



## ***Minutes of Meeting***

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<b>Meeting Name</b>	:	Business Meeting of the International Radiation Commission Chaired by T. Nakajima (President), R. Cahalan (Acting Vice President), C. Serio (Secretary)
<b>Meeting Reference</b>	:	Business Meeting/IRS Symposium
<b>Date of Meeting</b>	:	05-August-2008, hour 6 p.m.
<b>Place of Meeting</b>	:	Foz do Iguaçu, Brazil
<b>Minute Taker</b>	:	Carmine Serio
<b>Agenda:</b>	:	see Annex 1
<b>Participants</b>	:	see Annex 2
<b>Distribution</b>	:	IRC members
<b>Attachments</b>	:	Annexes 1 and 2 (end of this document)

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### ***1. Introduction***

These minutes summarize the IRC business meeting held in Foz do Iguaçu on August the 5<sup>th</sup> 2008 on occasion of the IRS Symposium, August 03-08, 2008, Foz do Iguaçu, Brazil. The minutes and the annexed documents will be made available at the IRC website: <http://www.irc-iamas.org/>.

The sequence of points, items and issues have been organized in this document according to the Agenda, which was approved at the very beginning of the meeting. Reader is cautioned that this sequence does not necessarily reflect the order in which the various points were brought to the discussion during the meeting. These minutes are organized according to the agenda schedule only for the sake of clarity and logic of organization.

### ***2. Meeting***

At 6.00 pm President T. Nakajima opened the meeting, briefly welcomed participants and asked to the IRC secretary to show the agenda. The agenda was shown for approval. The agenda was approved and the meeting moved to point 3 of the agenda.

#### **POINT 3: PRESIDENT REPORT**

President T. Nakajima renewed his welcome to participants and informed the group that the IRC Business Meetings were scheduled according to the following agenda:



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- IRC business meetings
  - 2006, July 11, Madison, USA (AMS Radiation Symposium)
  - 2007, July 10, Perugia, Italy (IUGG General Assembly)
  - 2008, August 6, Brazil (IRS2008) (today Business Meeting)
  - 2009 July, Montreal (IAMAS2009) (forthcoming Business Meeting)

He also gave a brief account on the financial situation of IRC, which is here summarized

○ <b>Date</b>	<b>Amount</b>
○ Status 1 January 2006	16,341.75 Eur
○ US Dep of Energy (14 August 06) 5,000\$	+ 3,919.42 Eur
○ Bill of A. Deepak Publishing 5,000\$	-3,964.79 Eur
	▪ =16,296.38 Eur
○ IRC meeting Perugia	
▪ - refreshments (15 June 07)	- 330.00 Eur
○ Status 27 June 2007	=15,966.38 Eur
○ IRS 2008	-3,528.58 Eur
Oct. 11, 07	
○ Nov. 22, 07 Transfer	12,437.80 Eur
	▪ =18,285.81 US\$
○ Feb. 2, 08 Interest	+17.39 US\$
○ Jul. 27, 08 Gift to LOC	-270.00 US\$
	▪ =18033.20 US\$

After showing the above financial situation, he briefly accounted about recent undertaken activities. They are here summarized in a bulleted form:

- Publications
  - IUGG Year Book: IRC for 2005-2008
  - IAMAS News Letter, July 2005, Featured Commission: The International Radiation Commission (IRC), pp 3. (available at the IRC web site)
  - Kirill Kondratyev: Obituaries, BAMS 2006 Oct. 1420-1421, T. Nakajima, H. Bolle, W. Smith, J. Lenoble, and Y. Timofeev.
  - IRC History, H.-J. Bolle, 2008, published by IAMAS Publication series #1 (copies available and distributed during the Symposium)/
  - Gary Rottman got an IRC history paper from J. London in Feb. 2008
- Meetings
  - IAMAS 2005, Beijing; IUGG 2007, Perugia
  - Asian-Pacific Radiation Symposium, July 2006, Kanazawa, Japan
  - Russian Radiation Commission, 2006
  - IUGG, 2007, Perugia
  - ITSC-16, 7-13 May 2008, Angra Dos Reis, Brazil
  - IRS2008, 4-8 August, 2008, Iguacu, Brazil
- Recommendation



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- A letter of supporting the climate sensors for the NPOESS satellite to John Church, Chairman of the Joint Scientific Committee, and Ann Henderson-Sellers, Director of the Joint Planning Staff for the World Climate Research Programme (Oct. 26, 2006)
- Concerns of the IAMAS officers about the Perugia Assembly (<http://www.iamas.org/News.html>): A letter to Tom Beer, President of IUGG Bureau and Lucio Ubertini, Chairman of Local Organizing Committee/IUGG2007 (July, 22 2007)

For the specific case of the IUGG assembly, IRC contributed to 4 sessions which, according to the President and participants at the meetings, were attended by a large number of persons, in some cases more than 100. The details of the IRC contributed sessions are here shown:

- **IRC sponsored sessions**
  - **JM25: 3D Radiative Transfer in Complex Geophysical Media Including Clouds, Vegetation, Ice and Snow (IAMAS, IAHS, UCCS); IRC conveners: Robert F. Cahalan, Bernhard Mayer.**
  - **JM03: Satellite Observations: Products and Applications (IAMAS, IAG, IAGA, IAHS, IAPSO, UCCS); IRC conveners: Hung Lung Allen Huang, Michael D. King.**
  - **M03: Aerosols, Radiation and Clouds (IRC, ICCP, ICACGP); IRC conveners: T. Nakajima, G. Isaac, G.-Y. Shi, and L. Barrie.**
  - **M20: Solar Activity and its Influences on the Earth's Weather and Climate (IRC); IRC conveners: Werner Schmutz.**

The President also renewed information about the most relevant outcomes from the IUGG/IAMAS business meetings. He announced the IAMAS officer nominations (this information was already given during the Business Meeting in Perugia, 2007):

- **President: Guoxiong Wu, China**
- **Vice presidents: M.A. F. da Silva Dias, Brazil; A. Thompson, USA**
- **Secretary general: Hans Volkert, Germany**

As already done during the Business Meeting in 2007, he once again informed the commission of two important IAMAS resolutions, which can be found on the IAMAS web page

- **Aerosol Pollution and Precipitation**
- **The Urgency of Addressing Climate Change**

He also informed the commission about the proposal of sessions for IAMAS 2009

- **IAMAS 2009, 19-29 July, Montreal**
- **IRC Proposals**
  - **M07: Link of aerosol-cloud-radiation-precipitation (IRC, ICCP, ICACGP), Ulrike Lohmann, George A. Isaac, Guang-Yu Shi, and Terry Nakajima**
  - **M17: The Impact of Solar Variability on Earth (ICMA, IAGA, IRC), Ulrike Langematz, Werner Schmutz, Lon L. Hood, Alexei Krivolutsky, Victor Fomichev, Joanna D. Haigh**
  - **M22: 3D Radiative Transfer in the atmosphere (IRC), Robert F. Cahalan and Bernhard Mayer**
  - **M24: Solar UV radiation (IRC), Peter Koepke, Mario Blumthaler, and Nataly Chubarova**

Then the President moved to the organization of the IRS 2008, and he also mentioned two Conferences , which were held just before our IRS 2008:



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- **ICCP: 7-11 July, 2008, Cancun Mexico**
- **Ozone symposium: Last week of July, Norway**

The main aspects and facts of the IRS2008 Symposium are here summarized in a bulleted form

- **Location and dates Brazil, Iguaçú, 3-8 August**
- **LOC: Marcia Akemi Yamasoe (University of Sao Paulo), Maria Assunção F. Silva Dias (CPTEC/INPE); Paulo Artaxo (University of Sao Paulo); Pedro Leite Silva Dias (University of Sao Paulo); Luiz Augusto Machado (CTA – CPTEC/INPE); Regina Alvalá (INPE); Juan Carlos Ceballos (CPTEC – INPE); Alexandre Correia (CPTEC – INPE); Karla Longo (CPTEC – INPE); Marcelo Corrêa (Federal University of Itajubá); Aline Procópio (Federal University of Rio de Janeiro); José Vanderlei Martins (IRC Representative, UMBC, NASA/GSFC)**
- **350 participants (\$300) + 150 students expected (\$60)**
  - **400 in IRS2000, St. Petersburg; 350 in IRS2004, Busan**
- **Fund raising**
  - **IAMAS: \$5,000**
- **Program committee (IRC officers + convenors)**

### **IRS2008 programming**

- **A: Topical Union Session (T. Nakajima, R. Ellingson, R. Cahalan, C. Serio and M. Yamasoe)**
- **B: Radiative Transfer Theory and Modeling (Bernhard Mayer, and Alexander Marshak)**
- **C: Molecular Radiative Properties (Carmine Serio Peter Bernath, and Claude Camy-Peyret)**
- **D: Particle Radiative properties (Tadahiro Hayasaka, Paolo Di Girolamo, and Peter Koepke)**
- **E: General Remote Sensing (Allen M. Larar, and Yuriy M. Timofeyev)**
- **F: Satellite Measurements (Michael King, Rolf Stuhlmann, and W. Paul Menzel)**
- **G: Surface measurements and field experiments (G. Shi, J. Vanderlei Martins,, and Bruce W. Forgan)**
- **H: Radiation budget and forcing (Byung-Ju. Sohn, Eugene Rozanov)**
- **I: Weather and climate application (Hung-Lung Allen Huang and Bruce McArthur)**
- **J: Biosphere-Atmosphere interactions influencing the radiation budget (Pedro Leite da Silva Dias, Paulo Artaxo)**

Finally, the President briefly illustrated the IRC web site and cordially invited members to contribute to its organization.

The members appreciated and welcomed the detailed presentation by the President, after that the meeting moved to the presentations of Working Groups.

### **POINT 4: WORKING GROUP PRESENTATIONS**

**Hung Lung Allen Huang** reported on the activity of the **ITWG** working group. His ppt presentation will be soon available on the IRC website. The presentation was appreciated and congratulated from the attendees. As already done during the 2007 Business Meeting in Perugia, H.-J. Bolle remarked with respect to the direct interaction between ITWG and other bodies that recommendations to International Organizations would have to be channeled through IRC and IAMAS. There was some discussion on this point and in the end it was agreed to have a better coordination for the future.



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**Paolo Digirolamo** reported on the activity of the **ICLAS** working group. His ppt presentation will be soon available on the IRC website. The presentation was appreciated and congratulated from the attendees. A discussion then followed which was mostly focused on the ICLAS rule to allow for 6-year term membership. It was stressed that this is in contrast with the IMAS statute and IRC rules, which only allowed for 4 year term (with the possibility of extension to an additional 4 year term). Paolo Digirolamo agreed with IRC members to discuss the question of membership duration within the ICLAS group.

**Lazaros Oreopoulos** reported on the activity of the **CIRC** working group (formerly ICRCCM ). His ppt presentation will be soon available on the IRC website. The presentation was appreciated and congratulated from the attendees. Some discussions arose about whether CIRC had to be considered as a new working group or just ICRCCM follow on. There was discussion on this point but a definite position/solution to the problem was left as an action, possibly, for next meeting.

**Alexander Marshak** reported on the activity of the **3D RT** working group. His ppt presentation will be soon available on the IRC website. The presentation was appreciated and congratulated from the attendees.

**T. Hayasaka** reported on the activity of the **LASR** working group. His ppt presentation will be soon available on the IRC website. The presentation was appreciated and congratulated from the attendees.

### POINT 5: FUTURE RESEARCH PRIORITIES

After some discussions, members converged on the following topics to be highlighted as future research priorities:

- **Surface interaction with atmosphere and radiation processes: Characterization, spectral structure, and validation; albedo, surface energy exchange.**
- **Better radiometric calibration for SW high spectral resolution data, far IR data and satellite radiances.**
- **Sub-millimeter microwave remote sensing**
- **Improvement in weak line and combination; continuum (e.g., HITRAN)**
- **Radiometric standardization/calibration of the solar constant**
- **Seek of passive and active remote sensing synergy**

### POINT 6: IRS2008 ORGNAZIZATION, COMMENTS, REMARKS AND RELATED ISSUES

This point was introduced and discussed at length by Marcia Yamasoe. The Symposium has been a success in terms of abstract submissions (507) and participants (304 including LOC, accompanying persons and sponsors). Yamasoe presentation was organized in a ppt format and this will be made available on the IRC web site. The submissions for each session are summarized in the table below. It was also clarified that for the case of IRS 2008 the proceedings will be published by the American Institute of Physics (AIP). The deadline for extended abstract submission is August 31, 2008, whereas the deadline to send final version to the publisher is November 8, 2008. The policy agreed with for publication is

- Attendance to IRS2008
- Cases of paid registration and no show analyzed case by case (VISA issues, etc.).

After Yamasoe presentation, the President and the attending members warmly thanked her and the LOC. She was cordially congratulated and applauded.



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Finally, the President concluded that the success of IRS2008 has brought significant interaction between scientists and stimulation for students. He also added that Dr. Graeme Stephens, Dr. David Tobin and Dr. Ilan Koren received the Gold Medal and Young Scientists Awards, respectively, selected by the IRC Award Selection Board.

### Summary of abstracts presented during the Symposium

<b>Session</b>	<b>Invited</b>	<b>Regular</b>	<b>Poster</b>	<b>Total</b>
<b>B</b>	2	27	41	<b>70</b>
<b>C</b>	2	7	5	<b>14</b>
<b>D</b>	1	10	18	<b>29</b>
<b>E</b>	4	30	45	<b>79</b>
<b>F</b>	2	32	46	<b>80</b>
<b>G</b>	4	27	41	<b>72</b>
<b>H</b>	5	27	43	<b>75</b>
<b>I</b>	1	22	18	<b>41</b>
<b>J</b>	2	4	6	<b>12</b>
<b>UV</b>		2	5	<b>7</b>

**Total                    23                    188                    268                    479**

### POINT 7: NEXT IRC BUSINESS MEETING

There was nothing to discuss on this point, since location and date were already agreed with in Perugia (2007). It was again stressed that next Business Meeting will be in 2009, Montreal (**IAMAS2009**)

### POINT 8: OTHER

There was nothing else to discuss and the meeting moved to the part reserved to IRC members.



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### POINT 1: WORKING GROUPS AND RAPORTEURS MEMBERSHIP RULES

The President showed a list of alive working groups and rapporteurs

- **WG ITWG: Stephen English and Allen Huang**
- **WG ICRCCM: Robert Ellingson**
- **WG ICLAS: R.T. Menzies**
- **WG ASA: Laurence Rothman**
- **WG RSMA : Yuriy M. Timofeyev**
- **WG 3DRT: Alexander Marshak**
- **WG LASR: Hayasaka**
- **RP Cloud and Radiation: Thomas P. Ackerman**
- **RP UV-B : Paul Simon**
- **RP BSRN: Atsumu Ohumura**
- **RP GRP: B.J. Sohn**
- **Continual Intercomparison of Radiation Codes (CIRC)**
  - **Core team: Oreopoulos, Mlawer, Delamere, Shippert**
  - **Phase-I: June 4, 2008**
  - **Sponsored by ARM and endorsed by GRP and IRC**
  - **Close collaboration of ICRCCM reorganization/expansion**

He also stressed that working groups are appointed by the IRC President, that the chairperson need not be IRC member. The rules for working groups are available on the IRC web site.

Carmine Serio stressed that the rules for the activities of the IRC-Working Groups (available on the IRC web site) are normally not applied and, to its 8 years IRC experience, there are WG chairpersons who never showed themselves and their reports to IRC meetings.

### POINT 2: ELECTION OF NEW MEMBERS

Some of the attendees observed that the 8 year term is approaching to its end for about 20 IRC members. The President observed that the new IRC members election process has started and already announced on the IRC web site. He said that the election rule for the term 2009-2012 will follow the same protocol as for the term 2005-2008. The protocol is now available at the IRC web site.

### POINT 3: ELECTION OF NEW OFFICERS

President T, Nakajima announced his wish not ask to IRC members for an extension of his presidency term for an additional 4 years period. He also announced his intention to officially communicate his will for not continuing, during the gala banquet. There was a long discussion trying to convince the President to continue for other 4 years. In the end, the members, in respecting his will, warmly thanked him for the precious work done for the Commission.

The President also announced his wish to propose to IRC members Robert F. Cahalan for the presidency of the commission for the term 2009-2012. His nomination was accepted by the members and Robert F. Cahalan was congratulated and applauded.

### POINT 4: FINANCE



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There was nothing to discuss, because the financial situation had been already shown at point 3 of the open session (President Report)-

### POINT 5: OTHER

There was nothing else to discuss and the meeting was closed at 9:30 p.m.





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**ANNEX 1: Meeting Agenda**

**IRC BM AGENDA, 2008**  
**Foz do Iguaçu, Brazil, August 2008-08-05**

**Open Session**

1. Welcome
2. Approval of Agenda
3. President Report
4. Reports from WGs and Rapporteurs
5. Future Research Priorities
6. IRS 2008: Organization, Comments, Remarks and related issues
7. Next IRS Business Meeting
8. Other

**Reserved Session**

1. Working Groups and Rapporteurs membership rules
2. Election of new members
  - a. Procedures for election
  - b. Members who have finished their term
3. Election of new Officers
4. Finance
5. Others
6. Close



## ANNEX 2: List of Participants

### IRC members

Name	Affiliation
Allen Huang, H.L.	University of Wisconsin
Blumthaler, M.	Innsbruck University
Bolle, H.J.	
Cahalan, R.	NASA/Goddard, USA
Di Girolamo, P.	University of Basilicata, DIFA, Italy
Fischer, H.	Forschungszentrum Karlsruhe
Hayasaka, T.	University of Tokyo
Kawata, Y.	Research Institute for Humanity and Nature
King, M.	University of Colorado
Kopke, P.	MIM/Germany
Larar, A.	NASA/Langley
Lenoble, J.	IRSA/UJF
Martins, J.V.	University of Sao Paulo
Mayer, B.	DLR, Germany
Mc Arthur, B.	York University
Nakajima, T.	Center for Climate System Research, The University of Tokyo, Japan
Serio, C	University of Basilicata, DIFA, Italy
Shi, G.-Y.	Institute of Atmospheric Physics, Chinese Academy of Sciences
Simmer, C.	Meteorologisches Institut
Smith, W.L.	
Sohn, B.J.	Seoul National University
Stuhlmann, R.	EUMETSAT, Germany
Uspensky, A.B.	Sci. & Res. Center on Space Hydrometeorology PLANETA

### Others

Name	Affiliation
Berger, F.H.	franz.berger@dwd.de
Oreopoulos, L.	lazaros.oreopoulos@nasa.gov
Marshak, A.	Alexander.marshak@nasa.gov
Camy-Peyret, C.	claude.camy-peyret@upmc.fr
Morcrette, J.J.	<a href="mailto:jean-jacques.morcrette@ecmwf.int">jean-jacques.morcrette@ecmwf.int</a>
Kinne, S.	Stefan.kinne@zmaw.de
Orphal, J.	jorph@gonline.fr
Yamasoe, M.	akemi@model.iag.usp.br
Zhang, H.	huazhang@cma.gov.cn