went through its "economic miracle" in these years and seldom posed financial problems. Naturally, it was aware that a positive attitude with respect to matters of European integration should help bridge the cleavage caused by the war. In the smaller partner countries, however, post-war rebuilding programmes drew heavily on financial resources and made governments hesitant to commit themselves to a long-term financial obligation in astronomy.

Whereas the project was the subject of frequent consultation between many astronomers mutually and with their governments, there are three persons who, due to their key position, emerged as the principal spokesmen in the international discourse. They were: Jan H. Oort who as initiator and deeply convinced of the necessity of the project constantly strived for its realization; André Danjon of Paris, leading French astronomer and also strong supporter who had the difficult task of attaining his government's approval; and Otto Heckmann, one of the leading German astronomers, Director of the Hamburg Observatory and one of the strongest advocates of the project in his country. He would become ESO's first director. More in the background, but not to be forgotten, were such men as Bertil Lindblad (close to Oort by personal friendship and similarity of research interests), Charles Fehrenbach of Marseilles (close to Danjon), J.H. Bannier and G. Funke, to mention a few. Deeply interested in the developments was also Pol Swings of Liège, but a certain lack of communication between Belgian astronomical centres at that time has hampered Swings full involvement [25]. Without the growing mutual respect and friendship between the people mentioned here, the ESO project might not have surmounted the many obstacles on its way towards realization. The correspondence between these men (telephone and cable messages played only a minor role in these days) sometimes was of a strong personal nature and represents a touching "document humain". Not all letters

The Ford Foundation and the European Southern Observatory

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The Ford Foundation supported projects around the world and expanded its activities to include science and engineering after Henry Heald became President of the Foundation in 1956. Carl Borgmann, President of the University of Vermont, was hired in 1958 to be the Director of the new Programme in Science and Engineering. Four large grants to support major astronomical programmes in the southern hemisphere were made during the period from late 1959 to early 1967. The Ford Foundation was restructured in March 1967 by Heald's successor, McGeorge Bundy, and the Programme in Science and Engineering was discontinued. Borgmann served as Advisor on Science and Technology until he retired in 1970.

Oort and Lindblad met with Heald and Borgmann on October 9, 1958 to discuss possible Ford Foundation support for the European Southern Observatory. Oort had written to the Ford Foundation in August 1956 but then received a negative reply. Little encouragement was given during the 1958 meeting, but a year later the Ford Foundation Board of Trustees approved an appropriation of \$ 1.0 million to be granted if three conditions were met. The first condition was that at least four of the five nations (Belgium, France, German Federal Republic, the Netherlands and Sweden) must sign the Convention to create ESO. The other two conditions were administrative. Borgmann wrote to Oort on October 2, 1959 to inform him about this action.

Shepard Stone, the Ford Foundation's Director of International Programmes, went to Paris three weeks after the \$ 1.0 million had been appropriated. He discussed the matter with Jean Monnet, the closest advisor to the Finance Minister, Pinay. Stone's personal friend Gaston Berger, who was Director of Higher Education, wrote in October 1959 a memorandum in French for Stone's signature. Monnet personally delivered it to Pinay, who presumably discussed it with De Gaulle. The French government decided to participate, and this was announced on June 28, 1960.

The \$ 1.0 million grant was paid in full on September 16, 1964. This grant was later used to buy the quartz blank for the 3.6-metre telescope.

The great importance of the \$ 1.0 million appropriation by the Ford Foundation cannot be overestimated. The Ford Foundation's promise of a \$ 1.0 million grant was the "catalytic agent", a term used in the Ford Foundation staff's recommendation, that persuaded the French government to join in creating ESO. Without it, ESO might never have been more than the dream of Baade and Oort.

The three other grants were: Yale-Columbia astrograph in Argentina, \$ 750,000 in 1960; CSIRO for Australian Radioheliograph, \$ 550,000 in 1962, and \$ 80,000 in 1966; AURA for half the cost of the Cerro Tololo 4-metre telescope, \$ 5,000,000 in 1967.

I wish to thank the Ford Foundation for giving me access to the archives for the four grants in Astronomy, and Eldon Jones and Ann Newhall for their assistance in using these archives.

are type-written, nearly all of Danjon's letters in the ESO Archive are handwritten.

Not all of these Founding Fathers have lived to see the dream realized. Walter Baade died already on 25 June 1960, and Bertil Lindblad on 25 June 1965, a little more than a year after the ratifications had been completed. André Danjon died on 21 April 1967, only shortly after ESO's first constructions on La Silla had begun.

The Final Struggles

By the middle of 1957, the chances for approval of the project by the French government were very low. Summarizing a discussion with Heckmann on August 26 of that year, Danjon wrote that he feared opposition to the project by the Ministry of Finance [26]; it even seemed impossible to obtain funds for the site tests of the years 1957 and 1958. Danjon nevertheless thought that the project should be pursued, with France possibly joining at a later stage.

Under these circumstances, serious consideration was given to a German financial guarantee to save the project and yet retain broad international character [27]. The suggestion received support from the German astronomical community [28] and the meeting of the ESO Committee of October 1957 accordingly drafted alternative budgets for the cases with and without France [29]. The guarantee was not really effectuated, and the situation remained gloomy.

When the ESO Committee met in October/November 1958 in Uccle, there was no French representation; Danjon and Fehrenbach requested to be excused because their country seemed to be unable to help support the site testing [30]. The other countries decided to go on, but the situation underlined once more the urgency of arriving at the binding international contract between parties. It would take another year for chances to become better.

In a letter to Oort of 6 November 1959, Danjon could write: "*Enfin, le*