

COMMISSION 36: THE THEORY OF STELLAR ATMOSPHERES (LA THEORIE DES ATMOSPHERES STELLAIRES)

Report of Meetings, 14, 16, 18, 20, and 21 August 1979

PRESIDENT: D. Mihalas

SECRETARY: J.M. Marlborough

Business Meeting, 14 August 1979, 3:30 pm

I. COMMISSION ACTIVITIES

The President outlined the activities of the Commission during the General Assembly.

II. ELECTION OF PRESIDENT AND VICE PRESIDENT

Dr. G. Traving was elected President unanimously. Two candidates, Dr. B. Gustafsson and Dr. A. Sapar, were nominated for Vice President. In a vote by secret ballot, Dr. Gustafsson was elected Vice President, Receiving 13 votes to 1 for Dr. Sapar.

III. ELECTION OF ORGANIZING COMMITTEE

The nominees proposed by the outgoing organizing committee were presented. Additional nominations from the floor were requested. After discussion the following names for the new organizing committee were approved: H. Frisch, A.G. Hearn, W. Kalkofen, K. Kodaira, J.M. Malborough, D. Mihalas, A. Sapar, M.J. Seaton, A.B. Underhill.

IV. MEMBERSHIP

a) DEATHS: Huang, S.S.; Menzel, D.H.

b) VOLUNTARY RESIGNATIONS: Busbridge, I.W.; Houziaux, L.; Kopylov, I.M.; Rucinski, S.; Schatzman, E.L.; Strömgren, B.

c) NEW MEMBERS

The president presented under several headings names of those proposed for or requesting membership in the Commission.

(i) Present IAU Members

The following names were approved as members of the Commission: Bues, I.D.; Cassinelli, J.P.; Gough, D.; Grinin, V.P.; Michaud, G.; Oxenius, J.; Peraiah, A.; Schmid-Burgk, J.; Scholz, M.; Souffrin, P.; Spite, F.; Stalio, R.; Stein, R.F.; Stepien, K.; Toomre, J.; Zahn, J.P.

(ii) New IAU Members

The following names were approved as members of the Commission: Bernat, A.P.; Bertaud, C.; Carbon, D.F.; Clegg, R.F.S.; Cram, L.E.; Domke, H.; Dufton, P.L.; Holzer, T.E.; Kamp, L.W.; Karp, A.H.; Klein, R.I.; Kontizas, E.; Kudritzki, R.P.; Kurucz, R.; Leibacher, J.; O'Mara, B.J.; Panek, R.J.; Peters, G.J.; Ramsey, L.W.; Ross, J.E.R.; Sakhbullin, N.A.; Schönberner, D.; Shine, R.A.; Simonneau, E.; Shipman, H.L.; Tarafdar, S.P.; Viik, T.; Yorke, H.W.

(iii) Seven other new IAU members were not approved for membership in the commission at the present time.

V. WORKING RULE FOR MEMBERSHIP IN THE COMMISSION

The President distributed a proposed working rule concerning membership in Commission 36. After discussion the rule was approved by the members present. The text of the approved rule is:

"In order to maintain the size of the Commission at a level where effective interaction among members can occur, and with regard to the IAU rule concerning membership in Commissions, the following procedures will be implemented starting with the XVIIth General Assembly in 1979. (a) Each incoming new President shall

write, as soon as is convenient after the General Assembly at which he is elected to all current Commission members asking them to affirm by letter their desire to remain active members of the Commission. (b) The names of all members failing to affirm their membership will be reported back to the Commission at the next following General Assembly (when they will have the opportunity to affirm their membership). (c) The next incoming President shall, in addition to writing all other members as described under (a) above, write once again to those members who failed to respond earlier, informing them that they did not affirm their desire to remain members of the Commission, and asking them again to do so. (d) If a member fails to respond the second time, then his name will be dropped from the active membership list of the Commission."

The meeting adjourned at 4:10 pm.

### SCIENTIFIC SESSIONS

#### 1) JOINT MEETING: 16 August, 1979

Physics of the Chromosphere-Corona-Wind Complex and Mass Loss in Stellar Atmospheres

A. Observational Evidence for Chromospheres, Coronae and Mass Loss.

Chairman: H. Lamers.

Introduction to the Joint Discussion: D. Mihalas

Papers Presented:

- (i) Stars of Spectral Types Earlier than the Sun: T. Snow
- (ii) Solar and Late-Type Stars: C. Jordan
- (iii) Mass Loss and Winds in Massive X-ray Binaries: H. Henrichs.

B. Observations of the Solar Chromosphere-Corona-Wind Complex

Chairman: R. Bonnet

Papers Presented:

- (i) Large Scale Structure of the Corona: J. Zirker
- (ii) A High Resolution View of the Solar Chromosphere and Corona: G. Brueckner

C. Physics of Dissipative Processes in Stellar Atmospheres.

Chairman: J.P. Zahn

Papers Presented:

- (i) Convective Instabilities and their Implications for Chromospheres and Coronal Heating: J. Toomre
- (ii) Small Scale Dissipative Processes in the Solar Atmosphere: J. Leibacher.

D. Propulsion and Dynamics of Stellar Winds and Their Influence on Stellar Evolution.

Chairman: A. Underhill

Papers Presented:

- (i) The Solar Wind: T. Holzer
- (ii) Stellar Wind Theories: A.G. Hearn
- (iii) Effects of Mass Loss and Angular Momentum Loss in Stellar Winds on Stellar Evolution: S. Sreenivasan

#### 2) JOINT MEETING: 18 August, 1979

"Stellar Abundances"

Chairman: W. Bidelman

Papers Presented:

- (i) Accuracy with which Stellar Abundances can be Determined: D. Lambert
- (ii) Red Giants in Globular Clusters and Large Scale Abundance Variations in the Galaxy: B. Pagel
- (iii) Abundances in Other Galaxies: L. Aller

3) SCIENTIFIC MEETING: 20 August, 1979

"Diffusion Phenomena in Stellar Atmospheres"

Chairmen: F. Praderie, C. Cowley

Papers Presented:

- (i) Astrophysical Context of Diffusion in Stars; Open Problems: G. Michaud
- (ii) Uncertainties in the Usual Approach to Diffusion: A Microscopic Point of View: J. Oxenius
- (iii) Confrontation Between Theory and Observations; General Spectroscopic Survey of Stars where Diffusion Occurs: W. Bonsack
- (iv) Competition Between Diffusion and Macroscopic Motions: S. Vauclair
- (v) The Role of Magnetic Fields; A Critical Evolution of Their Measurement: J. Landstreet
- (vi) One Neglected Hydrodynamical Aspect in the Presence of Radiative Forces; Horizontal Aggregation by Photoionization: E. Spiegel

4) JOINT MEETING: 21 August, 1979

"Stellar Rotation"

Chairman: A. Slettebak

Papers Presented:

- (i) Rotation of Very Young Stars: L. Kuhi
- (ii) Rotational Studies of Lower Main Sequence Stars: M. Smith
- (iii) Rotation in Binary Stars: M. Plavec