

Geophysical Society of Finland 1926–2001

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Abstract

The Geophysical Society of Finland was established in 1926 and will thus celebrate its 75th anniversary in May 2001. This paper is a brief introduction to the history of this learned society, the circumstances in which it was established and the development of its activities during the past 75 years.

Keywords: Geophysical Society of Finland, History of learned societies

The background

When the Geophysical Society of Finland was established in 1926, geophysical research had been carried out in Finland for almost two centuries. During this entire period, learned societies had an important role to play, beginning with the Royal Swedish Academy of Science. Many of the most important early contributions, such as Leche's climatological studies or Runeberg's treatise on land uplift, were published in the series *Kungliga Svenska Vetenskaps-academiens Handlingar*.

After 1809, when Finland became a grand-duchy within the Russian empire, the links with the Royal Swedish Academy of Science were gradually loosened, and the Russian institutions could not entirely replace them. To satisfy the needs of the Finnish scientific community, the Finnish Society of Sciences was established in 1838. In the early volumes of *Acta Societatis Scientiarum Fennica*, geophysical papers had a large and visible role, to a large extent due to the efforts of Gustaf Gabriel Hällström and Johan Jacob Nervander. Besides the publication, the meetings of the Society were a new benefit that Finnish scientists had previously seldom been able to enjoy when the learned societies they belonged to had their meetings in Stockholm, Uppsala, St. Petersburg or other faraway places.

The 19th century also saw the establishment of a number of more specialized learned societies in Finland. From a geophysical point of view, the two geographical societies established in the late 1880s should be mentioned: The *Geographical Society of Finland* with its series *Fennia* and the *Finnish Geographical Association* with its publications *Geografiska föreningens tidskrift* and *Vetenskapliga Meddelanden af Geo-*

grafiska Sällskapet i Finland). From a geophysical point of view, the next step in the diversification process would naturally be a more physically oriented society – a development that would be parallel with the emergence of meteorology as an academic discipline within the department of physics.

There are several factors that can promote a diversification of learned societies. The growth of other kinds of scientific institutions may provide potential for a wider membership. The increasing specialization of sciences may create a need for more specialized communication between close colleagues. It is also a fact that presentations with very specialized contents may be difficult to follow for those who do not share the same speciality.

Kaavake aatteellisen yhdistyksen yhdistysrekisteriin ilmoittamista varten.

(Ilmoitus, joka on maksuton, sisäänjätettävään liitteeseen.)

Sosiaaliministeriön diarinumero <u>1730</u>	Paikallisviranomaisen diarinumero
Tuonut Saapunut Sosiaaliministeriöön <u>216 26</u>	Tuonut Saapunut paikallisviranomaiselle
p.nä <u>10 joulukuuta 1926</u>	p.näkuuta 192.....
Yhdistyksen rekisterinumero <u>12 358</u>	
Merkitty: <u>221 NR 14</u>	Sosiaaliministeriö on hyväksynyt tämän yhdistyksen merkittäväksi yhdistysrekisteriin ja on yhdistyksen nimeen liitetty: <u>r.y.</u>
Yhdistysrekisteriin siv.	Helsingissä, Sosiaaliministeriössä
Paikallisuutteletoon siv.	<u>10</u> p.nä <u>joulukuuta</u> 19 <u>26</u>
	<u>K. J. W. G.</u>



Ilmoitus yhdistysrekisteriin.

Sosiaaliministeriö

lle

Ilmoitetaan täten yhdistysrekisteriin merkittäväksi jalempänä mainittu yhdistys:

Yhdistyksen nimi ja rekisteröitäessä nimeen tehtävä lisäys (valinnan mukaan, joko „rekisteröity yhdistys“ tahi sen lyhenne „r.y.“):

Geofyysittinen Seura r. y. Geofyysika Sällskapet

Yhdistyksen kotipaikka: Helsinki

Yhdistyksen tarkoitus ja toiminnan laatu: herättää harrastusta geofyysilliseen tutkimukseen Suomessa ja edistää sitä

The German example

Of the founders of the Geophysical Society of Finland, Oscar V. Johansson and Risto Jurva as well as Vilho Väisälä had given their written accounts of the background and early phases of the Society. Johansson writes that in 1902–1903 he came into close contact with meteorological societies and their various organs, during his studies in “Wien, Berlin usw.”. The idea of bringing into being something similar “in unserem entlegenen Nord” occurred to him. His main objective was a scientific journal, and as there were no special journals for physics or geophysics in Finland or Scandinavia, he presented his ideas to Dr. Nils Ekholm in Stockholm. However, these plans did not produce any results, mostly because of the lack of funding (Johansson, 1935, 9). Vilho Väisälä had also stayed in Germany, at the University of Göttingen (*Sola and Tudeer*, 1940). Of greater importance may, however, have been a colloquium group at the Meteorological Institute of Berlin. According to Johansson, it was the pattern for the “aerological club” he established at the Ilmala Observatory of the Finnish Meteorological Institute.

The emergence of other scientific institutions in Finland

Finland became independent in 1917. During the following years, various fields of scientific research and monitoring had to be organized or reorganized. The *Finnish Meteorological Institute* has its roots in the *Magnetic Observatory of the Imperial Alexander University of Finland*, founded in 1838. In 1880, the *Central Institute of Meteorology* was established, now within the Finnish Society of Sciences. It took over the old observatory as well as the meteorological network that was maintained by the Finnish Society of Sciences. From the beginning of 1919, it became a governmental research institute. The *Geological Bureau* was established in 1885, and reorganized in 1918 as the *Geological commission*, which was later to become the *Geological Survey of Finland*. The *Hydrographical Bureau* was established in 1908 and its organization did not need major changes, except that the precision levellings were taken over by the *Finnish Geodetic Institute*, founded in 1918. The *Institute of Marine Research*, established in 1919, had its origins in the hydrographical observation programme launched in 1898 and the biological-hydrographical commission established in 1902. A rather comprehensive account of this development has been written by *Simojoki* (1978). Other accounts, mostly in Finnish, can be found in treatises on the history of these institutions (*Seppinen*, 1988; *Virkkala*, 1986; *Sirén*, 1974; *Hyvärinen et al.*, 1998; *Kukkamäki*, 1968; *Kakkuri*, 1993; *Lisitzin*, 1978).

At the university of Helsinki – or the Imperial Alexander University of Finland, as it was called until 1919 – meteorology had been an important part of the activities of the department of physics throughout the 19th century. In 1909, O.V. Johansson became the first *docent* whose field was defined as *meteorology*. In 1921, he was appointed *extraordinary personal professor* of meteorology. In 1923, meteorology

became a separate subject at the university. In 1926, the first *docents* were appointed at the department: *Vilho Väisälä* became *docent of meteorology*, while *Henrik Renqvist* was appointed *docent of geophysics*. – An account of the history of the Department of Meteorology has been written by *Holopainen and Leskinen* (1996).

The “Club of Ilmala”

In early 1920's there were two scientists working at the Ilmala Observatory: Vilho Väisälä, who was also the head of the aerological department of the Central Meteorological Institute, and Ivar Melartin. A third colleague, Niilo Kallio, joined them in September 1921, after some years as a school teacher. Kallio soon recalled a literature club in Porvoo, and the result was an “aerological club” along similar lines, consisting of the three research scientists. According to Väisälä, the club had 27 meetings during a period of 7 months, in the homes of the three members. The club had no statutes and no chairperson, but the host was supposed to write minutes. The activities were, however, soon over, as Melartin suffered health problems and Kallio had to leave the observatory in August 1923 due to the shortage of funding (*Väisälä*, 1950).

Kallio returned to the school and made a career as a teacher. His textbook of arithmetic was used by a large number of pupils until the late 1960s. He did, however, not leave geophysical research. His doctoral thesis, published in 1926, was based on the material collected in Ilmala. Moreover, he became the first treasurer of the Geophysical Society and held this post for two decades (*Väisälä*, 1950).

The events in 1926

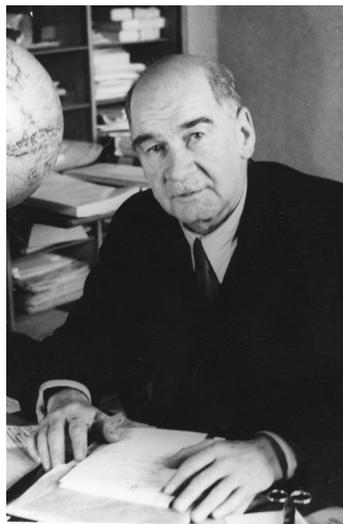
In January 1926, Vilho Väisälä was appointed docent of meteorology at the university. His main position was still at the Central Institute of Meteorology, but the new position as docent drew him closer to the university department and its professor O.V. Johansson. In a private discussion with Johansson, Väisälä mentioned his experience with the “club of Ilmala” and suggested that a similar group with a broader membership base could be possible. This proposal led to a meeting in which Johansson and Väisälä and two others – E.G. Pettersson from the Central Meteorological Institute and Risto Jurva from the Institute of Marine Research – participated. They decided to summon a meeting to which a number of people with meteorological interests were invited. This meeting took place on 17th March 1926 at the Department of Physics. A group was appointed, with the task of preparing a proposal for statutes. (*Johansson*, 1935; *Jurva*, 1948).

The statute group was chaired by Prof. Rolf Witting, the head of the Institute of Marine Research. He had from his own institute experience of leading a colloquium group similar to that of the “Club of Ilmala”. Risto Jurva, from the same institute, was the secretary of the statutes group. Seismology and hydrology can also be said to have been represented, by Henrik Renqvist who was responsible for the university seismol-

ogical station and later became the head of the Hydrographical Bureau. It is not certain whether the idea of a wider scope had been launched already at the meeting of 17th March or in the meetings of the committee; *Jurva* (1948) tells that the *decision* was made in the following meeting, 22th April, but this meeting was already able to decide to establish the Geophysical Society of Finland and accept the statutes proposed by the committee. In a newspaper notice (*Uusi Suomi* 12.5.1926) it was reported that the wider scope was desired especially by marine scientists, and that most of the founding members were from the university, from the Central Meteorological Institute, from the Institute of Marine Research and from the Hydrographical Bureau.

The statutes of the new society were submitted to the Register of Associations on 7th May 1926. The act of establishment was signed by Johansson, Väisälä, Pettersson and Jurva. The Society had its first meeting on 12th May. The statutes were confirmed by the Register of Associations on 10th December 1926.

It may be worth mentioning that the first meeting on 12th May had two topics: “On the importance of the migration dates of birds to climatological research” by O.V. Johansson and “On the recent earthquake in Western Finland” by H. Renqvist. Both meteorology and the other sciences were thus represented.



Prof. Oscar V. Johansson



Prof. Henrik Renqvist

Prof. Risto Jurva

The early years

Our knowledge about the early years of the Society is mostly based on secondary sources. The archives of the Society were destroyed in a bombing on 6th February 1944. Risto Jurva, the secretary of the Society during the first 20 years, wrote down some basic memories of the early years (1948); Johansson had given his account already in 1935; *Rossi* (1976), who joined the Society in 1934, had also personal experience from this period and he could speak with many of those who had

experienced the beginning. More material can occasionally be found in newspapers, but a systematic study of newspapers has not been undertaken.

The main type of activity were the meetings of the Society, but the early years also saw the publication of the first issue of *Geophysica* in 1935. A major project of the early years was an expedition to Svalbard in 1937. During a period of four weeks in July–August, 28 observation series were made using the radio sonde developed by Vilho Väisälä. The funding for this expedition was mainly acquired by the efforts of the Geophysical Society of Finland (*Tommila et al.*, 1939; *Rossi*, 1976).

The principal activities of the Society

The monthly meetings

From the very beginning, one of the main activities of the Society have been the regular meetings in which current geophysical topics have been presented and discussed. The tradition has been continuous until our days, except during the war years, but we can also see some changes in the pattern of these meetings. In the beginning, a meeting had often more than one theme and more than one presentation, while the more recent meetings, with the exception of panel discussions, have usually had one theme and one topic. At least from 1945, minutes were taken at all monthly meetings, until 1961. Thereafter minutes have been taken only in annual meetings and when particular topics, such as change of statutes or appointing an honorary member, were discussed.

The meetings have been arranged rather regularly. The preferred time has usually been the third Tuesday of the month; however, other days have been chosen if needed, and there have been shorter periods when some other weekday has been preferred. At least since early 1970, the meetings have often been mentioned as *monthly meetings*, even though few meetings have been arranged during the three summer months. Extraordinary meetings have been arranged when needed, e.g. when a foreign scientist has visited the town.

The minutes of the meetings from the late 1940s and the early 1950s often contained detailed accounts of the meetings, including the names of those who contributed to the discussion and their arguments or questions. The names of other participants were not usually mentioned. The habit of taking such minutes soon faded away, but the numbers of participants have been mentioned in the annual reports. More recent documents also include lists of participants. From these latter documents, it can be seen that the audience always consists of geophysicists working in various fields of research. On the other hand, the proportion of the speaker's close colleagues is usually relatively large, a fact that might be explained by their interest in the topic or in hearing comments from more distant colleagues. There is, however, also the possibility that more distant colleagues feel that they would perhaps not be able to follow the presentation. It is, of course, up to the speaker to adjust his/her approach to the needs of an in-

terdisciplinary geophysical audience and find a suitable position on the scale between entirely technical and entirely popularizing presentations.

It might be assumed that the meetings of the Society would not be of great importance as a forum for communication between the closest colleagues, as there are often possibilities for more immediate communication within the institutions, as well as conferences and seminars with a more specialized scope. This may be true, but the monthly meetings are at least one possibility among others. In the earlier years, when there were fewer opportunities for such conferences, the meetings of the Society were more likely to have a more crucial role. *Rossi* (1976) mentions as one of the highlights of the Geophysical Society's history the meeting on 7th November 1929, when Hugo Karsten explained the structure of a Russian radio meteorograph. Vilho Väisälä is reported to have said that this meeting inspired him to developing his famous radio sondes.

The meeting programme is planned by the board some months in advance. During a period, e.g. a term or a year, there are normally representations from several branches of geophysics. This has probably been the unwritten goal of the board in all times. On the other hand, the interests of board members can also be seen in the programme. An attempt to divide the presentations according to the topics can be seen in Table 1. The the figures for the first fifty years are taken from *Rossi* (1976), who paid attention to two trends: the the topic distribution had become more, even if meteorology is still the largest field, and the proportion of climatology within meteorology had considerably decreased. After the last quarter of the century we can see that the proportion of meteorology has continued to decrease, but the decreasing trend for climatology has broken.

Table 1. Monthly meetings of the Geophysical Society of Finland: number of presentations divided according to the branch of geophysics. The panel discussions of the 1980s and 1990s are regarded as one presentation.

Decade/*pentade	1926- 1935	1946- 1955	1956- 1965	1966- 1975	1976- 1985	1986- 1995	1996- 2000
Solid earth / seismology	6	10	11	12	2	7	2*
Solid earth / geology	3	1	6	8	12	16	6*
Geodesy	4	9	7	12	12	5	8*
Space & magnetism	3	16	17	18	20	10	6*
Oceanography	12	12	16	11	16	10	5*
Hydrology	8	13	11	22	10	12	6*
Meteorology / synoptic	24	32	30	26	11	8	4*
Meteorology / climate	22	26	24	5	8	8	7*
Others	20	29	33	11	13	13	5*
Altogether	102	147	155	125	104	89	49*
Meetings	50	86	94	91	95	88	46*

The meetings have also a certain importance as a social context, especially for retired members. For this reason, there has usually been a possibility for more informal discussions with coffee and biscuits at the meeting locality before or after the meeting.

In earlier days it was customary that many participants continued the discussions after the meeting in a restaurant. Some of these discussions could even lead to scientific results.

Until the early 1980's, the meetings used to begin rather late in the evening, often at 7 p.m. After a member poll and attempts with several timings, the meetings now normally start at 4 p.m. The change may, among other things, reflect the growth of the Helsinki region. An increasing number of members live in the suburbs and are thus not willing to go before the meeting.

A traditional site of the monthly meetings used to be the great auditorium at the Department of Physics of the University of Helsinki, located at Siltavuorenpenger 20. Meetings have also taken place in other university localities (the auditorium of the Department of High Energy Physics, various lecture rooms in *Porthania* etc.) A number of meetings in the 1980s and 1990s have taken place in the House of Estates, a building in which many learned societies used to have meetings. The *House of Sciences* was opened in 1997 and became the principal meeting site for the Geophysical Society as well as many other learned societies. Some meetings have taken place in various research institutes. Sometimes a monthly meeting has taken the form of an excursion.

Excursions

As was said above, very few monthly meetings have been arranged during the summer months, which for many geophysicists are a time for field research, conferences and holidays. On the other hand, late spring and early summer, as well as late summer and early autumn, are appropriate times for excursions.

The excursions arranged by the Geophysical Society of Finland have varied in duration, from one evening to more than one week. Unlike the monthly meetings or the *Geophysics Days*, they have not followed any regular pattern. It can, however, be seen that here was an excursion almost every year in the 1970's. In 1971, Prof. Yrjö Väisälä had invited the Society to the Tuorla observatory near Turku. In May 1972, the destination was the Nurmijärvi geophysical observatory. In summer 1973, seven members of the Geophysical Society of Poland visited Finland. Together with a number of Finnish colleagues, they made an excursion to several objects in Southern Finland. Some months later, a group of 15 members of the Geophysical Society of Finland visited Poland. In summer 1974, the members of the Society were invited to Maaninka, 30 km north of Kuopio, to the home of Mrs Anni Tuovinen, the former secretary of the Society who also generously paid the costs of this excursion. In August 1978, a one-day excursion was made to the summer residence of Prof. Erkki Palosuo at Lake Vanajavesi where several research projects took place. In 1979, a number of members visited the Tarfala research station in Northern Sweden. In 1981, an excursion was made to the Agricultural Research Institute and the meteorological observatory in Jokioinen.

The memorable excursions mentioned above took place within a decade. However, the idea of excursions arranged by the Society has not entirely vanished since that

Golden Age. In early September 1995, an excursion was made to Lammi Biological Station. Small-scale excursions to research institutes in the Helsinki region have been the framework of several monthly meetings in May.

Panel discussions

Another feature of the annual cycle has been the need to arrange some special programme in December, when an ordinary monthly meeting could easily be ruled out by other things. Since 1983, the December monthly meeting has often been a panel discussion on a topic which is supposed to be of general interest to members as well as non-members. These panel discussions have actually attracted a larger audience than most of the ordinary monthly meetings.

The panel discussions have dealt with such topics as weather forecasts (1983 and 1999), the climatic change (1984), the ozone depletion (1989), radiation control (1990), the condition of waters in Finland (2000), natural hazards (1994), the tectonical activity of the Finnish bedrock (1986 and 1991), the land uplift (1985), the role of geophysics in space research (1988, 1992), the possibility of finding life on Mars (1996), the Gaia hypothesis (1993) and how to cope with the scarcity of resources for geophysical research (1987).

The Geophysica

It is reasonable to assume that the possibilities of publishing a geophysical journal in Finland were discussed within the Society from the very beginning. It was, however, not possible to fund it with membership fees only. In early 1933, a grant for such a publication was received from the Finnish Ministry of Education. An editorial board was elected, consisting of O.V. Johansson, V. Väisälä, H. Renqvist and R. Jurva, and the editorial work began in late 1933. The name *Geophysica* was proposed by the editor, Henrik Renqvist, and the executive editor, Risto Jurva.

The first volume was published in 1935. It was “the first number in a series to be published, at irregular intervals, by the Geophysical Society of Finland.” The beginning was irregular indeed, as the second volume was not published until 1947. It is not known how often the Society had applied for funding, but one of the two papers of the second volume (*Ölander*, 1947) was obviously written long before. The volume also contained summaries (abstracts) of geophysical literature in Finland during the years 1935–44.

The third volume, which contained no less than 22 papers and 229 pages, was published soon after, already in 1948. It was dedicated to O.V. Johansson in honour of his 70th birthday. Most of the papers dealt with meteorological topics.

Besides publishing *Geophysica*, Finnish geophysicists had also participated in efforts to establish a common Nordic journal for geophysical sciences. A resolution concerning such a journal had been passed at a Nordic conference for geophysicists in

Abisko, Sweden in June 1946. Some documents concerning this project can be found in the archives of the Society. In February 1947, Prof. Hilding Köhler at Uppsala University wrote a letter to Jaakko Keränen, the chairperson of Geophysical Society of Finland, in which he asked how many papers could be annually expected from Finland annually, how much the printing of a monthly published journal of 40 pages would cost in Finland and whether Finnish geophysicists would be willing to write short summaries of Russian publications. The answers to these questions were prepared by the chairperson and the secretary, and discussed by the board, and the letter was sent, but a copy of it is not found in the archives. In the annual report written in December 1947, the secretary wrote that nothing had been heard of the new journal. In January 1948, it had become evident that the efforts had failed, as a decision had been made in Sweden that a geophysical journal, called *Tellus*, would be established on a national basis.

Finnish geophysicists were invited to contribute to the new Swedish journal. Nevertheless, the board of the Geophysical Society of Finland drew the conclusion that it was now time to begin to publish *Geophysica* more regularly, preferably once or twice a year. (*Minutes*, 27.1.1948). In September 1948, the Society sent an application to the Ministry of Education for the Geophysical Society to be included among those societies that receive regular government subsidies. Another application, addressed to the Central Commission of Sciences, was sent in January 1949. The decision was favourable, and in early 1949 the Society could begin to plan the future of the journal.

In a letter to Ilmo Hela, O.V. Johansson was of the opinion that the journal should be basically an abstract publication (*referatskrift*), as it was in the beginning, but he would add summaries of unpublished presentations and important notices. He also suggested that the journal would contain short semi-popularizing treatises and short scientific notices. The language could be chosen by the authors, but foreign languages would be recommended. It would be desirable if a couple of issues per year could be published. (*Letters*, Johansson to Hela, 16.2.1949).

In the invitation to a meeting 12th April 1949, the board had taken another approach. According to the proposal of the board, each single paper would be printed separately, “according to the pattern of *Geofysiske publikasjoner*”, and the separate prints collected in one volume. Each volume should contain at least one number (*vihko*) with short summaries of recent geophysical treatises in Finland as well as short papers and preliminary reports on research projects. The papers should be written in languages that are understood by scientists in other parts of the world. The name of the journal would be changed so that the name of Finland would be clearly identifiable; an appropriate name would be *Geophysica Fennica*. An editorial board should be elected, consisting of the editor and the executive editor as well as representatives of meteorology, hydrology, oceanography, magnetism, seismology, isostasy and geodesy, cosmic physics and radiation research. Popular treatises would not be published in this journal.

The meeting 12th April accepted the proposal of the board in its main features. The name was, however, not changed, and some minor changes were made to the text. A editorial board was elected in accordance with the proposal of the board. Vilho

Väisälä became the editor and Veikko Rossi the executive editor. The other board members were representatives for each of the sciences mentioned above, except that magnetism and cosmical physics were combined.

During the following years, the editorial board had met on average three times a year. It soon made new plans, according to which *Geophysica* would be published as three series: *Volume Abstracts* would contain “Abstracts and surveys concerning geophysical papers published in Finland”, *Volume Meteorology* “contributions of meteorological character” and *Volume General Geophysics* “contributions from other geophysical sciences than meteorology”. Only the two latter series were mentioned in the annual report of 1949; *Volume Abstracts*, which was mentioned in the early issues of the other series, was obviously added to satisfy the needs mentioned in the early phases of planning. Nevertheless, no issue of *Volume Abstracts* was ever published, and it was no longer mentioned in issues published after 1957.

Each of the volumes would contain “a suitable number of issues“, which proved to be four for the volumes 4 to 9. Volumes 4, 6 and 8 belonged to the series *Volume Meteorology*, whereas Volumes 5, 7 and 9 constituted the series *Volume General Geophysics*. The issues were published in chronological order within the volume, and as soon as there was a sufficient number of pages to be published. Thus the numbering of issues was not strictly chronological: Vol. 5 N:o 1 was published after Vol. 4 N:o 1, but before Vol. 4 N:o 2 etc. Of the corresponding issues of these two series, those of *Volume Meteorology* were 1 to 4 years ahead in time of *Volume General Geophysics*. The series *Volume Meteorology* contained also a special issue on the occasion of the 60th birthday of Erik Palmén in 1958. This issue, Vol. 6 N:o 3–4, had no less than 497 pages.

Of the 28 papers of the first three volumes of *Geophysica*, 13 were published in English, 12 in German, 2 in Swedish and 1 in Finnish. It was therefore not a radical change when it was decided that in future all papers would be published in some international language. In the beginning, four languages were allowed: English, French, German and Esperanto. Of these languages, English soon began to dominate. German was used in a few papers in the 1950's and occasionally later; the last contribution in German was written in 1973. The only paper in French was published in 1990. No papers in Esperanto have been published. From Vol. 10 (1968), Esperanto was no longer mentioned as a possible language of papers; from Vol. 25 (1990), it has not been mentioned that it would be possible to choose between several languages.

The volumes 4 to 9 contained altogether 24 issues during the years 1951–1967; the mean publishing interval between issues was thus about 8 months. As the journal was divided into two series, the mean publishing interval for each of the series was twice as long, about 16 months. The variations of this interval were, however, considerable: the longest interval within the *General Geophysics* series was more than four years and within the *Meteorology* series more than two years. The delay between the submission and the publication of a paper could theoretically be even longer. It was also obvious that the situation could not be much better: in their report from 1966, when

two issues were published, one from each series, the auditors pointed out that the present level of funding was not sufficient for more than one issue per year. It was therefore more or less necessary that the two series were combined into one, beginning with Vol. 10 in 1968.

In a letter attached to the application for government subsidies for the year 1969, the treasurer Juhani Virta wrote that the intention was to publish about 140 pages per year, in one or two volumes, which corresponds to the present supply of papers. This estimate proved to be a rather realistic one: twelve issues were published in the 1970s; the mean publishing interval was accordingly around 10 months. In the 1980s, the mean interval was also around 10 months. In the 1990s, the mean interval has been reduced to 7 months. From an author's point of view, however, the situation has not necessarily improved. If special issues are not considered, the mean interval for general issues has been more than one year.

A referee system with two anonymous referees was introduced in the early 1990s, in accordance with the new conditions for government subsidies. The reform was necessary – and also difficult in the beginning, as it caused a long delay, but it has certainly improved the status of *Geophysica* and the papers published in it. The number of papers published in *Geophysica* actually increased during the latter part of the 1990s to a level that has only been seen in the late 1950s. This is due to the special issues, while the number of papers published in the general issues has not increased.

Among the authors, there have been established senior scientists as well as first-time contributors. Some of the papers published in *Geophysica* have been used as parts of doctoral dissertations. There has also been one volume that is essentially a monography (Vol. 18, 1982). Besides papers presenting scientific results there have been conference reports, obituaries etc. Some issues have been devoted to anniversary celebrations, in honour of Oscar V. Johansson (Vol. 3), Erik Palmén (Vol. 6 N:o 3–4), Heikki Simojoki (Vol. 17) and Sergei Kitaigorodskii (Vol. 33 N:o 2).

The name *Geophysica* is appropriate for a journal that publishes papers from all branches of geophysics. For papers that are related to several branches of geophysics, such a scope is ideal. However, most of the papers can be characterized as belonging to one or perhaps two or three branches. An attempt to make such a division is presented in Table 2. It can be seen that there are considerable variations in the distribution of papers between the various branches of geophysics. The most obvious change is the decrease in the proportion of meteorology. Until 1968, one of the two series of *Geophysica* was devoted to meteorology. Nevertheless, also during the last decades several prominent meteorologists have occasionally chosen *Geophysica* as a publication forum. A major contribution in the field of meteorology has been the special issue on the Atmosphere Subprogramme of the Finnish Research Programme on Climatic Change, often known as SILMU (Vol. 32 N:o 1–2, 1996).

Another feature is that a small journal often tends to become a kind of house journal for the editors and their friends and colleagues. The increasing proportion of seismological and oceanographical papers may to some extent be explained by such fac-

tors. Special editions may, of course, influence the pattern considerably. Scientific institutions may also have different qualitative and quantitative criteria concerning the evaluation of results, a fact that may affect the appreciation of various journals as publication fora.

Table 2. Distribution of papers published in *Geophysica* between various branches of geophysics during three periods of time. N is the number of papers.

Field of geophysics	1935-1975		1976-1989		1990-2000	
	N	%	N	%	N	%
Solid earth /geology	6	2	7	5	7	7
Geodesy and gravimetry	8	3	3	2	3	3
Solid earth / seismology	39	14	24	18	21	20
Space and geomagnetism	26	10	33	24	18	17
Oceanography	32	12	21	15	20	19
Hydrology	18	7	21	15	12	11
Meteorology	114	43	22	16	19	18
Others	20	7	6	4	5	5
Altogether	263		137		105	

Table 3. Number of issues and papers published in *Geophysica* during 5 years' periods.

	Issues	Papers	Remarks
1931-1935	1	4	1935
1936-1940	0	0	
1941-1945	0	0	
1946-1950	2	24	1947, 1948
1951-1955	5	33	Two series
1956-1960	10	93	Two series; 1958 Palmén special issue (29 papers)
1961-1965	5	44	Two series
1966-1970	5	42	Two series until 1967
1971-1975	5	44	
1976-1980	6	37	
1981-1985	8	55	1981 Simojoki special issue; one monography
1986-1990	6	40	
1991-1995	7	34	1995 SILMU special issue
1996-2000	8	67	Three special issues

Table 4. Editors and executive editors of *Geophysica*.

Volumes/numbers	Editor	Executive editor
1	Henrik Renqvist	Risto Jurva
2 - 3	Veikko Rossi	-
4:1-2, 5:1	Vilho Väisälä	Veikko Rossi
4:3-4, 5:2-4, 6	Vilho Väisälä	Lauri A. Vuorela
7 - 24	Lauri A. Vuorela	-
25, 26:1	Heikki Nevanlinna	Lasse Häkkinen
26:2 - 34	Heikki Korhonen	Sirkka Tattari
35 -	Matti Leppäranta	Jari Haapala

The name *Geophysica* also suggests that the scope of the journal is not limited to treatises on Finland or its neighbourhood. On the other hand, *Geophysica* can hardly be called a truly international journal. Most of the authors as well as of the members of the editorial board have been from Finland. The proportion of foreign first authors in the first 13 volumes until 1975 was 17 %; in volumes 14 to 25 it was 27 % and in volumes 26 to 36 it was 22 %. Of course, these figures can be considered somewhat uncertain due to the mobility of scientists.

Table 5. Anniversaries and obituaries in *Geophysica*.

Issue	Title and Author
4:1	Harald Wilhelm Lunelund, Nachruf (by J. Keränen)
4:3	J. Keränen - 70th anniversary (by M. Franssila and E. Sucksdorff)
5:2	Risto Sakari Jurva In Memoriam (by V.V. Korhonen)
5:2	Gustaf Eyvind Sucksdorff 1899-1955 (by J. Keränen)
5:3	Henrik Renqvist in Memoriam (by A. Sirén)
6:2	Osc. V. Johansson in Memoriam (by E. Palmén)
6:3-4	Erik Herbert Palmén Sixty Years (by L. Vuorela and V. Väisälä)
8:1	Vilho Väisälä 70th Anniversary (by L. Vuorela)
12:2	Professor Lauri A. Vuorela 60 years old (by E. O. Holopainen)
17:1-2	Professor Heikki Juhani Simojoki - 75 years old on 22 January 1981 (By P. Mälkki and J. Virta)
20:1	Election of a Honorary Member; Award granted by the Geophysical Society (by T. Parm)
21:1	Erik Herbert Palmén - In Memoriam (by E. Holopainen)
24:1-2	Lauri A. Vuorela - 75 years (by E. O. Holopainen)

The Geophysics Days

The first *Geophysics Days* (*Geofysiikan Päivät*) took place on 21th and 22th June 1965 in Oulu. The initiative was taken by Prof. Pentti Tuomikoski who also organized the conference. The Geophysical Society of Finland was not formally involved in the earliest *Geophysics Days*, but many members of the Society participated. In 1968, it was agreed that the Geophysical Society of Finland would organize the *Geophysics Days* together with the local organizers in Oulu, and that the conference would circulate between Helsinki and Oulu. In accordance with this plan, the fourth *Geophysics Days* took thereby place in Helsinki, and the circulation pattern has been the same since then, except that since 1999 it has been modified so that the conference now circulates between Northern and Southern Finland. The 19th *Geophysics Days* took place in Sodankylä, a small township 250 km north of Oulu and the home of a geophysical and a meteorological observatory.

Until 1991, a part of the government subsidies of the Society could also be used for the printing costs of the proceedings of *Geophysics Days*, but the rules for the subsidies were changed so that neither non-refereed papers nor papers written in Finnish could receive the support. Since 1993, the funding has been based only on participation fees and to some extent on announcements. The *Geophysics Days* seem, however, to have established their role as a meeting forum for Finnish geophysicists and the proceedings as they have been may also have a certain importance as an opportunity to use

Finnish in a scientific paper. Finnish has been the recommended language from the very beginning, but exceptions have been made concerning foreign speakers. Most of the Estonian geophysicists who have participated since 1995 have preferred to speak English.

In table 6, the presentations given at *Geophysics Days* have been divided according to the branch of geophysics. The distribution is somewhat different from that of the papers published in *Geophysica*: the proportions of solid earth geophysics and space geophysics are larger at *Geophysics Days*. This is to a large extent due to the role of the University of Oulu, in which geophysical activities are concentrated on these fields.

Table 6. The Geophysics Days: The distribution of papers among the various branches of geophysics.

	1965-1975	1977-1987	1989-1999
Seismology	35	32	19
Other solid earth geophysics	8	44	37
Geodesy	22	7	2
Space geophysics and geomagnetism	48	63	53
Oceanography	6	25	21
Hydrology	11	25	22
Meteorology	34	36	42
Other	15	3	4
Altogether	179	235	200

International activities

Many of the activities of the Society have had a predominantly national character, and Finnish has usually been used as the language of meetings. On the other hand, *Geophysica* was from the very beginning published mostly in foreign languages, later exclusively in English, and the contributions by foreign authors have been numerous. There have also been a considerable number of foreign speakers at the monthly meetings, e.g. during the period 1956–1965 no less than 37 speakers or almost four per year (Rossi, 1976). The numbers of speakers, both Finnish and foreign ones, has decreased, but the numbers are not comparable, as the structure of the meetings has changed. It should also be noticed that during the recent years the institutions have often themselves arranged the meetings in which visiting scientists have given their presentations. – The *Geophysics Days* have also had some foreign speakers.

During earlier years, reports from international conferences could be an essential part of some meetings of the Geophysical Society of Finland. The Society itself could not have formal relations with such international organizations as the IUGG or the WMO, but many of the active members have had positions in such organizations or their national committees, and the Society has occasionally been requested to suggest candidates for posts in these organizations. In 1996, the Geophysical Society of Finland became an associate member of the *European Geophysical Society* (EGS). This organi-

zation, which was established in 1971, is based on individual membership, but it has also been possible for the national learned societies to join EGS, either as corporate members or associate members. A corporate membership was discussed in the 1980s but rejected because of the costs. When associate membership became possible, it was rather obvious that this option would be chosen. Corporate membership, i.e. the national society pays a certain fee for each of its members, was considered too expensive because of the large proportion of non-paying permanent members. Associate membership means that the members of the Geophysical Society of Finland can pay a lower fee for the membership of EGS but the Society itself does not pay any membership fee.

The Society has also contributed to the establishment of several international organizations, of which we can mention the Nordic Association for Hydrology and the European Meteorological Society.

The Nordic Association for Hydrology (NHF or Nordisk Hydrologisk Förening) was established in 1970 in Stockholm, in connection with the 6th Nordic Hydrological Conference. Its main activities became publishing the journals *Nordic Hydrology* and *Vannet i Norden* and organizing the biennial Nordic Hydrological conferences – activities that were launched either during the *International Hydrological Decade* (1966–1975) or earlier. The Geophysical Society of Finland did not become an institutional member of the NHF, but it represented Finland in the committee that outlined the organization. In 1997, it became obvious that a national organization for the NHF would be needed in Finland, for collecting the membership fees. A temporary hydrological section within the Geophysical Society took care of this activity until the Finnish section of the NHF was registered later in the same year.

The European Meteorological Society was established in 1999 in order to promote and organize the cooperation between national meteorological societies. This society has only institutional members. The Geophysical Society of Finland participated in the efforts to establish this society but did not itself become a member. Instead, an atmospheric section (or a section of atmospheric sciences) within the Society was established, and this section became a member of the EMS.

The Geophysical Society has also been the organizer of some international meetings. Of these we should mention at least the international meteorological conference in Helsinki in May 1953. A report from this conference has been published in *Geophysica* Vol. 4 Nr 3. The Erik Palmén memorial symposium on Extratropical Cyclones was arranged in 1988 in Helsinki, together with the American Meteorological Society and the Danish, Norwegian and Swedish geophysical societies. A report of this symposium, written by Eero Holopainen, has been published in *Geophysica* (Vol. 24.).

The statutes

In Finland, the statutes of a registered association are written according to the guidelines of the Act of Associations. This law has been changed several times since

the first law was passed in 1919. The statutes of a society are not changed when the law is changed, but if the statutes are changed, the new version should be written in accordance with the current version of the Act of Associations and other laws, such as the Bookkeeping Act. When the statutes are changed, they must be accepted at two meetings and then submitted to the Register of Associations. If needed, the authorities propose minor technical changes to the submitted statutes.

The first statutes of the Geophysical Society of Finland were confirmed in December 1926. According to them, the purpose of the Society is to raise interest in geophysics and promote geophysical research through lectures, discussions and publications. The board consisted of five members: the chairperson, the vice chairperson, the secretary, the vice secretary and the treasurer. These were elected in the annual meeting in December. The accounts were presented in another meeting in January. Ordinary meetings should have been organized at least once in a month, except during the three summer months. There were three member categories: honorary members, permanent members and annual members.

The statutes have been changed three times. In 1950, even the Finnish name of the Society was changed, from *Geofyysillinen Seura r.y.* to the present form *Geofysiikan seura r.y.* A similar change was proposed concerning the Swedish name, but the rather archaic old version *Geofysiska Sällskapet r.f.* has remained until now. The number of board members was increased from five to seven. The principle of rotating chairpersonship, which had already been applied since the very beginning, was now included in the statutes. The annual meeting was to be held in January. Other meetings were to be organized according to the decision of the board or when a certain number of members demanded it; monthly meetings were thus no longer mandatory, but the tradition was continued voluntarily. Permanent membership was now granted members who had paid the membership fee for fifteen years, or who was retired, or who paid a single membership fee corresponding to twelve annual membership fees.

In the early 1980s it was again time for change. This time the main issue was the increasing proportion of permanent members. The growth of scientific institutions had stagnated, and an increasing proportion of the members was reaching the status of permanent member. Since 1983, it has no longer been possible to become a permanent member, but those who were already permanent member would keep this status. Without this painful but necessary reform there would, *ceteris paribus*, be today some 200 permanent members and some 70 annual members; instead, there were at the time of writing 96 permanent members, while the number of paying annual members fluctuates around 130–140. Permanent members are, however, not necessarily non-paying members. They can contribute by paying a voluntary fee in which the subscription fee of *Geophysica* is included. Many permanent members (20 to 40 %, depending on the year) have taken this option.

Until the late 1990s, the statutes prescribed that the annual meeting should be held in January. Nevertheless, such an early date had become incompatible with the

new schedules of the Academy of Finland as well as the new bookkeeping legislation. When the statutes were changed, the English name of the Society was confirmed as the *Geophysical Society of Finland*, a form used already in the first issue of *Geophysica* in 1935. Two new member categories were also introduced: institutional members and student members. In 2000, the association had eight institutional members: research institutes, university departments and private companies.

The members

According to the present statutes, the Society may have six kinds of members: *annual members*, *permanent members*, *honorary members*, *corresponding members*, *student members* and *institutional members*. The two last categories were added in 1999, while the old category *supporting members*, which included institutions as well as individuals that were not geophysicists, was deleted.

Of the six categories, *annual members* has been the largest one, except during the years 1982–1984, and its proportion can be expected to grow. The category *permanent members* will decrease, as the statutes do not allow new permanent members to be taken. The category *student member* has not yet gained popularity. Eight institutions joined the category *institutional member* when it was introduced in 1999. The categories *honorary member* and *corresponding member* have always been rather small.

A rough outline of the distribution of members between the branches of geophysics can be seen in Table 7. The categories are those mentioned by Rossi, except that the categories *seismology* and *geology* are combined into *solid earth geophysics*. The category *aeronomy and geomagnetism* would today perhaps be called *space geophysics*. It can be seen that the number of members has decreased but in some fields there has been growth. A slow decrease is the expected development, as many of those members who would have become permanent members according to the old statutes will not stay as members when they no longer have contact with the scientific community.

Table 7. Members of the Geophysical Society of Finland, according to the branch.

Science	1926	1951	1975	2000
Solid earth geophysics	5	8	40	48
Geodesy	4	9	12	9
Space & magnetism	2	5	28	19
Oceanography	4	8	14	18
Hydrology	6	10	23	33
Meteorology	12	37	99	80
Others	11	19	71	45
Altogether	44	96	287	252

Geophysics has been a rather male-dominated science in Finland, even if the pattern has been slowly changing during the last decades. The proportion of female members has grown from 5 % in the early 1950s to 10 % in 1976 and to 16 % in the end of

the 1990s. In early 2001, the proportion women among the annual members was 24 % and the proportion of women among members that had joined the Society in the 1990s was 26 %.

From Table 8 it can be seen that the statute reform in the early 1980s did not cause any dramatic decrease in the total number of members, even if some annual members renounced their memberships. A more drastic decrease seems to have taken place in the late 1990s. The material is not entirely homogeneous, as the policy concerning non-paying annual members has varied. A member who has not paid and no longer enjoys the benefits of membership is not automatically deleted from the register, and the delay has sometimes been longer than one year.

Table 8. Members of the Geophysical Society divided according to the member category.

Year	All	Annual	Permanent	Honorary	Correspondent
1926	44				
1948	87	74	6		
1955	98	56	40	2	
1960	121	78	42	1	
1965	162	102	59	1	
1970	241	164	76	1	
1975	282	187	94	1	
1980	282	159	121	1	1
1982	283	124	158	1	1
1983	283	129	151	2	1
1984	291	141	147	1	1
1985	290	149	137	3	1
1990	311	179	128	3	1
1995	329	202	120	5	2
2000	257	157	96	2	2

The board

The board of the Society consists of the chairperson, the vice chairperson, the secretary, the treasurer and three other board members. Since 1950, a rotation principle is applied so that the person who is elected vice chairperson in an annual meeting becomes chairperson after one year, without an election, and is succeeded by the following vice chairperson who in turn becomes chairperson for the following year. The outgoing chairperson will stay in the board for one year but cannot be immediately re-elected to the board. However, an ordinary board member can be elected vice chairperson. A former chairperson can again become vice chairperson and chairperson after a time outside the board. During 19 years of 76, the Society has had a chairperson who has acted as chairperson during an earlier period. Vilho Väisälä has been chairperson four times, Ilmo Hela and Lauri Vuorela three times. Theoretically, the Society should always have at least four members that are capable of acting as chairperson. In reality, it has never been necessary to circulate the chairperson's

position between only four persons. The shortest intervals between two periods as chairperson have been recorded for V. V. Korhonen (chairperson 1929 and 1931) and Henrik Renqvist (1934 and 1938), both before the statute reform in 1950. A list of the chairpersons (or the *chairmen*, they have so far all been men) is presented in Table 9.

Table 9. Chairpersons of the Geophysical Society of Finland 1926-2001.

1926	Oscar V. Johansson	1964	Jaakko Tuominen
1927	Vilho Väisälä	1965	Ilmo Hela (2)
1928	Rolf Witting	1966	Lauri Vuorela (2)
1929	V.V. Korhonen	1967	Seppo Huovila
1930	O.V. Jansson	1968	Erkki Palosuo
1931	V.V Korhonen (2)	1969	Allan Sirén (2)
1932	Erik Palmén	1970	Christian Sucksdorff
1933	Hjalmar V. Brotherus	1971	Eero Holopainen
1934	Henrik Renqvist	1972	T.J. Kukkamäki
1935	not known	1973	Maunu Puranen
1936	O.V. Johansson (2)	1974	Seppo Mustonen
1937	Vilho Väisälä (2)	1975	Lauri Vuorela (3)
1938	Henrik Renqvist (2)	1976	Ilmo Hela (3)
1939	not known	1977	Juhani Kakkuri
1940	not known	1978	Pentti Mälkki
1941	not known	1979	Heikki Korhonen
1942	not known	1980	Juhani Virta
1943	not known	1981	Juhani Oksman
1944	Matti Franssila	1982	Erkki Jatila
1945	Veikko Rossi	1983	Teuvo Parm
1946	Vilho Väisälä (3)	1984	Christian Sucksdorff (2)
1947	Jaakko Keränen	1985	Aarno Voipio
1948	Risto Jurva	1986	Timo Puhakka
1949	Harald Lunelund	1987	Sven-Erik Hjelt
1950	Heikki Simojoki	1988	Seppo Huovila (2)
1951	Eyvind Sucksdorff	1989	Urmas Luosto
1952	J.M. Angervo	1990	Kimmo Kahma
1953	Risto Jurva (2)	1991	Risto Kuittinen
1954	Allan Sirén	1992	Ilmo Kukkonen
1955	Matti Franssila (2)	1993	Lauri J. Pesonen
1956	Vilho Väisälä (4)	1994	Esko Kuusisto
1957	Ilmo Hela	1995	Matti Leppäranta
1958	Tauno Honkasalo	1996	Markku Peltoniemi
1959	Eijo Vesanen	1997	Tapio Tuomi
1960	Lauri A. Vuorela	1998	Raino Heino
1961	Veikko Rossi (2)	1999	Martin Vermeer
1962	Erik Palmén (2)	2000	Tuomo Karvonen
1963	Heikki Simojoki (2)	2001	Erkki Jatila (2)

The secretary and the treasurer are elected every year and their period on the board is not limited to three years. The longest periods can be noted for Risto Jurva (20 years as secretary), Niilo Kallio (20 years as treasurer), Erkki Palosuo (17 years as treasurer) and Veikko Rossi (14 years as secretary). A list of the secretaries and treasurers is presented in Table 10.

Table 10. Secretaries and treasurers of the Geophysical Society of Finland 1926-2001.

Secretaries:

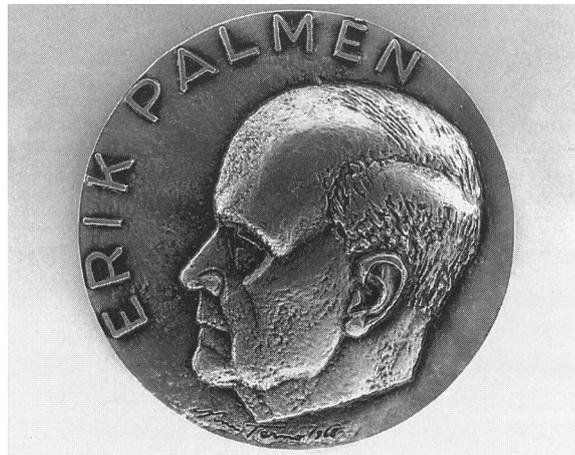
Risto Jurva	1926-1945	Pekka Alenius	1982-1985
Veikko Rossi	1946-1959	John Forsius	1986-1989
Anni Parvi	1960-1962	Sirkka Tattari	1990-1991
Aimo Väisänen	1963-1965	Satu Mertanen	1992-1993
Ilmari Helimäki	1965-1972	Yrjö Kivinen	1994-1996
Erkki Jatila	1973-1975	Kirsti Jylhä	1997-1998
Jaakko Helminen	1976-1978	Paavo J. Airaksinen	1999
Matti Leppäranta	1979-1981	Meri-Liisa Airo	2000-

Treasurers:

Niilo Kallio	1926-1945	Olli Laasanen	1986-1987
Ilmo Hela	1946-1949	Heikki Nevanlinna	1988-1989
Erkki Palosuo	1950-1966	Tellervo Hyvönen	1990-1992
Juhani Virta	1967-1973	Juha Kajander	1993-2000
Erkki Hytönen	1974-1978	Jaakko Helminen	2001-
Risto Lemmelä	1979-1985		

The awards

The Geophysical Society of Finland has three awards: *honorary membership*, *correspondent membership* and the *Erik Palmén Medallion*.



The Erik Palmén Medallion.

According to the statutes, a person who has meritoriously promoted the goals of the Geophysical Society of Finland can be invited to be an honorary member. Oscar Johansson became the first honorary member in 1951. Other honorary members have been Vilho Väisälä (1953), Erik Palmén (1966), Lauri A. Vuorela (1983), T.J. Kukkamäki (1986), Heikki Simojoki (1986), Maunu Puranen (1988), Heikki Korhonen (1991), Pentti Tuomikoski (1995) and Eero O. Holopainen (2001).



Prof. Lauri A. Vuorela.



The tradition of the Geophysics Days was established by Prof. Pentti Tuomikoski.



Prof. Heikki Simojoki received the 3rd Erik Palmén medallion at the 50 Anniversary of the Society.



Prof. Maunu Puranen

A person who is invited to become a correspondent member shall be an eminent foreign geophysicist. So far there have been two individuals who have received this status: Sergei Kitaigorodskii (1978) and Juhan Ross (1994). Both of them have also had strong links with Finland.



Prof. Sergei Kitaigorodskii.



Prof. Juhan Ross.

The Erik Palmén Medallion in silver is given to a Finnish scientist who has gained prominence in one of the sciences that are represented in the Geophysical Society of Finland. The medallion is awarded every fifth year, or in connection with certain anniversaries of the Society. Only one medallion at a time is given on these occasions. The first Erik Palmén medallion in silver was given to Erik Palmén himself on his 70th birthday in 1968. After him, this award has been given to Lauri A. Vuorela (1972), Heikki Simojoki (1976), T. J. Kukkamäki (1978), Erkki Palosuo (1983), Heikki Korhonen (1988), Eero Holopainen (1993) and Christian Sucksdorff (1998). – Besides the Erik Palmén Medallion *in silver* there is the Erik Palmén Medallion *in bronze*. The bronze version can be purchased by the members or any other interested parties.



Prof. Christian Sucksdorff.

Prof. Erkki Palosuo

The logo

The present logo of the Geophysical Society of Finland is the result of the logo competition in 1993. The winning proposal was designed by Teemu Mäkinen who used the signature *Termo*. The logo can be interpreted as representing various geophysical sciences or the historical four elements; the figure is surrounded by a circular text com-

prised of the name in Finnish and Swedish and the year when the Society was established. The logo has been used since 1993 on the cover of *Geophysica* and it can also be seen on member circulars, letters and envelopes.

Future

The diversification of science and scientific institutions may be a factor that affects the future of the Geophysical Society of Finland. If the growth in the number of associations is not balanced by the growth of the scientific community, the number of members in an association is likely to decrease. There has been a slow decrease in the number of paying members during the 1990's. On the other hand, the diversification may also stress the need for an interdisciplinary forum for geophysically oriented scientists.

Learned societies in Finland are dependent on membership fees but also on subsidies of various kinds. For *Geophysica* the subsidies paid by the Academy of Finland have been absolutely essential, even if their proportion of the budget has decreased. Another form of public support is the possibility to use the services of the House of Sciences. Free meeting rooms are a benefit that has been fully appreciated only since the university localities were taken over by a company which began to charge a fee for using them. A working room shared with a number of other societies, with a bookcase for each society and a desk and a computer shared with three other societies, is also an important benefit. The Society has also enjoyed the hospitality of several public research institutes, especially during the years when it had no other possibilities to store its archives and old issues of its publications. Of private sponsors, a special mention is due to the Vaisala Group. This company, established by Vilho Väisälä, who was also one of the founders of the Society, has had its announcements in many issues of *Geophysica*.

The future of the Society and its various activities will depend on the continuity of external support but also on the willingness of the members to contribute their money and their time. The Society has, however, survived a period of 75 years and is likely survive as long as its activities are vital.

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