

The transition of the SSN from Zürich to Brussels in 1980

J.O. Stenflo

*Institute of Astronomy, ETH Zurich, CH-8093 Zurich, and
Istituto Ricerche Solari Locarno (IRSOL), Via Patocchi, CH-6605 Locarno Monti,
Switzerland*

Although it is well known that the leading role that Zurich had in establishing and determining the relative sunspot number ended with the retirement of Max Waldmeier, and that the responsibility for the continuation of this program was taken over by Brussels, few people really know why and how all this happened. As the successor on the Chair of Max Waldmeier I happened to play a key role in this transition. In the popular media I was at that time blamed for coming to Switzerland as a young Swede and without sensitivity abruptly discontinuing a century-old Swiss tradition.



Figure 1 Front-page news May 20, 1980: “Violent sunset” at the Swiss Federal Observatory.

With his strong personality Max Waldmeier had over the years generated many enemies within the ETH, something I learnt when I came there, although my own encounters with him had always been very friendly and even cordial. The ETH wanted to use the opportunity of Waldmeier's retirement to dissolve the Eidgenössische Sternwarte and make an entirely fresh start, preferably in an entirely new field of astronomy. Thus the ETH Search Committee picked as the successor the extragalactic astronomer Peter Strittmatter, who was of Swiss origin but was working as a Professor at the University of Arizona in Tucson. As it happened, his American wife did not want to make the move to Switzerland, so the search committee had to make a new choice. In this situation the only non-Zurich member of the search committee, Prof. Edith Müller from the Geneva Observatory, former Secretary General of the International Astronomical Union, urged the committee to choose me. So it happened that solar physics could be continued in Zurich, in particular since my American wife did not mind moving to Switzerland.

Die Träger der Hochschule sind die Professoren. Ihretwillen bedarf es einer Administration. Wenn diese sich aber zu einem eigenen Imperium aufbläht, werden die Träger der Wissenschaft zu Vasallen in der Abhängigkeit von Gunst und Mißgunst der Schulleitung. Diese ist an einem Punkt angekommen, wo sie ein völliges Unvermögen an den Tag legt, sachlich über Ansichten zu reden, welche nicht die ihren sind. Systemkritiker bleiben unverstanden und unerwünscht. Kommissionen haben blosse Alibifunktionen, wenn diejenigen, welche etwas zu sagen hätten, ausgeschlossen sind und auf jene gehört wird, welche sagen, was man hören will.

Als 1973 ein neuer ETH-Präsident das Amt antrat, mußte ich ihm schon nach wenigen Wochen mitteilen, daß seine Verfügungen geeignet seien, die Astronomie in Zürich zu ruinieren, und er hat es geschafft. Bei meinem Ausscheiden wird die Sternwarte noch zwei Assistenten haben wie schon im Jahre 1904 und von den 24 Räumen, die bisher ausschließlich durch die Astronomie belegt waren, werden ihr noch 6 verbleiben. Das ist

das Ende der Eidgenössischen Sternwarte.

30. Juni 1979

M. Waldmeier

Figure 2 Last page from Waldmeier's final Annual Report, signed June 30, 1979, before his successor had been chosen. He declares that the "end of the Swiss Federal Observatory" has happened through a process that started many years before.

ETH dissolved the Eidgenössische Sternwarte and all the positions related to the sunspot number program a few months before I began my position on April 1, 1980, to give me a "clean table" to start with. However, I naturally share responsibility for what happened, since ETH asked for my consent as the new professor before they executed these decisions. It was fully clear to me that the sunspot number time series was of great importance to the wide scientific community and had to be continued. So why did I give my consent to this?

There were two main reasons: (1) I saw that satisfactory alternative solutions for a responsible continuation of the sunspot number time series existed. The overriding priority was that reliable determinations could be continued somewhere, for me with an international outlook it was not essential that it had to continue to be in Zurich. (2) Having come to understand the atmosphere at the ETH, it was clear that stubbornly clinging to the continuation of the Zurich role would block the opportunities to develop new research programs in solar physics.

Nevertheless it was clear to me that the identification of a long-term solution to secure the continuation of the sunspot number had to be my first priority at the ETH, and that swift action on this matter was essential. In anticipation of Waldmeier's retirement there had been in 1979 concerned discussions within the IAU about the long-term future of the sunspot number, and in this context Alan Shapley at NOAA in Boulder had carried out detailed statistical studies that showed the excellent correlations between the Zurich sunspot number on the one hand and the corresponding number determined by the American Association of Variable Star Observers (AAVSO) on the other hand, as well as with the solar 10 cm radio flux measured at Ottawa. A large number of different observing stations sent their observations to Zurich, where the various input was weighted together to form the sunspot number.

Among the potential candidates to take over the responsibility of the determination of the sunspot number were Madrid, Istanbul, Manila, and Pulkovo (Leningrad), but without any particular evaluation procedure it was clear to me that the best and most reliable choice would be Observatoire de Bruxelles, where they had excellent experience over many years as a contributing station to the Zurich sunspot number. It was of critical help that I personally knew the Director, André Koeckelenbergh, since several years, and knew that he was highly motivated and conscientious, perfectly suited for taking over this task in a most responsible way. He had participated in a Workshop on Solar Polarization that I organized in Lund, Sweden, in 1977, so we had common scientific interests.

Therefore, only two weeks after I immigrated to Switzerland from Sweden and started my new job in Zurich I traveled to Brussels in mid April 1980 to have direct discussions with Koeckelenbergh about the possibility of transferring the responsibility for the sunspot number from Zurich to Brussels and about the modalities for this transfer. From

his enthusiastic response it was clear to me that this would be an excellent solution that should be implemented as soon as possible. It also became clear to me that the most important station that carried the by far greatest weight in the determinations of the relative sunspot number was Specola Solare in Locarno, which had belonged to the Eidgenössische Sternwarte under Waldmeier, but which was taken over from the ETH by a private local foundation, Associazione Specolar Solare Ticinese (ASST). The long-term sunspot observer, Sergio Cortesi, could continue his work there, but now effectively in the capacity of being the *de facto* Director of Specola.

As a follow-up of my Brussels visit I organized a meeting on June 4, 1980, at the newly formed Institute of Astronomy of ETH Zurich that I was now directing. At this meeting we formulated a detailed plan, based on a draft by Koeckelenbergh, which described how the transfer to Brussels should be executed, and which also defined the future role that Specola should play in this context. This plan was unanimously accepted by the participants at the meeting, which included besides Koeckelenbergh and Cortesi also Max Waldmeier and the two main representatives of the Zurich sunspot program, A. Zelenka and H.U Keller. According to our plan the transfer would be complete by the end of 1980, and from then on the designation would change from the Zurich relative sunspot number to the International Sunspot Number. Two days later, on June 6, I informed the President of IAU Commission 10, Dr. V. Bumba from Prague, about our plans. IAU was pleased with this solution and happy to support it.

Teilnehmer der Konferenz über die Weiterführung der
Sonnenfleckenzahlen, Institut für Astronomie,
4.6.1980

J.O. Stenflo	}	Institutsleitung
K. Dressler		
M. Waldmeier		Universität Zürich
A. Koeckelenbergh		Observatoire Royal de Belgique, Brüssel
S. Cortesi		Specola Solare, Locarno
A. Zelenka	}	Sternwarte
H.U. Keller		
M.C.E. Huber	}	Gruppe für Atom- und Astrophysik
H. Nussbaumer		
A.O. Benz	}	Gruppe für Radioastronomie
M. Perrenoud		

Figure 3 Participants in the meeting at ETH Zurich on June 4, 1980, at which the definite plan for the SSN transfer from Zurich to Brussels was unanimously adopted.

The backing by the IAU was essential to make it unambiguously clear who was now in charge of the sunspot number task, since there were other organizations who kept publishing their versions of the sunspot number. One of them was the long-term observer at the Eidgenössische Sternwarte in Zurich (H.U. Keller), whose funding was taken over by the Swiss military when the ETH terminated his employment.

After having successfully served as a kind of "midwife" to secure the long-term future continuation of the sunspot number series through the transfer from Zurich to Brussels, I consciously tried to keep a distance from all the activities related to the sunspot number, not only from the militarily-supported work in Zurich but also to some extent also from the work at Specola, to avoid confusion, because Brussels had to be viewed as the sole organization in charge, and the activities in my ETH institute dealt with other aspects of solar physics. The distance that I kept from the sunspot number might have been interpreted as a disinterest, but I have always appreciated the importance and necessity of the sunspot record and have from time to time myself been a scientific user of this record.

Looking back over the more than three decades that have since passed, I feel vindicated that we came up with a good solution back in 1980. The sunspot number series is in good hands.

Waldmeier suffered a debilitating stroke in 1986, which severely impaired the left side of his brain and his ability to understand speech or to communicate. He lived in this "twilight zone" until he died in the year 2000. My two last pictures shows him first in 1983, three years into retirement, looking through the Fraunhofer refractor that had been used by him and his predecessors to count the sunspots, while the second picture is from 1992, in which we find him in a wheelchair in the garden of his Zurich house.



Figure 4 Max Waldmeier in 1983 looking through the Fraunhofer refractor that had been used since the time of Rudolf Wolf to count the sunspots.



Figure 5 Max Waldmeier in the garden of his house in Zurich, during a visit by myself and Susi Weber, who served her whole life as astronomy secretary, first under Waldmeier, then for nearly two decades as my secretary.