



20 April 2011

**Re: Report of the Nominating Committee presenting nominees for
IAMAS Officers for the Period 2011- 2015**

Dear National Representatives:

We, the members of the IAMAS Nominating Committee, are writing to present to you our report on nominations for IAMAS officers to be considered for election at the IAMAS General Assembly at the upcoming IUGG General Assembly in Melbourne. As called for in the Statutes, we sent out a letter last fall, with a reminder in January, seeking nominations. We thank you for submitting a very strong set of nominations and we had discussions with a number of them about the responsibilities involved and the set of needed nominees. After consideration of the nominees and needs and considering the mix of disciplines, the spread of nations, gender, and related factors, we are very pleased to submit our report to you. As called for in the Statutes, this transmission is being made to you two months prior to the General Assembly.

Six notes as background for presentation of the nominees:

1. As indicated in the mailing last fall, the present Vice-Presidents of IAMAS both indicated that, due to their other commitments, they would not be running for re-election.
2. With the withdrawal of one nominee to accept another IAMAS position, the number of nominees matched the number of positions.
3. Upon deciding that she would like to be a nominee for IAMAS President, Athéna Coustenis resigned from the Nominating Committee and did not participate in the Nominating Committee deliberations.
4. All of the proposed candidates have indicated a willingness to serve.
5. The Statutes do provide for there to be additional nominees nominated in Melbourne. Per Regulation 1, provision 4:

“At the first Plenary Session of the General Assembly the Nominating Committee will formally table its slate of candidates. Nominations from the floor for all positions except Secretary General can be made at that time. All nominations require the agreement of the individual to serve if elected. The election will take place during the final Plenary Session of the General Assembly.”

6. The positions of following officers of IAMAS are not up for election as their terms continue to 2015:

Secretary General: Dr. Hans Volkert of Germany, whose disciplinary interests are primarily in mesocale and mountain meteorology.

Past President: Dr. Guoxiong Wu of China, whose disciplinary interests are primarily in weather dynamics, climate dynamics and atmospheric general circulation.

Member-at-Large: Prof. Ernesto Hugo Berbery, originally of Argentina and now a research professor at the University of Maryland, USA, whose primary interests are dynamic meteorology and the monsoons.

Member-at-Large: Dr. Vladimir Kattsov of Russia, whose primary interests are polar meteorology and climate.

Member-at-Large: Prof. Tetsuzo Yasunari of Japan, whose primary interests are dynamic meteorology and climate.

Nominees for 2011-2015

With that initial information, the nominations for election in Melbourne are as follows (and note that biographical materials of the nominees are appended to this letter):

President: Elected for one 4-year term, and not eligible for immediate re-election:

Dr. Athéna Coustenis of France, presently head of the International Commission on Planetary Atmospheres and their Evolution (from which she will resign if elected)

Vice-President (two to be elected): Elected for one 4-year term, and eligible to be re-elected for a second 4-year term:

Prof. Joyce Penner of the United States, whose primary interests relate to atmospheric chemistry and their radiative influences.

Prof. John Turner of the United Kingdom, whose primary interests relate to polar meteorology.

Members-at-Large of the Executive Committee (two to be elected): Elected for one 8-year term, and cannot be immediately re-elected. The five members-at-large must all be from different countries, and so nominees cannot be from Argentina/US, Russia, or Japan:

Prof. Daren Lu of China, whose primary interests are radiation and the middle atmosphere.

Prof. Colin Price of Israel, whose primary interest is atmospheric electricity.

Please plan to attend to cast your vote for officers or arrange to vote by proxy.

Yours sincerely,



Michael C. MacCracken, chair of Nominating Committee, past president, IAMAS (2007-2011)

Peter Baines, past president, International Commission on Dynamic Meteorology (2007-2011)

Andrea Flossman, vice-president, International Commission on Clouds and Precipitation (2004-2012)

Werner Schmutz, vice president, International Radiation Commission (2008-2012)

Guoxiong Wu, president, IAMAS (2007-2011)

Athena Coustenis

Director of Research at the Centre National de la Recherche Scientifique (CNRS), astrophysicist with the Laboratoire d'Etudes Spatiales et d'Instrumentation en Astrophysique (LESIA) of Paris-Meudon Observatory, France

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Observatoire de Meudon
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Date of birth : 28 September 1961, Athens, Greece, French resident.

Education

1986: Master in Astrophysics and Space techniques, Univ. Paris 7 (P. & M. Curie)
1987: Master in English Literature, Univ. Paris 3 (Nouvelle Sorbonne)
1989: PhD in Astrophysics and Space techniques, Univ. Paris 7 (P. & M. Curie)
1996: Habilitation à diriger les Recherches (HDR), Univ. Paris 6 (P. & M. Curie).

Professional History :

2008-present : Director of research, CNRS, at LESIA, Paris-Meudon Observatory
1991-2008: Chargée de recherché (Senior researcher) at DESPA, then at LESIA, Paris-Meudon Observatory

Areas of expertise :

Athena Coustenis works in the field of Planetology. Her research is devoted to the investigation of planetary atmospheres and surfaces, with emphasis on Titan, Saturn's largest satellite. She has also contributed to an effort to uncover the nature of the atmosphere surrounding the newly-found extrasolar planets. She has led many observational campaigns from the ground using large telescopes (CFHT, UKIRT, VLT, etc) and has used the Infrared Space Observatory (ISO) to conduct planetary investigations.

She is Co-Investigator of three of the instruments (CIRS, HASI, DISR) aboard the Cassini/Huygens space mission to Saturn and Titan, into which she involved from the beginning of the development phase. The success of the mission has led her to devote most of her time to the analysis and interpretation of the data recovered, using her own radiative transfer codes and other analysis tools. In 2007 and 2008 she led a study for a new mission (TandEM) to return to the Saturnian system with emphasis on Titan and Enceladus, in response to ESA's Cosmic Vision Call. TandEM was combined with the 2007 Flagship mission and now composes the Titan/Saturn System Mission (TSSM) studied jointly by ESA and NASA, for which she is the Lead European Scientist. She is also involved, as European co-Lead, in the Jupiter-Europa mission (EJSM), to study Europa, Ganymede and Jupiter's system, currently planned for launch in 2020.

Honors :

- The NASA Group Achievement Award for the Cassini Programme Huygens Atmospheric Structure Instrument (HASI)

- The NASA Group Achievement Award for the Cassini Program Descent Imager Radiometer Spectrometer (DISR)
- The NASA Public Service Group Achievement Award for the Huygens Atmospheric Structure Instrument (HASI)
- The NASA Public Service Group Achievement Award for the Descent Imager Spectrometer radiometer (DISR)
- The ESA Award for making an outstanding contribution to the Huygens Probe.

Research management and outreach

- President of the International Commission for Planetary Atmospheres and Environment (ICPAE) since 2003.
- Secretary of the Committee of the Division of Planetary Sciences (DPS)
- President of the Division for Planetary Sciences of the European Geophysical Union (EGU).
- Chair of ESA's Solar System and Exploration Working Group
- Member of ESA's Space Sciences Advisory Committee and Human Space Flight and Exploration Science Advisory Committee.
- NASA consultant
- Member of the International Astronomical Union (IAU)
- Member-at-large of the Observing Program Committee for the selection of proposals for the ESO/Very Large Telescope (2001-2003) and chair of Panel C ("Stars, planets and ISM").
- Organiser/convener of Planetary sessions in the International colloquia of EGU (since 2000), IAMAS (since 2003), AOGS (since 2004), DPS (since 2006), EPSC (since 2006), Goldschmidt Conference (since 2007) and IPPW (since 2006).
- Professor in Post-Master courses
- Member of the Editorial Board of *Astronomy & Astrophys. Reviews* and of the *Astronomy and Astrophysics Library*
- Head Guest Editor for special issues of *Planetary and Space Sciences* since 2003.

She has written more than 100 scientific papers, several articles for the public, participated in the juries many public astronomy contests, made several TV appearances in connection to Titan, Cassini and the extrasolar planets. She has delivered more than 250 science lectures, many public lectures on planetology and participated in television documentaries. She is actively involved in the preparation of the IYA09.

Some significant publications :

Over 100 refereed publications among which :

1. Coustenis, A., Bézard, B. 1995. Titan's Atmosphere from Voyager Infrared Observations: IV. Latitudinal Variations in Temperature and Composition. *Icarus* 115, 126-140.
2. Coustenis, A., Salama, A., Lellouch, E., et al., 1998. Evidence for water vapor in Titan's atmosphere from ISO/SWS data. *Astron. Astrophys.* 336, L85-L89.
3. Coustenis, A., Gendron, E., Lai, O., et al., 2001. Images of Titan at 1.3 and 1.6 microns with adaptive optics at the CFHT. *Icarus* 154, 501-515.
4. Coustenis, A., Salama, A., Schulz, B., et al., 2003. Titan's atmosphere from ISO mid-infrared spectroscopy. *Icarus*, 161, 383-403.
5. Moutou, C., Coustenis, A., Schneider, J., Queloz, D., Mayor, M., 2003. Search for the HeI absorption feature in the transmission spectrum of HD209458. *Astron. Astroph.* 405, 341-348.
6. Coustenis, A., Hirtzig, M., Gendron, E., et al., 2005. Maps of Titan's surface from 1 to 2.5 micron. *Icarus* 177, 89-105.
7. Coustenis, A., Negrao, A., Salama, A., et al., 2006. Titan's 3-micron spectral region from ISO high-resolution spectroscopy. *Icarus* 180, 176-185.

8. Negrao, A., Coustenis, A., Lellouch, E., et al., 2006. Titan's surface albedo from near-infrared CFHT/FTS spectra: modeling dependence on the methane absorption. *Plan. Space Sci.* 54, 1225-1246.
9. Coustenis, A., Achterberg, R., Conrath, B., et al., 2007. The composition of Titan's stratosphere from Cassini/CIRS mid-infrared spectra. *Icarus* 189, 35-62.
10. Coustenis, A., 2007. Titan. In the *Encyclopedia of the Solar System*, Second Edition, P. R. Weissman, L.-A. McFadden, T.V. Johnson, Eds., Academic Press.
11. Coustenis, A., Taylor, F.W., 2008. *Titan : Exploring an Earth-like World*. World Scientific Press, Singapore.
12. Lavvas, P. P., Coustenis, A., Vardavas, I. M., 2008. Coupling photochemistry with haze formation in Titan's atmosphere. Part II: Results and Validation with Cassini/Huygens data. *Plan. Space Sci.* 56, 67-99.
13. Coustenis, A., Atreya, S., Balint, T., and 142 co-authors, 2008. TandEM: Titan and Enceladus mission. *Experimental Astronomy*, DOI: 10.1007/s10686-008-9103-z.
14. Coustenis, A., Jennings, D., Jolly, A., et al., 2008. Detection of C₂HD and the D/H ratio on Titan. *Icarus* 197, 539-548, 10.1016/j.icarus.2008.06.003.
15. Lebreton, J-P., Coustenis, A., Lunine, J., Raulin, F., Owen, T., Strobel, D., 2009. Results from the Huygens probe on Titan. *Astron. & Astrophys. Rev.*, 17, 149-179.
16. Coustenis, A., Jennings, D. E., Nixon, C. A., Achterbergh, R. K., Lavvas, P., Vinatier, S., Teanby, N. A., Bjoraker, G. L., Carlson, R. C., Piani, L., Bampasidis, G., Flasar, F. M., Romani, P. N., 2010. Titan trace gaseous composition from CIRS at the end of the Cassini-Huygens prime mission. *Icarus* 207, 461-476, DOI : 0.1016/j.icarus.2009.11.027.

JOYCE E. PENNER

Professor, Atmospheric, Oceanic and Space Sciences, University of Michigan
2455 Hayward, Ann Arbor, MI 48109-2143
Phone: 734-936-0519; Fax: 734-764-5137; Email: penner@umich.edu

Professional Preparation

B.A., 1970, Applied Mathematics, University of California, Santa Barbara
M.S., 1972, Applied Mathematics, Harvard University, Cambridge, MA
Ph.D., 1977, Applied Mathematics, Harvard University, Cambridge, MA

Appointments

1996- Professor, University of Michigan
1993–1995 Division Leader, Global Climate Research Division, Lawrence Livermore
National Laboratory, Livermore, CA
1993 Visiting Lecturer, University of California at Davis
1987–1996 Group Leader, Lawrence Livermore National Laboratory, Livermore, CA
1977–1996 Physicist, Lawrence Livermore National Laboratory, Livermore, CA

RESEARCH ACCOMPLISHMENTS

Joyce Penner is a leading expert on the interactions of chemistry, aerosols, and their effects on the climate system. Her work on aerosols began in early 1983, when Turco and co-workers as well as Crutzen and Birks pointed out the possible large climate effects of smoke aerosols from fires initiated in the aftermath of a large-scale nuclear war. Dr. Penner developed models to study the processes of coagulation and aerosol scavenging by clouds in the early smoke (1986). The inclusion of these processes both altered the total amount of smoke injected into the free troposphere and its optical properties. Dr. Penner's work has also had a major influence on the study of tropospheric chemical cycles. She developed a simplified treatment for the chemical interactions within the nitrogen cycle in the troposphere and used a global three-dimensional model together with comparison to observations to place constraints on the sources of nitrogen in the troposphere and the effects of anthropogenic emissions on tropospheric ozone (1991, 1994). This study was extended to treat nitrate and ammonium in aerosols (2007). She also developed simplified treatments for the sulfur cycle within a global model and used this model to quantify the climate forcing and climate response from anthropogenic sulfate aerosols (1994, 2000). This work has had a major effect in understanding how climate has changed over the last hundred years (IPCC, 1995). Dr. Penner began studies of climate forcing from aerosols produced in biomass burning (1992) as well as absorbing black carbon aerosols from fossil fuel burning (1993). These effects are now recognized as important to include in estimates of the total forcing over the last 100 years (IPCC, 1995). She was the coordinating lead author for IPCC (2001) Chapter 5: Aerosols, their direct and indirect effects. She was also report coordinator for the IPCC report on Aviation and the Global Atmosphere (1999). Dr. Penner has played a major role in promoting 3-dimensional model intercomparison studies, including the Intergovernmental Panel on Climate Change (IPCC) Intercomparison Workshop (1999), and more recently an intercomparison study of the indirect aerosol effect (2006).

GRADUATE STUDENTS AND POSTDOCTORAL SCHOLARS

Doctoral Students: Yang Zhang (GISS), Yan Feng (Argonne National Laboratory), Christiane Jablonowski (University of Michigan); Yang Chen (University of California at Irvine); Huan Guo (Princeton University), Minghuai Wang (PNNL)

Postdoctoral scholars: J. Dignon (LLNL), C. Chuang (LLNL), C. Liousse (CNRS), C. Price (Israel), D. Erickson (Oak Ridge National Lab), M. Herzog (University of Cambridge), X. Liu (PNNL), Seoung Soo Lee (NOAA)

RECENT PUBLICATIONS

- Wang, M., and J. E. Penner, 2010: Cirrus clouds in a global climate model with a statistical cirrus cloud scheme, *Atmos. Chem. Phys.*, 10, 5449-5474.
- Penner, J. E., Y. Chen, M. Wang, and X. Liu, 2009: Possible influence of anthropogenic aerosols on cirrus clouds and anthropogenic forcing, *Atmos. Chem. Phys.*, 9, 879-896, <http://www.atmos-chem-phys.net/9/879/2009/acp-9-879-2009.html>.
- Wang, M., J.E. Penner, and X. Liu, 2009: The coupled IMPACT aerosol and NCAR CAM3 model: Evaluation of predicted aerosol number and size distribution, *J. Geophys. Res.*, 114, D06302, doi:10.1029/2008JD010459.
- Wang, M. and J. E. Penner, 2009: Aerosol indirect forcing in a global model with particle nucleation, *Atmos. Chem. Phys.*, 9, 239-260, 2009, www.atmos-chem-phys.net/9/239/2009/.
- Lee, S. S., J.E. Penner, and S.M. Saleeby, 2009: Aerosol effects on liquid-water path of thin stratocumulus clouds, *J. Geophys. Res.*, 114, D07204, doi:10.1029/2008JD010513.
- Lee, S. S., J.E. Penner, and M. Wang, 2009: Comparison of a global-climate model simulation to a cloud-system resolving model simulation for long-term thin stratocumulus clouds, *Atmos. Chem. Phys.*, 9, 6497-6520.
- Feng, Y. and J.E. Penner, 2007: Global Modeling of Nitrate and Ammonium: Interaction of Aerosols and Tropospheric Chemistry, *J. Geophys. Res.*, 112, D01304, doi:10.1029/2005JD006404.
- Guo, H., J. E. Penner, M. Herzog, and S. Xie: 2007, Investigation of the first and second aerosol indirect effects using data from the May 2003 Intensive Operational Period at the Southern Great Plains, *J. Geophys. Res.*, 112, D15206, doi:10.1029/2006JD007173.
- Guo, H. J. E. Penner, M. Herzog, H. Pawlowska, 2007: Examination of the aerosol indirect effect under contrasting environments during the ACE-2 experiment, *Atmos. Chem. Phys.*, 7, 535-548, <http://www.atmos-chem-phys.net/7/535/2007/acp-7-535-2007.pdf>.
- Penner, J.E., J. Quaas, T. Storelvmo, T. Takemura, O. Boucher, H. Guo, A. Kirkevåg, J.E. Kristjánsson, and Ø. Seland, 2006: Model intercomparison of indirect aerosol effects, *Atmos. Chem. Phys.*, 6, 3391-3405.
- Chen, Y. and J.E. Penner, 2005: Uncertainty analysis for estimates of the first indirect effect, *Atmos. Chem. Phys.*, 5, 2935-2948, SRef-ID: 1680-7324/acp/2005-5-2935.
- Liu, X., J.E. Penner, and M. Herzog, 2005: Global modeling of aerosol dynamics: Model description, evaluation and interactions between sulfate and non-sulfate aerosols, *J. Geophys. Res.*, 110, D18206, doi:10.1029/2004JD005674.
- Penner, J.E., X. Dong and Y. Chen, 2004: Observational evidence of a change in radiative forcing due to the indirect aerosol effect, *Nature*, 427, 231-234.
- Penner, J.E., S.Y. Zhang, and C.C. Chuang, 2003: Soot and smoke aerosol may not warm climate, *J. Geophys. Res.*, 108, D21, Art. No. 4657, doi: 10.1029/2003JD003409.
- Penner, J.E., S. Y. Zhang, M. Chin, C.C. Chuang, J. Feichter, Y. Feng, I.V. Geogdzhayev, P. Ginoux, M. Herzog, A. Higurashi, D. Koch, C. Land, U. Lohmann, M. Mishchenko, T. Nakajima, G. Pitari, B. Soden, I. Tegen, L. Stowe, 2002: A comparison of model- and satellite-derived aerosol optical depth and reflectivity, *J. Atmos. Sci.*, 59, 441-460.
- Penner, J.E., M. Andreae, H. Annegarn, L. Barrie, J. Feichter, D. Hegg, A. Jayaraman, R. Leaitch, D. Murphy, J. Nganga, and G. Pitari, 2001: Aerosols, their Direct and Indirect Effects, Intergovernmental Panel on Climate Change, Report to IPCC from the Scientific Assessment Working Group (WGI), 289-348, Cambridge University Press.

NAME **PROF. John TURNER**
DATE OF BIRTH: 7 April 1953.
POSITION: Project Leader, Physical Sciences Division, British Antarctic Survey
Individual Merit Promotion (Band 3)

ACADEMIC QUALIFICATIONS

1974 B.Sc. University of Reading, Physics and Meteorology.
2003 Ph.D. Anglia Polytechnic University. Antarctic Climate Variability.

MEMBERSHIP OF PROFESSIONAL BODIES

Royal Meteorological Society (1975-)

APPOINTMENTS

1974-86 UK Meteorological Office, Bracknell
Research into numerical weather prediction and satellite meteorology.
One year forecasting in the Central Forecast Office.
1986-present British Antarctic Survey, Cambridge
Research into the meteorology and climatology of the Antarctic.
Currently leading the Work Package Climate Variability and
Modelling (CLIVARM)
1990 Visiting scientist, Byrd Polar Research Center, Ohio State University.
2007 Visiting Senior Research Fellow, University of Malaya.
2008-present Visiting Professor, University of Malaya

AWARDS

2001 The Len Curtis Award of the Remote Sensing and Photogrammetry
Society for the best scientific paper published in the open literature of
remote sensing in 2001.
2005 The International Journal of Climatology Award of the Royal
Meteorological Society.
2010 The SCAR Medal for Excellence in Antarctic Research.

PROFESSIONAL SERVICE

1987-2003 Member of the International Commission on Polar Meteorology
1987-1994 Secretary of the European Geophysical Society's European Polar Lows
Working Group
1988-1993 Council Member of the Royal Meteorological Society
1988-1991 Member of the Meetings Committee of the Royal Meteorological Society
1990-1993 Editor of *Weather* journal
1990-2002 UK Delegate to the SCAR (Scientific Committee on Antarctic Research)
Physics and Chemistry of the Atmosphere Working Group
1992-2000 Head of SCAR FROST project
1995-2003 President, International Commission on Polar Meteorology
1995-present Member of the Executive of the International Association of Meteorology
and Atmospheric Sciences (IAMAS)
1998-2002 Chairman, SCAR Physics and Chemistry of the Atmosphere Group
2002-2006 Chief Officer, SCAR Physical Sciences Standing Scientific Group
2002-2008 Member of the Steering Committee of the WCRP CliC Project
2002-present Member UK National Committee for Antarctic Research
2003-present Deputy Secretary General of IAMAS

2004-2008	Chair, Steering Committee of the SCAR Antarctica and the Global Climate System programme
2008-present	Past Chair, Steering Committee of the SCAR Antarctica and the Global Climate System programme
2008	Lead UK Delegate to SCAR, St Petersburg, Russia, July 2008
2006-2009	Chair, Steering Committee of the Antarctic Climate Change and the Environment (ACCE) initiative.
2010-present	Chair, SCAR Expert Group on Antarctic Climate Change and the Environment

PUBLICATIONS

Over 90 papers in the refereed literature, plus four books and many unrefereed publications.

SELECTED RECENT PUBLICATIONS

- Turner, J., Comiso, J. C., Marshall, G. J., Lachlan-Cope, T. A., Bracegirdle, T. J., Maksym, T., Meredith, M. P., Wang, Z., and Orr, A. Non-annular atmospheric circulation change induced by stratospheric ozone depletion and its role in the recent increase of Antarctic sea ice extent. *Geophysics Research Letters* 36, L08502, doi:10.1029/2009GL037524. 2009.
- Turner, J., Chenoli, S. N., abu Samah, A., Marshall, G. J., Phillips, T., and Orr, A. Strong wind events in the Antarctic. *Journal of Geophysical Research* 114, D18103, doi:10.1029/2008JD011642. 2009.
- Turner, J., Bindschadler, R. A., Convey, P., di Prisco, G., Fahrbach, E., Gutt, J., Hodgson, D. A., Mayewski, P. A., and Summerhayes, C. P. 2009. Antarctic Climate Change and the Environment. Cambridge, Scientific Committee on Antarctic Research, 526 pp.
- Turner, J. and Overland, J. E. Contrasting climate change in the two polar regions. *Polar Research* 28(2), 146-164. 2009.
- Turner, J., Overland, J.E. & Walsh, J.E. (2007) An Arctic and Antarctic perspective on recent climate change. *Int. J. of Climatol.*, 27, 277-293.
- Turner, J., Lachlan-Cope, T.A., Colwell, S.R., Marshall, G.J. & Connolley, W.M. (2006) Significant warming of the Antarctic winter troposphere. *Science*, 311, 1914-7.
- Turner, J., Connolley, W.M., Lachlan-Cope, T.A. & Marshall, G.J. (2006) The Performance of the Hadley Centre Climate Model (HadCM3) in High Southern Latitudes. *Int. J. of Climatol.*, 26, 91-112
- Turner, J., Colwell, S. R., Marshall, G. J., Lachlan-Cope, T. A., Carleton, A. M., Jones, P. D., Lagon, V., Reid, P. A. and Iagovkina, S. 2005. Antarctic climate change during the last 50 years. *Int. J. of Climatol.* 25: 279-294.
- Turner, J., Lachlan-Cope, T.A., Colwell, S. & Marshall, G.J. (2005) A positive trend in western Antarctic Peninsula precipitation over the last 50 years reflecting regional and Antarctic-wide atmospheric circulation changes. *Annals of Glaciology*, 41, 85-91.
- Turner, J. 2004. The El Nino-Southern Oscillation and Antarctica. *Int. J. of Climatol.* 24: 1-31.
- Turner, J. & Pendlebury, S.F. (2004) *The International Antarctic Weather Forecasting Handbook*. British Antarctic Survey, Cambridge.
- Turner, J., S.A. Harangozo, J.C. King, W. Connolley, T. Lachlan-Cope, and G.J. Marshall. (2003), An exceptional winter sea-ice retreat/advance in the Bellingshausen Sea, Antarctica, *Atmos. - Ocean*. 41, 171-85.

Resume for Daren Lu

Name: Lu (Family name), Da-ren (Given name)

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1. Brief experiences:

EDUCATION:

1956-1962: Peking University, Dept. of Geophysics, Atmospheric Physics

1962-1966: Graduate student study in Chinese Academy of Sciences, Atmospheric Physics

(*Note: no academy degree system in China until 1980s)

PROFESSIONAL EXPERIENCE

1967- Research scientist at IAP, as full research professor since 1985, Division director,
Director of LAGEO (Lab. for middle Atmosphere and Global Environment
Observation in 1995-2000)

1981-1982 visiting scientist in NOAA/ERL/ Aeronomy Lab., Boulder, CO, US

1987-1993 Expert team member of China's National High-Tech Program/ Space Technology
Area/ Manned Space Station and its Application

1993-1997 Steering Committee Member of China National High-Tech Program/ Space
Technology Area.

1988-1993, 1996-1999, 2006- Review Panel member of National Natural Science Foundation
of China in Atmospheric Sciences

1990-1993 Vice chair, Committee on Space Science and Application, Chinese Academy of
Sciences

2005 elected Member of the Chinese Academy of Sciences

PROFESSIONAL ACTIVITIES:

1988-2000, 2009-2012, Member, International Radiation Commission (IAMAS)

1992-2000, Member, International Committee on Middle Atmosphere (IAMAS)

1995-2003 Scientific Representative, SCOSTEP

1987-present, Council member, Chinese Space Science Society (CSSS) and member of
Commission on Space Physics, CSSS

1986-2005, Vice Chair, Committee on Atmospheric physics, Chinese Meteorological Society.

2007-present, Chair, China National Committee for International Association of Meteorology
and Atmospheric Science (CNC-IAMAS)

2008- Chief Editor of 'Advances in Atmospheric Science' (SCI cited journal)

Actively involved in IUGG/IAMAS related activities since 1980

2. Research topics and activities

During the last 45 years, he has been involved in basic and high-tech research in various fields of atmospheric science, solar-terrestrial physics, earth observation, and global change research. In 1960s, mainly involved in thunderstorm and atmospheric radio emission study. Since 1970s, involving in lidar atmospheric remote sensing of aerosol distribution and boundary layer structure, as well as atmospheric visibility. Since 1975, involving in microwave remote sensing with both developing ground-based MW radiometer for field observation and space-borne MW remote sensing retrieval method. In 1980, he firstly suggested the principle of combined active and passive microwave remote sensing for precipitation distribution and established an iterative solution for combined remote sensing equations. Since mid-1970s, has been involving in atmospheric aerosol remote sensing with optical observation. In 1981, he firstly suggested a retrieval scheme for aerosol size distribution by using joint solar-direct spectral irradiance and forward scattered radiances. During last 20 years, he was involving middle atmosphere research, as chief scientist to develop the first VHF/ST radar in mainland China, doing research on gravity waves, ozone variation, volcanic eruption, as well as stratosphere- troposphere coupling etc. Also during late 1990s, he involved in AMSR (microwave sensor onboard Japanese earth observation satellite ADEOS) retrieval development as PI.

Since late 1980s, he took part in China National High-Tech Development Program (863 Program) on space technology as the expert of science and application. He is the chief scientist of Earth Environment Monitoring Unit on board China spacecraft SZ-3 which was launched in 2002. He also actively involved in earth observation high-tech R&D programs, as well as R&D of ground –based atmosphere remote sensing system.

3. On-going Projects (as Chief Scientist)

1. Composite Observation for Stratosphere-Troposphere Exchange over Tibet (Approved by NSFC) 2008-2010
2. Integrated system development for automatic observation of cloud, visibility, and present weather, 2008-2011
3. Stratospheric Processes and its influence to climate and weather of East Asia (2010-2014, approved by Ministry of Science and Technology of China)

4. Teaching experience

Concurrent Professorship at:

Graduate school, Chinese Academy of Sciences, Beijing
China University of Science and Technology, Hefei

Fudan University, Shanghai
Nanjing University, Nanjing
Lanzhou University, Lanzhou
Peking University, Beijing

Advisor of 8 PhD candidates and 6 Master Degree students, 2 Postgraduate-Scholar in past 5 years,

5. Publications (selected):

- Li Qishen & Lu Daren, 1963: Radar Scattering induced by fluctuation of atmospheric refractivity index. Chinese J. of Meteorology, Vol. 33 No.1, (in Chinese)
- Lu Daren & Lin Hai 1980: Comparison of radar and radiometer in precipitation remote sensing and their combined use. Chinese J. of Atmos. Sci. Vol.4, No.1, 30-39. (in Chinese)
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MEMBERSHIP IN PROFESSIONAL SOCIETIES

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 Israel Meteorological Society
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LIST OF REFEREED SCIENTIFIC ARTICLES

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