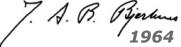
Jacob Aall Bonnevie Bjerknes:

eminent meteorological pioneer and decade-long officer of IAMAS und IUGG

Hans Volkert

Secretary-General, IAMAS DLR, Institut für Physik der Atmosphäre (IPA), Oberpfaffenhofen, DE









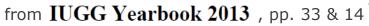
a few bio-data

born: 2 Nov. 1897 in Stockholm, SE emigration to USA: 1939

"On the structure of moving cyclones": 1919 died: 7 July 1975 in Los Angeles, USA

service for IAMAS & IUGG

| PAST IAMAS PRESIDENTS | | S PRESIDENTS | PAST IAMAS SECRETARIES GENERAL | | |
|-----------------------|-----------|--------------------------------|--------------------------------|--|--|
| | 1919-1930 | William Napier Shaw (UK) | 1919-1922 | Charles F. Marvin (USA) | |
| | 1930-1936 | Axel Wallen (Sweden) | 1922-1927 | Filippo Eredia (Italy) | |
| | 1936-1948 | Sidney Chapman (UK) | 1927-1936 | Philippe Wehrlé (France) | |
| | 1948-1951 | Jacob Bjerknes (USA) | 1936-1948 | Jacob Bjerknes (USA) | |
| | 1951-1954 | Kalpathi R. Ramanathan (India) | 1948-1954 | Jacques van Mieghem (Belgium) | |
| | 1954-1957 | Carl-Gustaf Rossby (Sweden) | 1954-1960 | Reginald C. Sutcliffe (UK) | |
| | 1957-1960 | Jacques van Mieghem (Belgium) | 1960-1975 | Warren L. Godson (Canada) | |
| | 1960-1963 | Horace R. Byers (USA) | 1975-1987 | Stanley Ruttenberg (USA) | |
| | 1963-1967 | Alexei M. Oboukhov (USSR) | 1987-1995 | Michael Kuhn (Austria) | |
| | 1967-1971 | Reginald C. Sutcliffe (UK) | 1995-2007 | Roland List (Canada) | |
| | 1971-1975 | Sigmund Fritz (USA) | PAST IUC | GG VICE-PRESIDENTS | |
| | 1975-1979 | Christian Junge (F.R.Germany) | | | |
| | 1979-1983 | Warren L. Godson (Canada) | 1919-1922 | S.A.S. Prince Albert Ie de Monaco William Bowie (USA) | |
| | 1983-1987 | Hans-Jürgen Bolle (Austria) | | Sir William Napier Shaw (UK) | |
| | 1987-1991 | G. Brian Tucker (Australia) | | M. Tanakadate (Japan) | |
| | 1991-1995 | Brian J. Hoskins (UK) | 1922-1948 | The Presidents of the Associations | |
| | 1995-1999 | Robert A. Duce (USA) | 1948-1951 | Sydney Chapman (UK) | |
| | 1999-2003 | Huw C. Davies (Switzerland) | | Leason H. Adams (USA) | |
| | 2003-2007 | Michael C. MacCracken (USA) | 1951-1954 | Gino Cassinis (Italy) | |
| | 2007-2011 | Guoxiong Wu (China) | | Jacob Bjerknes (USA) | |
| | | | 1954-1957 | John T. Wilson (Canada) | |

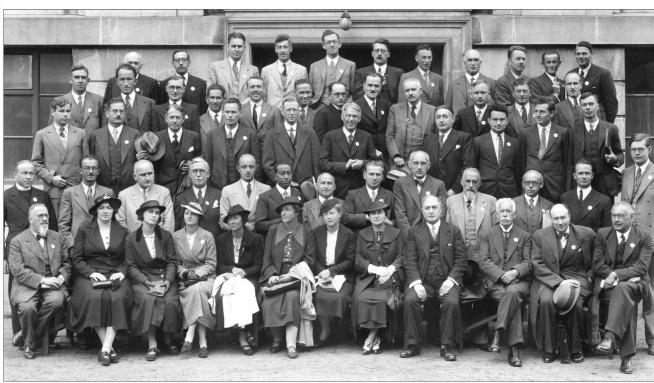




Example for international grouping:

Ozone Conference (" $IAMAS/IO_3C$ ") We. **9** – Fr. **11 Sep. 1936** in Oxford, UK

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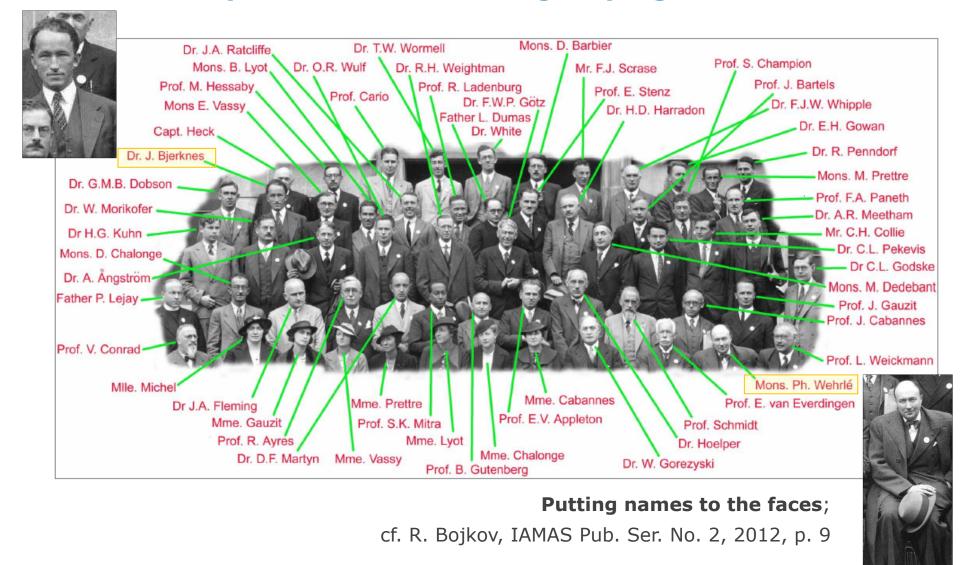
C. Weiken

C. Weike

Arms gut angetion a. K. heelt an Olivin a. Wulf.



Example for international grouping:





IUGG/IAM 1936: Edinburgh, UK, Th. 17 - Th. 24 Sep. 1936

UNION GÉODÉSIQUE ET GÉOPHYSIQUE INTERNATIONALE

SIXIÈME ASSEMBLÉE GÉNÉRALE

EDIMBOURG - SEPTEMBRE 1936

PROCÈS-VERBAUX DES SÉANCES

DE

L'ASSOCIATION DE MÉTÉOROLOGIE

T

ACTES DE L'ASSOCIATION

Frv. Vy. 185

PARIS

IMPRIMERIE PAUL DUPONT

4, RUE DU BOULOI, 4

1937

26 participants

Procès-Verbal de la Onzième Séance, (Jeudi 24 Septembre au matin).

La séance est ouverte à 10 h. 10, sous la présidence de M. V. BIERKNES.

Membres présents: MM. A. Ångström, J. Blaton, J. Bjerknes, V. Bjerknes, C. Braak, G. Dedebant, M. Ferreira, C. L. Godske, A. H. R. Goldie, L. Gorczynski, St. Hanzlik, G. S. P. Heywood, H. Hubert, C. W. B. Normand, R. Penndorf, S. Petterssen, C. G. Rossby, Sir G. C. Simpson, MM. H. Solberg, F. Spiess, E. Van Everdingen, F. E. Volochine, Sir G. T. Walker, MM. Ph. Wehrlé, R. H. Weightman, O. R. Wulf.

— 34 **—**

La Commission de Radiation Solaire, le Comité de l'Ozone et la Commission mixte de l'Année Polaire sont accrédités à nouveau.

M. V. BJERKNES cède la présidence à Sir G. C. SIMPSON pour l'élection du Bureau. M. WEHRLÉ expose qu'il est Secrétaire depuis neuf ans et que le labeur du Secrétariat n'est pas compatible avec les fonctions très absorbantes de Directeur d'un Service National. En conséquence, il ne demande pas le renouvellement de son mandat. Sir G. C. SIMPSON expose la manière dont l'élection aura lieu. A l'unanimité les personnalités suivantes sont nommées :

Président (pour trois ans) : M. S. CHAPMAN.

Vice-Président (pour trois ans) : MM. Ph. Wehrlé et W. R. Gregg.

Secrétaire (pour six ans) : M. J. BJERKNES.

Membres du Comité Exécutif (pour six ans): MM. E. VAN EVER-DINGEN, St. HANZLIK et P. L. MERCANTON.

Il est spécifié que le mandat du Secrétaire sortant n'expirera que dans un an, de manière qu'il ait le temps d'assurer les publications de la présente Assemblée et son successeur celui de préparer les travaux de l'Assemblée de Washington.

M. Weightman propose qu'un Comité Spécial soit institué pour faire un rapport à l'Association sur les subventions demandées et sur les prévisions budgétaires. Après explications de Sir G. C. Simpson, il est reconnu que le Comité financier est compétent pour remplir cette mission et M. Weightman retire sa proposition.

La séance est levée à 12 h. 15.

Le Secrétaire, Ph. WEHRLÉ.



Correspondence from Secretary in May 1936

Office National Météorologique Union Géodésique en Géophysique internationale de France 196, Rue de l'Université — Garis (VII°) Toèl: Ségur 03-41445 Ossociation de Météorologie Secrétarian Paris, le 17 MAR 1935 a M, onsieur le Professeur A. SCHMAUSS Directeur Meteorologisches Institut der Forstlichen Versuchsanstalt Gabelsbergerstrasse 55/I (Allemagne) Monsieur le Professeur et Cher Collègue, J'ai l'honneur de vous informer que l'Association de Météorologie de l'Union Géodésique et Géophysique Internationale se réunira en Assemblée Générale à Edimbourg du 17 au 26 Septembre 1936 . Conservant une méthode de travail qui s'est révélée fructueu lors de la dernière Assemblée tenue à Lisbonne, le Bureau de l'Association a mis à l'ordre du jour quelques thèmes de discussion dont vous trouverez l'énumération avec commentaires explicatifs dans le programme ci-joint . Je serais très heureux que vous manifestiez par votre participation effective au Congrès d'Edimbourg l'intérêt que vous portez....

portez à la collaboration scientifique internationale . Si toutefois il vous était impossible de vous rendre personnellement au Congrès , il vous suffirait d'envoyer vos communications au Secrétariat de l'Association, 196, rue de l'Université -PARIS - 7° , et je me ferais un plaisir de les présenter en votre nom . Je vous serais très obligé de bien vouloir joindre à chaque communication un résumé en langue originale, destiné à être traduit en français et imprimé en tête du mémoire. En vous répétant quel prix j'attache à votre collaboration, je vous prie d'agréer, Monsieur le Professeur et Cher Collègue, l'expression de mes sentiments cordialement dévoués .







IUGG/IAM 1939: Washington, USA, Th. 7 - Fr. 15 Sep. 1939

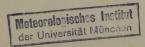
UNION GÉODÉSIQUE ET GÉOPHYSIQUE INTERNATIONALE
SEPTIÈME ASSEMBLÉE GÉNÉRALE
WASHINGTON, D.C., U.S.A.
SEPTEMBRE 1939

PROCÈS-VERBAUX DES SÉANCES

DE

L'ASSOCIATION DE MÉTÉOROLOGIE

I ACTES DE L'ASSOCIATION



WASHINGTON OCTOBRE, 1939 MINUTES OF THE MEETINGS

MINUTES OF THE FIRST MEETING THURSDAY, SEPTEMBER 7, 10:00-12:35

The meeting was called to order by Professor S. Chapman, President, with Dr. J. Bjerknes acting as Secretary. Sixty-two delegates were in attendance.

Introductory words by the President:

"Fellow members of the Meteorological Association, and guests: We meet here today in good numbers to learn and to exchange learning for the advancement of our science of meteorology; but the tragedy of war with which the world is again afflicted has taken or kept from us many on whose presence we had confidently counted. Some national delegations are entirely absent, while of others only few remain; especially we regret the absence of our Vice-President, M. Wehrlé, of others of our Executive Committee, and our other Vice-President, Mr. Gregg, whom we have lost through his untimely death.

"In view of the absence of our Vice-President, the Bureau of the Association wishes to propose that Mr. R. H. Weightman, President of the Section of Meteorology of the American Geophysical Union, be temporarily appointed as Acting Vice-President for the period of this Assembly. (The Association agreed unanimously.)

"The Executive Committee of the Union has already considered the regrettable situation arising from the European war which affects all the Associations; in particular, they have taken account of the likelihood that for some time the receipts of the Union will be curtailed. In view of this, and of the inability of many member-States to join in the deliberations at the present Assembly, the Executive Committee of this Union has concluded that it is desirable to continue the financial management of the Union and the Associations along the lines heretofore followed, except of course as regards expenditure on projects now completed or whose continuance is impossible or inadvisable under present conditions. If our Association endorses this conclusion, which implies that no new projects involving expenditure should be undertaken, the administrative business on our program will be much reduced. In order to enable the officers to arrange this program to the best advantage, we should be glad to know at once the attitude of this Association on the matter. We ourselves share the view of the Executive Committee of the Union, and therefore propose for your consideration the following resolution:

"The Association of Meteorology decides to continue its financial management until the next Assembly along the lines hitherto followed, without embarking on any new projects involving financial expenditure." (Unanimously adopted by the Association.)

... "but the tragedy of war with which the world is again afflicted has taken or kept from us many on whose presence we had confidently counted" ...

MINUTES OF THE THIRD MEETING FRIDAY, SEPTEMBER 8, 10:00-13:00

Professor S. Chapman, President, Dr. J. Bjerknes, Secretary, and 71 delegates were present;

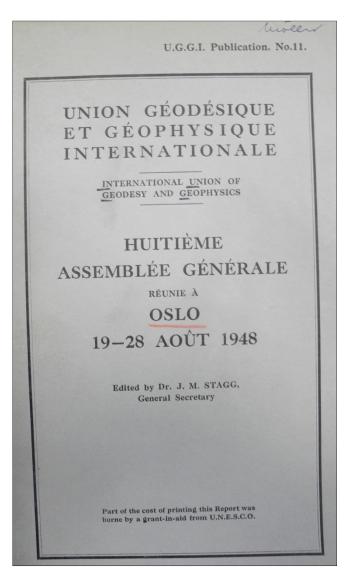
Presidential address by Professor S. Chapman: "Tides in the Air."

The President of the Union, Dr. D. la Cour, expressed on behalf of all Associations their admiration and thanks for the interesting address. These words were seconded by the Chief of the U. S. Weather Bureau, Commander F. W. Reichelderfer. In the discussion which followed, Dr. C. L. Pekeris, Dr. E. O. Hulburt, Dr. H. Wexler, and Dr. W. Elsasser took part.

The paper by E. Palmén on "Über die dreidimensionale Luftströmung in einer Zyklone und die Ozonverteilung" was read by J. Bjerknes. Prof. S. Chapman and Dr. O. R. Wulf took part in the discussion.

At the request of the General Secretary of the Union, the Association elected representatives for the inter-association subcommissions to handle the matters of the Union during the Washington Assembly. The following were elected: Dr. C. F. Brooks for the subcommission to treat the questions on the interchange of publications, Mr. R. H. Weightman for the subcommission to treat the report of the General Secretary, and Dr. C. W. Thornthwaite for the subcommission on repositories.

IUGG/IAM 1948: Oslo, NO, Th. 19 - Sa. 28 Aug. 1948



Association of Meteorology: Dr. J. Bjerknes.

Since 1939 the Association has published one pamphlet of *Proceedings* and one volume of *Memoirs and Discussions* pertaining to the Washington Assembly. The expenses of the Association have been moderate owing to the policy adopted in Washington to refrain from any new projects involving financial commitments. The accounts for 1939–47 have been audited and found in order.

The Association before the war granted subsidies for the purchase of radio-sondes to be launched during the selected "international month," April, 1939, from stations in N.W. Europe, extending the existing network of upper air data towards unexplored areas. The collected observations proved useful and were the forerunners for the routine upper air service under the International Meteorological Organisation now covering the same areas.

Another project of exploration sponsored by the Association is concerned with the measurement of ozone, the triatomic form of oxygen. The ozone occurs in very small quantities, but is known to have decisive influence on the radiation balance of the upper part of the stratosphere, and indirectly, perhaps also on the lower parts of the atmosphere where the weather is made. The synoptic ozone measurements, which were made possible through Association subsidies voted at the Edinburgh meeting, had just started in 1939 when the outbreak of the war upset the further plans. The Association now endeavours to take up the same work on as big a scale as our research funds permit. The Association has accordingly renewed the Ozone Commission which is co-ordinating the efforts of the several countries now engaged in ozone research.

The Association has also renewed its Radiation Commission whose activities were interrupted by the war. The present radiation research programme comprises:

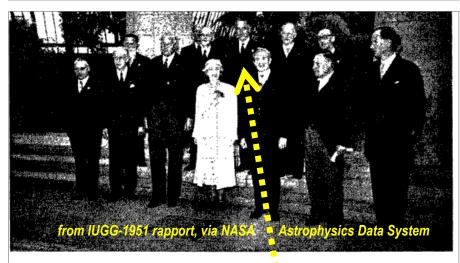


IUGG/IAM 1951: Brussels, BE, Mo. 20 Aug. - Sa. 1 Sep. 1951

UNION GEODESIQUE ET GEOPHYSIQUE INTERNATIONALE Association de Météorologie Réunion de Bruxelles 20 août - 1 septembre 1951 RAPPORT du BUREAU pour la période triennale 1948-51 1. Comaté exécutif et Bureau de l'Association Les membres du Comité exécutif et du Bureau, élus à Oslo, le 23 août 1948, sont restés en fonction au cours de la période triennale 1948 - 51. COMITE EXECUTIF Bureau: Prof. J. Bjerknes, Los Angeles, Président. Prof. K.R. Ramanathan, Navrangpura, Vice - Président. Dr. F.W. Reichelderfer, Washington, Vice - Président. Prof. J. Van Mieghem, Uccle, Secrétaire. Membres: Dr. W. Mörikofer, Davos. sir Charles Normand, Oxford. Prof. V. Väisälä, Helsinki. Le mandat des membres du Comité exécutif expire au 1 septembre 1951, fin de la IXème Assemblée Générale de l'U.G.G.I. 2. Les Commissions de l'Association (a) COMMISSION du RAYONNEMENT: MM. A. Ångström (président), S. Fritz, F.W.P. Götz, W. Morikofer (secrétaire), M. Nicolet, G.D. Robinson, L.A. Ramdas, J. Roulleau. (b) COMMISSION de l'OZONE ATMOSPHERIQUE: MM. D. Challonge, G.M.B. Dobson (président), F.W.P. Götz, C.I.E. Normand (secrétaire), K.R. Ramanathan, E. Tønsberg, E. Vassy. Aucune modification n'est intervenue dans la composition de ces Commissions. 3. Représentation de l'Association dans les Commissions Mixtes (a) COMMISSION MIXTE des RELATIONS entre les PHENOMENES SOLAIRES et TERRESTRES Prof. F.W.P. Gotz (Suisse), Dr. M. Nicolet (Belgique), Dr. Wulf (U.S.A.). (France) The Radio - METEOROLOGIE: Prof. H. Norinder (Suède), Mr A. Perlat (France), Prof. P.A. Sheppard (Grande Bretagne), Dr. H. Wexler (U.S.A.). M. Northder a été désigné, en avril 1980, en remplacement de Mr A. Thomson (Cana-da), démissionnaire da), démissionnaire. (c) COMMISSION MIXTE des STATIONS de RECHERCHES aux HAUTES ALTITUDES Prof. F.W.P. Gotz (Suisse), Prof. K.R. Ramanathan (Inde). (4) COMMISSION MIXTE DOUR les CALAMITES NATURELLES Dr. H. Riehl (U.S.A.) a été désigné en janvier 1949.



Photo prise pendant la Séance inaugurale de la IXº Assemblée générale de l'U. G. G. I., le 21 août 1951, dans la Grande Salle du Palais des Beaux-Arts,



Les membres des Bureaux de l'Union et du Comité belge et les Présidents des Associations photographiés avec S. M. la Reine Elisabeth, au Château de Lacken.

De gauche à droite: MM. R. Stoneley, L. H. Adams, V. Frolow, F. A. Vening Meinesz, H. V. Sverdrup, N. E. Nörlund, J. A. B. Bjerknes, S. Chapman, B. G. Escher, J. F. Cox, Ch. Charlier, J. M. Stagg et W. D. Lambert.

Traces from 1919 & 1964:

Bjerknes, J., 1919: On the structure of moving cyclones. Mon.Wea.Rev..**47**, 95-99.

Volkert, H., 1999: Components of the Norwegian Cyclone Model: Observations and theretical ideas in Europe prior to 1920. In Shapiro & Gronas (eds.), AMS, Boston, 15-27.

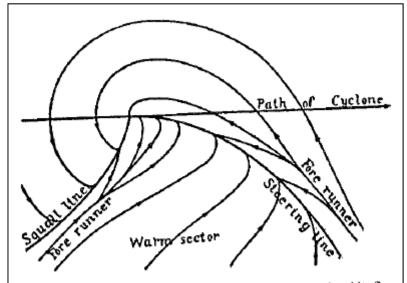


Fig. 1. First appearance of the Norwegian cyclone model and its flow structure. The components are an asymmetric cyclone moving from left to right, a sector of warm air in the south, and two separation lines ahead of and behind the warm sector (JB19, Fig. 1).

End of address to AMS in 1964 at the occasion of the presentation first Sverdrup gold medal to Henry Stommel

DLR

But yet I would give highest recommendation to the less narrow and more basic field of meteorology, which was the concern of the founders of our science, and which still is our first duty to society: weather forecasting. All too frequently, students, and professors too, shy away from the subject of weather forecasting and go into one of the nice little research specialties which are less nerve racking, and which do not force you to show the public how often you are wrong.

Conclusions

Jacob Bjerknes's IAMAS period during politically difficult times

His involvment for the Association not well known/recorded

Concrete mechanisms of early cooperation may well provide useful links to current procedures

My curiosity has been awakened; perhaps some of you join the (re)search



