

INSTITUT FÜR ASTRONOMIE DER UNIVERSITÄT WIEN

Universitäts-Sternwarte und L. Figl Observatorium für Astrophysik

Dr. Béla Széidl
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Adresse:

Institut für Astronomie
Türkenschanzstraße 17
A-1180 WIEN, Austria

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1987 October 2

Dear Béla,

Enclosed please find two reports for the IAU
Commission Reports: Delta Scuti stars, and the
Archives. I hope that the format and length
are satisfactory.

Hoping to speak to you soon,

Best wishes,

Michel

DELTA SCUTI STARS:

1984-1987

Michel Breger

Astronomy Department, University of Texas at Austin

and

University of Vienna

Report for the Transactions of the International Astronomical Union

Vol. XXA (Reports 1988)

INSTITUT FÜR ASTRONOMIE DER UNIVERSITÄT WIEN

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Dr. Belá Szeidl
Director, Konkoly Observatory
Box 67
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1988 February 2

Dear Belá,

Thank you for your letter of January 15. As far as the commission matters are concerned:

- (i) You mentioned that one of the main purposes of the scientific sessions was to enable some astronomers to give short talks in order to obtain local financing for the trip to the IAU. This would mean that the topic of the scientific session should be as general as possible. How about "Recent developments in variable star research" or something similar?
- (ii) I support the five applicants for membership in Commission 27.
- (iii) I really do not know which twelve IAU members should be suggested for the Nominating Committee. I support your selection. However, I would prefer not to be among the twelve, should anyone mention my name.

The computer is analyzing the data on θ^2 Tau for about four hours every day. So far the same four frequencies appear. The question of a 5th frequency will still be worked on.

Johannes Breger is doing fine, gaining a lot of weight and has a powerful voice.

Please give my regards to the young ladies.

With best wishes,

Michel

Michel Breger

Erindale Campus
Prof. Dr. Michel Breger

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Dr. Bela Szeidl
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August 16, 1989

1989 October 4

Dear Bela,

John Percy sent a short note in which he addresses the resolution of the IAU which deals with SI units to be used in astronomical publications. A copy of his letter is enclosed.

I am not sure whether the IBVS should be involved in this. Since the editors of all astronomical publications are free to pursue editorial policies based on their best judgement and practical considerations, all resolutions concerning units (and reference styles - the biggest problem for astronomers) are just resolutions. Since the IBVS is not an edited journal, I am not sure what the IBVS can do. Anyhow, I pass on the suggestion by John to consider.

I am looking forward to Margit's visit in Vienna. The previous Tscharnuter apartment in the observatory was converted by the Ministry to office space. The space was assigned at our request to the Astroseismology group (5 offices) and a museum (two very large rooms). My new office is very quiet and I am moving at the moment. The office next to me can be used by my visitors and students. So Margit will have a nice place to work. Since Margit wants to analyze a Delta Scuti star, I have written a 15-page handbook for the use of program PERDET which should allow her to use the program without too much difficulty. If she likes it, she can take a copy of the program with her to Budapest.

If you obtain an E-Mail number, please let me know.

Best wishes,

Michel



Erindale Campus

Associate Dean (Sciences)

University of Toronto IN MISSISSAUGA

Mississauga Ontario L5L 1C6

From D. McNally

August 16, 1989

Presidents and Vice-Presidents
of Commissions

Dear Michel:

I assume that you received a copy of this.

It seem to me that it is our duty to publish this (or a summary of this) in the IBVS (with the permission of the editors) and to encourage authors of papers in the IBVS to conform to these recommendations. In this way, we are following the spirit of the Resolution, and carrying out the request to "disseminate this document".

Best wishes,

John R. Percy

Dear Colleague,

At the XXth General Assembly in Baltimore, a series of resolutions was voted: they have appeared, in English, in Information Bulletin No. 41 (pp. 7 to 12 and 11 to 14), and the official versions, in English and in French, are now in press in Transactions XXB.

It is therefore the right time for me to send you the resolutions that concern you most: may I ask you to disseminate this document whenever relevant since it is important that the largest possible astronomical community gets the message.

Looking forward to a fruitful collaboration on these matters,

Yours sincerely,

D. McNally
General Secretary IBU

IBU Resolution A3, A4

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M. ROBERTS

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UAI IAU

INTERNATIONAL ASTRONOMICAL UNION
UNION ASTRONOMIQUE INTERNATIONALE



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From D. McNally

to

Presidents and Vice-Presidents
of Commissions

Paris, August 2 1989

Dear Colleague,

At the XXth General Assembly in Baltimore, a series of resolutions was voted : they have appeared, in English, in Information Bulletin No. 61 (pp. 3 to 10 and 13 to 16), and the official versions, in English and in French, are now in press in Transactions XXB.

It is therefore the right time for me to send you the resolutions that concern you most : may I ask you to disseminate this document whenever relevant since it is important that the largest possible astronomical community gets the message.

Looking forward to a fruitful collaboration on these matters, I remain,

Yours sincerely,

Derek McNally,
General Secretary IAU

Encl. Resolutions A3, A4.



Executive Committee

President

Y. KOZAI

General Secretary

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Vice-Presidents

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Resolution A3: Improvement of Publications

The XXth General Assembly of the International Astronomical Union

recognising

- the need to develop clear lines of communication between the various branches of astronomy and other related scientific disciplines;
- the desirability of promoting ease of access to information contained in the astronomical literature;
- the advantages that would follow from a reduction in the variety of the editorial requirements for the submission of papers and reports; and
- the importance of identifying astronomical objects by clear and unambiguous designations; and

noting

- the growth in the cadre of young scientists trained in the use of the International System (SI) of units and widespread adoption of SI in other scientific and technical areas; and
- the substantial measure of agreement that has been reached during the drafting of the new IAU Style Manual for the preparation of astronomical papers, reports and books;

recommends

that the authors and the editors of the astronomical literature adopt the recommendations in the IAU Style Manual, which is to be published in the Transactions of the Union and reprinted for wide distribution and greater convenience;

in particular, it urges authors and editors:

1. to use only the standard SI units and those additional units that are recognised for use in astronomy, as recommended by Commission 5;
2. to adopt the conventions for citations and references that are given in the IAU Style Manual and that are exemplified in Astronomy and Astrophysics Abstracts; and
3. to ensure that all astronomical objects referred to in the literature are designated clearly and unambiguously in accordance with the recommendations of the Union.

Note:

The Executive Committee recognises that the replacement of CGS by SI units will require an adjustment of practice on the part of many astronomers; this will no doubt take time. Consequently, we urge that the total conversion from CGS to SI units by all organs of communication shall be accomplished by the time of the next General Assembly (1991).

In the meantime we request that the major journals should publish, once a year, a table of conversions between CGS and SI units, as provided by Commission 5.

SI

International System (units)

CGS

Centimeter, Gramme, Second (units)

Commission 27 of the International Astronomical Union

President: Michel Breger

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Dr. Bela Szeidl
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1989 July 24

Dear Bela,

The last year has been quiet for Commission 27. We have sponsored or cosponsored several applications for IAU support of meetings. The following new meetings are in the planning stage:

Confrontation between stellar pulsation and evolution, 28 - 31 May, 1990, Bologna, Italy

Evolutionary processes in interacting binary stars (Comm. 42), week before or after the General Assembly

Structure and emission properties of accretion disks, Summer, 1990 (Paris, Comm. 48)

Wolf-Rayet stars and interrelations with other massive stars in galaxies, 18 - 22 June, 1990 (Bali, Indonesia),

Magellanic Clouds, 9 - 13 July, 1990 (Australia)

We are awaiting final details on the meeting next year linking amateur and professional astronomy.

It is not too early to think about our activities at the next IAU General Assembly. John Mathis, President of IAU Commission 34 (Interstellar Matter) has proposed a Joint Commission Meeting on the subject of late stages of stellar evolution of low-mass stars. My first thoughts on the matter were supportive, provided that the variability of these stars is included. What are your views? Should we support this idea, we should appoint a member for the Scientific Organizing Committee. Do you have any suggestions (I exclude myself from this)? A copy of the letter by John Mathis is attached.

Do you have any suggestions concerning special scientific sessions during the next General Assembly? One or two sessions on special topics might be possible. Of course, Joint Discussions or Joint Commission Meetings could also be planned. In addition, I would favor a scientific session with invited contributions (as we had last time) on a variety of topics. At this stage I have to admit to a personal prejudice: Unfocussed sessions with open, uninvited contributions may be less useful. Many of such contributions seem to be descriptions of unfinished or future work and have next to no audience. On the other hand, some astronomers can only find travel support if they present a paper.

I am looking forward to your suggestions and ideas.

With best wishes,

Michel

PS: Margit's visit has been approved from the Austrian side as well.

Michel

Washburn Observatory
The University of Wisconsin-Madison

475 North Charter Street
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Telephone (608) 262-5994
28 June 1989

Prof. M. Breger
Institut für Astronomie
Universität Wien
Türkenschanzstrasse 17
A-1180 Vienna, AUSTRIA

Dear Prof. Breger,

I am writing as President of IAU Commission 34 (Interstellar Matter), to suggest that the three commissions 34, 27 (Variable Stars), and 35 (Stellar Structure) propose a Joint Commission Meeting (JCM), to be held during the General Assembly of the IAU at Buenos Aires in 1991. The theme would be the late stages of evolution of low-mass stars, involving evolution on and near the AGB, and the formation and subsequent evolution of planetary nebulae. Of course, we can only propose to the Executive Committee of the IAU that this JCM take place, but I believe that we can make a very good case for it if your commission would join us in proposing it.

The JCM would presumably consist of invited review talks only (but see below), aimed at summarizing the current status of knowledge (or dogma) in the relevant topics. I am not prepared to suggest the precise titles of the review talks and speakers at this time. If your commission agrees to co-sponsor the JCM, I hope that you will appoint a person to represent it on a Scientific Organizing Committee (SOC) for the proposed JCM. Prof. Yervant Terzian (Cornell University, USA), Chairman of our Working group on Planetary Nebulae, has kindly agreed to serve in this capacity for our commission. I propose that he serve as Chair of the SOC. I assume that the titles and speakers can be settled in an amicable fashion without an overly large amount of work on the part of the SOC. There would not be any written version of the invited talks required.

We envision that the talks will not be for specialists in the subjects under review, but rather for interested scientists of a rather wide variety of backgrounds, having in common only a general interest in the ISM. The more specialized issues would be reserved for discussion at meetings such as colloquia and symposia on the particular topic.

Our commission's SOC has discussed the problem of contributed papers with mixed feelings. We are aware that many participants need to make a contribution to the General Assembly in order to obtain support for their travel, but the time and space required for presentation of the contributed papers are very problematical for the organizers of the meeting. We propose that a rather new form of contributed paper be allowed at this JCM: a one-page paper (printed on both sides if desired), with the contributor bringing enough copies to distribute one to each of those attending the JCM. If there were enough time between the beginning and end of the JCM, we could distribute the papers at the beginning and have a brief period of questions and comments regarding the contributed papers at the end. This form of having contributed papers is not required for our having the proposed JCM, but I would like your reactions to it and suggestions for improvements.

I would like to propose the JCM formally to the IAU as early as possible. If it is practical for you to consult with your commission's SOC and give me a reply within two months, I would greatly appreciate it. My E-mail addresses are MADRAF::Mathis (SPAN) and Mathis@WISCMACC.Bitnet. We very much hope that your commission will be favorable about the idea, and welcome any suggestions you may have.

Yours sincerely,

John Mathis

John Mathis

Commission 27 of the International Astronomical Union

President: Michel Breger

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Dr. Bela Szeidl
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1990 February 14

Dear Bela,

This is a copy of my letter to the members of the Organizing Committee and should represent some of the discussion we have had during my visit.

The last letter to the Organizing Committee (OC) of Commission 27 has led to a number of responses. The OC was unanimous in its support of a Joint Commission Meeting (JCM) on the late stages of stellar evolution at the next General Assembly. The concern that the JCM should include sufficient comprehensive discussions of stellar variability was forwarded to the organizer, John Mathis.

The IAU Secretariat has requested that the commission presidents forward the names of candidates for next commission president and vice-president (VP). I propose that, following IAU tradition, the current VP, John Percy, be our candidate for president.

As far as the next VP is concerned, there are a number of excellent candidates on our OC. Your president and VP propose Mikolaj Jerzykiewicz. Mike fulfils our wish for geographical balance as well as scientific and organizational qualities. There could, of course, also be more candidates standing for election during the next General Assembly. In this matter two procedural options seem optimal: (i) If the OC feels that it wants to have Mikolaj Jerzykiewicz as its candidate, the general commission membership would be asked for suggestions and comments. In any case, at the General Assembly the floor would be opened for suggestions of other candidates. (ii) Alternatively, the OC could decide to present a list of two or more candidates to the IAU Secretariat and the commission membership. The election at the General Assembly would be held between these candidates as well as others suggested by the members of the commission.

It is customary for members of the OC to serve for up to six years and then to enable new members to be appointed. Do you have any suggestions on which active astronomers should be invited to serve as new members on our next OC?

It is also time to plan our sessions at the next General Assembly and to apply for time at the meeting. A scientific session on *The Role of Rotation in Stellar Variability* has been suggested. This excellent topic would, of course, include the different types

of spotted stars, but also nonspotted stars such as nonradial pulsators with rotational mode-splitting. We might plan a double session (i.e. three hours). In the past we often included a further session to enable astronomers to present papers on a variety of topics (e.g. to enable them to obtain financial support to visit the IAU). I am happy to report that this general session with its variety of scientific levels may no longer be necessary since the IAU is planning a general, experimental poster session. The plan of a single business session (is this enough?), a double session on rotational variability, the JCM and the poster session represents a full program. Theoretically this leaves place for an additional (single) scientific session if the the OC would like to have one.

Please let me know your suggestions on all these matters soon so that some of these suggestions could be included in a letter to general membership of our commission.

Michel

Commission 27 of the International Astronomical Union

President: Michel Breger

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Dr. Bela Szeidl
Konkoly Observatory
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H - 1525 Budapest XII
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1990 March 14

Dear Bela,

One of the important activities of IAU Commission 27 is to prepare the scientific summaries of our various subfields to be published in the IAU Transactions. These summaries probably provide the best means for the astronomer inside and outside the field to find out about recent developments. Consequently, it is not surprising that these summaries are widely used.

Three years have gone by and our commission will have to prepare the new reports. It is important that these reports are prepared by astronomers who are active and knowledgeable in their field. Could we impose on you again to prepare a report?

The title of the report would be *RR Lyrae Stars*.

The length would be similar to the last summary you wrote. The report should cover the developments in the field between 1987 July 1 and 1990 June 30. A complete listing of all the papers published in the time period is neither necessary nor desirable. The most important papers as well as the trends and developments would be more useful. In order to keep the deadline given by the IAU, I would have to have the report by 1990 August 30. I would send you helpful information such as the assigned length of the report as well as abbreviations for the journal names during May.

I hope that you will be able to accept the invitation to write the report. Please let me know your answer soon.

We would also be grateful for a report on the *Information Bulletin*.

With best wishes,

Michel



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Dr. Bela Szeidl
Konkoly Observatory
Box 67
1525 Budapest
Hungary

1987 September 16

Dear Bela,

Thank you for your letter of August 24. There have been answers to my letters from the O.C. Some copies are enclosed. Myron Smith also wrote that he would consider John Percy to be an excellent choice for Vice President.

It appears to me that the O.C. favors John Percy, but that the support is not unanimous. As far as a second choice is concerned, we should discuss that some more. At the moment I have no clear preferences for a second candidate. (Art Cox has already been president of a commission?)

After many attempts I have gotten hold of C. Bertout (while he was in a shower and could not escape). His report on T Tauri stars is almost finished and will be mailed soon. For your information, his phone numbers are: (415) 642 3792 work, (415) 845 3259 (home).

In about a week I will return to Vienna. The time here has been productive. Apart from finishing the Delta Scuti review of the last three years, the observing weather has been kind. Two polarimetry quasar papers are essentially finished and in two weeks I'll work on Theta2 Tau again. I hope your summer has been pleasant.

Regards to Margit and Katalin.

With best wishes,

Michel
Michel Breger



sterrewacht leiden

18 August, 1907

Dear Professor Breger,

Thank you very much for your letter of August 6 on the Vice-Presidency of IAU Comm. 27. I like to support your suggestion of John Percy as the new VP. This overrules an earlier suggestion to Dr. Steidl a week ago.

Congratulations with the beautiful results on Θ^2 Tau!

With best wishes,

Arno van Genderen

Columbia University in the City of New York | New York, N.Y. 10027

DEPARTMENT OF ASTRONOMY

28 August 1987

Prof. M. Breger
Astronomy Department
University of Texas
Austin, Texas 78712

Dear Mike:

Thanks for your letter of August 6. I am not sure that I have much wisdom to contribute regarding a new VP for Commission 27. I agree that John Percy would be good, and he would surely be conscientious. He has always been helpful to the Commission. Another good candidate would be Marcello Rodonò--he is an enthusiastic organizer of international campaigns and the like. (I guess he is not on the OC, but I don't know if that matters.) Another person who is well spoken of is Myron Smith, but I don't know him personally.

The only trouble with all these candidates is that the president always seems to come from Europe or N. America. (My predecessor was Don Fernie, also from Toronto.) It would be good to find someone from another part of the world, but I find it hard to make suggestions. Brian Warner comes to mind. Mike Feast won't do, as he is a VP of the IAU, but there might be others in S. Africa. What about someone from Japan or India? I can't think of anyone offhand, but that doesn't mean anything.

I am handicapped because I am not in New York just now, and I don't have any IAU membership lists and the like with me. I have a terrible memory for people, especially if I know them only by reputation. I might be able to do better if I can look over the lists of members of the OC and the Commission. If you would like to chat about it when I am better informed, you could give me a call at 212-280-3884 after September 9. I am also available on BITNET at AANHB@NASAGISS.

Thanks also for sending the 8 Scuti data. It is really impressive to see what good agreement there is among the various stations and how one can get nearly continuous coverage. I hope there'll be lots more of the same.

All the best, and let me know if I can be of any further help.

Sincerely,

Norm

Norman H. Baker

DEPARTMENT OF ASTRONOMY



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TEL. (416) 978-3149

August 18, 1987

Dr. Michel Breger
Department of Astronomy
University of Texas
Austin TX 78712
USA

Dear Michel,

First of all, thanks for sending the graphs of Θ^2 Tau. They are most impressive. I heard about the campaign from Margit Paparo when I was in Hungary last fall. I am glad that it was so successful.

I have already sent my thoughts on the Vice-Presidency of Commission 27 to Bela Szeidl, and they have changed only slightly since then. Recognizing that geographical considerations are important (which is probably why the IAU Executive Committee wants some say in Commission matters), I would suggest that we look for someone from outside Europe and perhaps outside North America. The candidate should have a good overview of variable stars (especially the aspects with which Commission 27 is concerned), an interest in the IAU and its role, and some administrative skills. An obvious candidate is Brian Warner - unless he has been President before. Art Cox has experience as a Commission president, and is good at getting things done - though his interests are not exactly in line with Commission 27's. Myron Smith would bring a fresh outlook to Commission matters, but he has shown no particular interest in the IAU, and his position is somewhat uncertain now that his appointment at NSO has been terminated. As for people outside the Organizing Committee: Luis Balona, Tom Barnes, Bob Shobbrook and Bob Wing are names which come to mind as I read through the membership list.

I am flattered that you should suggest me as a nominee, but I have mixed reactions to the suggestion. On one hand, I am certainly interested in the work of the IAU and Commission 27. On the other hand, I think that you should look for other candidates who are more active in research. Right now, research is in third place in my list of activities, after teaching and administration. I would be willing to serve if nominated, but would not be offended if you found someone more suitable.

We have just finished a two-week "campaign" on short-term variability in Be stars, with Doug Gies at Texas supplying the spectroscopy, and IUE and Voyager supplying the UV spectroscopy and photometry (I hope). So the Toronto-Texas connection continues!

Have a good stay in Texas. And I will come to Vienna someday - I promise.

Yours sincerely,

John R. Percy



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Dr. B. Szeidl
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August 22, 1986

Dear Bela,

The "Stellar Pulsation" Conference organized by Art Cox was once again a model of excellent organization and interesting science. There were many new ideas and views (as one might expect from such a conference). Of particular interest to me was the general tone that the present papers on B star pulsations might include too many effects, which are not fully proved to exist (puffs, transient line-profile phenomena, mode switching, resonances etc. etc.)

During a lunch of the Organizing Committee I mentioned your idea of a stellar pulsation conference in Budapest (1999?). It was mentioned that the next Stellar Pulsation Conference in the series would be in Nebraska during 1988. Japan wanted to also hold one of these meetings, but expressed some interest in a more solar-related meeting. After discussing the virtues of a meeting in Hungary (including the attendance of socialist astronomers, which were missing this time), a preliminary consensus emerged that a 1990 meeting in Hungary would be a reasonable course of action. However, all the discussions were of a preliminary nature, so you (we) have plenty of time to discuss the possibilities.

Karen Strom sent a letter asking to join Comm. 27. Steve Strom (her husband) was my first boss in Stony Brook. Since I do not really know what to do with the letter, I forward it to you.

Please give my regards to everyone.

With best wishes,

Michel

P₂ S. McDonald Observatory has assigned the 36-inch telescope for November to the θ^2 Tau project as well as four nights on the 2.7 meter telescope to do line-profiles of the star.



UNIVERSITY OF MASSACHUSETTS
AT AMHERST

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July 7, 1986

Dr. Michael Breger
Astronomisches Institut
University Observatory
Turkenscharzstrasse 17
A-1180 Vienna
Austria

Dear Mike,

This letter is just to ask a simple favor of you in your role as Vice-President of Commission 27 of the IAU. Steve and I have never become members of the Variable Star Commission. Since we are again working in that area, I thought it was about time and that you would be a good person to ask about it. I would also like to enquire about obtaining a copy of the variable star catalog and it's supplements (the printed version).

Thanks for your help.

Yours truly,

A handwritten signature in cursive script, appearing to read "Karen".

Karen M. Strom

KMS/tg



COLLEGE OF NATURAL SCIENCES
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August 6, 1987

Dr. A. N. Cox
Los Alamos National Lab
P. O. Box 1663
Los Alamos, NM 87545

Dear Art:

*Dear Béla,
Enclosed please find a copy of your
suggested letter to part of the O.C.
Thanks for both of your (identical) letters.
Best wishes,
Michel*

Béla Szeidl, President of IAU Commission 27, has suggested that I consult you concerning the next Vice-President of Commission 27. As you know, during the next General Assembly of the IAU, the commission will vote on the next Vice-President (and President) of the commission. I fully agree with Béla Szeidl that our best approach might be for the Organizing Committee to suggest one particular person for Vice-President.

There are a number of potentially excellent VP's on the Organizing Committee, and I propose that we nominate a member of the present Organizing Committee. One of its members, John Percy, has already been mentioned. However, the Organizing Committee might consider all its members.

What are your views on the matter? An informal, quick note would be appreciated.

On the scientific side, we have completed several worldwide observing photometric campaigns on Delta Scuti stars. I would like to share a part of the results on the star θ^2 Tau for November, 1986. The enclosed diagram shows the light curves for ten days (48 hours per strip). The regions of overlap indicate excellent agreement between the different observations. The value of such coordinated campaigns may be seen in the power spectrum, where the spectral window for θ^2 Tau is quite clean. Also, the four-frequency solution leaves only noise.

With best wishes,

Michel Breger
Vice-President, Commission 27

— Address until September 25:

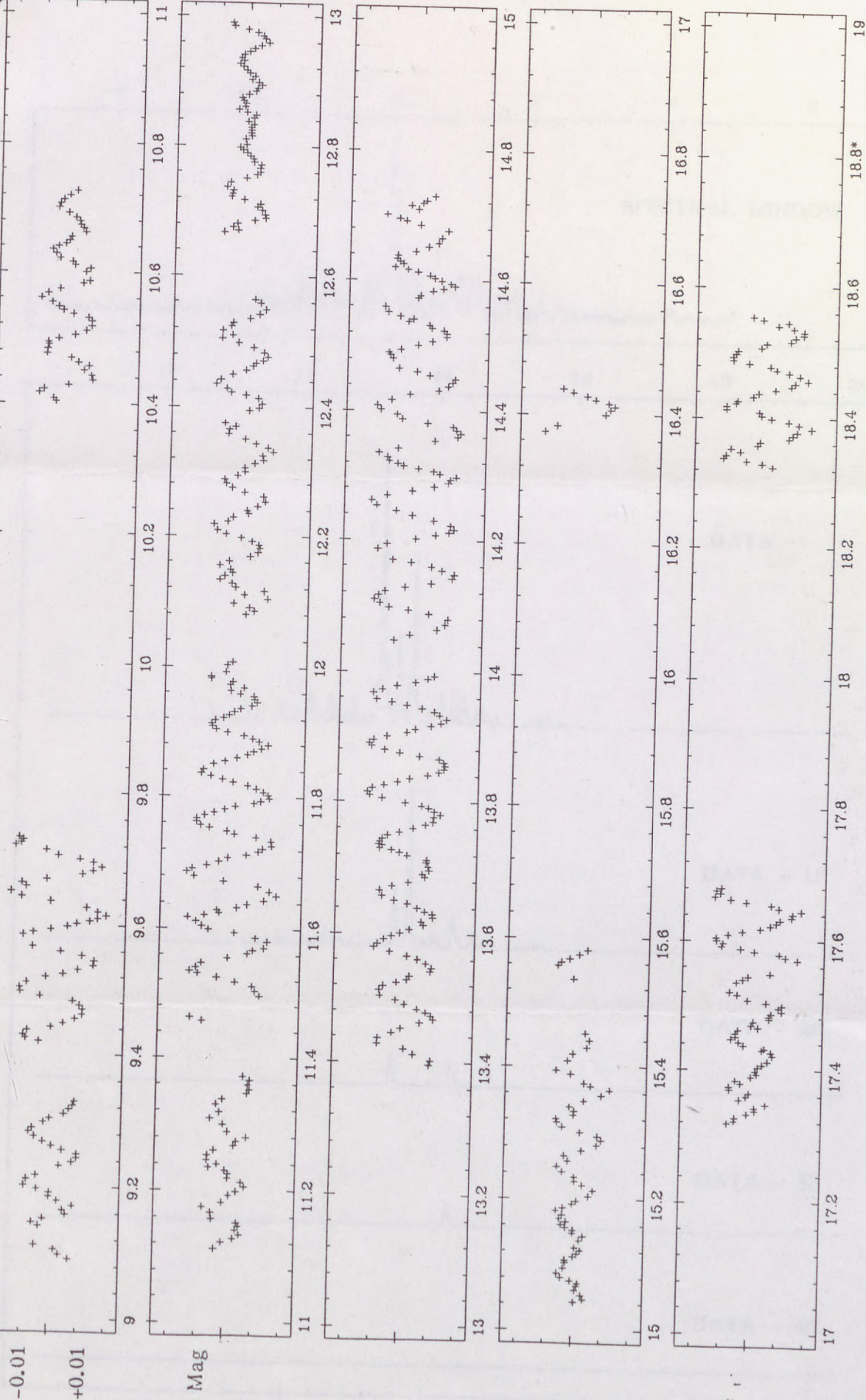
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USA

Address October through June:

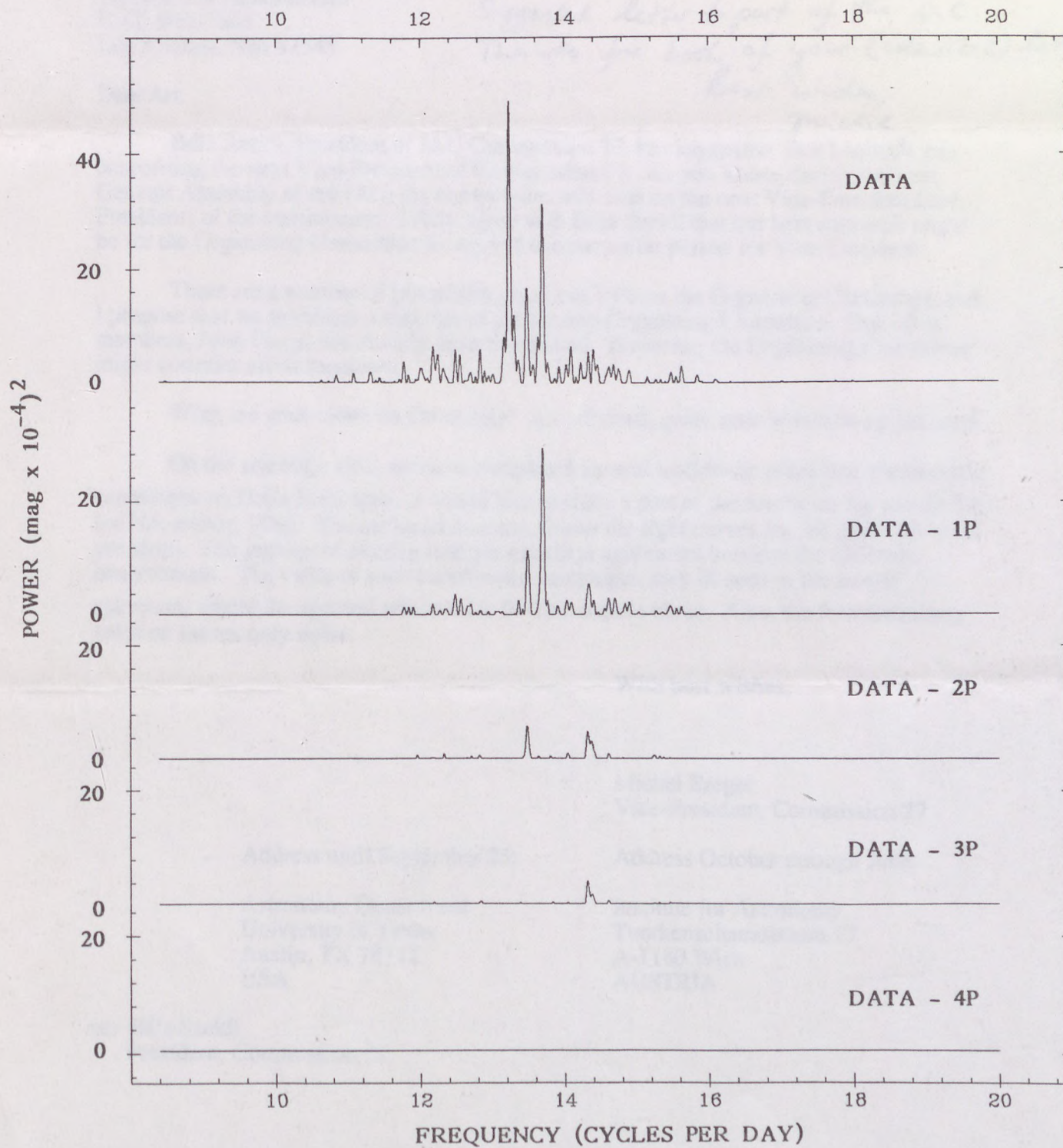
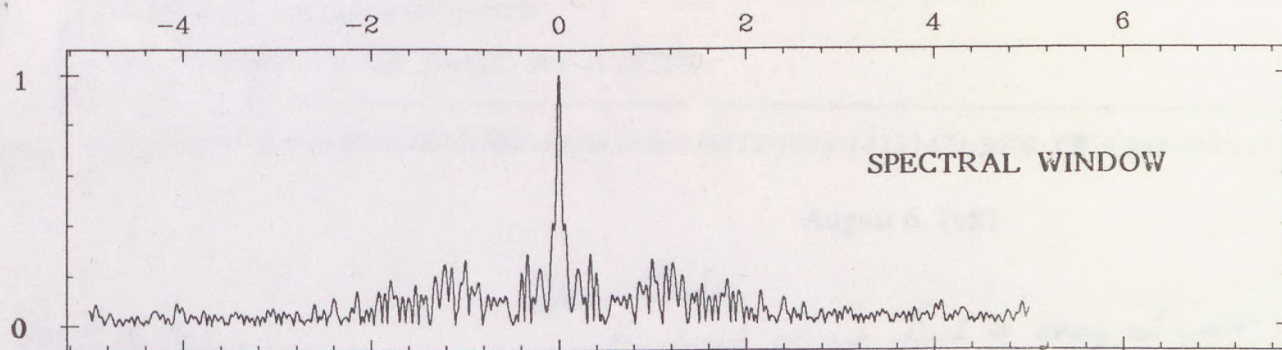
Institute for Astronomy
Tuerkenschanzstrasse 17
A-1180 Wien
AUSTRIA

cc: Béla Szeidl
President, Commission 27

China Spain Texas China Spain Texas



Hel. Julian Date (244 6730+)



IAU Commission 27 : Letter to the members, 1991 April

Thank you to the many astronomers who have assisted us with the work of the commission. We must also thank the many authors who have produced such excellent summaries of the scientific progress in our field during the last three years. These scientific reports will be published in the Transactions of the IAU and we encourage everyone to look at them.

INFORMATION BULLETIN ON VARIABLE STARS

For more than two decades the IBVS has been edited by Béla Szeidl. This important and time-consuming task has been taken over by L. Szabados and K. Oláh, also at Konkoly Observatory. Regrettably, the astronomical budget forces the editors to restrict the number of mailed copies. Individual members of Commission 27, in particular, can no longer be sent personal copies. Anyone who has followed the economic transition in Hungary fully understands this decision. In my view, the personal copies improved the astronomical communication considerably. Maybe we could discuss possible solutions at the IAU General Assembly.

ARCHIVES OF UNPUBLISHED OBSERVATIONS

New data for the Archives can now be transmitted by electronic means such as E-Mail. Copies of data previously submitted electronically (the file number has the letter 'E' added to it) can also be obtained electronically from Strasbourg. Information is given in IBVS 3422, 1990 (and Bull. Centre Donn. Stell. 37, 147, 1990; IAPP Comm. 40, 36, 1990).

GENERAL CATALOG OF VARIABLE STARS

Volume IV of the 4th edition has been completed and mailed.

DELTA SCUTI STAR NEWSLETTER

After discussions at the last IAU General Assembly, this newsletter has been started. Three issues have already appeared and sent to individuals working on these stars. If you have been forgotten, contact me at the address given later.

COMMISSION MATTERS

The Organizing Committee is proposing that the present Vice-President, Prof. Dr. John Percy (Univ. of Toronto, Canada), be nominated as our next President. Dr. Mikolaj Jerzykiewicz (Wroclaw, Poland) has been chosen as its nominee for the next Vice-President. Both having been active in the work of the commission and are highly respected researchers.

The following members of the Organizing Committee (OC) are retiring after serving several terms: L. N. Mavridis, A. M. van Genderen, and B. Warner. Continuing are T. Barnes, M. Breger, J. Christensen-Dalsgaard, M. Jerzykiewicz, M. Rodono, J. Percy, M. Smith, and B. Szeidl.

IAU GENERAL ASSEMBLY

We have planned a full scientific program which will hopefully motivate any presently undecided astronomers to participate in the General Assembly. Administrative matters might be kept to a minimum should the members wish to do so. The dates listed below are from a provisional program. Please check the final program for any changes:

1. Business meeting and scientific program (July 26, 14 - 17:30 hours)

After conclusion of the business meeting, a scientific program with the title '**New developments in variable-star research**' (Chairman: Michel Breger) will be held with a number of ten-minute contributions followed each by about five minutes of discussion. If you would like to contribute, please contact me at: Türkenschanzstr. 17, A-1180 Wien, Austria (E-Mail: breger@avia.una.ac.at).

2. Scientific meeting: '**The role of rotation in stellar variability**' (July 31, 14 - 17:30 hours). Part I: Pulsation (Chairman J. Percy), part II: Activity in stars (Chairman M. Rodono)

In each session about four invited reviews will be presented.

3. Scientific meeting: '**Contributions of polarimetry to stellar astrophysics**' (July 29, all day, to be held together with commissions 25, 9 and 42)

Contact R. Koch (Dept. Astronomy, University of Pennsylvania, 209 S. 33rd St., Philadelphia, PA 19104, USA) for more details.

4. We also also cosponsoring an all-day session on '**Late evolution of low-mass stars**' (also on July 29 - not our decision - together with commissions 34 and 38). Contact Y. Terzian for details.

5. Poster sessions at the IAU:

The IAU is providing a new way to present your results outside the scheduled commission sessions by providing poster sessions on each full day of scientific meetings. Each poster will be exhibited for one day only, from 10 to 18 hours. There will be 50 poster spaces available. If you are interested, you should send an abstract (no longer than an A4 page) to the IAU General Secretary at the Paris Secretariat, no later than May 1, 1991 (that means now). Related posters will be displayed at the same time in the same area. Do mention which JCM or Commission meeting, if any, your poster is relevant to.

Hope to see you in Buenos Aires.

Michel Breger

Hartmut Schneider

Universitäts-Sternwarte
Göttingen

D-3400 Göttingen, 10.05.1988

Geismarlandstraße 11
Fernruf (0551) 395042/395053
Telex 96753

Ihr Schreiben:

Universitäts-Sternwarte · Geismarlandstraße 11 · D-3400 Göttingen

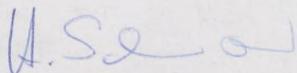
Dr.B.Szeidl
President of IAU Comm.27
Konkoly Observatory
P.O.Box 67
H-1525 BUDAPEST

Dear Dr.Szeidl,

I would like to attend the general assembly of the IAU 1988 at Baltimore. Because I am not a member of the IAU I need an official invitation for this purpose. Can you, please, send me an invitation as "invited participant"? Thank you very much in advance!

For the scientific session of IAU commission 27 present development in variable star research I would like to present a contributed paper "Variability among CP3 stars: a general phenomenon?".

Sincerely
Yours



(H.Schneider)

cc: M.Breger, Vienna

INSTITUT FÜR ASTRONOMIE DER UNIVERSITÄT WIEN

Universitäts-Sternwarte und L. Figl Observatorium für Astrophysik

Dr. B. Szeidl
Konkoly Observatory
P. O. Box 67

H-1525 BUDAPEST

Ungarn

Adresse:

Institut für Astronomie
Türkenschanzstraße 17
A-1180 WIEN, Austria

Telefon: (0 22 2) 34 53 60-0

1988 May 25

Dear Bela,

Enclosed please find a copy of a letter from H. Schneider, who would like to attend the General Assembly as a nonmember. As far as I understand the situation, he can apply either through the National Committee (West Germany) or through the president of a commission. He has chosen the latter approach and I hope that you will be able to support his request.

The copy of the paper by Margit and Geza has arrived and I like the changes which were included. I have been amiss in not immediately writing a letter to these two thanking them for the copy. Could you please give my regards to Margit and Geza? At the moment I am working on our paper of θ^2 Tau.

With best wishes,

Michel

Michel Breger

COMMISSION 27: VARIABLE STARS (ETOILES VARIABLES)

Report of Business Meeting: August 5, 1988

PRESIDENT: B. Szeidl

SECRETARY: J.R. Percy

1. Dr. B.G. Marsden (Central Bureau for Astronomical Telegrams) reported on the problem of the designation of extra-galactic novae. The system presently used in the IAU Circulars is ambiguous. Dr. Marsden recommended interim designations of the form "Nova LMC 1988 #2" to indicate the second nova discovered in the LMC in 1988.

A discussion followed, in which several comments were made: the system should be (i) conveniently applicable to galaxies such as M31, M33 and the galaxies in the Virgo cluster, in which many novae may be discovered (ii) open-ended, for use in the future (iii) flexible and (iv) acceptable to the editors of the IAU Circulars. The meeting agreed to accept Dr. Marsden's recommendation.

2. Dr. M. Breger, supervisor of the IAU Archives for Unpublished Photoelectric Observations of Variable Stars, described the current status of these archives. Copies of printed files are maintained at (and can be obtained by writing to) the following

institutions: Centre de Données Stellaires (CDS: Strasbourg, France), the Library of the Royal Astronomical Society (London, UK) and at the Odessa Astronomical Observatory (Odessa, USSR). Electronic files (if any) are maintained in Strasbourg. The supervisor commented that he prefers printed files. Copies of data files should be sent to: M. Breger, Universitätssternwarte, Türkenschanzstrasse 17, A-1180 Wien, Austria, along with a cover sheet (see IBVS 2853 (1986) for instructions). Lists of files are published regularly in the IBVS (2853 (1986)), Astron. Tsirk (1517 (1987)), and Publ. Astron. Soc. Pacific (100, 751 (1988)). At present, 196 file numbers have been assigned (45 since 1984), and 180 files have been filled. These files are now cross-referenced in the bibliographic data bases of the CDS. The supervisor thanked the institutions involved in the maintenance of the Archives for their help.

3. Dr. A.M. Cherepashchuk reported on the General Catalogue of Variable Stars, which is compiled at the Sternberg Astronomical Institute in the USSR. Until now, the GCVS has been compiled from hand-written records, of which the total number is now about 500,000 and is increasing by 20,000 per annum. Less than 1 per cent of the information in the records is actually included in the GCVS, and the compilers are seeking ways to improve this situation by converting the records to machine-readable form. Each GCVS file will then consist of a series of descriptive keywords, parameters and comments. The compilers are aware of the need to proceed carefully at this stage of the

planning, and they would be grateful to receive suggestions from users of the catalogue.

4. Dr. B. Szeidl, co-editor of the Information Bulletin on Variable Stars, reported on the publication and distribution of the IBVS. Approximately 500 bulletins have been published in the last three years, and these have been mailed to 350 institutional addresses and 200 private addresses. The number of addresses is constantly increasing. The costs involved are very great, and the editors are seeking ways of reducing them. Various solutions (and their drawbacks) were discussed: (i) cease sending copies to "private" addresses if the recipient's institution already received a copy (private copies are more convenient and therefore more thoroughly read) (ii) charge a subscription fee (for technical reasons, it is not possible for the editors to collect subscription fees directly, though it might be done indirectly - through the IAU secretariat, for instance) (iii) trim the mailing list periodically (this is already done) (iv) approach the IAU for financial support (the IAU would be unlikely to begin such a costly precedent) (iv) keep IBVS issues to 4 pages or less, such as by using smaller print (the print is often too small already) (v) reject papers which could or should be published in regular journals, or which are of insufficient quality (this could increase the time delay in publishing papers, and would certainly increase the work load of the editors - which is already great). Commission Vice-President M. Breger

commented that the Commission should support the editors of the IBVS in finding solutions to the current problems. The Commission also affirms its gratitude to the editors for their excellent work.

5. Dr. J.A. Mattei, Director of the American Association of Variable Star Observers, discussed the current work and future plans of the association. There are 3,600 stars on the AAVSO visual program, and 50 on the photoelectric program. In the past year, 260,000 observations were made by 550 observers - more than half from outside the USA - bringing the total number of observations to more than 6,000,000. All of those made since 1960 are edited and archived in machine-readable form. Earlier observations are now being computerized; this project is 60 per cent complete. The AAVSO receives about 150 requests for data each year: "real-time" information on the state of unpredictable stars, simultaneous optical observations of stars being observed at other wavelengths, current optical data for correlating with other data, and archival data for analysis. A small fee is charged to cover the cost of compiling and sending the data. The AAVSO is presently engaged in several collaborative research projects, including one to provide improved predictions of Mira star magnitudes for the HIPPARCOS satellite input catalogue. The AAVSO is planning a meeting in 1990 in Belgium - its first outside North America - to which all variable star observers are cordially invited.

6. The following meetings have been proposed; some of them may be approved as IAU Symposia or Colloquia: In 1988: a workshop on "Astroseismology" in Vienna in December; in 1989: a meeting on "The Physics of Classical Novae" in Madrid in late June, a meeting on "Rotation and Angular Momentum Evolution of Low Mass Stars" in Catania, and a meeting on "Frontiers of Stellar Evolution" at the University of Texas, marking the 50th anniversary of McDonald Observatory; in 1990: a meeting on "Surface Inhomogeneities in Stars" in Armagh, a meeting on "The Magellanic Clouds" in Australia, a meeting as part of the "Los Alamos" series of meetings on stellar pulsation, possibly in Hungary, and the AAVSO meeting mentioned above.
7. The following slate of officers for Commission 27 was proposed and accepted: President: M. Breger, Vice-President: J.R. Percy, Organizing Committee: T.G. Barnes, J. Christensen-Dalsgaard, R.E. Gershberg, M. Jerzykiewicz, L.N. Mavridis, M. Rodono, M.A. Smith, B. Szeidl, A.M. van Genderen, and B. Warner. Several new members of the Commission were proposed prior to the General Assembly; these applications were accepted. Further applications for membership will be considered by the officers of the Commission. The total membership is now approximately 350.
8. There was a brief discussion about whether Commission 27 should establish any Working Groups. A WG on Flare Stars existed in the past. M. Breger announced that he plans to publish an

informal newsletter on Delta Scuti stars, to help to co-ordinate research in this field. Those interested in receiving such a newsletter should write to him at the address given above.

9. S. Dunlop (British Astronomical Association) raised the question of how significant research results based on visual observations (such as revised ephemerides of eclipsing binaries) could be published quickly. The IBVS does not publish results based on visual observations. No satisfactory solution to the question was proposed.

DEPARTMENT OF ASTRONOMY



60 ST. GEORGE STREET
UNIVERSITY OF TORONTO
TORONTO ONTARIO
CANADA M5S 1A1
TEL. (416) 978-3149

August 25, 1988

Dr. B. Szeidl
Director: Konkoly Observatory
Hungarian Academy of Sciences
P.O. Box 67
H-1525 Budapest
Hungary

Dear Bela,

Here are the notes which I made at the business meeting of IAU Commission 27. If they are too long, or if they are inaccurate in any way, please feel free to edit them.

I hope that there will be some way for you to have a meeting on stellar pulsation in 1990, even if it is not sponsored by the IAU. Budapest would be such a pleasant and appropriate place for such a meeting.

It was good to see you in Baltimore. Perhaps we will meet again in Vienna in December?

Yours sincerely,

A handwritten signature in blue ink, appearing to read "John R. Percy".

John R. Percy

RAG CONTENT

DEPARTMENT OF ASTRONOMY



UNIVERSITY OF TORONTO
TORONTO ONTARIO
CANADA M5S 1A1
TEL. (416) 978-3149

February 4, 1988

Dr. Bela Szeidl
Director: Konkoly Observatory
Hungarian Academy of Sciences
Box 67, 1525 Budapest XII
Hungary

Dear Bela:

This is in reply to your letter of January 15:

- i) It is difficult to think of topics which are scientifically important and which have not been covered in recent meetings or IAU sessions. One possibility would be a session on pulsation and mass loss in yellow supergiants, particularly stars like R CrB, UU Her and perhaps the population II Cepheids and long-period classical Cepheids. Some aspects of this topic were discussed at a small workshop in Belgium last year - particularly the evolution of stars from the AGB to the region of the planetary nebulae. Some interesting spectroscopy has been done on rho Cas by the Texas group (Lambert et al), and the photometry by Endre Zsoldos is interesting. And IR and UV observations continue to shed light on R CrB.

Another possible topic might be methods of observation and analysis of variable stars. This is a rather vague topic, but I have in mind CCD imaging, automated photometry and also the interpretation of power spectra and (O-C) diagrams. It would be interesting to have talks by people who have used the period determination methods of Stellingwerf, Scargle etc.

Otherwise we could have a session on the "solar-stellar connection" - activity and activity cycles on solar-type stars, and possibly asteroseismology. But there have been enough meetings on this topic already.

- ii) New members of Commission 27: W. Bauer, M. Paparo and W. Weiss are certainly good candidates. B.S. Shylaja has written papers on variable stars, but I cannot comment on the quality of them. As for F. Verheest, I can find no papers in Astronomy and Astrophysics Abstracts by such a person. There is a book by F. Verhulst on a topic in theoretical mechanics. Perhaps that is the correct spelling.
- iii) It would be appropriate to nominate a member of our Commission for the Special Nominating Committee - perhaps one of our former presidents: Don Fernie, Norman Baker (or yourself, if you are eligible)! Don Fernie would do a good job. Incidentally, he completes his ten-year term as chairman of this department and director of the DDO this summer. He then plans to take a one-year research leave. Perhaps you can induce him to visit Budapest! Most likely, he will be succeeded by Ernie Seaquist, a radio astronomer who has done some interesting and important work on novae, symbiotic stars and other variables.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'John'.

John R. Percy

DEPARTMENT OF ASTRONOMY



UNIVERSITY OF TORONTO
TORONTO ONTARIO
CANADA M5S 1A1
TEL. (416) 978-3149

February 4, 1988

Dr. Bela Szeidl
Director: Konkoly Observatory
Hungarian Academy of Sciences
Box 67, 1525 Budapest XII
Hungary

Dear Bela:

Bela: I should have added that there have been some interesting theoretical papers on irregular variability (C. Whitney, Buchler, and your colleague Geza Kovacs). A review of this work could also be included. John

- This is in reply to your letter of January 15:
- i) It is difficult to think of topics which are scientifically important and which have not been covered in recent meetings or IAU sessions. One possibility would be a session on pulsation and mass loss in yellow supergiants, particularly stars like R CrB, UU Her and perhaps the population II Cepheids and long-period classical Cepheids. Some aspects of this topic were discussed at a small workshop in Belgium last year - particularly the evolution of stars from the AGB to the region of the planetary nebulae. Some interesting spectroscopy has been done on rho Cas by the Texas group (Lambert et al), and the photometry by Endre Zsoldos is interesting. And IR and UV observations continue to shed light on R CrB.

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Yours sincerely,

John R. Percy

DEPARTMENT OF ASTRONOMY



UNIVERSITY OF TORONTO
TORONTO ONTARIO
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TEL. (416) 978-3149

September 14, 1987

Dr. Bela Szeidl
Director: Konkoly Observatory
Hungarian Academy of Sciences
Box 67, 1525 Budapest XII
Hungary

Dear Bela,

Thank you for your letter of August 24. Michel has already written to me, asking if I might consider serving as Vice-President of IAU Commission 27. I told him that it might be better to have a candidate from outside Europe or North America. I also told him that I was very interested in the work of the IAU and of Commission 27, so if I was nominated as Vice-President of the Commission, then I would be willing to serve.

It is a great honour to be asked if I would be willing to serve. Thank you very much. And best wishes to you and your colleagues!

Yours sincerely,

A handwritten signature in cursive script, appearing to read "John R. Percy".

John R. Percy

RAG CONTENT

DEPARTMENT OF ASTRONOMY



UNIVERSITY OF TORONTO
TORONTO ONTARIO
CANADA M5S 1A1
TEL. (416) 978-3149

July 21, 1987

Dr. Bela Szeidl
Director: Konkoly Observatory
1525 Budapest XII, Box 67
Hungary

Dear Bela,

Here are my comments in reply to your letter of 30 June 1987 to the members of the Organizing Committee of IAU Commission 27.

1. I am also not enthusiastic about the IAU Executive Committee's recommendations about the nomination of Commission Presidents and Vice-Presidents. In many Commissions, the Vice-President carries out duties which prepare him/her for the presidency; this is the case in Commission 46. The progression should, in my opinion, normally be automatic. If there is any problem in a specific case, then the Executive Committee and the Commission can deal with it.

With regard to the nomination of a Vice-President: perhaps the Executive Committee wants to be able to control the distribution of countries of Commission Presidents and Vice-Presidents, so that there is good representation from the different parts of the world. That problem could perhaps be solved, however, by asking Commissions to consider this factor when proposing candidates. The Commissions should be trusted to nominate candidates whose scientific and administrative ability is good. There is another practical problem. Before we suggest 2 or 3 nominees to the Executive Committee, we should probably ask them if they would be willing to serve. All but one of the nominees will then be told later that their nomination was unsuccessful, and they may wonder why. This could cause some hard feeling. All in all, I agree with you that we should submit one nominee.

The nominee should have a good overview of the field of Variable Stars, an appreciation of the role of the IAU, and good scientific and administrative ability. It might be preferable to have someone from outside of Europe, and possibly outside of North America. Of the members of the Organizing Committee: Art Cox has had experience as a Commission President, but his view of Variable Stars is somewhat more restricted than yours, Michel Breger's or Don Fernie's, for instance. Myron Smith may possibly be leaving astronomy, since his position at National Solar Observatory has been terminated. Brian Warner would be a good choice, especially as he is from outside North America. Among the other members of the Commission, I might suggest Luis Balona, Tom Barnes, or Robert Wing. Has Michael Feast been President of Commission 27 before? Bob Shobbrook might be good, but he has not worked so much in Variable Stars lately.

2. Among the proposed new members of Commission 27: I know all but Bedogni, and I approve their membership.

Yours sincerely,

A handwritten signature in cursive script, appearing to read 'John R. Percy'.

John R. Percy

To: Organizing Committee Members
IAU Commission 27 (Variable Stars)

Re: Commission Business

Welcome to the Organizing Committee 1991-94. I am glad that you are willing to serve. The following are items of Commission business. I am also sending you a copy of the minutes of the business and scientific meetings of Commission 27 which were held at the General Assembly in Buenos Aires. These were prepared by Tom Barnes, and I thank him on your behalf for carrying out this very important duty so effectively.

1. Commission Members

Please send me (by regular or electronic mail) your correct mailing address, your electronic mail address if you have one, and your telephone and Fax numbers. Next time I write to you, I will send you a copy of the final list.

2. Information Bulletin on Variable Stars

The IAU was asked for funds to support the IBVS, but I have not yet heard whether funds were provided. The situation with regard to the printing and distribution of the IBVS is important, and requires our full attention and thought.

As noted in the minutes, there is now an Editorial Board for the IBVS. The chairman is Chris Sterken, and he has already organized a meeting of the Board, to be held on November 13, 1991. I will report to you on the outcome of that meeting in my next letter to you. If you have any thoughts on the matter of the IBVS, please let Chris and I know.

3. Archives of Unpublished Observations of Variable Stars

After seven years of dedicated and effective service as the coordinator of the Archives, Michel Breger has asked to "retire". Naturally, I would be happy if he would coordinate the Archives forever, but I understand and support his desire to be relieved of this position. We are deeply indebted to him for the time, effort and thought that he has put into this project.

If you know of a possible successor, or would be interested in the position yourself, please let me know as soon as possible. One requirement is reliable access to electronic mail.

4. The Next General Assembly of the IAU

I have received a letter from the IAU Secretariat, announcing a new format for the General Assembly. The GA will be held in the Hague, Netherlands, August 14 to 27, 1994 (two full weeks). The exact format, duration and dates of the GA itself will be decided

OVER →

next year. During the two-week interval, 4 to 6 IAU Symposia or Colloquia will be held at the conference site. No other IAU Symposia or Colloquia can be held within 3 months before or after the GA.

You might begin to think about how the activities of our Commission can fit in with this schedule.

5. Other Symposia/Colloquia Sponsored by Commission 27

The presidents of commissions are often sent proposals for meetings, and are asked if their commission will support or sponsor the meeting as an IAU Symposium/Colloquium. These requests often come unexpectedly, and it can be difficult to know whether to offer support or sponsorship, given the very small number of meetings which can be supported financially by the IAU. Are any of you aware of plans for such meetings? There is a group which is organizing a meeting on variability, mass loss and other processes in OB stars, to be held in France in autumn 1992.

6. Co-Sponsorship of the IBVS

Bob Koch, past President of IAU Commission 42 (Close Binary Stars) and a member of the Editorial Board of the IBVS, has suggested that his commission consider becoming more formally involved with the IBVS, since half the topics in it are related to close binary stars. Yoji Kondo, the current President, has suggested that his commission become a co-sponsor. This seems like a reasonable idea, especially if we want the IAU to offer some financial support. What do you think?

7. Relationship to Other Commissions

The IAU Executive Committee is exploring the possibility of reorganizing the commissions, creating new ones, merging existing ones, or perhaps disbanding some. If you have any thoughts on this matter, please let me know. In the meantime, to improve the contacts between our commission and others, I am sending a copy of this and other Commission 27 memos to the presidents of those commissions which are closely related to ours.

John R. Percy
President: IAU Commission 27
Erindale Campus
University of Toronto
Mississauga, Ontario
Canada L5L 1C6

November 1, 1991

COMMISSION No. 27

VARIABLE STARS (ETOILES VARIABLES)

Report of Meetings: July 26, 31, 1991

PRESIDENT: Michel Breger

SECRETARY: Thomas Barnes

1. BUSINESS MEETING (July 26, 1991)

- 1.1. M. Breger called the business meeting to order at 1400 hours and welcomed the members of the Commission. He presented an introduction to the meetings of the Commission during the General Assembly. Approximately 50 members of the Commission were in attendance.
- 1.2. There followed a brief discussion of the availability of the General Catalogue of Variable Stars. H. Bond enquired as to how members in the USA may obtain a personal copy. J.A. Mattei responded that the GCVS is distributed in the USA by the American Association of Variable Star Observers through an agreement with the Sternberg State Astronomical Institute. She noted that the first four volumes are currently available for \$50 plus \$5 for shipping per volume. Requests should be sent to the AAVSO, 25 Birch Street, Cambridge, Massachusetts 02138, USA. A fifth volume on extragalactic variables is in preparation in the USSR.
- 1.3. B. Szeidl, editor of the Information Bulletin on Variable Stars, reported on the status of the Bulletin. He noted that the Bulletin is now in its thirtieth year of publication, and he expressed his hope that it will continue for another thirty years. However, after twenty-five years as editor, he decided that it was time to retire from that position. L. Szabados and K. Olah, both of Konkoly Observatory, accepted to be editor and co-editor effective immediately. J. Smak rose to offer very great appreciation from the variable star community to B. Szeidl for his many years of outstanding service as editor of the Bulletin. These remarks were followed by great applause.

B. Szeidl also drew the members' attention to serious economic problems in publication of the Bulletin. At present the Bulletin is mailed to approximately 600 addresses, which includes 350 institutions. The financial resources of the Konkoly Observatory no longer permit this number of mailings, and B. Szeidl suggested that the Bulletin be distributed only to institutions. There followed an extensive discussion of the finances of the Bulletin. M. Breger said that Commissions 27 and 42 (Close Binary Stars) have asked the IAU Secretariat for \$500 over three years to assist with the distribution of the Bulletin. B. Koch (President of Commission 42) remarked that Commission 42 strongly supports financial assistance to the Bulletin as about 50% of the activity of that Commission involves variable stars. The Secretariat has not yet indicated its willingness to provide this financial assistance. E. Malone moved that Commission 27 request all possible financial support for the Information Bulletin on Variable Stars from the Secretariat. This motion was seconded and accepted by the members. E. Malone also suggested that the Commission may wish to appoint an editorial board to assist with publication of the Bulletin. M. Breger reported that the new editors of the Bulletin have proposed an editorial board of L. Balona, M. Breger, M. deGroot, D.S. Hall, R. Koch, J.M. LeContel, J. Percy, M. Rodono, J. Smak, and C. Sterken. A. Landolt moved the acceptance of this editorial board by the Commission. The motion was seconded and accepted by the members. Concerning the suggestion that personal copies of the Bulletin be discontinued, numerous members said that they have access to the Bulletin only through their personal subscriptions and they requested that these be continued.

H. Bond enquired whether submissions to the Bulletin are reviewed. B. Szeidl responded that the editors act as referees in the interest of rapid publication, and that 15–20% of the submissions are rejected. In questionable cases, an informal referee system is used.

- 1.4. M. Breger reported on the IAU Archives for Unpublished Photoelectric Observations of Variable Stars. The number of files in the archive has increased from 174 in 1988 to 221 (not including 14 incomplete files) at present. Copies of the archives now exist in France, the USSR, and the United Kingdom. Researchers may submit and retrieve files electronically, with details of the procedure given in the current Transactions of the IAU. Approximately 1–2 requests come each month to each center for access to the files.
- 1.5. M. Breger also reported on the Delta Scuti Newsletter, which has now grown to 22 pages per issue. There have been three issues of the Newsletter and the next issue is anticipated for distribution in November. Copies are sent to interested individuals active in the field only. M. Breger expressed his appreciation to all contributors to the Newsletter.
- 1.6. The following slate of officers was proposed for Commission 27: President: J. Percy; Vice-President: M. Jerzykiewicz; Organizing Committee: T. Barnes, M. Breger, J. Christensen-Dalsgaard, R. Gershberg, D. Kurtz, J. Mattei, M. Rodono, N. Samus, M. Smith, B. Szeidl, and M. Takeuti. The members approved these officers by unanimous vote. Approximately 50 new members were proposed for the Commission and were approved by vote of the members. This brings the membership of the Commission to about 400 members.
- 1.7. M. Breger reported on the situation at Sonneberg Observatory which is proposed to be closed by the German government. The Sonneberg Observatory has conducted important research for 66 years in the field of variable stars and has a valuable, archival plate collection. M. Breger submitted to the members for discussion a joint resolution with Commission 42 to the General Assembly in support of the research of the Sonneberg Observatory. The (final) text of the resolution is as follows:

“IAU Commission 27 considering that the systematic coverage of the long-term behavior of the population of variable stellar objects, such as the sixty years of measurements made at Sonneberg Observatory, makes a major contribution to Astronomy and Astrophysics, recommends that all efforts be undertaken to continue these important measurements and to ensure the appropriate maintenance and availability of the data.”

Considerable discussion on how this important work could best be supported followed. In particular, J. Smak noted that the context of this resolution is to assist the Sonneberg astronomers in finding support for their work and their archive and not to interfere in any decisions being taken by national governments. The members then voted on the resolution, 43 votes for the resolution and no votes opposed. The members of the Commission also authorized M. Breger to make minor editorial changes to the resolution (if necessary) and to present this resolution to the IAU General Assembly.

- 1.8. M. Breger brought forward the suggestion of the Secretariat that each Commission examine its reason for being, and he proposed for discussion a merger with Commission 26 (Double & Multiple Stars) or 42 (Close Binary Stars). The members present opposed this possibility and strongly preferred to retain the present format of the Commission. Several members encouraged more interaction among the various astronomical fields allied with variable stars. J. Percy recommended that the Organizing Committee take an active role in proposing meetings involving more than one commission.
- 1.9. J. Percy raised the question of whether the members find the current Reports on Astronomy useful to them. Several of the Commission members spoke very positively about the value of the Reports. J. Matthews and O. Osborn suggested that the Reports are so useful that they should be published more widely than just in the Transactions of the IAU.
- 1.10. W. Wamstecker proposed a resolution to the Commission in support of World Astronomy Days. The text of the resolution was “Recognizing that the detailed planning of the World Astronomy Days in the context of the International Space Year is in full concordance with the

IAU Resolution A4 (XXth General Assembly), Commission 27 supports the activities and hopes that ALL OBSERVATORIES will be able to cooperate to make these World Astronomy Days a successful activity involving astronomers from all IAU member countries." W. Wamstecker explained that the resolution was intended to encourage all observatories to cooperate in multi-site observations during World Astronomy Days. He reported that Commissions 28, 42, and 44 had approved the resolution and that other commissions would be considering it in their business meetings. Various opinions on the import of the resolution were offered by the members. C. Sterken noted that multi-site observations are of considerable value for standard star observations because good estimates of the external errors can be obtained. D. Kurtz expressed doubt that major observatories will be able to devote their larger telescopes to such a program. E. Malone suggested that the scientific value of the observations should be the driving force behind such collaborations. The resolution was approved by the members by a vote of 27 in favor to none opposed.

2. FIRST SCIENTIFIC SESSION (JULY 26, 1991)

New Developments in Variable-Star Research

CHAIRMEN: M. BREGER AND J. PERCY

The first scientific session of Commission 27 began immediately following the close of the business meeting. Seven papers were given, each followed by lively discussion. Approximately 50 people attended the session.

P.A. Whitelock reported on the long-term variability of luminous supergiant stars from infrared JHKL observations. She showed a quasi-periodic variability of Eta Car on a time scale of 2000 days, as well as a secular increase for the same star over the period 1974–1991. VY CMa showed similar behavior: a secular decrease with a quasi-period near 1500 days. For the star AG Car, she noted brightening in an emission shell phase in 1982 and a rapid increase in brightness in 1990. For the latter star, additional observations are urgently needed.

H. Bond discussed pulsations of central stars of planetary nebulae. Six such stars are now known. They are non-radial pulsators with typical periods of 16–31 minutes. All are extremely hot, carbon and nitrogen rich objects, supporting a pulsation mechanism involving cyclical ionization of C and O. Analysis of the pulsations may lead to determinations of the stellar mass, interior structure and evolutionary contraction rate.

The Livermore OPAL opacities have been used by A. Cox to calculate models of double-mode RR Lyrae variables (RRd class). The opacity decreases in the region below 10^5 K, changing the models and making all radial mode periods larger. This results in lower period ratios and higher RRd masses than other opacity codes. These masses are now possibly even larger than evolution masses. If so, new horizontal branch evolution tracks should be calculated.

T. Barnes presented recent work done in collaboration with T. Wilson, S. Hawley, and W. Jefferys on the Cepheid distance scale. A maximum-likelihood statistical parallax analysis of classical Cepheids was performed to determine kinematical and absolute magnitude parameters. The proper motion data used were taken from the extensive compilation by D. K. Karimova and E.D. Pavlovskaya. The best estimate for the mean absolute magnitude at $\log(\text{period}) = 0.8$ mag. is -3.46 ± 0.33 mag. He emphasized that any improvement in this statistical parallax result will require marked improvement in the proper motions.

M. Breger presented new results on Tau Peg which impact our understanding of the singly-periodic Delta Scuti stars. Although Tau Peg shows a dominant pulsation frequency of 18.4052 cycles per day, it is not a radial pulsator. He identified the frequency as a non-radial p_3 or p_4 mode with $l = 2$ by examining the amplitude ratios and phase differences between observed light and color variations as well as from the derived Q value of 0.016 ± 0.003 days. Thus for small amplitude stars, the existence of a single frequency of oscillation cannot be taken as evidence of radial pulsation.

C. Sterken communicated a study of period changes in Beta Cephei by A. Pigulski and D. Boratyn. Beta Cep has a pulsation period of 0.1905 days and is also a member of a multiple system. One visual companion is located at 13.4 arcsec and another has separation decreasing from 0.25 to 0.07 arcsec in less than 20 years. The pulsation period of Beta Cep underwent a sudden decrease of about 10^{-5} days in 1920. Period changes are common in Beta Cep stars, but have never been solidly explained by any mechanism. This work analyzed 70 years of photometric and spectroscopic data and showed that the period variations of Beta Cep could be completely explained by the light-time effect in the binary system. From this, they also obtained a preliminary solution for the orbit of the system, which has a period of 92 years.

The observed period ratio of double mode Cepheids, approximately 5/7, is larger than the theoretical one obtained from models having standard evolutionary masses. This disagreement is not yet resolved to everyone's satisfaction. M. Takeuti discussed the discrepancy in terms of the coupling between two different modes of pulsation. The coupling can decrease the period ratio until a synchronized state is reached with ratio 1/2. Using LNA wave functions, the strength of non-adiabatic coupling was calculated. He found that the non-adiabatic coupling is stronger than the adiabatic one for radiative model Cepheids which suggests a possible mechanism for the observed period ratio.

3. SECOND SCIENTIFIC SESSION (JULY 31, 1991)

The Role of Rotation in Stellar Variability

CHAIRMEN: J. PERCY AND M. BREGER

The final scientific session of Commission 27 was re-scheduled to the morning of July 31 because of the fire in the conference hall. As not all members and speakers could be notified of the new time and place of the session, only about 25 people attended the session.

The roAp star HR 3831 has a pulsational period of 11.677 minutes and a variable amplitude of 0 to 5 mmag. D.W. Kurtz presented results by himself and his collaborators A. Kanaan, P. Martinez, and P. Tripe based on 516 hours of new high-speed photometry. They showed that the period of pulsation amplitude modulation is equal to the period of mean light variation. They also demonstrated that the times of pulsation maximum and magnetic extremum coincide and are different from the time of mean light extremum. From these circumstances, they concluded that HR 3831 is an oblique rotator with the magnetic axis and pulsational axis aligned, rather than a spotted pulsator with amplitude modulation caused by surface inhomogeneities.

L. Mestel presented a discussion of the rotational evolution of solar-type stars with different degrees of core-envelope coupling. The results suggested that weak coupling can give a reasonable agreement to observations of rotational properties in the Alpha Per, Pleiades and Hyades clusters. In weak coupling the supply of angular momentum from the core does not affect the surface rotation up to the Pleiades age, but does have some influence at the Hyades age. This model also predicts that the Sun began main-sequence life with rotation at 40 km/s.

The interaction of rotation and pulsation in early-type stars was discussed by D. Baade. Among OB stars, variability is ubiquitous; only stars with strong magnetic fields and/or surface abundance anomalies may be exceptions. In un-evolved and moderately evolved stars, amplitudes drop steeply beyond B7. Although numerous subclasses of variables have been suggested, most lack physical justification. Only the Beta Cephei stars, with short periods and (usually) radial modes, may be a distinct class. In young stars, rotation is important, and the distribution of $v \sin i$ values shows a lack of narrow-lined O stars, whereas in B stars there is a slowly rotating population (largely Cp stars) and a rapidly rotating population (largely Be stars). Non-radial pulsation (NRP) can change a star's rotational profile, including its apparent surface rotation rate. Conversely, homogeneous evolution in the presence of rapid rotation would modify the opacity profile and so give rise to different pulsation properties. This may explain the general weakness of low-order NRP modes in Bn stars, whereas they are predominant in Be stars; indeed, they may contribute to the episodic mass loss.

DEPARTMENT OF ASTRONOMY



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May 29, 1987

Dr. Bela Szeidl
Director: Konkoly Observatory
Hungarian Academy of Sciences
P.O. Box 67
1525 Budapest
Hungary

Dear Bela,

One simple question about my section on Early-Type Variable Stars for the report of IAU Commission 27: do you want me to type it in any particular format (camera-ready, for instance) or do you plan to retype it in Budapest?

With best wishes to you and my other friends at the Konkoly Observatory,

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'John'.

John R. Percy

RAG CONTENT

From jpercy@credit.erin.utoronto.ca Thu May 5 03:38:14 1994
Return-Path: <jpercy@credit.erin.utoronto.ca>
Received: from ogyalla.konkoly.hu by buda.konkoly.hu (4.1/SMI-4.1)
id AA29610; Thu, 5 May 94 03:38:13 +0200
Received: from credit.erin.utoronto.ca by ogyalla.konkoly.hu (4.1/SMI-4.1)
id AA14810; Thu, 5 May 94 03:39:22 +0200
Received: by credit.erin.utoronto.ca id <34201>; Wed, 4 May 1994 21:41:26 -0400
Date: Wed, 4 May 1994 21:36:02 -0400
From: John Percy <jpercy@credit.erin.utoronto.ca>
Subject: grant
To: szejdl@ogyalla.konkoly.hu
Message-Id: <Pine.3.89.9405042144.A24976-0100000@tuzo.erin>
Mime-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII
Status: R

Dear Bela,

My message to Gabor was that it was important for ALL of the Commission 46 National Representatives to be able to attend the IAU GA, and the meetings of Commission 46. Commission 46 has requested grants for some of the speakers at JD4, and for the representatives of the countries in which Commission 46 is especially active (developing countries such as Paraguay and Peru). Gabor's status as a Commission 46 National Representative might increase his chances of getting a grant, but I suspect that the IAU will have difficulty finding grants for every worthy applicant.

Best wishes,

John Percy

DEPARTMENT OF ASTRONOMY



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January 7, 1987

Dr. Bela Szeidl
Director: Konkoly Observatory
P.O. Box 67
1525 Budapest
Hungary

Dear Bela:

I want to bring you up to date on the possibility for scientific exchange between our countries. Several weeks ago, I sent a report on my visit to Hungary to the International Relations Officer of NSERC. I enclose a copy of his reply, and also a copy of the descriptions of the two programs to which he refers.

The International Scientific Exchange Award program looks promising, and it might be possible for you or an established member of your institute to visit Canada under this program. The International Collaborative Research Grants program seems to require a major collaboration between our two institutes, and this might take several years to develop.

Unfortunately, the level of funding for NSERC is not increasing, and it is possible that one or both of these programs may be discontinued in the future. But, as of now, there is some possibility for scientific exchange between our countries.

There is a good chance that I will be able to visit with you for a few days before the IAU meeting in Prague. Again, thank you for your hospitality in October. That visit was a highlight of 1986!

Happy New Year!

Yours sincerely,

John R. Percy

JRP/mw

Encl.



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naturelles et en génie du Canada

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910-28-10
903

December 30, 1986

Professor J.R. Percy
Department of Astronomy
University of Toronto
Toronto, Ontario
M5S 1A1

Dear Professor Percy:

I am writing to acknowledge receipt of your letter of October 24, 1986 and report on a visit at the Astronomical Institute of the Hungarian Academy of Sciences.

Although a bilateral exchange program with Hungary would certainly merit consideration, there are several factors which make the establishment of such a program rather unlikely for the near future. First, as you may be aware, NSERC has undertaken a comprehensive review of all its programs, including the existing eight bilateral exchange programs. Secondly, the implementation of exchange programs requires the allocation of sufficient resources, in terms of both finances and personnel. At a time of financial restraint and general "downsizing", considerations of priority will prevail; expansion of NSERC's international programs has not been identified as a priority.

Despite the lack of a formal bilateral exchange program with Hungary, you may be pleased to learn that scientific contacts and exchanges with that country appear to be satisfactory. Through NSERC's International Scientific Exchange Awards program, a significant number of awards have been made to support visits of Hungarian researchers invited by Canadian host institutions. Also, our International Collaborative Research Grants program enables Canadian researchers to apply for funds to enable them to pursue collaborative projects with scientists in other countries. I would refer you to the NSERC Awards Guide for further details on these programs.

Thank you for your interest and input on the topic of exchange programs.

Yours sincerely,

A.A. Kugler
International Relations Officer

Review Procedures and Deadline Dates

177. Applications for participation in the bilateral exchange program are reviewed by the Committee on International Relations in the fall and spring of each year. The deadline dates are October 15 and March 1.

Report

178. Within three months of their return to Canada, candidates whose travel has been supported by NSERC must submit a brief report on their visit, indicating the nature and benefit of the exchanges that have taken place. Failure to submit such a report within the specified time-frame can result in the freezing or closing of the NSERC grant account(s) of the researcher.

Payment of Grants

179. Travel funds for Canadian university researchers are provided through the common grant account at the university (paragraph 206).

Regulations Governing Grants

180. Grants must be used only for the purpose for which they were awarded (see also paragraph 211 regarding submission of travel claims).

INTERNATIONAL SCIENTIFIC EXCHANGE AWARDS

Objective

181. The objective of the international scientific exchange awards program is to promote international research collaboration by providing support for visits of selected foreign scientists and engineers invited by Canadian academic institutions and research laboratories. The awards are to encourage and facilitate productive interchanges and collaboration between Canadian researchers and their counterparts from other countries.

Description

182. The awards consist of a grant to the Canadian host scientist to contribute towards meals and accommodation expenses of a foreign researcher for a specified period. The grant is not a salary or honorarium paid to the visiting scientist. Support under this program will normally be limited to visits lasting from one month (minimum) to one year.

Normally NSERC will not provide any travel funds for a visiting researcher; however, in exceptional circumstances, NSERC may contribute some funds for such purposes, provided that the stay in Canada is at least three months in duration. NSERC will not contribute to medical, dental or hospital care of visitors.

Examen des demandes et dates limites

177. Les demandes de participation au programme d'échanges de scientifiques sont examinées par le Comité des relations internationales deux fois l'an, à l'automne et au printemps. Les dates limites sont les 15 octobre et 1^{er} mars.

Rapport

178. Chaque scientifique ayant participé à l'un de ces échanges doit présenter au CRSNG, au plus tard trois mois après son retour au Canada, un bref rapport sur la nature des échanges et les avantages qui en ont découlé. Si le bénéficiaire ne remet pas son rapport dans le délai indiqué, le Conseil pourra geler ou fermer les comptes de subventions du bénéficiaire.

Païement des subventions

179. Les frais de déplacement des chercheurs universitaires canadiens sont payés à même le compte commun des subventions à l'université (article 206).

Règlements régissant les subventions

180. Les subventions ne peuvent servir qu'aux fins auxquelles elles ont été accordées (voir l'article 211 concernant les frais de déplacement).

SUBVENTIONS D'ÉCHANGE SCIENTIFIQUE INTERNATIONAL

Objectif

181. L'objectif du programme d'échange scientifique international est de promouvoir la collaboration internationale en recherche en subventionnant la visite de scientifiques et d'ingénieurs étrangers invités par des laboratoires de recherche et établissements universitaires au Canada. Le programme vise également à encourager et à faciliter une collaboration et des échanges fructueux entre des chercheurs canadiens et étrangers.

Description

182. Les subventions sont accordées au professeur qui accueille le chercheur et contribuent à payer les frais de séjour de l'invité pendant une période prédéterminée. Il ne s'agit pas d'un salaire ni d'honoraires payés au chercheur invité. L'aide financière dans le cadre de ce programme sera normalement limitée à des séjours d'un mois (minimum) à un an.

Le CRSNG ne fournira normalement aucune aide financière pour les frais de déplacement du chercheur invité; cependant, dans des circonstances exceptionnelles, le CRSNG pourrait fournir une somme à cette fin, à la condition que le séjour au Canada dure au moins trois mois. Le CRSNG ne contribuera pas au paiement de l'assurance-maladie, de l'assurance dentaire ou de l'assurance-hospitalisation des invités.

Eligibility

183. Candidates must be of foreign nationality, be based in a recognized institution in their home countries, and expect to return abroad after their stay in Canada. They must normally possess a doctoral degree or the academic qualifications and research experience analogous to those held by NSERC grantees.

Foreign postdoctoral candidates who do not satisfy these conditions are not eligible for this program. Researchers of foreign nationality who have permanent resident status in Canada or who are themselves eligible to apply for NSERC research grants are not eligible for international scientific exchange awards. Scientists of foreign nationality who are already in Canada may not be nominated for these awards. This program is not intended for visits of foreign scientists to federal government research centres or laboratories.

Consideration may be given to Canadian scientists employed at scientific institutions abroad if they are not themselves eligible for NSERC grants and if they intend to return abroad after their visit to Canada.

Recipients of these awards may not concurrently hold another fellowship or receive a salary from other Canadian sources. However, operating grants may be used to supplement an award or to provide an extension of the visit period beyond the time specified in the award (see paragraph 236).

Application Procedures

184. Prospective candidates for these awards cannot apply directly to NSERC, but must be nominated by a Canadian researcher. The nomination must be endorsed by the host institution. An application for an award is made by submitting NSERC form 115 (Application for International Scientific Exchange Award) accompanied by a Personal Data Form (form 100) for the host scientist. Form 115 consists of two parts, a "Nomination" part to be completed by the Canadian host scientist and host institution, and a "Candidate's Statement" to be completed by the prospective candidate. The completed application form must be submitted by the Canadian host institution. A Canadian host scientist may submit only one application per competition.

Review Procedures and Deadline Dates

185. Applications for international scientific exchange awards are reviewed by the Committee on International Relations in the fall and spring of each year. The deadline dates for the receipt of completed application forms are October 15 and March 1.

Report

186. On termination of a foreign scientist's visit, the Canadian host scientist is required to submit a brief report on the nature of the visit, the work that has been accomplished and the benefits that have resulted from the visit. Failure to submit such a report within three months of the visit can result in the freezing or closing of the Canadian researcher's NSERC grant account(s).

Admissibilité

183. Les candidats doivent être des citoyens étrangers, affiliés à un établissement reconnu dans leur pays, et s'attendre à y retourner après leur séjour au Canada. Ils doivent normalement détenir un doctorat ou des qualifications équivalentes à celles des bénéficiaires des subventions du CRSNG.

Les stagiaires postdoctoraux étrangers qui ne satisfont pas à ces exigences ne sont pas admissibles à ce programme. Les chercheurs de nationalité étrangère qui ont le statut de résidents permanents au Canada ou qui sont eux-mêmes admissibles aux subventions de recherche du CRSNG ne peuvent participer au programme d'échange scientifique international. Les chercheurs étrangers qui sont déjà au Canada ne sont pas admissibles à ce programme. En outre, le programme ne s'adresse pas aux chercheurs étrangers visitant des laboratoires ou centres de recherche du gouvernement fédéral.

Les chercheurs canadiens travaillant dans des établissements scientifiques étrangers peuvent participer au programme s'ils ne sont pas eux-mêmes admissibles aux subventions du CRSNG et s'ils ont l'intention de retourner à l'étranger après leur séjour au Canada.

Les bénéficiaires de ces subventions ne peuvent détenir en même temps une autre bourse ou recevoir un salaire provenant d'autres sources canadiennes. Soulignons cependant que les subventions pour dépenses courantes peuvent être utilisées pour accorder un supplément ou pour prolonger le stage au-delà de la durée de la subvention (voir l'article 236).

Modalités de demande

184. Les chercheurs ne peuvent présenter leur candidature directement au CRSNG; ils doivent être parrainés par un chercheur canadien et leur nomination doit être approuvée par l'établissement d'accueil. Les candidats doivent présenter la formule 115 (Demande de subvention d'échange scientifique international), accompagnée d'une formule de renseignements personnels (100) remplie par le chercheur qui accueillera le scientifique étranger. La formule 115 comprend deux parties: une recommandation, à remplir par le chercheur canadien et l'établissement, et une déclaration préparée par le candidat lui-même. La formule remplie doit être envoyée par l'établissement canadien d'accueil. Chaque chercheur canadien ne peut présenter qu'une demande par concours.

Examen des demandes et dates limites

185. Les demandes de subventions d'échange scientifique international sont examinées par le Comité des relations internationales au printemps et à l'automne. Les dates limites de réception des demandes sont les 15 octobre et 1^{er} mars.

Rapport

186. Dès la fin du séjour d'un chercheur étranger, le chercheur canadien qui l'a accueilli doit présenter un bref rapport sur la nature de la visite, le travail accompli et les avantages qui en ont découlé. Si le rapport n'est pas reçu dans les trois mois suivant la visite, le Conseil pourra geler ou fermer les comptes de subventions du CRSNG du chercheur canadien.

Payment of Grants

187. Awards are made in the name of the host scientist and are paid to the common grant account at the university (paragraph 206).

Regulations Governing Grants

188. Awards must be used only for the purpose for which they were awarded; see also paragraph 211 (Travel Claims), paragraph 217 (Hospitality Expenses), and paragraphs 235 and 236 (Visiting Scientists).

INTERNATIONAL COLLABORATIVE RESEARCH GRANTS

(Applicants should consult the description of the travel grant program to determine the program which best corresponds to the objective of their proposed travel. Applicants who are in doubt as to the most appropriate program are invited to contact NSERC well in advance of the deadline.)

Objective

189. The objective of the international collaborative research grants program is to promote international research collaboration by providing financial support to Canadian scientists and engineers engaging in a collaborative research project with their colleagues abroad.

Description

190. The awards cover the cost of return air fare between a candidate's residence in Canada and the foreign host institution. In addition, an allowance may be provided to contribute towards meals and accommodation costs (for a maximum of three months) when no funds for such purposes are forthcoming from other sources (Canadian or foreign). The minimum period spent at a foreign host institution is one month. Candidates intending to stay abroad for more than three months are encouraged to seek additional support from other sources. No allowances will be made towards support of accompanying dependents. These awards are not intended to provide support towards attendance at conferences, meetings or symposia, or for general fact-finding missions abroad. In this regard, attention is drawn to paragraph 248 on the possible use of other NSERC grant funds for such purposes.

Eligibility

191. Candidates for these awards must satisfy the general eligibility conditions for NSERC grants (paragraphs 10 to 12) and must intend to return to their institution in Canada following their collaborative work in a foreign country. Only those candidates who have a demonstrated capacity as researchers

Païement des subventions

187. Ces subventions, au nom du chercheur-hôte, sont versées au compte commun des subventions à l'université (article 206).

Règlements régissant les subventions

188. Les subventions ne doivent servir qu'aux fins auxquelles elles ont été accordées; voir aussi les articles 211 (Frais de déplacement), 217 (Frais de représentation), ainsi que 235 et 236 (Scientifiques invités).

SUBVENTIONS DE RECHERCHE COOPÉRATIVE INTERNATIONALE

(Consulter la description du programme de subventions de voyage pour déterminer le programme qui correspond le mieux aux objectifs du voyage proposé. Les candidats qui ont de la difficulté à déterminer le programme approprié sont invités à communiquer avec le CRSNG longtemps avant la date limite.)

Objectif

189. L'objectif du programme de subventions de recherche coopérative internationale est de promouvoir la collaboration internationale en recherche en fournissant une aide financière à des scientifiques et des ingénieurs canadiens qui entreprennent un projet de recherche en collaboration avec des collègues étrangers.

Description

190. La subvention couvrira le coût du transport aérien aller retour entre le lieu de résidence du candidat au Canada et l'établissement étranger qu'il visitera. De plus, une indemnité mensuelle pourra être fournie pour aider à payer les frais de séjour (pour un maximum de trois mois) lorsque le bénéficiaire ne reçoit pas d'aide financière à cette fin d'autres sources, canadiennes ou étrangères. La durée minimale du stage à l'étranger est d'un mois. Les candidats ayant l'intention de demeurer à l'étranger pour plus de trois mois sont encouragés à demander de l'aide financière d'autres sources. Aucune indemnité ne sera payée aux personnes à charge qui accompagnent le scientifique. Ces subventions ne visent pas à fournir une aide financière pour participer à des conférences, des rencontres, des symposiums ou des missions de recherche à l'étranger. À ce sujet, on attire l'attention sur l'article 248 qui décrit la possibilité d'utiliser à cette fin les autres subventions du CRSNG.

Admissibilité

191. Les candidats à ces subventions doivent satisfaire aux conditions d'admissibilité du CRSNG (articles 10 à 12) et doivent avoir l'intention de retourner à leur établissement au Canada après leur travail coopératif à l'étranger. On étudiera seulement les demandes de candidats ayant fait preuve de

and who provide evidence of sufficient prior contacts and planning for the proposed joint research with their host scientist abroad will be considered. Researchers who receive adequate support from other sources (Canadian or foreign) for their stay abroad are not eligible.

Application Procedures

192. Applicants must submit form 116 (Application for International Collaborative Research Grant) and a Personal Data Form (form 100). Append correspondence with foreign host scientists.

Review Procedures and Deadline Dates

193. Applications for these grants are considered by the Committee on International Relations in the fall and spring of each year. The deadline dates for receipt of applications are October 15 and March 1.

Report

194. Within three months of their return to Canada, grantees under this program must submit a short report on the collaborative work accomplished abroad. Failure to submit a report within the specified time-frame can result in the freezing or closing of the researcher's NSERC grant account(s).

Payment of Grants

195. Grants are paid to the common grant account at the university (paragraph 206).

Regulations Governing Grants

196. Grants may be used only for the purpose for which they were awarded (see also paragraph 211 regarding the submission of travel claims).

CIDA/NSERC RESEARCH ASSOCIATESHIPS FOR SCIENTISTS FROM DEVELOPING COUNTRIES

197. The objective of the CIDA/NSERC research associateships program is to promote scientific expertise and capability in developing countries by providing research opportunities in Canada to selected scientists from such countries. The program enables scientists from developing countries to establish themselves as up-to-date researchers in their home countries and provides them with an opportunity to acquire additional expertise and new techniques in Canada.

This program is administered by NSERC on behalf of the Canadian International Development Agency. Full particulars regarding application procedures and conditions governing these research associateships may be obtained from the International Relations Officer at NSERC.

compétence en recherche qui auront préalablement communiqué avec les scientifiques étrangers afin de préparer le projet de recherche conjoint. Les personnes qui reçoivent déjà une aide financière adéquate pour leur séjour à l'étranger ne sont pas admissibles.

Modalités de demande

192. Les candidats doivent présenter la formule 116 (Demande de subvention de recherche coopérative internationale) et une formule de renseignements personnels (100). Ils doivent y annexer toute correspondance avec les scientifiques étrangers.

Examen des demandes et dates limites

193. Ces demandes de subventions sont examinées par le Comité des relations internationales à l'automne et au printemps de chaque année. Les dates limites sont les 15 octobre et 1^{er} mars.

Rapport

194. Les bénéficiaires doivent présenter, au plus tard trois mois après leur retour au Canada, un bref rapport sur le travail coopératif accompli à l'étranger. Si le bénéficiaire ne remet pas son rapport dans le délai indiqué, le Conseil pourra geler ou fermer ses comptes de subventions.

Paiement des subventions

195. Les subventions sont versées au compte commun des subventions à l'université (article 206).

Règlements régissant les subventions

196. Les subventions ne peuvent servir qu'aux fins auxquelles elles ont été accordées (voir aussi l'article 211 concernant les frais de déplacement).

BOURSES D'ATTACHÉS DE RECHERCHE ACDI/ CRSNG À DES SCIENTIFIQUES DES PAYS EN VOIE DE DÉVELOPPEMENT

197. L'objectif du programme d'attachés de recherche ACDI/ CRSNG est de promouvoir la compétence et la capacité scientifiques dans les pays en voie de développement en donnant à des chercheurs choisis provenant de ces pays l'occasion de faire de la recherche au Canada. Ce programme vise aussi à permettre à des scientifiques de pays en voie de développement de devenir des chercheurs établis dans leur propre pays et d'acquérir au Canada des compétences et des techniques nouvelles.

Ce programme est administré par le CRSNG au nom de l'Agence canadienne de développement international. On peut obtenir auprès de l'Administrateur des relations internationales du CRSNG tous les détails sur les modalités d'inscription et les conditions régissant ces bourses.

Bela, Margit, Laszlo, Katalin,
Endre, Attila and all those
others who helped to make my
visit to Hungary so enjoyable!

Greetings, and best wishes
for a happy Christmas and new
year! It is difficult to believe
that two months have gone by so
quickly. But I have been busy,
especially pursuing some of the
research projects on which we are
jointly collaborating.



The Erindale Campus
University of Toronto
Mississauga, Ontario

My main unexpected
project was to write
courses of study in
astronomy for the

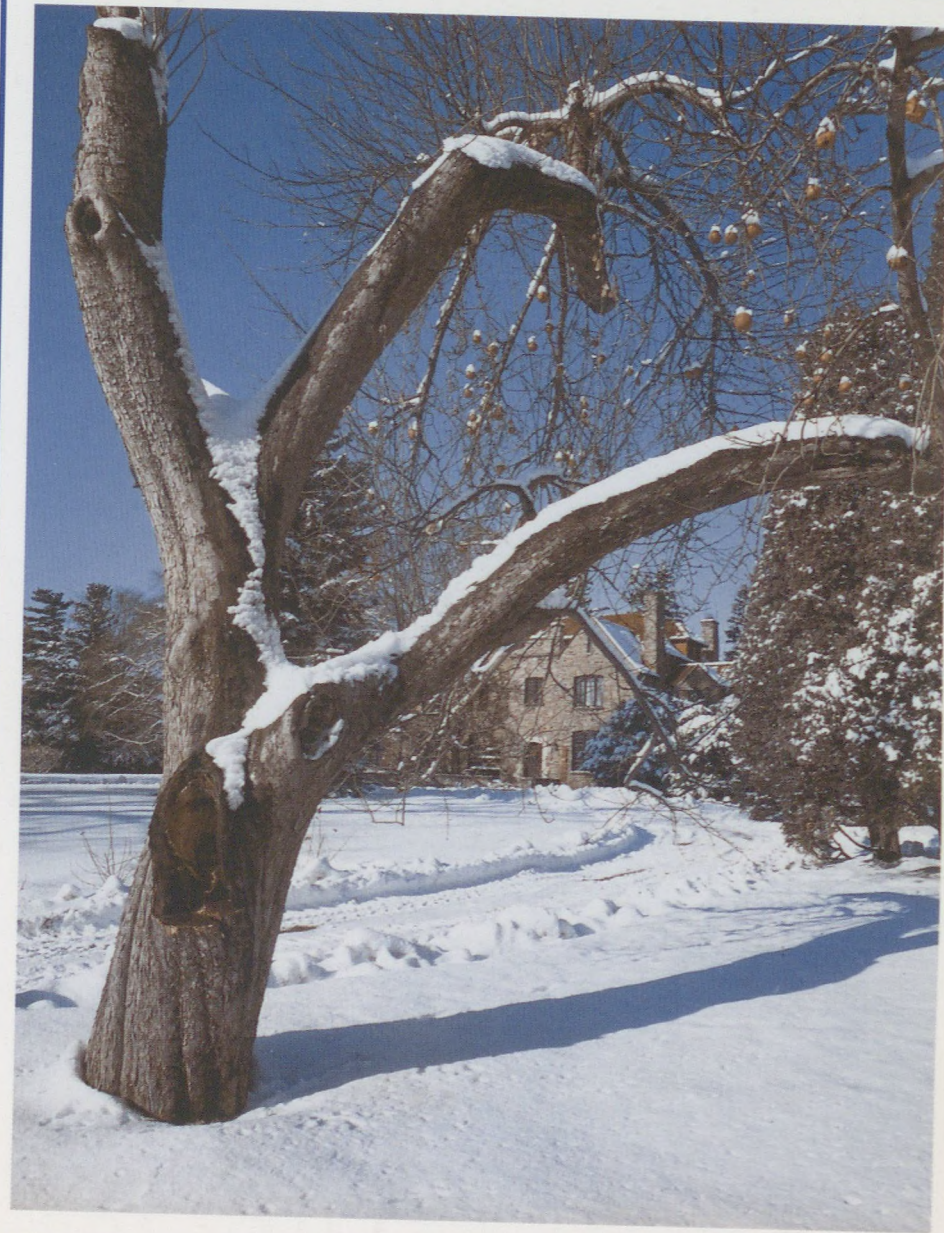
new science curriculum
Ontario's Secondary schools

I am constantly reminded
of my visit to your country,
thanks to the books and records
I bought and the slides I took -
and especially the Hungarian
cook book! Early next year,

SEASON'S GREETINGS
MEILLEURS VOEUX

Dimitar Sassilov will arrive
in Toronto (we hope), and after
that, I have to give a talk on
"Astronomy in Hungary" to the
R.A.S.C. Both of these will bring
back more happy memories!

Sincerely
John Percy



DEPARTMENT OF ASTRONOMY



UNIVERSITY OF TORONTO
TORONTO ONTARIO
CANADA M5S 1A1
TEL. (416) 978-3149

November 3, 1986

Dr. Bela Szeidl
Director: Konkoly Observatory
Hungarian Academy of Sciences
H-1525 Budapest, P.O. Box 67
Hungary

Dear Bela,

This is an official "thank you", to you and the Hungarian Academy of Sciences, for making my visit so enjoyable and successful. Everything about the visit was excellent, most of all the hospitality of you and your colleagues.

I have prepared a formal report on the visit, and I enclose two copies - for you and for the Academy. I have also sent a copy to the International Affairs Officer of the Natural Sciences and Engineering Research Council of Canada. As I mention in the report, there are some possibilities for exchange of scientists between our countries, but there is no bilateral agreement of the type we have with Bulgaria, Czechoslovakia and some other countries. I hope that such an agreement can be negotiated.

Yours sincerely,

A handwritten signature in dark ink, appearing to read "John R. Percy".

John R. Percy

JRP/jc

encl. (2)

REPORT ON A VISIT TO THE ASTRONOMICAL INSTITUTE OF THE
HUNGARIAN ACADEMY OF SCIENCES

From October 6 to 14, 1986, I visited the Astronomical Institute of the Hungarian Academy of Sciences at the invitation of the director Dr. Bela Szeidl. I visited the three major observatories of the Institute: the Konkoly Observatory at the headquarters of the Institute in Budapest, the Piszkesteto Observatory in the Matra Hills, and the Heliophysical Observatory in Debrecen, in each case for a day or more.

At the Konkoly Observatory, I gave lectures on the variability of normal and B emission (Be) stars, on four projects involving the use of visual observations to study variable stars, and on the history and present state of astronomy in Canada. I had extensive discussions with members of the staff on general topics such as the training of astronomers in Hungary, the extent of public interest and support of astronomy, and the present state of astronomical research in Hungary. In addition, I also consulted with several members of the staff of the Institute on joint research projects, as follows:

Katalin Olah, an expert on the observation and modelling of spots on cool stars, has recently joined an international collaborative project to study the variability of the Be stars - a project in which I have been involved for some years. Already we are co-authors on one paper to be published in the proceedings of IAU Colloquium 92: The Physics of Be Stars. We discussed background information on Be stars, present and future observations of these stars, and the modelling of these stars on the hypothesis that they have spots on their surfaces. I was fortunate to also meet J. Arsenejvich, a visiting Yugoslav astronomer who has also recently joined this project.

Margit Paparo has begun a study of the complex variability of the Delta Scuti stars. At one time (though no longer), I was actively involved in studying these stars, and I still retain an interest in them, so I was able to provide some advice and encouragement on her project.

Laszlo Szabados has made important studies of the changes in the periods of Cepheid variable stars, using new and existing photoelectric observations. I have recently begun a project of this kind using visual observations provided by the American Association of Variable Star Observers (AAVSO). During my visit, we discussed his studies in the context of this new project, and he recommended Cepheid variables which would be most suitable and least suitable for visual observations. He agreed to review the results of the project in a few months, and to comment on the desirability of continuing the visual observations of these stars. We also discussed a project which is to be carried out by my colleagues Don Fernie and Nancy Evans - a computer-based data bank on Cepheid variables. We agreed that it would be desirable for Dr. Szabados to collaborate on this project.

Endre Zsoldos has made long-term photometric observations of many luminous stars including three for which I have many observations myself, and we have already begun to combine our observations. For instance, I recently presented papers on P Cygni.

at two conferences, with Mr. Zsoldos as a co-author, and a written version of this paper is now in preparation. During my visit, we discussed some problems of intercomparing our observations, and also planned a joint paper on another star - Rho Cassiopeiae.

Attila Mizser, a research assistant at the Institute, devotes most of his spare time to making visual observations of variable stars, and co-ordinating, analyzing, publishing and archiving such observations made by himself and other amateur astronomers in Hungary. Because of my interest in visual observations (both as a user of them and as an advisor to the AAVSO), it was useful for me to discuss this work with him, and encourage him to continue it.

Bela Szeidl, director of the Institute, is also President of IAU Commission 27 (Variable Stars), and I am a member of the Organizing Committee of that Commission. We have many broad and specific interests in common: the operation of observatories in the vicinity of large cities, future co-operation in astronomy between Canada and Hungary, the publication of the results of variable star observations, to mention three. The Institute has chosen to concentrate on long-term projects in both stellar and solar astronomy. This approach is valuable, and I support it strongly, but it is not currently fashionable in some parts of the astronomical community.

My visit was an outstanding success, both scientifically and otherwise. The hospitality of the director and staff of the Institute, and their willingness to show and tell me about the astronomy, history and culture of Hungary, exceeded my greatest expectations. I returned to Canada with a warm appreciation of the astronomers of Hungary, and of their work.

There is apparently no bilateral scientific exchange program between Canada and Hungary, but there exist channels which could possibly be used for the exchange of scientists. I strongly recommend that the governments of Canada and Hungary establish a bilateral scientific exchange program. Such a program would be extremely valuable in astronomy, because Canadian and Hungarian astronomers share an interest and expertise in such areas as solar astronomy and variable stars. Undoubtedly the program would be equally valuable in other areas of science and mathematics.

John R. Percy
Professor of Astronomy
University of Toronto
Toronto, Canada M5S 1A1

October 23, 1986

REPORT ON A VISIT TO THE ASTRONOMICAL INSTITUTE OF THE
HUNGARIAN ACADEMY OF SCIENCES

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John R. Percy
Professor of Astronomy
University of Toronto
Toronto, Canada M5S 1A1

October 23, 1986

October 21, 1986

r. Bela,

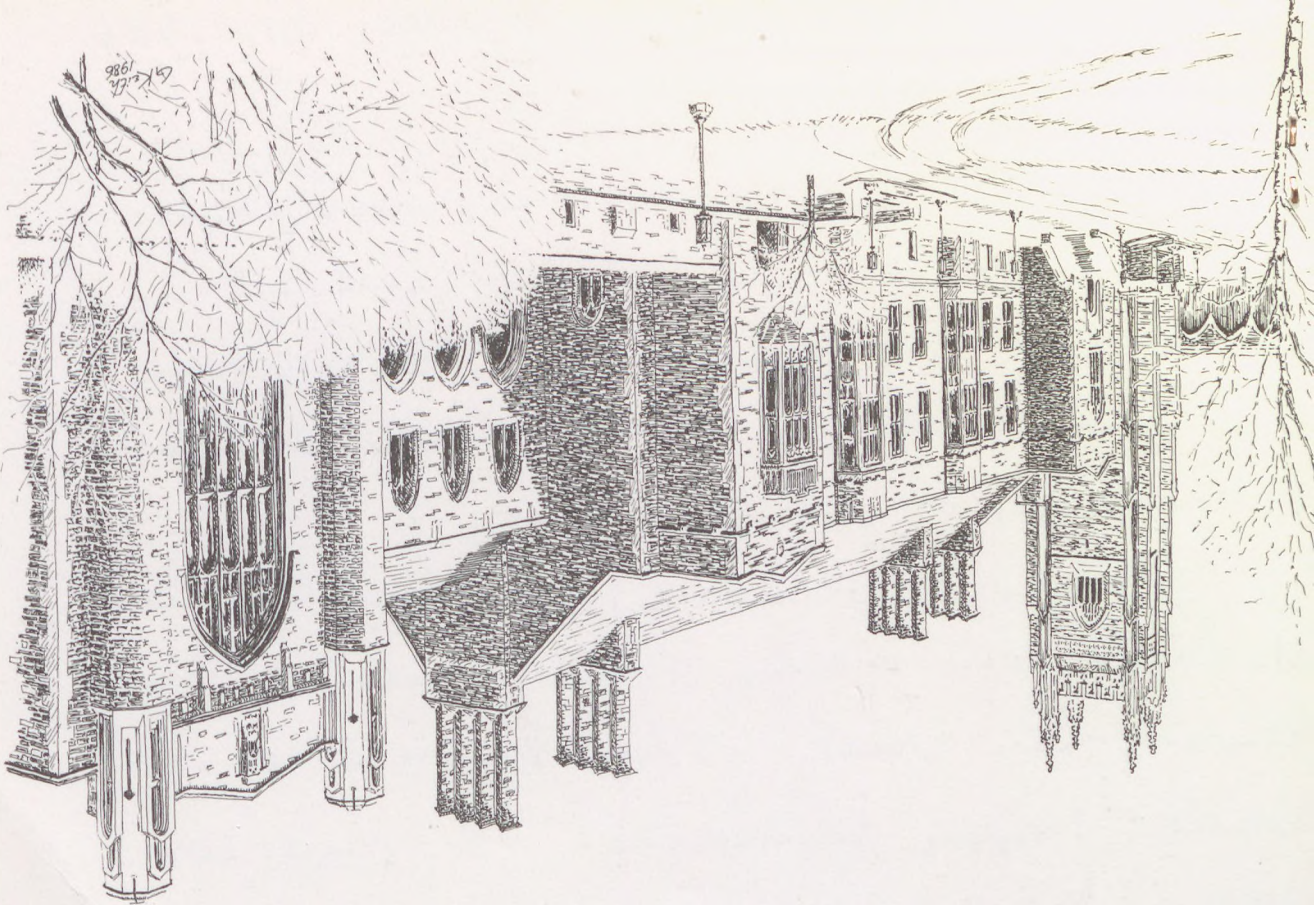
I thank you again for everything which you did to make my visit so successful and enjoyable. Everything was just perfect - most of all the warm hospitality of all of you.

I have particularly enjoyed looking through the many slides which I took during my visit. They bring back so many happy memories. I must come back soon, and not just because there is an envelope full of money waiting for me there!

In a few days, I will write you a more formal report on my visit. Contrary to what I thought, there is not a full scientific exchange agreement between our countries, but there is some possibility of official visits, and this possibility can be improved.

Thank you again, and best wishes for a happy and successful year ahead.

Sincerely,
John Percy



Hart House
University of Toronto

Hart House was conceived by the executors of the estate of Hart Massey as a student centre for men on campus. Designed by Sproatt and Rolph, construction began in 1911 under the supervision of Vincent Massey. It was all but suspended during the First World War, and the building opened on November 11th, 1919. Soldier's Tower, subsequently erected as a memorial to the fallen of the War, was dedicated in 1924. Women were finally admitted to Hart House in 1972.

inkworks
Toronto, Canada

COMMISSION 27: VARIABLE STARS (ETOILES VARIABLES)

Report of Meetings: November 20, 21 and 26, 1985

PRESIDENT: Norman H. Baker

SECRETARY: John R. Percy

November 20, 1985

SESSION ON FLARE STARS

- C.J. Butler: "Coordinated EXOSAT and Optical Observations of Flare Stars and Coronal Heating". By considering the relation between X-ray, U-band and total luminosity, and by studying the time variability of each, the author reached the conclusion that the coronae of flaring stars may represent the superposition of large numbers of microflares.
- R. Stern: "Thermal X-ray Emission in Solar and Stellar Flares". Observations were described which were relevant to the question of the sequence of events which occur in solar and stellar flares, starting with the still-poorly-understood initial flare event. The main difference between solar and stellar flares is the large volumes occupied by the emitting material in the latter case. Hyades dwarfs have thermal X-ray temperatures similar to that of the flaring sun.
- D. Gibson: "EXOSAT Observations of YY Gem". The advantage of observing the flare stars in this system is that they form an eclipsing system; the disadvantage is that the emission cannot be separated from any from the A-type components. An eclipse of the flaring region shows that this is very small. Slow, low-level variations were also observed.
- L.N. Mirzoyan and E.S. Parsamyan: "Flare Stars in Star Clusters and Associations". The following aspects were discussed: mean flare frequency in clusters, occurrence of classical flare star activity in T Tauri stars, change of average luminosity of flare stars as a function of age of cluster, and the classification of flare types.
- M. Tsvetkov, H. Duerbeck and W. Seitter: "A Search for Flare Stars with the GPO Astrograph at La Silla - ESO". Multiple exposures on 2°×2° plates taken with this astrograph have been used to discover flare stars. The results were compared with those using other instruments.
- L.N. Mavridis and S. Avgoloupis: "The Activity Cycle of EV Lac" (read by N. Baker). From a long and homogeneous data set, the authors have discovered an interesting cycle in the mean quiescent luminosity and in the flare rate in this star. The cycle length was about five years.
- P. Feldman: "Radio Emission from FK Comae Stars". FK Comae stars are single stars of G-K III type which show high rotation and high levels of activity. High-luminosity radio flares have been detected in two of these stars, but optical observations suggest that both are binary stars, and therefore not FK Comae stars.

This session was organized by L. Mavridis. About 50 people attended.

BUSINESS MEETING

The Commission president, N.H. Baker, introduced members of the Organizing Committee, and outlined the agenda for the meeting.

1. J.R. Percy reported that, thanks to a resolution of the 1982 IAU General Assembly, and to a financial contribution by the IAU, the American Association of Variable Star Observers (AAVSO) had been able to obtain additional funds, and to begin publication of their archival data in the form of monographs on individual stars.

2. M. Breger reported on the IAU Archives of Unpublished Observations of Variable Stars. The archives serve as a depository for files of observations, thus ensuring that the observations will be available at any future time. Contributors should send three copies of the observations, with a descriptive cover sheet, to the coordinator (M. Breger), who assigns a file number. The copies are then deposited at the Royal Astronomical Society (England), Centre de Données Stellaires (France) and the Odessa Astronomical Observatory (USSR). Copies of the files may be obtained by writing to one of these institutions. A list of new files is published regularly in the IBVS and the Publications of the Astronomical Society of the Pacific. Files were received at an average rate of 16 per year from 1980-1985, with 25 being received in the most recent year. A total of 156 files has been received to date. Approximately 20 requests for copies are received each year.

The coordinator recommended that each file should contain observations of only one star, unless several stars have been described in a single publication. In these cases, observations of all stars can be included in a single file. Reference to the publication should be included on the cover sheet. This recommendation was accepted.

There was some discussion of the possibility of depositing observations on magnetic tape or diskette, but it was decided that a paper copy would be more permanent, and less likely to become technologically obsolescent!

3. N.H. Baker reported on a meeting on November 19 on the topic of the designation of astronomical objects. The situation in the field of variable stars is much better than in most other fields! Commission 5 is working on the problem, and it was recommended that Commission 27 should maintain an interest in this work. In variable star work, authors are urged to use multiple designations where possible.

4. B. Szeidl (editor) reported on the Information Bulletin on Variable Stars. A total of 2814 issues have been published since the birth of the IBVS 24 years ago; 600 have been published since 1982; the number per year continues to increase. Papers are not formally refereed, though about 1/3 are refused for one reason or another. This results in variable scientific quality, but quick "turn-around" time (3-5 weeks). The IBVS is not intended for detailed discussions, or for papers not requiring urgent publication (the latter guideline is not always adhered to). The IBVS does not accept papers based on visual observations. The IBVS is currently sent to 350 institutions and 200 individuals.

5. N. Baker reported on the current status of the General Catalogue of Variable Stars; see also IAU IB #54. The second volume of the current edition (Cyg-Ori) has just been published. Members of Commission 27 receive copies free of charge.

6. N. Baker reported on membership in Commission 27. The IAU Secretariat, in order to "clean" their membership files, has written to members to confirm their commission membership. There are presently 250 members of Commission 27. A list

possible new members was read and approved.

7. The following symposia and colloquia are planned:

"Advances in Helio- and Astro-seismology", July 7-11, 1986 in Aarhus, Denmark, approved as IAU Symposium 123 by the IAU Executive Committee.

"Circumstellar Material in Close Binaries", summer 1987 in Victoria, Canada. Cosponsored by Commission 42. Commission 27 agreed to cosponsor this meeting.*

"Atmospheric Phenomena as Manifestation of Internal Evolution of Stars", August 1987 in Tokyo, Japan. Cosponsored by several other commissions. Commission 27 agreed to cosponsor this meeting.

"Solar and Stellar Flares", in 1988 in Palo Alto, USA, and "Flare Stars in Stellar Clusters and Associations and in the Solar Neighbourhood" in 1988 at the Byurakan Observatory, USSR (in honour of the 80th birthday of V. Ambartsumyan). It was noted that, although both of these meetings are scientifically useful, there is overlap of content and conflict of schedule. It was agreed that the president and vice-president of Commission 27 should discuss these concerns with the organizers. Some problems were encountered in obtaining visas for a previous USSR meeting; this matter was referred to the IAU Executive Committee.

8. N. Baker proposed that the 1985-1988 Organizing Committee be the same as in 1982-1985, except that M.A. Smith be added. M. Breger becomes vice-president and B. Szeidl becomes president. This proposal was approved. The Organizing Committee therefore consists of A.N. Cox, R.E. Gershberg, M. Jerzykiewicz, L.N. Mavridis, L.N. Mirzoyan, J.R. Percy, M.A. Smith, A.M. van Genderen and B. Warner.

9. There was some discussion about the possible revival of the Working Group on Flare Stars. There is a need for cooperation and coordination of observations, especially between satellites and ground-based facilities. This matter was referred to the following session on Coordinated Multisite Observations.

SCIENTIFIC SESSION

The following two papers were presented:

A.N. Cox: "The Puzzling B Star Pulsations". The author reviewed the persistent problem of what is the pulsation mechanism in B stars, and proposed a new theory based on nuclear driving. In the presence of a molecular weight gradient (caused by the shrinking convective core), this mechanism may be capable of driving pulsations in a low-order ($\ell=1$) g mode.

H. Deasy: "Mass Loss from Cepheids". The author has used the IRAS catalogue to search for IR excesses in Cepheids and nonvariable yellow supergiants. Long-period Cepheids have such excesses, which are attributed to mass loss. The mass loss does not seem to be sufficient to explain all of the Cepheid mass discrepancy.

*Not yet approved by IAU Executive Committee.

SESSION ON COORDINATED MULTISITE OBSERVATIONS

The following report was prepared by the Secretary for publication in the XIX IAU GA Newspaper Mandakini:

"The potential value of observations from two or more sites, using different techniques or frequencies, is well known. It was noted at Joint Discussion II, for example, that thanks to a coordinated "campaign", the recent eclipse of Epsilon Aurigae was studied in unprecedented detail. Furthermore, the availability of measurements from the radio to the X-ray region has made it possible to construct greatly improved models of this and related objects. At Joint Discussion III, several speakers noted that coordinated observations from different longitudes are absolutely essential in determining accurate and reliable pulsation periods in the Sun and other stars -- particularly Delta Scuti and Be stars. The International Halley Watch is perhaps the most ambitious example of coordinated multi-site observations.

C. Sterken and J. Christensen-Dalsgaard have recently proposed that a new IAU Commission (or more likely, a working group) should be established to assist in organizing such coordinated observations. On 21 November, Commissions 12 and 27 cosponsored an informal discussion of this proposal. Several advantages were pointed out. A working group might publish a newsletter containing information on the success (or failure) of coordinated campaigns. It could circulate a list of astronomers and observatories which would be interested in and available for campaigns (many "local" observatories have far more flexibility in scheduling than do the "national" ones). It might even be possible to set up a quasi-permanent network of observatories, somewhat analogous to the *ad-hoc* VLBI network in the USA. It might devise ways to simplify the simultaneous submission of complex proposals to several ground-based or space-based observatories. At the very least, the working group could keep the astronomical community aware of the problems (and solutions) in making multi-site observations, and could encourage and assist observers to do better planning. It was realized that the success of a working group depends on having some enthusiastic and active organizers, and that a formal administrative structure can sometimes do more harm than good.

In the end, no consensus was reached about what to do, and no decisions were taken. Nevertheless, the discussion was useful in that it demonstrated the great interest in and variety of opinions about the topic. Sterken and Christensen-Dalsgaard plan to organize a workshop on 'Coordinated Multi-site Observations' in 1987, somewhere in Europe, and would be happy to hear from prospective participants."

November 26, 1985

SESSION ON T TAURI STARS

- I. Appenzeller: "High Resolution Spectroscopy of T Tauri Stars". Spectra of S CrA and VV CrA, obtained at a resolution of 20,000 and a S/N of 25 to 50, were described. They showed interesting profile shapes and variability in emission lines; absorption lines of several elements (e.g. Li) were detected. This work is in press (AA Suppl.)

V. Pirronello: "Ice Stability during Eruptive Phases in T Tauri Stars". Ice grains may be expected in T Tauri envelopes, and have been observed in HL Tau (by Cohen). This paper described calculations and experiments relevant to the destruction of grains by sublimation and sputtering during FU Ori-type outbursts. The surfaces of comet nuclei may show evidence for radiation chemistry reactions which occurred during these outbursts.

A.L. Gyulbudaghian: "Trapezium-Like Tight Systems Containing Red Dwarf Stars" (read by N. Baker). Observations of Trapezium-like systems of typical dimensions 0.1 pc were described. Since these are dynamically unstable, they must be young. Both systems containing OB stars and systems containing red dwarf stars were investigated.

This session was organized by M. Cohen. About 35 people attended.

COPY

Columbia University in the City of New York | New York, N.Y. 10027

DEPARTMENT OF ASTRONOMY

31 January 1985

Dr. Bernard M. Haisch
Lockheed Palo Alto Research Laboratory
Div. 91-20, Bldg. 255
3251 Hanover St.
Palo Alto, Calif. 94304

Prof. Marcello Rodono
Director, Institute of Astronomy
University of Catania
Viale Andrea Doria 6
95125 Catania, Italy

Dear Dr. Haisch and Prof. Rodono:

I have circulated your proposal for an IAU Colloquium in 1988 on the subject of "Solar and Stellar Flares" to the members of the Commission 27 Organizing Committee. All the members who have expressed an opinion on the matter have supported it, and so do I. In view of the very considerable amount of activity in this field it does not seem too soon for another such colloquium, and I think it is very good that the proposed title embraces both solar and stellar work. The fact that you are beginning the organizing work early, as well as Prof. Rodono's previous experience with the 1982 Catania meeting, augur well for the success of your efforts.

When you approach the Executive Committee you may advise them that Commission 27 agrees to be a sponsor of this Colloquium.

By a copy of this letter I am informing Dr. B. Szeidl, who will be President of Commission 27 in the 1985-1988 period, of this action.

Sincerely yours,

Norman H. Baker
President, Comm. 27

cc: B. Szeidl✓

Columbia University in the City of New York

DEPARTMENT OF ASTRONOMY

New York, N. Y. 10027

December 6, 1984

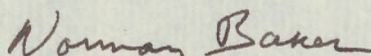
Dr. B. Szeidl
Konkoly Observatory
1525 Budapest XII. Box 67
Hungary

Dear Dr. Szeidl:

I have received your contribution on "RR Lyrae Stars" for our Commission 27 report. Thank you very much for doing it and for getting it in on time.

I don't think there's going to be any problem about space, as some of the reports actually came in with fewer words than I had allotted. You may be interested to know that nearly all the reports have now been received.

Yours sincerely,



Norman H. Baker

DEPARTMENT OF ASTRONOMY

22 October 1983

Dr. B. Szeidl
Konkoly Observatory
1525 Budapest XII. Box 67
Hungary

Dear Dr. Szeidl:

Thank you for sending me the material on IBVS for the new "Astronomers Handbook". This material will be very helpful to me. I was also very happy to see the notice that you prepared for the IAU Information Bulletin No. 52.

I had a very good response to my requests for contributions to our Commission Report. We will have about the same number of contributions as last time, but the categories will be slightly different and most of the authors will be new (you are one of the exceptions). Incidentally, I have decided to ask the authors to use the style and abbreviations of the Astrophysical Journal in literature references. For the most commonly cited journals these abbreviations do not entirely agree with the international standard, but they are much shorter and will save a good deal of space, and they are familiar to all astronomers. If by chance you have already prepared your report using some other system, please don't bother to change it, because the whole report will have to be retyped in our office anyhow, and can be edited then.

I am enclosing a proposal I recently received for Commission 27 sponsorship of a Colloquium to be held in 1988. It looks quite good to me, but you should certainly have something to say about it, since it would occur during your term as president of the Commission (indeed, at the end of your term). I expect that the Executive Committee would not take action on it until after the next General Assembly, since the Colloquium is to be held in conjunction with the 1988 General Assembly, the site of which will not be officially decided until the 1985 General Assembly. However, I must give at least a preliminary answer to the proposers, so I would be glad to know whether you see any objection to our commission being the main sponsor of this meeting. I am also asking the opinions of the other members of the Organizing Committee.

Early next year I must submit names for a new Vice President (to succeed you) and new members for the Organizing Committee. (Present members of the Organizing Committee are: M. Breger, A.N. Cox, A.M. van Genderen, R.E. Gershberg, M. Jerzykiewicz, L.N. Mavridis, L.N. Mirzoyan, J.R. Percy, and B. Warner. J.D. Fernie serves ex officio as past president.) I would be glad if you would care to make suggestions for either of these offices.

With best wishes,

Yours sincerely,

Norman Baker

Norman H. Baker

Columbia University in the City of New York | New York, N.Y. 10027

DEPARTMENT OF ASTRONOMY

Phone: (212) 280-3280

Telex: 220094 (Reply COLU-UR)

May 24, 1984

Dr. B. Szeidl
Konkoly Observatory
1525 Budapest XII. Box 67
Hungary

Dear Dr. Szeidl:

I am writing to the members of the Organizing Committee of IAU Commission 27 (Variable Stars), to let you know about Commission matters which will arise between now and the XIXth General Assembly in New Delhi during November 1985.

There is very little to report about Commission business since the last General Assembly. We are co-sponsors, along with Commission 35 (Stellar Structure) of IAU Colloquium No. 82, "Cepheids: Observation and Theory", to be held May 29-June 1, 1984, in Toronto. We shall also co-sponsor, together with Commission 29 (Stellar Spectra) and Commission 34 (Interstellar Matter) IAU Colloquium No. 87, "Hydrogen Deficient Stars and Related Objects", to be held in December 1985 in Bangalore, India.

There are no other symposia or colloquia which we have been asked to sponsor. A proposal has been made to Commissions 35 and 12 (Radiation and Structure of the Solar Atmosphere) for a symposium on "Solar and Stellar Oscillations", to be held in Aarhus, Denmark, in July 1986. It is quite possible that Commission 27 should be a co-sponsor as well, and I have written to the proposer, J. Christensen-Dalsgaard, to get the details. I shall be glad to have your comments.

The Supernova Working Group is proposing a (probably informal) joint session at the 1985 General Assembly on various aspects of supernovae including remnants, spectra, progenitors etc., and have asked our cooperation. Any comments or suggestions for topics and speakers that you may have will be most welcome, and I shall pass them on to the organizers.

One of our most immediate responsibilities will be to propose Joint Discussions to be held at the next General Assembly. A proposal has been made for a Joint Discussion involving Commissions 12, 27, and 35, entitled "Solar and Stellar Nonradial Oscillations". One or two speakers would be asked to review each class of nonradial pulsators. The classes so far suggested are: the ZZ Ceti white dwarfs, the red dwarfs, the sun, the delta Scuti variables, the Maia variables, the 53 Persei stars, the beta Cephei variables, the Be variables, and

the supergiant stars. It seems to me that this would make quite a nice Joint Discussion, and if we are to proceed with this it will be up to the presidents of the commissions involved to suggest members of a Scientific Organizing Committee, as well as possible speakers. I would like to have your comments on this proposal and any suggestions you would care to make. We can, of course, propose other Joint Discussions, and suggestions are in order. The time is short, however, since our proposal must be sent to the IAU General Secretary in July. So please let me know any comments you may have on the subject of Joint Discussions as soon as possible.

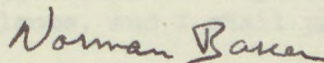
It is not too soon to start planning our contribution to the Reports on Astronomy 1985. As usual, our report will be prepared by the commission president with the help of several colleagues who will each discuss some part of our rather broad field. I believe the 11 topics selected in 1982 were quite suitable, and I have been thinking of using similar categories for our new report, which must be submitted by the end of this year. I hope you will give me your suggestions for suitable topics, especially if you think some important subjects might be overlooked. Above all, I must depend on the members of the Scientific Organizing Committee for suggestions as to possible reviewers. Please send me your suggestions.

My last request is for any assistance you may be able to give me in preparing the Commission 27 contribution to a new edition of the IAU Astronomer's Handbook which will be published in 1986. We are asked to give a brief description of the Commission, including such matters as "origin, brief history of development; summary of main functions, outline of research area; Commission publications, if any, participation in international projects; outlook, possible future projects; any special events (highlights), major results of actions by the Commission, etc." I would not like to omit, through oversight, any important information that should be included, so please do not hesitate to pass on to me any facts of which I should be aware (even if you think I probably am).

Please let me have your comments and suggestions. For my part, I shall be sending you progress reports from time to time over the next months.

With best wishes,

Yours sincerely,



Norman H. Baker
President, Comm. 27, IAU

Columbia University in the City of New York

DEPARTMENT OF ASTRONOMY

New York, N. Y. 10027

6 August 1984

Dr. B. Szeidl
Konkoly Observatory
1525 Budapest XII. Box 67
Hungary

Dear Dr. Szeidl,

Thank you very much for your letter of July 16, and for agreeing to prepare the section on "RR Lyrae Stars" for our Comm. 27 report. I think the way you prepared it last time was very satisfactory, and I am happy to have you do it this way again.

Thank you also for suggesting that we put a notice in IBVS--that had not occurred to me. There is much to be said for it, but after giving it a lot of thought I have decided not to insert such a notice, partly because I do not yet have agreement from all the people I have asked to write.

It is very kind of you to agree also to send me some material on the IBVS. I look forward to seeing it, and I am sure it will be helpful to me in preparing our contribution for the "Astronomers Handbook".

Please forgive the appearance of this letter. I am away from my office for several weeks and must rely on my own defective typing.

Yours sincerely,

Norman Baker

Norman H. Baker

Columbia University in the City of New York | New York, N.Y. 10027

DEPARTMENT OF ASTRONOMY

7 July 1984

Dr. Bela Szeidl
Konkoly Obseratory
1525 Budapest XII. Box 67
Hungary

Dear Dr. Szeidl:

This year it is my responsibility to compile the contribution of Commission 27 for the next IAU Reports on Astronomy . In 1982 you prepared the section of our report on "RR Lyrae Stars", and I am writing to ask if you would be willing to do so again for our 1985 report. Last time your contribution filled 1-1/2 or 2 pages, and it should be about the same length this time, since our entire report must be no longer than it was in 1982.

As I must put all the contributions together, and have them re-typed and in the hands of the General Secretary by January 31, I would like to have your contribution by December 1 of this year.

I have another request. Next year, for the first time in twenty years, I think, there will be a new edition of the Astronomers Handbook. We are asked to include a brief account of the activities of our Commission. Would it be possible for you to provide me with a very brief account of history and functioning of the Information Bulletin on Variable Stars , for inclusion in the Astronomers Handbook ?

I do hope you will be able to assist me in these two matters. If it should happen that this is not possible, I beg that you let me know as soon as possible. Thank you very much for your cooperation.

Yours sincerely,

Norman Baker

Norman H. Baker
President, Commission 27

Columbia University in the City of New York | New York, N.Y. 10027

DEPARTMENT OF ASTRONOMY

24 June 1985

Dr. Bjørn Ragnvald Pettersen
Institute of Mathematical and Physical Sciences
Department of Physics
University of Tromsø
P.O. Box 953
N-9001 Tromsø
NORWAY

Dear Dr. Pettersen:

Thank you very much for your letter of 7 June, informing me of the tentative proposal by astronomers from the Bulgarian Academy of Sciences to organize a meeting on "Flare Stars in the Solar Neighbourhood and Stellar Associations" in 1988. By coincidence, it happens that a similar meeting has already been proposed.

Last autumn I received from Professor Marcello Rodonò and Dr. Bernard Haisch a proposal for an IAU Colloquium on "Solar and Stellar Flares", to be held in conjunction with the 1988 General Assembly. (I enclose a copy of their letter.) I circulated this proposal among the Organizing Committee of Commission 27 and, finding general agreement, informed the proposers that our Commission would support it. While the emphasis of the new proposal is rather different, it seems certain that the Executive Committee would not approve two such closely related conferences in the same year.

I would hope that the Rodonò-Haisch proposal could be broadened to comprise some of the subjects that might have been included in the new proposal. By copies of this letter I am informing Professor Rodonò and Dr. Haisch of the situation, and I hope you or Dr. Tsvetkov will be in contact with them. I am also sending a copy to Dr. B. Szeidl, who will be president of Commission 27 in 1985-88. Naturally I will be glad to help in any way I can.

You and your colleagues may be interested to know that we are planning a small session of Commission 27 on "Flare Stars" at the New Delhi General Assembly. I am organizing this with the help of Professor L.N. Mavridis, and we hope to have about six invited papers. Though I have not heard from him recently I believe we are still looking for speakers, and would be happy to receive suggestions.

Department of Astronomy
Columbia University
534 West 120th Street
New York, NY 10027, USA.

Yours sincerely,

Norman Baker

Norman H. Baker
President, Commission 27

enc: Rodonð-Haisch letter

cc: M. Tsvetkov
M. Rodonð
B. Haisch
B. Szeidl

Dear Dr. Baker,

On several visits to Bulgaria I have suggested that the Bulgarian Academy of Sciences organize a meeting on Flare Stars in the Solar Neighbourhood and Stellar Associations. A recent letter from Dr. Milcho Tsvetkov informs me that a symposium could be held in July or October 1988 at IMU which we support. We believe that Commission 27 should consider this matter, and hope to have your support in giving the meeting an IMU status. This letter is meant as an advance information to you as the president of the Commission. I believe Bulgarian representatives will approach you at the IMU General Assembly in India.

Sincerely,

Milcho Tsvetkov
Milcho Tsvetkov

UNIVERSITY OF TROMSÖ

INSTITUTE OF MATHEMATICAL AND PHYSICAL SCIENCES
DEPARTMENT OF PHYSICS

P. O. BOX 953, N-9001 TROMSÖ • TELEPHONE (083) 8 60 60 • TELEX 64124 AUROB N

Dr. N. H. Baker
Department of Astronomy
Columbia University
538 West 120th Street
New York,, NY 10027, USA.

YOUR REF.:

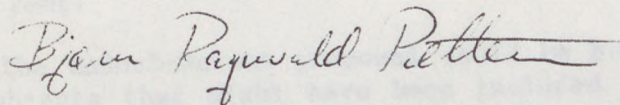
OUR REF.:

DATE: 7 June 1985

Dear Dr. Baker,

On several visits to Bulgaria I have suggested that the Bulgarian Academy of Sciences organizes a meeting on Flare Stars in the Solar Neighbourhood and Stellar Associations. A recent letter from Dr. Milcho Tsvetkov informs me that a symposium could be held in July or October 1988 if IAU would support it. We believe that Commission 27 should consider this matter, and hope to have your support in giving the meeting an IAU status. This letter is meant as an advance information to you as the president of the Commission. I believe Bulgarian representatives will approach you at the IAU General Assembly in India.

Sincerely,



Bjørn Ragnvald Pettersen

Columbia University in the City of New York | New York, N.Y. 10027

DEPARTMENT OF ASTRONOMY

1 April 1985

Dr. B. Szeidl
Konkoly Observatory
1525 Budapest XII. Box 67
Hungary

Dear Dr. Szeidl:

I am enclosing an announcement about the present state of progress on the *GCVS*. If you think it appropriate, I hope you will publish this in the *IBVS*.

The history of this is that Dr. Samus' sent me a report some months ago. In reply I asked him for certain additional details for our contribution to the *Astronomers Handbook*. I also told him that I thought the news about the *GCVS* was so important that it should be widely circulated through publication in *IBVS*. He requested that I arrange it, and that is why I am now sending you this announcement.

If you can provide a specific reference for the 67th Name-list, please change the last sentence of the announcement accordingly.

I shall be sending another letter to the Organizing Committee before very long, but I'd like to take this opportunity to ask your opinion about one Commission matter, and that concerns the *GCVS*. It is of course an indispensable tool for variable-star astronomers, and many people will be happy that the new edition is now coming out. The problem seems to be that *GCVS* is not as generally available as perhaps it should be. Colleagues have asked me about this, and I must say that I don't really know how the catalogue is distributed. I don't even know how you get one -- they just seem to come. But new departments and observatories may not get them, and I am told this has even led to embarrassing "rediscoveries". Indeed, when I tried, late last year, to get just the sort of information that is contained now in my announcement, I failed, even though I phoned a number of colleagues who, I thought, would be sure to know.

Do you perceive this to be a real problem? If so, is there anything we might do? Perhaps we should discuss it in the Commission's business meeting. Perhaps we should try to get the IAU to help somehow with the distribution. I really don't know what we can do, but I do want to find out how much of a problem this is in various countries, and I intend to seek advice from people such as yourself, who may understand the picture better than I. I shall be glad for any advice you can give.

Incidentally, I am glad to report that Dr. Breger has agreed to become the new Vice-President of Commission 27 at the next GA.

With best wishes,

Yours sincerely,

Norman Baker

Norman H. Baker

DEPARTMENT OF ASTRONOMY

3 April, 1985

Dear Dr. Szeidl:

After the enclosed letter was typed I received your letter of 15 March, to which I would like to reply briefly.

Regarding possible scientific sessions at the General Assembly, it has been pointed out that some members find it easier to obtain travel funds if they present a paper. For this reason we should have at least part of a session available. I doubt that our business meeting will take more than one 1 1/2-hr session, so I am tentatively reserving the other session of the same half-day for contributed papers.

Dr. Bregier has informed me that he will be prepared to present a new set of proposed guidelines for the "Archives" at our business meeting. He also intends to be in touch with Douglas Hall about the APT-data problem.

In regard to IBVS I can well understand, having been an editor myself, how much difficulty you must have, particularly with unsuitable manuscripts. It may be that potential contributors need to be informed regularly about the purposes and requirements of the IBVS. In any case it seems to me that a brief report from you followed by an opportunity for discussion would be a good idea for our business meeting, and I shall plan to put these items on the agenda.

Please forgive the handwriting, which in this case was expedient.

Sincerely,

Norman Baker

BULGARIAN ACADEMY OF SCIENCES
DEPARTMENT OF ASTRONOMY AND
NATIONAL ASTRONOMICAL OBSERVATORY

72 Lenin Blvd., Sofia 1184
BULGARIA

Our ref: D/A

Telephone: 7341 ext. 614,
75-89-27
Telex: 23561 ECF BAN BG

24 Sept., 1985
Sofia,

Professor Norman H. Baker
President, IAU Commission 27
Dept. of Astronomy,
Columbia University
Pupin Hall
538 W. 120th Street
New York NY 10027, USA

Dear Professor Baker,

Thank you for your letter of 24 June regarding our proposal for a possible organizing of a symposium in Bulgaria on problems of flare stars. At the beginning of September I was in Budapest and discussed the subject with Prof. Szeidl. It turned out that a similar proposal to organize such a meeting in 1988 will be made by the Byurakan Observatory (Armenian SSR). The title is analogous to the title suggested by us: "Flare Stars in Stellar Clusters and Associations and in the Solar Neighbourhood". The meeting will be dedicated to the 80th anniversary of Academician V.A. Ambartsumian.

I think that the sound traditions and achievements of the Byurakan Observatory in the investigations of flare stars give a definite priority over our proposal. However, the problem will be finally settled during the discussions of Commission 27 in India.

To my opinion, such an IAU symposium organized in Europe parallel to the General Assembly in Baltimore would be attended by a greater number of scientists from East European countries. Besides, the present interest in the proposed topic is indisputable and the topic itself is not identical to that proposed by M. Rodono and B. Haisch. On the whole, the discussion on the connections between the flares of K-MWD stars in the solar neighbourhood and these in stellar aggregates of different ages will probably contribute to the clarification of the problem.

The other problem I am referring to you is my unclear membership in Commission 27. I was kindly informed by Dr. R. West that after renewing the files my name was not found to be among the members of IAU Commissions. I thought that with my admittance to the IAU in 1976 I would automatically become a member of your Commission since my interest in

Cont'd

astronomical investigations is mainly in flare stars. So far, I have had about 40 publications in this field in the IBVS, Variable Stars, etc., treating the discovery, investigation and cataloguing of more than 200 flare and variable stars, H_α emission and other types of stars.

Since my research interests in this field are permanent, I think that I shall be engaged in flare stars problems for the future. Therefore I shall appreciate your assistance in admitting me to IAU Commission 27.

With best regards,

Yours sincerely,

M. Tsvetkov

M. Tsvetkov

Enclosure: The copy of Dr. R. West's letter



National Research Council
Canada

Conseil national de recherches
Canada

Herzberg Institute
of Astrophysics

Institut Herzberg
d'astrophysique

Dominion Astrophysical
Observatory

Observatoire fédéral
d'astrophysique

File Référence

LBAT7-17

15 July 1985

Prof. Norman H. Baker
Astronomy Department
Columbia University
Pupin Hall
538 W 120
New York, NY 10027
U.S.A.

Dear Norman:

Commission 42 is preparing a proposal for an IAU Symposium on the subject "Circumstellar Matter in Close Binaries". This will be of interest to several members of Commission 27, and I am wondering if you would be interested in formally co-sponsoring the proposal. Present plans are to hold the meeting in the summer of 1987, probably here in Victoria immediately after the AAS June meeting in Vancouver, but the possibility of a European venue coordinated with an IAU regional meeting that summer is not yet ruled out. Since the proposed meeting is during the term of office of your successor, I am sending a copy of this letter to Bela Szeidl.

With all good wishes,

Yours sincerely

Alan H. Batten

AHB/yh

cc: Bela Szeidl

Best wishes

AHB

5071 W. Saanich Road
Victoria, B.C.
V8X 4M6

5071 Chemin Saanich W.
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Columbia University in the City of New York | New York, N.Y. 10027

DEPARTMENT OF ASTRONOMY

4 August 1985

Dr. Alan H. Batten
Dominion Astrophysical Observatory
5071 W. Saanich Road
Victoria, B.C. V8X 4M6
Canada

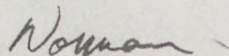
Dear Alan:

Thanks for your letter of July 15. I think that the proposed IAU Symposium on "Circumstellar Material in Close Binaries" is one that could appropriately be co-sponsored by Commission 27. I shall solicit the opinions of our Organizing Committee when next I write them. I should know their response well before the General Assembly.

I am not aware of any proposed symposia or colloquia whose subject matter would overlap that of this one at all.

All the best,

Yours Sincerely,



Norman H. Baker

cc: B. Szeidl

MAX-PLANCK-INSTITUT FÜR PHYSIK UND ASTROPHYSIK
INSTITUT FÜR ASTROPHYSIK

Karl-Schwarzschild-Strasse 1 · 8046 Garching bei München · Telefon · 089 · 32990

22 October 1985

Dear Dr. Széidl:

I am enclosing a recent exchange of correspondence between Dr. M. Tsvetkov and myself in regard to a proposal that Comm. 27 will probably receive at Delhi for a symposium at the Byurakan Obs. in 1988. There is a potential conflict here. On the whole I think we can say that Comm. 27 will sponsor ~~and~~ appropriate symposium that has sufficient scientific merit, as this one doubtless will. It is up to the IAU Executive Committee to avoid scheduling conflicts. On the other hand, we could say, if we wished, that it is too bad that two similar conferences are proposed for the same year, since many members who might want to attend both might be unable to do so. In any case the matter will probably come up in Delhi and I thought you should be informed.

In the next day or two I shall send you and all members of the Organizing Committee a letter about our activities in Delhi. Please let me know if you have any comments, suggestions, objections, etc.

Please note my change of address as on this letterhead. I shall be in Munich until the end of August 1986. Should you need to communicate with me before the General Assembly, a telex will reach me here quickly. I shall leave Munich for Delhi on Nov. 15.

Yours sincerely,
Norman Baker
NORMAN BAKER

DEPARTMENT OF ASTRONOMY

22 October 1983

Dr. B. Szeidl
Konkoly Observatory
1525 Budapest XII. Box 67
Hungary

Dear Dr. Szeidl:

Thank you for sending me the material on IBVS for the new "Astronomers Handbook". This material will be very helpful to me. I was also very happy to see the notice that you prepared for the IAU Information Bulletin No. 52.

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I am enclosing a proposal I recently received for Commission 27 sponsorship of a Colloquium to be held in 1988. It looks quite good to me, but you should certainly have something to say about it, since it would occur during your term as president of the commission (indeed, at the end of your term). I expect that the Executive Committee would not take action on it until after the next General Assembly, since the Colloquium is to be held in conjunction with the 1988 General Assembly, the site of which will not be officially decided until the 1985 General Assembly. However, I must give at least a preliminary answer to the proposers, so I would be glad to know whether you see any objection to our commission being the main sponsor of this meeting. I am also asking the opinions of the other members of the Organizing Committee.

Early next year I must submit names for a new Vice President (to succeed you) and new members for the Organizing Committee. (Present members of the Organizing Committee are: M. Breger, A.N. Cox, A.M. van Genderen, R.E. Gershberg, M. Jerzykiewicz, L.N. Mavridis, L.N. Mirzoyan, J.R. Percy, and B. Warner. J.D. Fernie serves ex officio as past president.) I would be glad if you would care to make suggestions for either of these offices.

With best wishes,

Yours sincerely,

Norman Baker

Norman H. Baker

November 23, 1984

RR LYRAE STARS

Dear Professor Baker,
Enclosed I send you my contributions. If
you find it too lengthy, please omit the
less important parts.

For the time being I am at MPI für
Astronomie - Heidelberg, but at the beginning
of December I am again in Budapest.
With best ~~whish~~ wishes,

Yours sincerely

Béla Székely

Ephemerides of RR Lyrae type variables have been compiled by Tsesevich, Firmanuk and Kreiner for the years 1982, 1983 and 1984 (Rocznik Astr. Obs. Krakow.). Elements have been derived, revised or refined for a great number of known RR Lyr stars and for some accidentally discovered ones. The results have been mostly published in Astr. Tsirk., IBVS, JAAVSO and Per. Zv. Suppl. Eight new RR Lyrae stars have been found in a field around δ Aql (Gessner: MVS 10.35) and 24 new ones in a field around M92 (Meinunger: MVS 10.1). Liller (AJ 88.1463) found ten new variables in a field of NGC 6681 and concluded that at least some of them belong to the galactic bulge population. 42 new RR Lyrae variables have been discovered and periods have been determined for 49 of them in a field surrounding the globular cluster NGC 6304 (Barlow and Hesser: AJ 86.1044).

Photoelectric photometry has been reported on RZ Cep (Garbuzov: Astr. Tsirk. 1200.5), BC Dra (Szabados and Stobie: AASuppl. 47.541), UW Gru (Bernard: PASP 94.700), AV Peg (Alaniya: IBVS 2558), DH Peg (Alaniya: IBVS 2558; Garbuzov: Astr. Tsirk. 1200.5) Hopp: As. Sp. Sci. 79.239) and two new discoveries (Grauner: PASP 96.84; Tan Huisong: IBVS 2533). The photometry of BD+16 2356 revealed that this star is the brightest representative of c-type variables with periods longer than 0.40 day (Oja: AA 103.339). High-phase resolution uvby photometry of SU Dra, RX Eri and RR Lyr were used to find the variations of effective temperatures and surface gravities with phase. The Baade-Wesselink method was applied in order to find their absolute magnitudes (Siegel: PASP 94.122). Simultaneous photometric and radial velocity data of VY Ser were obtained and were used to solve for the star's radius and distance. A phase difference $\Delta\phi \approx 0.075$, between the photometric and spectroscopic radii has been found. It may be a consequence of the star's strong convection, which has not been properly taken into account (Carney and Latham: ApJ 278.241). A theoretical relation between stellar surface brightness and V-R colour has been calculated from model atmospheres for parameters appropriate to RR Lyrae stars (Manduca and Bell: ApJ 250.306). In a subsequent paper this relation has been combined with new VR photometry to determine distances, radii and absolute magnitudes for X Ari and RR Lyr (Manduca, Bell, Barnes, Moffett and Evans: ApJ 250.312). Photometric observations of RR Lyr in the ultraviolet have been obtained using the ANS. The observations have been compared with theoretical light curves calculated using photometry at longer wavelengths and a good agreement has been found. A bump in the observed UV light curves in the phase range 0.6 to 0.8 supports the existence of a shock (Bonnell, Wu, Bell and Hutchinson: PASP 94.910).

Fourier decompositions have been made of the light curves of a large sample of RR Lyrae field stars (Simon and Teays: PASP 93.550, ApJ 261.586). Although the period of the small-amplitude pulsator, XZ Cet is 0.823 day, the Fourier decomposition coefficients of its light curve fall far from the regions occupied by the ab pulsators (Simon and Teays: BAAS 15.655).

Wisniewski's conclusion that the RRc variable RW Ari is an eclipsing binary simultaneously has been questioned (Goranski and Shugarov: Per. Zv. 21.211).

Abundance analysis has been reported on VY Ser (Carney and Jones: PASP 95.246) and MT Tel (Prybylski: Acta Astron. 33.141). $[\text{Fe}/\text{H}]$ values and mean temperatures have been derived for a sample of field RRc-type stars and the Oosterhoff effect was studied for this group (Kemper: AJ 87.1395). Kinman, Mahaffey and Wirtanen (AJ 87.314) extended the Lick survey to three fields in the galactic anticenter ((28 RR variable in 84 deg²). As indices and $[\text{Fe}/\text{H}]$ values have been determined for these stars and compared with the corresponding values of RR Lyrae stars in the north galactic pole. The entire sample shows no direct evidence for an abundance gradient (Butler, Kemper, Kraft and Suntzeff: AJ 87.353). The carbon abundances for a large number of field stars have been studied and found that the RR Lyrae stars have carbon-to-iron ratios which are similar to those of unevolved stars (Butler, Manduca, Deming and Bell: AJ 87.640). A number of papers have been dealing with the helium content and metal abundance of RR Lyrae stars in globular clusters (Caputo, Castellani and Tornambe: IAU Coll. 68.309; Smith: ApJ 250.719; ApJ 281.148; Smith and Perkins: ApJ 261.576; Smith and Manduca: AJ 88.982). The pulsational properties of field RR Lyrae stars have been studied by Castellani, Maceroni and Tosi (AA 102.411, AA 128.64). The Oosterhoff period shift for RR Lyr stars in globular clusters and in the galactic disc has been discussed and it has been established that it correlates with metal abundance (Sandage: ApJ 252.553,

ApJ 252.574). The latest review of the pulsational properties of RR Lyraes in globular clusters and the Oosterhoff problem has been given by Dickens (Pulsations in Classical and Cataclysmic Variable Stars, p.182). Metal abundance parameters have been determined for RR Lyrae stars in the Magellanic Clouds and population mass and evolutionary ages have been discussed (Butler, Demarque and Smith: ApJ 257.592). Some RR Lyraes have been investigated in the direction of the LMC (Connolly and Smith: BAAS 15.927).

Shethers (ApJ 274.20) redetermined the visual absolute magnitude of metal poor RR Lyraes using five independent methods. Catalogues of proper motions, space velocities and absolute magnitudes of RR Lyrae stars have been compiled (Wan, Mao and Ji: Ann. Shanghai Obs. No.2.1, No.3.110, Proc. Shanghai Astrometry Symp. p.326).

The period changes of a few RR Lyrae stars have been investigated (IM Aql by Lada and Belserene: JAAVSO 10.81; XZ Cyg by Blasberg: IBVS 2361; RR Gem by Goranskij: Astr. Tsirk. 1226.1; RR Lyr by Romanov, Fedotev and Movchan: Astr. Tsirk. 1205.4; HK Pup by Lysova: Astr. Tsirk. 1261.6). The characteristics of period behaviour of field RR Lyraes have been studied by Firmanuk (Astr. Tsirk. 1118.1, 1118.3). A model has been given for the explanation of fluctuation of period in multiple periodic variables (Marik: Comm. Konkoly Obs. No.83.225).

The Blazhko-effect has been detected in a few RR Lyrae stars. The Blazhko-period of DM Cyg (Lysova and Firmanuk: Astr. Tsirk. 1122.3) and V5 in M3 (Panov: Per. Zv. 21.391) has been determined. Changes in the shape and amplitude of the light curves of V672 Aql (Tsesevich: Astrometr. Astrofiz. 43.3), RR CVn (Belserene and Larson: JAAVSO 9.61), EL Com (Wheatley: JAAVSO 11.17), TV CrB (Alaniya and Abuladze: Abastumani Bull. 55.71) and V802 Cyg (Ventura: JAAVSO 10.90) have been found. On the other hand Glowina (AN 304.45) showed that the secondary variability of RZ Cep found earlier was spurious. Photometric observations of RR Lyr were published and short discussions were given on its light curve variations (Alaniya and Abuladze: Abastumani Bull. 53.13, 55.53; Murnikova: Per. Zv. Suppl. 4.1; Mironov, Moshkalikov and Kolykhalova: Per. Zv. Suppl. 4.7; Kazimirskij: Astr. Tsirk. 1204.7). Tayler (JAAVSO 9.57) noticed that the amplitude of secondary cycle magnitude maxima of XZ Cyg appeared to have decreased abruptly, coincident with the increase in its primary period. From a comparison of calculated and observed light curves of XZ Cyg Gadun, Zajkova and Romanov (Astrometr. Astrofiz. 46.23) determined the star's mean radius at two phases of the Blazhko-cycle. Polarization observations of RR Lyr have been carried out by Piirola (Per. Zv. Suppl. 4.31). Low dispersion spectroscopic works have been made on XZ Cyg (Romanov and Fenina: Per. Zv. Suppl. 4.35) and RR Lyr (Fenina and Romanov: Per. Zv. Suppl. 4.13; Romanov, Fenina and Vasileva: Astrometr. Astrofiz. 43.43) in order to investigate the variation of spectral characteristics with the phase of the Blazhko-effect. Smith (PASP 93.721) discussed the period distribution of irregularly variable RR Lyrae stars in M3, M5, M15, ω Cen and the Draco dwarf galaxy, and found that irregular variability is more frequent among shorter period ab-type RR Lyraes. These period distributions are consistent with some of the mode-mixing explanations for the Blazhko-effect. On the other hand, attempt was made to discover what effects the coupling of the magnetic field and the pulsation have (Biront, Cousens, Goossens and Mestel: Liege Coll. 23.337), and in a subsequent paper (Cousens: MN 203.1171) it has been found that if rotation is slow enough, the dynamics of the oscillating magnetic star are altered very little, but the kinematic effect of the differing aspects of the oscillation presented to an observer at different epochs leads to modulated light and velocity curves. It has been concluded that the oscillating oblique magnetic rotator is a plausible model for the Blazhko-effect in RR Lyr.

The recent discovery of many double-mode RR Lyrae variables in three globular clusters, in the Magellanic Clouds and even in the nearby Draco galaxy (Hodson, Cox and Clancy: BAAS 13.870; Goranskij: IBVS 2007; Astr. Tsirk. 1216.5; Nemec: IAU Symp. 105.465; Nemec, Liller and Hesser: IAU Symp. 108.39) has spurred interest in these stars. A detailed analysis of ten double-mode pulsators in M15 (Cox, Hodson and Clancy: ApJ 266.94; Cox: Pulsations in Classical and Cataclysmic Variable Stars, p.157) provided period ratios, and masses, luminosities, effective temperatures, radii and He content have been derived for these stars. They appear in the instability strip between the pure fundamental and the overtone pulsators, and it is suspected that these stars undergo mode switching as they are evolving (Hodson and Cox: Pulsations in Classical and Cataclysmic Variable Stars, p.201). The masses of RR Lyrae stars determined from double-mode pulsation range from $0.55M_{\odot}$ to $0.65M_{\odot}$ (Cox: IAU Symp. 105.421). This is a very large range of mass and it has some consequences

strains on stellar evolution (Cox and Hodson: BAAS 16.190). The only known field double-mode RR Lyrae star AQ Leo has been revisited. Its mean B-V colour index places AQ Leo close to the transition line between the c- and the a-type pulsators in the instability strip (Jerzykiewicz, Schult and Wenzel: Acta Astron. 32.357, Comm. Konkoly Obs. No.83.22).

27 October 1983

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Abbreviations:

Astr.Tsirk. = Soviet Astron. Tsirkular

IBVS = Information Bulletin on Variable Stars

JAAVSO = Journal of AAVSO

Per.Zv. = Peremennye Zvezdy (Soviet Variable Stars) 1978 for the new

MVS = Mitteilungen über Veränderliche Sterne (Sonneberg, GDR) 1978 for the new

AA = Astron. and Astrophys. 1978 for the new

AN = Astronomische Nachrichten 1978 for the new

to our Commission. I have about the same number of contributions as last year. The categories will be slightly different and some of the subjects will be new (you are one of the exceptions). Incidentally, I have decided to ask the authors to use the style and abbreviations of the Astrophysical Journal in literature references. For the most commonly cited journals these abbreviations do not entirely agree with the international standards, but they are much shorter and will save a good deal of space. They are familiar to all astronomers. If by chance you have already prepared your report using some other system, please do not change it, because the whole report will have to be changed in our office anyway.

I am enclosing a report which I recently received from Commission 27 sponsorship of a Colloquium to be held in 1985. It is quite good to me, but you should not really have something to say about it, since it would be during your term as President of the commission (indeed, at the end of your term). I expect that the Executive Committee will not take action on it until after the next General Assembly, which the Colloquium is to be held in conjunction with. The next General Assembly, the site of which will not be decided until the 1985 General Assembly, should give at least a preliminary answer to the proposals, so I would be glad to know whether you see any objection to my continuing being the main sponsor of this meeting. I am also asking the opinions of the other members of the Organizing Committee.

Early next year I shall submit names for a new Vice President (to succeed you) and new members for the Organizing Committee. (Present members of the Organizing Committee are: M. Bieger, A.N. Cox, A.M. van Genderen, S.A. Gershberg, M. Jerzykiewicz, L.N. Kuvshinov, L.V. Mirman, J.A. Price, and B. Warner. J.D. Fernie serves as honorary President.) I would be glad if you would care to make suggestions for either of these offices.

With best wishes,

Yours sincerely,

William A. Baker

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