CV of

Prof. B. N. Goswami, FASc,FNA,FNASc,FTWAS

1.	Full name(s)	Prof. Bhupendra Nath Goswami
2.	Date & Place of Birth	1-8-1950, Assam
3.	Designation & Office Address	SERB Distinguished Fellow Department of Physics, Cotton University Panbazar, Guwahati 781001 Assam, India
4.	Telephone Mobile phone Email	 +919860201144 +917020149530 bhupengoswami100@gmail.com
5.	Residential address	TUSTI, House No. 95, Opposite Primary Health Centre Kharghuli Main Road Kharghuli Guwahati 781004 Assam, India

7. Academic & Professional Qualifications
(State in chronological order)

Sr.No.	Degree / Diploma	University	Year	Achievements / Subjects
1.	High School Leaving certificate	Assam State Board	1965	First Class
2.	Pre-University	Assam State Board	1966	6^{th} Rank

2.	B.Sc.	Cotton College, Guwahati	1969	Physics (Hons)
4.	M.Sc.	Guwahati University	1971	Physics
5.	Ph.D.	Gujarat University (Physical Research Laboratory)	1976	Plasma Physics

8. Employment particulars

(Start with present one) :

Name & address of Employer	Period	Designation
Cotton University, Guwahati	May 2018--	SERB Distinguished Fellow
Cotton University Guwahati 781001, Assam	May 2017 – April 2018	INSA Senior Scientist
Indian Institute of Science Education and Research, Pune	Sept. 2014 –April.2017	Pisharoty Chair Professor, MoES Earth and Climate Science Department
Indian Institute of Tropical Meteorology, Pashan, Pune-411008	June 2006 – July 2014	Director
Centre for Atmospheric Sciences, Indian Institute of Science, Bangalore	2005 (August)- to 2006 (May)	Chairman
Institute for Global Environment and Society (IGES), Maryland, USA	1998 (June-July)	Visiting Research Scientist
Centre for Atmospheric Sciences, Indian Institute of Science, Bangalore	1998 (May)	Professor
Program in Atmospheric and Oceanic Sciences, Princeton University, Princeton, USA	1994 (July) 1995 (January) 1995 (May-July)	Visiting Research Scientist
United Nations Industrial Development Organization (UNIDO) at International Centre For Science and High Technology, Trieste, Italy	1992 (July-August)	Consultant
Centre for Atmospheric Sciences, Indian Institute of Science,	1992-1998	Associate Professor

Bangalore		
Centre for Ocean-Land-Atmosphere Interactions Univ. of Maryland, USA	1988-1989	Senior Visiting Research Associate
Centre for Atmospheric Sciences, Indian Institute of Science, Bangalore 560 012	1985-1992	Assistant Professor
Indian Institute of Technology, New Delhi	1983-1985	Senior Scientific Officer
NASA, GSFC, Modelling and Simulation Branch, Greenbelt, MD-USA	1982-1983	Visiting Scientist of Universities Space Research Association, USA
NASA, GSFC, Modelling and Simulation Branch, Greenbelt, MD-USA	1980-1982	Resident Research Associate of National Research Council, USA
M.I.T, Cambridge, Mass., USA (with Prof. Jule Charney)	1978-1980	Post Doctoral Research Associate
Physical Research Laboratory, Ahmedabad, India	1978 (March-September)	Research Associate
Physical Research Laboratory, Ahmedabad, India	1976-1978	Visiting Scientist

Membership of Academic / Professional bodies, with details of positions held :

- **Member, Joint Scientific Committee (JSC) of World Climate Research Program (WCRP) supported by WMO/ICSU (2011-2014).**
- **Member of the Council of Indian Academy of Science, Bangalore, (2010- 2012)**
- **Member,** American Meteorological Society
- **Member, Academic Council, University of Pune, Pune, India**
- **Member, Science and Engineering Research Board, Department of Science and Technology, New Delhi (2011-2014**
- **Chairman, Research Advisory Committee, INCOIS, Hyderabad (2012-2015).**
- **Member, Senate, IISER-Pune (2010-20014)**
- **Member,** CLIVAR Monsoon Panel of the International CLIVAR Project of World Climate Research Programme (WCRP) (1999-2002)
- **Member**, WCRP National Committee (1995-1997)
- **Life Member**, Indian Meteorological Society
- **Member**, World Climate Research Programme (WCRP) National Committee (1995-1997)
- **Member,** Programme Advisory Committee (PAC) in Atmospheric Sciences of Department of

Science and Technology (1998-2001)

- **Member,** Physical Sciences Research Committee of CSIR (1998- 2004)
- **Member**, Advisory Committee to evaluate DST FIST Proposals
- **Member,** Research Council of Centre for Earth Science Studies (CESS), 2003-2005, Trivandrum
- **Secretary,** Indian Meteorological Society, Bangalore Chapter (1996- 2000)
- **Member,** Editorial Board of International Journal of Climatology
- **Member,** Science Education Panel of the Indian Academy of Science, Bangalore (2004-2006)
- **Member,** Earth Commission, Ministry of Earth Sciences, Govt. of India
- **Member,** CLIVAR Scientific Steering Group (WCRP) – 4 years from January 1, 2008.
- **Ex-officio Member,** Expert Committee set up by Prime Minister on Impacts of Climate Change – 3 years from May 2007
- **Member,** Standing Committee on Ocean Resources & Meteorology (SC-OM) since May 2007, ISRO and MoES
- **Member,** Steering Committee – National Disaster Management Authority since February 2007
- **Member,** SERC (Science & Engineering Research Council) – of DST for 3 years (2007-2010) with effect from 19 March 2007.
- **Member,** Sectional Committee V (Earth Sciences) INSA for 3 years from January1.2007
- **Member,** S&T Cooperation – China - as nodal scientist – Climate Change & Forecasting, DST
- **Member,** India UK S&T Cooperation (Joint Evaluation Panel) Weather Science and Climate Change), DST
- **Member,** Committee on Definition of Monsoon Season, MoES, New Delhi
- **Member**, CLIVAR Monsoon Panel of the International CLIVAR Project of World Climate Research Programme (WCRP)
- **Member,** Advisory Committee to evaluate DST FIST Proposals on Earth Sciences
- **Member,** Program Advisory & Monitoring Committee (PAMC), Indian Climate Research Programme, DST
- **Member,** Program Advisory Council, Earth Sciences, DST
- **Member,** Research Advisory Committee, NCAOR, Goa
- **Member,** Indian National Science Academy, Sectional Committee on Earth Sciences
- **Member,** PAMC-WCRP of the Department of Science & Technology
- **Member,** Project Management Council (PMC) meeting of Project INDOMODSATCORE Project
- **Member,** Sectional Committee on Earth Sciences, Indian Academy of Science, Bangalore
- **Member,** Research Advisory Committee (RAC) of Indian National Centre for Ocean Information Services (INCOIS), Hyderabad
- **Member,** Program Advisory and Monitoring Committee-Himalayan Glaciology

(PAMC-HG) of DST

- **Member,** Editorial Board, International Journal of Climatology, Royal Meteorological Society
- **Member,** Editorial Board, Current Science, Current Science Association
- **Member,** Editorial Board, Mausam
- **Member,** Scientific Advisory and Review Committee (SARC) for Atmospheric Science Programs, MoES, New Delhi, for 3 years w.e.f. 12 August 2008.
- **Member,** Core Committee on "National Mission on Strategic Knowledge on Climate Change" for Implementation of the National Mission on Climate Change, DST, New Delhi for 3 years w.e.f. 26 August 2008.
- **Member**, Joint Scientific Committee of World Climate Research Programme (WCRP)/IOC/ICSU, WMO for the period 1 January 2009 to 31 December 2012.
- **Indian Member,** on the Scientific Planning Group of the Asia Pacific Network (APN SPG) for Global Change Research, Kobe, Japan**.**
- **Honorary Editorial Board Member** for the Magazine "Planet Earth", Hyderabad.
- **Member, Steering Committee,** Irrigation Department, Govt. of Maharashtra to undertake hydrological studies for the Mumbai Metropolitan Region.
- **Convener, INSA, Pune Chapter** for 3 years 1.4.2009 to 31.3.2012.
- **Chairman, Standing Advisory Committee** for Atmospheric Research and Climate Change (SAC-ARCC), MoES, for a period of 3 years with effect from 25th Feb. 2009.
- **Member, Judging Committee for the 'Biennial MAUSAM Award", June 2009 to May 2013.**
- **Indian Steering Committee for the FOS 2011 - Indo-US S&T Forum (IUSSTF)**
- **External Expert Member, Senate, Tezpur University, Tezpur (2012- 16)**
- **Chairman, Steering Committee for Centre for Brahmaputra Studies, Guwahati University.**

Recognition / Awards / Honours / Fellowships

- **Shanti Swarup Bhatnagar Award**, in Earth, Atmosphere, Ocean and Planetary Sciences, 1995 by Council of Scientific and Industrial Research, India
- **Hari Om Ashram Prerit Vikram Sarabhai Award** in Space Science including Atmospheric Science, 1994, Physical Research Laboratory, Ahmedabad
- **Kamal Kumari National Award in Science and Technology, 2008 by Kamal Kumari Foundation**
- **K.R. Ramanathan Prize by Indian National Science Academy, 2008**
- **Fellow, The World Academy of Sciences (FTWAS)**
- **Fellow, Indian Academy of Sciences, (FASc)**

- **Fellow, Indian National Science Academy, (FNA)**
- **Fellow, National Academy of Sciences, India ,(FNASc)**
- **Fellow, Indian Meteorological Society (IMS)**
- **National Award in Atmospheric Science and Technology, 2014 by the Ministry of Earth Sciences**
  - **VASVIK National Industrial Research Award in Environmental Science and Engineering for 2012**
  - **K. R. Ramanathan Medal, Indian Geophysical Union, 2014**
  - **Life Time Achievement Award in Science and Technology by Government of Assam, 2018**

Institution Building

With his Vision '*To make IITM a Global Centre of Excellence in basic research on tropical ocean-atmosphere system required for improving weather and climate forecasts over the monsoon region*' Prof Goswami provided inspired leadership during 2006 and 2014 and transformed IITM to a leadership position in climate research. He achieved this goal through implementing

(a) Focused Science Plan in (i) Seasonal and Extended Prediction of monsoon, (ii) Global and regional climate change research and (iii) Physics and Dynamics of Tropical Clouds
(b) Infrastructure development , both physical and scientific
(c) Capacity building and manpower development

The computing and communication infrastructure in the Institute has been 20 year behind for doing state of the art climate modeling and large scale diagnostic study with large volume of data. The need for a high performance computer (super computer) was felt for a long time but the previous Directors could not convince the authorities to provide one to IITM. Prof. Goswami as a part of the 11-Plan proposal convinced the MoES on the need and a HPC with more than 5 Teraflop was procured in 2008.

With planned augmentation, the capacity was increased to 70 TF in 2010 and further to 790 TF in 2014! **In November,2014, this is No. 1 Supercomputer in India and No.34 the world!!**

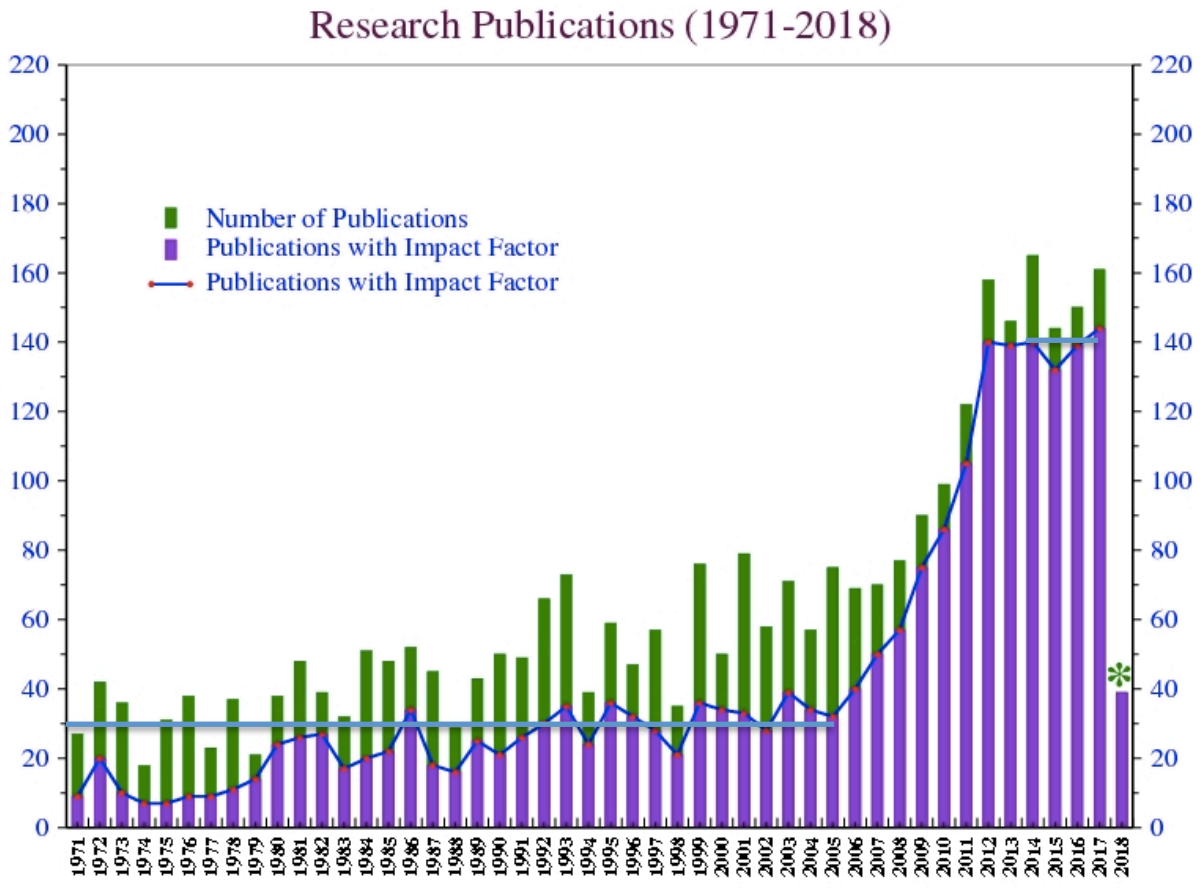
With vigorous efforts Prof. Goswami inducted about 70 new and bright young scientists to IITM during this period thereby reducing the average of scientists from 47 to 42 years.

He also started several innovative programs such as the Centre for Advanced Training in Earth System Science and Climate (CAT-ESSC), a job-linked Training program to attract bright young scientists to the filed.

He introduced the concept of 'Monsoon Mission' to involve the academic community to work on the National Operational Weather and Climate Prediction system and improve the skill of the weather and

climate forecasts. This has led to a quantum jump in young scientists in the country working on model developments for improving forecasts of weather and climate.

As a result of addressing big science questions adequately supported by necessary infrastructure and training, the impact factor publications of IITM increased by a factor of almost 5 (from 30 to 140) during the past eight years without significant increase in the total number of scientists (see Figure below). Not only the quantity of the publications but the quality of the publications increased by a factor of almost 8 with average impact factor per publication improving from 0.3 in 2007 to 2.5 in 2014. Through these dedicated efforts, Prof. Goswami has been able to take the country in the field of weather and climate science from about 25 years behind the best in the world in 2007 to a position comparable to the global leaders in the field in 2014. In 2016 IITM published 158 papers with an average impact factor of 3.03 per paper! In Earth and Climate Science, this quality of publication is not only best amongst any Earth and Climate science institute in India but also competitive amongst the best Earth and Climate science Institutes in the world. This is again a result of Prof. Goswami's induction of a number of young scientists during his tenure and build up culture of doing cutting edge research in the field.



Please note that impact factor publications (magenta) remained below 30 for more than 4 decades of IITM, and it went up by a factor of almost 5 to 140+ during Prof Goswami's stewartship of 8 years between 2006 and 2014. Noteworthy is also that it is during the last 4 years after his superannuation, it has remained flat or decreasing! (Courtesy IITM website under Publications)

Research Areas:

Indian Summer Monsoon Variability, Predictability of the Tropical Coupled Ocean-Atmosphere System, Climate Modelling, Modelling of Large Scale Air-Sea Interactions in the Tropics, Theoretical Study of Large Scale Tropical Dynamics using Simple Models.

Publications and Quality:

- **Papers in referred Journal/referred book chapters: 189 with average impact factor of more than 3.6**
- **3 papers in Nature, 1 in Nature Communications and 2 in Science**
- **Highest cited paper: IOD paper in Nature Sep. 23, 1999: more than 4800 times** (In a recent bibliometric study by Bakthavachalam Elango and Yuh-Shan Ho (CURRENT SCIENCE, VOL. 112, NO. 8, 25 APRIL 2017, this paper ranks 15th amongst 27 highest cited papers (total citation >1000) published from Indian Institutions between 1901 and 2014!)
- **Paper on Extreme Rainfall events in Science, 2006 is cited more than 1770 times**
-
- **No. of papers cited more than 1000 times; 4**
-
- **H-index : 61** (Google Scholar)

Total Citations: 22,200 (Google Scholar)

Full List of Peer Reviewed Publications

Publications: (Total : 189) as on December, 30, 2021

1. Dipjyoti Mudiar,Anupam Hazra,S. D. Pawar,Rama Krishna Karumuri,Mahen Konwar,Subrata Mukherjee,M. K. Srivastava,Earle Williams,**B. N. Goswami**, 2021: Role of Electrical Effects in Intensifying Rainfall Rates in the Tropics, Geophys. Res. Letters. First published: 28 December 2021, https://doi.org/10.1029/2021GL096276

2. Mudiar, Dipjyoti, S.D. Pawar, A. Hazra, V. Gopalkrishnana, D. M. Lal, K. Chakravarty, M.A. Domkawale, M. K. Srivastava, **B. N. Goswami**, E.R. Williams, 2021: Lightning and precipitation: The possible electrical modification of observed raindrop size distributizons, Atmospheric Research, https://doi.org/10.1016/j.atmosres.2021.105663
3. Zahan Yasmin & Rahul Mahanta & P. V. Rajesh & **B. N. Goswami**, 2021: Impact of climate change on North-East India (NEI) summer monsoon rainfall, Climatic Change https://doi.org/10.1007/s10584-021-02994-5
4. Choudhury, B.A., Rajesh, P.V., Zahan, Y. and B. N. Goswami. Evolution of the Indian summer monsoon rainfall simulations from CMIP3 to CMIP6 models. *Clim Dyn* (2021). https://doi.org/10.1007/s00382-021-06023-0
5. Zahan Yasmin, P. V. Rajesh, B. Abida Choudhuri and **B. N. Goswami**, 2021: Why Indian summer Monsoon Circulation Indices? Fidelity in Representing Rainfall Variability and Teleconnections, Q. J. Roy. Met. Soc., http://doi.org/10.1002/qj.3972
6. Rajesh, P. V. **B. N. Goswami**, B. Abida Choudhury and Yasmin Zahan, 2020: Large Sensitivity of Simulated Indian Monsoon Rainfall (ISMR) to Global Warming: Implications of ISMR Projections, J. Geophys. Res. doi: 10.1029/2020JD033511 .
1. Borah, P. J., V. Venugopal, J. Sukhatme, P. Muddebihal and **B. N. Goswami**, 2020: Indian Monsoon Derailed by a North Atlantic Wavetrain, Science, doi:10.1126/science.aay6043
2. Saha, S. K., Hazra, A., Pokhrel, S.,Chaudhari, H. S., Rai, A., Sujith, K.,H. Rahaman and **B. N. Goswami** (2020). Reply to comment by E. T. Swenson, D. Das, and J. Shukla on "Unraveling the mystery of indian summer monsoon prediction: Improved Estimate of predictability limit". Journal of Geophysical Research: Atmospheres,125, e2020JD033242. https://doi.org/10.1029/2020JD033242
3. Pandey, Pushpa, Suneet Dwivedi, **B. N. Goswami**, and Fred Kucharski, 2020: A new perspective on ENSO-Indian summer monsoon rainfall relationship in a warming environment. Climate Dynamics, DOI 10.1007/s00382-020-05452-7
4. B.A. Choudhury, **B.N. Goswami**, Yasmin Zahan, P.V. Rajesh, 2020: Seasonality in power law scaling of convective and stratiform rainfall with lightning intensity over Indian Monsoon regions, Atmospheric Research 248 (2021) 105265, https://doi.org/10.1016/j.atmosres.2020.105265
5. Rajesh, P.V., **Goswami, B.N.**, 2020: Four-dimensional structure and sub-seasonal regulation of the Indian summer monsoon multi-decadal mode. *Clim Dyn* (2020). https://doi.org/10.1007/s00382-020-05407-y
6. **B. N. Goswami** and Neena Joseph Mani, 2020: Prediction, Predictability, and Multi-Decadal Variability of the South Asian Monsoon, *Chap.7 in The Multiscale Global*

Monsoon System (4th ed.), Edited by C. P. Chang et al., by World Scientific Publishing Co. pp 79-88.

7. Anupam Hazra, Hemantkumar S. Chaudhari, Subodh K. Saha, Samir Pokhrel, Ushnanshu Dutta, **B. N. Goswami** 2019: Role of cloud microphysics in improved simulation of the Asian monsoon quasi−biweekly mode (QBM) Climate Dynamics, https://doi.org/10.1007/s00382-019-05015-5
8. Rajib Chattopadhaya, S. K. Dixit and **B. N. Goswami**, 2019: Modal Rendition of ENSO Diversity, Scientific Reports, https://doi.org/10.1038/s41598-019-50409-4
9. Suryachandra Rao, **B. N. Goswami** et al., 2019: Monsoon Mission: A targeted activity to improve monsoon prediction across scales, Bulletin of American Meteorological Society (BAMS), © 2019 American Meteorological Society, DOI:10.1175/BAMS-D-17-0330.1
10. Nitesh Sinha, S. Chakraborty, Rajib Chattopadhyay, **B.N. Goswami**, P.M. Mohan, Dipak K. Parua, Dipankar Sarma, Amey Datye, S. Sengupta, Subir Bera, K.K. Baruah, 2019: Isotopic investigation of the moisture transport processes over the Bay of Bengal, Journal of Hydrology, (https://doi.org/10.1016/j.hydroa.2019.100021)
11. K. Sujith, Subodh Kumar Saha, Archana Rai, Samir Pokhrel, Hemantkumar S. Chaudhari,Anupam Hazra, Raghu Murtugudde, **B. N. Goswami**, 2019: Effects of a Multilayer Snow Scheme on the Global Teleconnections of the Indian Summer Monsoon, Q. J. Roy. Meterol. Soc. DOI: 10.1002/qj.3480
12. Subodh K. Saha, Anupam Hazra, Samir Pokhrel, Hemantkumar S. Chaudhari and **B. N. Goswami**, 2019: Unraveling the Mystery of Indian Summer Monsoon Prediction: Improved Estimate of Predictability Limit, J. Geophys.Res. (Atmospheres), doi: 10.1029/2018JD030082
13. Kaustav Chakravarty, Samir Pokhrel, Mahesh Kalshetti1, Anish Kumar Muralidharan Nair, Madhu Chandra R. Kalapureddy, Sachin M. Deshpande, Subrata Kumar Das, Govindan Pandithurai, and **B N Goswami**, 2018 : Unraveling of cloud types during phases of monsoon intraseasonal oscillations by a Ka-band Doppler weather radar. Atmos Sci Lett. https://doi.org/10.1002/asl.847
14. Mudiar,D., S. Pawar, A. Hazra, M. Konwar, V. Gopalakrishnan, M.K. Srivastava and **B.N. Goswami**, 2018: Quantification of observed electrical effect on the raindrop size distribution in tropical clouds , Journal of Geophysical Research: Atmospheres , DOI: 10.1029/2017JD028205
15. Ankur Srivastava, Maheswar Pradhan, **B. N. Goswami** and Suryachandra A. Rao, 2017: Regime shift of Indian summer monsoon rainfall to a persistent arid state: external forcing versus internal variability, Meteorol Atmos Phys (2017). https://doi.org/10.1007/s00703-017-0565-2
16. Hazra , Anupam, Hemantkumar S. Chaudhari , Subodh Kumar Saha , Samir Pokhrel1 and **B. N. Goswami, 2017:** Progress towards achieving the Challenge of Indian Summer Monsoon Climate Simulation in a Coupled Ocean-Atmosphere Model, J. Adv. Modeling Earth Systems, doi: 10.1002/2017MS000966

17. **Goswami B. N.** and Soumi Chakravorty, 2017: Dynamics of the Indian Summer Monsoon Climate , Oxford Research Encyclopedia (Climate Science) , doi: 10.1093/acrefore/9780190228620.013.613
18. A.K. Sahai, S. Sharmila, R. Chattopadhyay, S. Abhilash, S. Joseph, N. Borah, **B. N. Goswami**, D. S. Pai and A. K. Srivastava, 2017: Potential predictability of wet/dry spells transitions during extreme monsoon years: Optimism for dynamical extended range prediction, Nat Hazards (2017) 88: 853. https://doi.org/10.1007/s11069-017-2895-

2016

19. **Goswami, B.N**., S.A. Rao, D. Sengupta, and S. Chakravorty. 2016. Monsoons to mixing in the Bay of Bengal: Multiscale air-sea interactions and monsoon predictability. *Oceanography* 29(2):18–27, http://dx.doi.org/10.5670/oceanog.2016.35.

20. Goswami, B.B. & **Goswami, B.N**., 2016: A road map for improving dry-bias in simulating the South Asian monsoon precipitation by climate models. *Climate Dynamics* (Nov. 2016). doi:10.1007/s00382-016-3439-2

21. Medha Deshpande ; P. Mukhopadhyay ; Michiko Masutani ; Zaizhong Ma ; Lars Peter Riishojgaard ; Michael Hardesty ; Dave Emmitt ; T. N. Krishnamurti ; **B. N. Goswami**, 2016, Analysis and evaluation of Observing System Simulation Experiments (OSSEs) forecast data for Indian summer monsoon , *Proc. SPIE* 9882, Remote Sensing and Modeling of the Atmosphere, Oceans, and Interactions VI, 98821P (May 3, 2016); doi:10.1117/12.2223656

22. Kumar, Siddharth, Anika Arora, R. Chattopadhyay, Anupam Hazra, Suryachandra A. Rao and **B. N. Goswami,** 2016, Seminal role of stratiform clouds in large-scale aggregation of tropical rain in boreal summer monsoon intraseasonal oscillations, Clim. Dyn. , DOI 10.1007/s00382-016-3124-5

2015

23. Halder, S., Saha, S. K., Dirmeyer, P. A., Chase, T. N., and **Goswami, B. N**., 2015: Investigating the impact of land-use land-cover change on Indian summer monsoon daily rainfall and temperature during 1951–2005 using a regional climate model, Hydrol. Earth Syst. Sci. Discuss., 12, 6575-6633, doi:10.5194/hessd-12-6575-2015, 2015
24. R. Krishnan, T.P. Sabin, R. Vellore, M. Mujumdar, J. Sanjay, **B. N. Goswami**, F. Hourdin, J.-L. Dufrene, P. Terray, 2015: Deciphering the desiccation trend of the South Asian monsoon hydroclimate in a warming world. Climate Dynamics, DOI 10.1007/s00382-015-2886-5
25. Dwivedi, Suneet, **B. N. Goswami** and F. Kucharsk, 2015: Unraveling the missing link of ENSO Control over the Indian Monsoon Rainfall, Geophys. Res. Lett. 42, doi:10.1002/2015GL065909.
26. Goswami, B., R. Krishna, P. Mukhopadhyay, M. Khairoutdinov, and **B. N. Goswami**, 2015: Simulation of the Indian Summer Monsoon in the Superparameterized Climate Forecast System version 2: Preliminary Results. J. Climate. doi:10.1175/JCLI-D-14-00607.1,
27. Dhrubajyoti Samanta, M. K. Dash, **B. N. Goswami** and P. C. Pandey, 2015: Extratropical Anticyclonic Rossby Wave Breaking and Indian Summer Monsoon Failure, Climate Dynamics , DOI 10.1007/s00382-015-2661-7.

28. Mathew Roxy, Kapoor Ritika, Pascal Terray, Raghu Murtugudde, Karumuri Ashok, and **B.N. Goswami**, 2015 : Drying of Indian Subcontinent by Rapid Indian Ocean Warming and a Weakening Land-Sea Thermal Gradient, Nature Communications , DOI: 10.1038/ncomms842
29. Rajib Chattopadhyay, R. Phani1, C. T. Sabeerali, A. R. Dhakate, K. Salunke, S. Mahapatra, A. Suryachandra Rao, **B. N. Goswami**, 2015: Influence of Extra-tropical Sea Surface Temperature on the Indian summer Monsoon: An unexplored source of seasonal predictability, Quart. J. Roy. Met. Soc. DOI:10.1002/qj.2562
30. Swapna P., Roxy M., Aparna K., Kulkarni K., Prajeesh A.G., Ashok K., Krishnan R., Moorthi S., Kumar A., **Goswami B.N**., 2015: IITM Earth System Model: Transformation of a Seasonal Prediction Model to a Long Term Climate Model, Bulletin of the American Meteorological Society, 96, 1351-1367, DOI:10.1175/BAMS-D-13-00276.1.
31. Hazra Anupam, H. S. Chaudhari, S. A. Rao, **B. N. Goswami**, A. Dhakate, S. Pokhrel and S.K.Saha, 2015 : Impact of revised cloud microphysical scheme in CFSv2 on the simulation of the India summer monsoon, Int. J. Climatol. DOI: 10.1002/joc.4320
32. **Goswami B. N.**, R. H. Kriplani, H. P. Borgaonkar and B. Preethi, 2015: Multi-decadal variability of Indian summer monsoon rainfall using proxy data, Climate Change : Multi-decadal and beyond, Chap. 21, pp. 327-346, (Editors: C.P. Chang, Michael Ghil, Mojif Latif, and Mike Wallace), World Scientific, New Jersey, London, Singapore, Beijing, Chennai

2014

33. C. T. Sabeerali · Suryachandra A. Rao · A. R. Dhakate · K. Salunke · **B. N. Goswami**, 2014 : Why ensemble mean projection of south Asian monsoon rainfall by CMIP5 models is not reliable? Clim Dyn, DOI 10.1007/s00382-014-2269-3

34. Taraphdar, S., P. Mukhopadhyay, L. Ruby Leung, F. Zhang, S. Abhilash and **B.N. Goswami**, 2014 : Role of moist processes in the intrinsic predictability of Indian ocean cyclones, Journal of Geophysical Research, 119, July 2014, DOI:10.1002/2013JD021265, 1-17

35. Konwar, Mahen S.K. Das, S.M. Deshpande, K. Chakravaarty and **B.N. Go swami**, 2014 : Microphysics of cloud and rain water over the Western Ghat. J. Geophys. Res. Atmosphere, doi : 10.1002/2014JDO021606.

36. Bidyut, B., Go swami, Medha Deshpande, P. Mukhopadhyay, S.K. Saha, Suryachandra A. Rao, Raghu Murtugudde, **B.N. Goswami**, 2014, Simulation of monsoon intraseasonal Variability in NCEP CFS v.2 and its role on Systematic bias, Climate Dynamics, doi : 10.1007/soo382-014-2089-5.

37. Abhilash S., Sahai A.K., Borah N., Chattopadhyay R., Joseph S., Sharmila S., De S., **Goswami B.N**., Arun Kumar, Prediction and monitoring of monsoon intraseasonal oscillations over Indian monsoon region in an ensemble prediction system using CFSv2, **Climate Dynamics**, online, January 2014, DOI:10.1007/s00382-013-2045-9, 1-15

38. Goswami B.B., Deshpande M.S., Mukhopadhyay P., Saha Subodh K., Rao Suryachandra A., Murthugudde R., **Goswami B.N.**, 2014: Simulation of monsoon intraseasonal variability in NCEP CFSv2 and its role on systematic bias, **Climate Dynamics**, Published online, February 2014, DOI:10.1007/s00382-014-2089-5, 1-21

39. Abhilash S., Sahai A. K., Pattnaik S., **Goswami B.N.**, Arun Kumar, 2014: Extended range prediction of active-break spells of Indian summer monsoon rainfall using an ensemble prediction system in NCEP Climate Forecast System, ***International Journal of Climatology***, Vol.34, 2014, DOI:10.1002/joc.3668, 98-113

2013

40. Carolina Vera, William Gutowski, R. Mechoso, **B.N. Goswami,** Chris C. Reason, et al., 2013, Understanding and Predicting Climate Variability and Change of monsoon regions, in Climate Science for Serving Society, Research Modeling and Prediction Priorities, Ghasim Asrar, and James Harrell (Eds.) Sorubger.

41. Sahai A.K., Chattopadhyay R., Joseph S., Borah N., **Goswami B.N.**, 2013: New method to compute the principal components from self-organizing maps: an application to monsoon intraseasonal oscillations, ***International Journal of Climatology*** , Published online, December 2013, DOI:10.1002/joc.3885, 1-15

42. Abhilash S., Sahai A.K., Borah N., Chattopadhyay R., Joseph S., Sharmila S., De S., **Goswami B.N.**, 2013: Does bias correction in the forecasted SST improve the extended range prediction skill of active-break spells of Indian summer monsoon rainfall? , ***Atmospheric Science Letters*** , Published online, December 2013, DOI:10.1002/asl2.477, 1-6

43. Mahakur M., Prabhu A., Sharma A.K., Rao V.R., Senroy S., Singh R., **Goswami B.N.**, 2013: A high-resolution outgoing longwave radiation dataset from Kalpana-1 satellite during 2004-2012 , ***Current Science***, 105, October 2013, 1124-1133

44. Padmakumari B., Jaswal A.K., **Goswami B.N.**, 2013: Decrease in evaporation over the Indian monsoon region: implication on regional hydrological cycle, ***Climatic Change***, Published online, October 2013, DOI:10.1007/s10584-013-0957-3, 1-13

45. Goswami B.B., Mukhopadhyay P., Khairoutdinov M., **Goswami B.N.**, 2013: Simulation of Indian summer monsoon intraseasonal oscillations in a superparameterized coupled climate model: need to improve the embedded cloud resolving model, ***Clim. Dyn.***, 41, September 2013, DOI:10.1007/s00382-012-1563-1, 1497-1507

46. Borah N., Sahai A.K., Chattopadhyay R., Joseph S., Abhilash S., **Goswami B.N.**, 2013: Self-organizing map-based ensemble forecast system for extended range prediction of active/break cycles of Indian summer monsoon, ***J. Geophy. Res.***, published online 30 August 2013, Vol. 118, DOI:10.1002/jgrd.50688, 1-13

47. Siddharth Kumar, Hazra A., **Goswami B.N.**, 2013: Role of interaction between dynamics, thermodynamics and cloud microphysics on summer monsoon precipitating clouds over the Myanmar Coast and the Western Ghat, ***Clim. Dyn.***, published online August 2013, DOI:10.1007/s00382-013-1909-3, 1-14

48. **Goswami B.N.**, Krishnan R., 2013: Opportunities and challenges in monsoon prediction in a changing climate - Editorial of Special OCHAMP issue, ***Clim. Dyn.***, vol. 41, July 2013, DOI:10.1007/s00382-013-1835-4, 1

49. Sharmila S., Pillai P.A., Joseph S., Roxy M., Krishna R.P.M., Chattopadhyay R., Abhilash S., Sahai A.K., **Goswami B.N.**, 2013: Role of ocean-atmosphere interaction on northward propagation of Indian summer monsoon intra-seasonal oscillations (MISO), ***Clim. Dyn.***, 41, September 2013, DOI:10.1007/s00382-013-1854-1, 1651-1669

50. Abhik S., Mukhopadhyay P., **Goswami B.N.**, 2013: Evaluation of mean and intraseasonal variability of Indian summer monsoon simulation in ECHAM5: identification of possible source of bias, ***Clim. Dyn.***, Published online, 16 June 2013, DOI:10.1007/s00382-013-1824-7, 1-18

51. Suhas E., Neena J.M., **Goswami B.N.**, 2013: An Indian monsoon intraseasonal oscillations (MISO) index for real time monitoring and forecast verification, ***Clim. Dyn.***, 40, DOI:10.1007/s00382-012-1462-5, 2605-2616

52. Deshpande N.R., **Goswami B.N.**, 2013: Modulation of the dirunal cycle of rainfall over India by intraseasonal variations of Indian summer monsoon, ***Int. J. Clim.***, Published online, May 2013, DOI:10.1002/joc.3719, 1-15

53. Hazra A., **Goswami B.N.**, Chen J-P, 2013: Role of Interactions between Aerosol Radiative Effect, Dynamics and Cloud Microphysics on Transitions of Monsoon Intraseasonal Oscillations, ***J. Atmos. Sc.***, 70 , July 2013, DOI:10.1175/JAS-D-12-0179.1, 2073-2087

54. Padmakumari B., Maheskumar R.S., Morwal S.B., Harikishan G., Konwar M., Kulkarni J.R., **Goswami B.N.**, 2013: Aircraft observations of elevated pollution layers near the foothills of the Himalayas during CAIPEEX-2009, ***Q.J.R.M.S.***, vol. 139, April 2013, DOI:10.1002/qj.1989, 625-638

55. Padmakumari B., Maheskumar R.S., Harikishan G., Kulkarni J.R., **Goswami B.N.**, 2013: Comparative study of aircraft- and satellite-derived aerosol and cloud microphysical parameters during CAIPEEX-2009 over the Indian region, ***Int. J. Rem. Sensing***, vol. 34, January 2013, DOI:10.1080/01431161.2012.705442, 358-373

56. Dipu S., Prabha T.V., Pandithurai G., Dudhia J., Pfister G., Rajesh K., **Goswami B.N.**, 2013: Impact of elevated aerosol layer on the cloud macrophysical properties prior to monsoon onset, ***Atmos. Env.***, vol. 70, 2013, DOI:10.1016/j.atmosenv.2012.12.036, 454-467

57. Fadnavis S., Raj P.E., Buchunde P., **Goswami B.N.**, 2013: In search of influence of stratospheric Quasi-Biennial Oscillation on tropical cyclones tracks over the Bay of Bengal region, ***Int. J. Clim.***, Published online, 2013, DOI:10.1002/joc.3706, 1-14

58. Abhik S., Halder M., Mukhopadhyay P., Jiang X., **Goswami B.N.**, 2013: A possible new mechanism for northward propagation of boreal summer intraseasonal oscillations based on TRMM and MERRA reanalysis, **Climate Dynamics**, vol. 40, 2013, DOI:10.1007/s00382-012-1425-x, 1611-1624

59. Pattnaik S., Abhilash S., De S., Sahai A.K., Phani R., **Goswami B.N.**, 2013: Influence of convective parameterization on the systematic errors of Climate Forecast System (CFS) model over the Indian region from an extended range forecast perspective, **Climate Dynamics**, 41, July 2013, DOI:10.1007/s00382-013-1662-7, 341-365

2012

60. Prabha T.V., Patade S., Pandithurai G., Khain A., Axisa D., Pradeep Kumar P., Maheshkumar R.S., Kulkarni J.R., **Goswami B.N.**, 2012: Spectral width of premonsoon and monsoon clouds over Indo-Gangetic valley, ***J. Geophy. Res.***, vol. 117, D20205, DOI:10.1029/2011JD016837, 1-15

61. Pandithurai G., Dipu S., Prabha T.V., Maheskumar R.S., Kulkarni J.R., **Goswami B.N.**, 2012: Aerosol effect on droplet spectral dispersion in warm continental cumuli, ***J. Geophy. Res.***, vol. 117, D16202, DOI:10.1029/2011JD016532, 1-15

62. Morwal S.B., Maheshkumar R.S., Padma Kumari B., Kulkarni J.R., **Goswami B.N.**, 2012: Cloud microphysical properties over Indian monsoon regions during CAIPEEX-2009, ***J. Atm. Solar Terr. Phy.***, 81-82, DOI:10.1016/j.jastp.2012.04.01076-85, 76-85

63. Waliser D.E., Moncrieff M.W., Burridge D., Fink A.H., Gochis D., **Goswami B.N.** Guan B., Harr P., Heming J., Hsu H-H, Jakob C., Janiga M., Johnson R., Jones S., Knippertz P., Marengo J., Nguyen H., Pope M., Serra Y., Thorncroft C., Wheeler M., Wood R., Yuter S., 2012: The Year of tropical convection (May 2008-April 2010) Climate Variability and Weather highlights, ***B.A.M.S.***, August 2012, DOI:10.1175/2011BAMS3095.1, 1-31

64. Saha Subodh Kumar, Halder S., Suryachandra A. Rao, **Goswami B.N.**, 2012: Modulation of ISOs by Land-Atmosphere Feedback and Contribution to the Interannual Variability of Indian Summer Monsoon, , ***J. Geophy. Res.,*** July 2012, 117, D13101, doi:10.1029/2011JD017291, 1-14

65. Chakraborty S., **Goswami B.N.**, Dutta K., 2012: Pacific coral oxygen isotope and the tropospheric temperature gradient over the Asian monsoon region: a tool to reconstruct past Indian summer monsoon rainfall, ***J. Quaternary Sc.,*** doi: 10.1002/jqs.1541 27, June 2012, 269-278

66. Konwar M., Maheskumar R.S., Kulkarni J.R., Freud E., **Goswami B.N.**, Rosenfeld D., 2012: Aerosol control on depth of warm rain in convective clouds, ***J. Geophy. Res.,*** Vol. 117, July 2012, D13204, doi: 10.1029/2012JD017585, 1-10

67. Konwar M., Parekh A., **Goswami B.N.**, 2012: Dynamics of east-west asymmetry of Indian Summer Monsoon rainfall trends in recent decades, , ***Geophy. Res. Lett.,*** 39, May 2012, doi:10.1029/2012GL052018, L10708, 1-6

68. Prabha T.V., Karipot A., Axisa D., Padma Kumari B., Konwar M., Kulkarni J.R., **Goswami B.N.**, 2012: Scale interactions near the foothills of Himalayas during CAIPEEX , ***J. Geophy. Res.,***117, doi: 10.1029/2011JD016754, D10203

69. Urankar G. M., Prabha T.V.,Pandithurai G.,Prabhu P.M., Achuthavarier D., **Goswami B.N.**, 2012: Aerosol and cloud feedbacks on surface energy balance over selected regions of Indian subcontinent, ***J. Geophys. Res.,*** 117, doi:10.1029/2011JD016363, D04210, 1-16

70. Suhas E., Neena J.M., **Goswami B.N.**, 2012: Interannual Variability of Indian Summer Monsoon arising from Interactions between Seasonal Mean and Intraseasonal Oscillations , ***J. Atmos. Sc.***, 69, doi: 10.1175/JAS-D-11-0211.1, 1761-1774

71. Lau W.K.M., Waliser D.E., Goswami B.N. (2012) South Asian monsoon. In: Intraseasonal Variability in the Atmosphere-Ocean Climate System. Springer Praxis Books. Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-642-13914-7_2

2011

72. Joseph S., Sahai A.K., **Goswami B.N.** Terray P., Masson S., Luo J.-J., 2011: Possible role of warm SST bias in the simulation of boreal summer monsoon in SINTEX-F2 coupled model, **Climate Dynamics,** April 2012, 38, pp.1561-1576,DOI 10.1007/s00382-011-1264-1.

73. Kulkarni J.R., Maheshkumar R.S., Morwal S.B., Padma kumari B., Konwar M., Deshpande C.G., Joshi R.R., Bhalwankar R.V., Pandithurai G., Safai P.D., Narkhedkar S.G., Dani K.K., Nath A., Nair Sathy, Sapre V.V., Puranik P.V., Kandalgaonkar S.S., Mujumdar V.R., Khaladkar R.M., Vijaykumar R., Prabha T.V., **Goswami B.N.** 2012: Cloud Aerosol Interaction and Precipitation Enhancement Experiment (CAIPEEX): overview and preliminary results , ***Current Science,*** 102, pp. 413-425

74. Joseph S., Sahai A.K., Chattopadhyay R., **Goswami B.N.**, 2011: Can El-Nino and Southern Oscillation (ENSO) events modulate intraseasonal oscillations of Indian summer monsoon? , ***J. Geophys. Res.,***116, D20123, doi:10.1029/2010JD015510

75. Manoj M.G., Devara P.C.S., Safai P.D., **Goswami B.N.** 2011: Absorbing aerosols facilitate transition of Indian monsoon breaks to active spells, ***Climate Dynamics,*** 37, December 2011, pp.2181-2198, DOI 10.1007/s00382-010-0971-3.

76. Krishna Kumar K., Kamala K., Rajagopalan B., Hoerling M.P., Eischeid J.K., Patwardhan S.K., Srinivasan G., **Goswami B.N.**, Nemanai R., 2011: The once and future pulse of Indian monsoonal climate, ***Climate Dynamics,*** 36, 2011, pp.2159-2170, DOI 10.1007/s00382-010-0974-0.

77. Saha S.K., Halder S., Krishna Kumar K., **Goswami B.N.** 2011: Pre-onset land surface processes and 'internal' interannual variabilities of the Indian summer monsoon, ***Climate Dynamics,***vol.36, June 2011, 2011-2089, DOI 10.1007/s00382-010-0886-z

78. Goswami B.B., Neena J.M., Mukhopadhyay P., Waliser D.E., Benedict J.J., Maloney E.D., Khairoutdinov M., **Goswami B.N.**, 2011: Monsoon Intraseasonal Oscillations as simulated by the Superparameterized Community Atmosphere Model, ***J. Geophys. Res.,*** 116, doi:10.1029/2011JD015948

79. **Goswami B.N.,**Wheeler M.C., Gottschalck J.C. and Waliser D.E., 2011: Intra- seasonal Variability and Forecasting: A Review of Recent Research , ***The Global Monsoon System: Research and Forecast, 2nd Edition, World Scientific Publication Company in collaboration with WMO,*** *vol. 5, pp.389-407*

80. Prabha T.V., **Goswami B.N.**, Murthy B.S., Kulkarni J.R., 2011: Nocturnal low-level jet and 'atmospheric streams' over the rain shadow region of Indian Western Ghats, ***Q. J. R. Meteorol. Soc.,*** 137, pp. 1273-1287, DOI:10.1002/qj.818

81. Prabha T.V., Khain A., Maheshkumar R.S., Pandithurai G., Kulkarni J.R., Konwar M. **Goswami B.N.**, 2011: Microphysics of pre-monsoon and monsoon clouds as seen from in situ measurements during CAIPEEX, ***J. Atmo. Sci***, 68, pp. 1882-1901, doi: 10.1175/2011JAS3707.1

82. Neena J.M., Suhas E., **Goswami B.N.** 2011: Leading role of internal dynamics in the 2009 Indian Summer Monsoon drought, ***J. Geophys. Res.,*** 116, D13103, doi:10.1029/2010JD015328

83. Vialard J., Jayakumar A., Gnanaseelan C., Lengaigne M., Sengupta D., **Goswami B.N.** 2011: Processes of 30-90 days sea surface temperature variability in the northern Indian Ocean during boreal summer, ***Clim. Dyn.*, 68,** DOI 10.1007/s00382-011-1015-3, 1901-1916

84. Mukhopadhyay, P., S. Taraphdar, **Goswami B.N.** 2011: Influence of moist processes on track and intensity forecast of cyclones over the North Indian Ocean, ***J. Geophys. Res.,*** 116, D05116, pp.1-21, doi:10.1029/2010JD014700

85. Mujumdar M., Salunke K., Suryachandra Rao A., Ravichandran M., **Goswami B.N.** 2011: Diurnal cycle induced amplification of sea surface temperature Intraseasonal oscillations over the Bay of Bengal in summer monsoon season, ***IEEE Geoscience and Remote Sensing Letters,*** 29, pp.206-210

2010

86. Joseph S., Sahai A.K., **Goswami B.N.** 2010: Boreal summer intraseasonal oscillations and seasonal Indian monsoon prediction in DEMETER coupled models, ***Climate Dynamics,*** vol.35, pp.651-667

87. Suryachandra A. Rao, Chaudhari H.S., Pokhrel S., **Goswami B.N.** 2010: Unusual central Indian drought of summer monsoon - 2008: Role of Southern Tropical Indian Ocean warming, ***Journal of Climate,***, 23, 5163-5174

88. Taraphdar S., Mukhopadhyay P., **Goswami B.N.** 2010: Predictability of Indian summer monsoon weather during active and break phases using a high resolution regional model, ***Geophys. Res. Lett.,*** 37, L21812, 1-6, doi:10.1029/2010GL044969

89. Mukhopadhyay P., Taraphdar S., **Goswami B.N.**, Krishna Kumar K., 2010: Indian summer monsoon precipitation climatology in a high resolution regional climate model: Impact of convective parameterization on systematic biases, ***Weather and Forecasting,*** Vol. 25, 369-387, doi:10.1175/2009WAF2222320.1

90. Padma Kumari B., **Goswami B.N.**, 2010: Seminal role of clouds on solar dimming over the Indian monsoon region, ***Geophy. Res. Lett.,*** 37, L06703, pp.1-5, doi:10.1029/2009GL042133

91. Goswami B.B., Mukhopadhyay P., Mahanta R., **Goswami B.N.**, 2010: Multiscale interaction with Topography and Extreme Rainfall Events in the North-East Indian region, ***J. Geophys. Res.,***Vol. 115, doi:10.1029/2009JD012275, D12114

92. Suhas E., **Goswami B.N.**, 2010: Loss of significance and multidecadal variability of the Madden-Julian oscillation, ***Journal of Climate,*** 23, p.3739-3759, doi:10.1175/2010JCLI3180.1

93. Neena J.M., **Goswami B.N.**, 2010: Extension of potential predictability of Indian summer monsoon dry and wet spells in recent decades, ***Quarterly Journal of Royal Meteorological Society,*** 136, pp.583-592

2009

94. **Goswami B.N.**, Kulkarni J.R., Mujumdar V.R., Chattopadhyay 2009: On factors responsible for recent secular trend in the onset phase of monsoon intraseasonal oscillations, ***International Journal of Climatology,*** vol. 30, pp.2240-2246, Short Communication, doi:10.1002/joc.2041

95. Chattopadhyay R., **Goswami B.N.**, Sahai A.K., Fraedrich K., 2009: Role of stratiform rainfall in modifying the northward propagation of Monsoon Intraseasonal Oscillation,, ***J. Geophys. Res.,***114, D19114, doi:10.1029/2009JD011869, pp.1-15

96. Joseph S., Sahai A.K.,**B N Goswami,** 2009 :Eastward propagating MJO during boreal summer and Indian monsoon droughts, ***Climate Dynamics,*** *32, DOI 10.1007/s00382-008-0412-8, pp. 1139-1153*

97. Mani N.J., Suhas E., **Goswami B.N.,** 2009: Can global warming make Indian monsoon weather less predictable? , ***Geophysical Research Letters,*** *36, L08811, pp.1-5, doi:10.1029 /2009GL037989*

2008

98. Suhas E, and **Goswami B.N.,** 2008: Regime shift in Indian summer monsoon climatological intraseasonal oscillations, ***Geophysical Research Letters,*** *35, L20703, pp.1-6, doi:10.1029/2008GL035511*

99. Sahai A.K., Chattopadhyay R., **Goswami B.N.,** 2008: SST based large multi-model ensemble forecasting system for Indian summer monsoon rainfall, ***Geophysical Research Letters,*** *35, L19705, pp.1-9, doi:10.1029/2008GL035461*

100. Chattopadhyay R., Sahai A.K., **Goswami B.N.,** 2008: Objective Identification of Nonlinear Convectively Coupled Phases of Monsoon Intraseasonal Oscillation: Implications for Prediction, ***J. Atmo. Sci.,****65, 1549-1569*

101. P. K. Xavier and **B N Goswami,** 2007 : Analog method for realtime forecasting of summer monsoon subseasonal variability, ***Mon. Weather Review*** 135, 4149-4160

102. Xavier P.K., **Goswami B. N.,** 2007:Promising alternative to prediction of seasonal mean all India rainfall, ***Current Science***, 93, 195-202

103. Ajaya Mohan, R. S. and **Goswami B. N.,** 2007: Dependence of simulation of boreal tropical summer intraseasonal oscillaions on simulation of seasonal mean. ***J. Atmo. Sci.*** , 64, 460-478

104. P. K. Xavier, C. Marzin and **B. N. Goswami,** 2007: An objective definition of the Indian summer monsoon season and a new perspective on ENSO-monsoon relationship, ***Q. J. Meteorol. Soc.*** 133, 749-764

105. Sengupta D., Senana R., **Goswami B.N.** and J. Vialard, 2005, Intraseasonal variability of equatorial Indian Ocean zonalcurrents, ***J. Climate*** (2007), 20, 3036-3055

106. **Goswami B.N.,** Venugopal V., Sengupta D., Madhusoodanan M.S., Xavier Prince K., 2006: Increasing trend of Extreme Rain Events over India in a Warming Environment, ***Science***, 314, 5804, 1 December, 1442-1445.

107. **Goswami B.N.,** Wu G., Yasunari T. *2006:* Annual cycle, Intraseasonal Oscillations and Roadblock to seasonal predictability of the Asian summer monsoon, ***J. Climate****, 19,5078-5099*

108. Suneet Dwivedi, Ashok Kumar Mittal, **B. N. Goswami**, 2006: An empirical rule for extended range prediction of duration of Indian summer monsoon breaks. ***Geophys. Res. Lett.***, 33, L18801, doi:10.1029/2006GL027035.

109. **B. N. Goswami**, M. S. Madhusoodanan, C. P. Neema, and D. Sengupta, 2006: A physical mechanism for North Atlantic SST influence on the Indian summer monsoon, ***Geophys. Res. Lett.***, 33, L02706, doi:10.1029/ 2005GL024803

110. **Goswami B. N.** and Xavier Prince K., 2005: ENSO control on the South Asian Monsoon through the length of the rainy season ***Geophys. Res. Lett.*** *32, L18717, doi:10.1029/2005GL023216.*

111. **B. N. Goswami** and Prince K. Xavier, 2005: Dynamics of 'Internal' Interannual Variability of Indian Summer Monsoon in a GCM ***J. Geophys. Res., 110****, D24104, doi:10.1029/2005JD006042.*

112. **B. N. Goswami,** 2005: South Asian Monsoon: in ***Intraseasonal Variability of the Atmosphere-Ocean Climate System,*** Eds. William K. M. Lau and Duane E.Waliser Chapter 2, Praxis, Springer Berlin Heidelberg, 19-61 pp. https://doi.org/10.1007/3-540-27250-X_2

113. B. N. Goswami, 2005: The Asian monsoon: Interdecadal Variability, in ***The Asian Monsoon****,* Eds, Bin Wang, Chapter 7, Praxis, Springer Berlin Heidelberg, 295-327 pp.

114. **B. N. Goswami**, 2004: Interdecadal Change in Potential Predictability of the Indian Summer Monsoon, ***Geophys. Res. Lett.*** 31, L16208, doi:10.1029/2004GL020337.

115. Piyali Chatterjee and **B. N. Goswami** , 2004: Structure, genesis and scale selection of the tropical quasi-biweekly mode, ***Q. J. R. Meteorol. Soc***. 130, 1171-1194.

116. **Goswami, B N** and Prince K Xavier , 2003: Potential Predictability and Extended Range Prediction of Indian Summer Monsoon Breaks, ***Geophys. Res. Lett.*** 30(18), 1966, doi:10.1029/2003GL017,810, 2003.

117. Retish Senan, Debasis Sengupta and **B N Goswami**, 2003: Intraseasonal 'monsoon jets' in the equatorial Indian Ocean, ***Geophys. Res. Lett.*** 30(14), 1750, doi:10.1029/ 2003GL017583, 2003.

118. **Goswami, B N**, R.S Ajaya Mohan, Prince K Xavier and D. Sengupta, 2003:Clustering of Low Pressure Systems During the Indian Summer Monsoon by Intraseasonal Oscillations, ***Geophys. Res. Lett.*** 30 (8), 1431, doi: 10.1029/ 2002GL016734, 2003.

119. **Goswami, B N**, and E. N. Rajagopal, 2003: Indian Ocean Surface Winds from NCMRWF Analysis as Compared to QuikSCAT and Moored Buoy Winds, ***Proc. Indian. Acad. Sci. (Earth & Planetary Sci.),*** 112, No. 1, March 2003, pp. 61-77

120. **Goswami, B N,** and D. Sengupta, 2003: A Note on the Deficiency of NCEP/NCAR Reanalysis Surface Winds over the Equatorial Indian Ocean. J. Geophys. Res., 108(C4), 3124, doi:10.1029/2002JC001497, 2003.

121. Ajaya Mohan R S and **B N Goswami**, 2003: Potential Predictability of the Asian Summer Monsoon on Monthly and Seasonal Time Scales ***Meteor. Atmos. Phys.*** DOI 10.1007/s00703-002-0576-4.

122. **Goswami B N** and Ajaya Mohan R S, 2001: Intra-seasonal oscillations and inter-annual variability of the Indian summer monsoon, ***J. Climate,*** 14, 1180-1198.

123. **Goswami B N** and Jayavelu V, 2001: On possible impact of the Indian summer monsoon on the ENSO, ***Geophys. Res. Letts,*** 28, 571-574.

124. **Goswami B N** and Manu Anna Thomas, 2001: Decadal variations of Hadley and Walker Circulations in the tropics, ***Mausam*** (special issue on Global and Regional Climate Change), 52, 23-36.

125. **Goswami B N** and Ajaya Mohan R S, 2001: Intra-seasonal oscillations and Predictability of the Indian summer monsoon, ***Proc. Ind. Natl. Sci. Aca.,*** 67A(3), 369-383.

126. **Goswami B N** and Ajaya Mohan R S, 2001: Estimate of monthly mean predictability in the tropics form observations, ***Current Science,*** 80, 56-63.

127. Sengupta, D., Senan R. and **Goswami B. N.**, 2001: Origin of intraseasonal variability of circulation in the tropical central Indian Ocean,***Geophys. Res. Letts.*** 28, 1267-1270.

128. Sengupta, D., **Goswami B. N.** and Senan, R 2001: Coherent intraseasonal oscillations of ocean and atmosphere during the Asian summer monsoon, ***Geophys. Res. Letts.***28, 4127-4131.

129. **Goswami B. N.** and Manu Anna Thomas 2000: Walker circulation associated with interdecadal and interannual variability in the tropics, Meteorological Society of Japan, 78, 765-775.

130. Krishnamurthy V and **Goswami B. N.** 2000: Indian monsoon-ENSO relationship on inter decadal time scales, J. Climate **,** 13, 579-595.

131. **Goswami B. N.** , 2000: Comments on 'Choice of South Asian Summer Monsoon Indices', ***Bull. Amer. Meteorol. Soc***., 81, 821-822.

132. **Goswami B. N.** and Ajaya Mohan R S, 2000: A common spatial mode for intra-seasonal and inter-annual variation and predictability of the Indian summer monsoon, ***Curr. Sci,*** 79, 1106-1111.

133. **Goswami B. N.** and Manu Anna Thomas, 2000: Coupled Ocean-atmosphere inter-decadal modes in the tropics, ***J. Met. Soc. Japan,*** 78, 765-775.

134. **Goswami B. N.,** Annamalai H and Krishnamurthy , 1999:A broad scale circulation index for interannual variability of the Indian summer monsoon, ***Q. J. Roy. Met. Soc.,*** 125, 611-633.

135. Saji N H, **Goswami B. N.**, Vinayachandran P N and Yamagata T 1999: A dipole mode in the tropical Indian Ocean, ***Nature.*** 401, 360-363. [download pdf file]

136. **Goswami B. N.** 1998: Interannual variation of Indian summer monsoon in a GCM: External conditions versus internal feedbacks, ***J. Climate,*** 11, 501-522.

137. **Goswami B. N.** 1998: Physics of ENSO-Monsoon connection, ***Ind. J. Marine Sci.,*** 27, 82-89.

138. **Goswami B. N.**, Sengupta D and Suresh Kumar 1998: Intraseasonal oscillaions and interannual variability of surface winds over the Indian monsoon region, ***Proc. Ind. Aca. Sci. (Earth and Planetary Sci.),*** 107, 45-64.

139. **Goswami B. N.,** Rajendran K and Sengupta D 1997: Source of seasonality and scale dependence of predictability in a coupled ocean-atmosphere model, ***Mon. Wea. Rev.***, 125, 846-858.

140. Saji N. H. and **Goswami B. N.** 1997: An intercomparison of the seasonal cycle of tropical surface stress simulated by 17 AMIP GCMs, ***Climate Dynamics,*** 13, 561-585.

141. **Goswami B. N.** 1997: Chaos and predictability of the Indian summer monsoon, ***Pramana - J. Physics,*** 48, 719-736.

142. **Goswami B. N.** 1996: The challenge of weather prediction: what makes it difficult; Part II: The conceptual and technical difficulties, ***RESONANCE, Ind. Acad. Sci.***, Bangalore, Jan. 1997.

143. **Goswami B. N.** 1996: The challenge of weather prediction: what makes it difficult; Part III: Old and new ways of weather prediction, ***RESONANCE, Ind. Acad. Sci.,*** Bangalore, March 1997.

144. **Goswami B. N.** and Annamalai H. 1996: Origin of a trend in ECMWF wind analysis and its objective removal: Importance in interannual variability studies**, *Proc. Ind. Acad. Sci. (Earth & Planetary Sci.),*** 105, 101-117.

145. Chandrasekar A. and **Goswami B. N.** 1996: Feedback between convective heating and dynamics and movements of tropical cyclones,***Meteorol. Atmos. Phys.,*** 61, 55-64.

146. Saji N. H. and **Goswami B. N.** 1996: An improved linear model of tropical surface wind variability, ***Q. J. Roy. Meteorol. Soc.,*** 122, 23-53.

147. Chandrasekar A. and **Goswami B. N.** 1996: A linear model study of the mid tropospheric ridge and its displacement, ***Mausam,*** 47, 369-376.

148. Goswami P. and **Goswami B. N.** 1996: Reply to "Comments on modification of n=0 equatorial waves due to interaction between convection and dynamics" by Smith and Srinivasan, ***J. Atmos. Sci.***,53, 919-922.

149. **Goswami B. N.** 1996: The challenge of weather prediction: what makes it difficult; Part I: Basic driving, ***RESONANCE, Ind. Acad. Sci.,*** *Bangalore*, Nov. 1996.

150. **Goswami B. N.** 1995: Modelling and predictability studies of the tropical coupled ocean-atmosphere system, ***J. Ind. Inst. Sci.,*** (Special Issue of Fluid Mechanics Research), 75, 403-430.

151. Anantharaman A., **Goswami B. N.** and Chandrasekar A. 1995: Lyapunov exponent and predictability of the tropical coupled ocean-atmosphere system, ***Current Science,*** 68, 946-950.

152. Biswas M., **Goswami B. N.** and Chandrasekar A. 1995: Bispectra of a tropical coupled ocean-atmosphere system, ***Current Science,*** 68, 1236-1243.

153. **Goswami B. N.**, Krishnamurthy V. and Saji N. H. 1995: Simulation of ENSO related surface winds in the tropics by an AGCM forced by observed SST. ***Mon. Wea. Rev.,*** 123, 1677-1694.

154. **Goswami B. N.** 1995: A multiscale interaction model for the origin of the tropospheric QBO. ***J. Climate,*** 8, 529-539.

155. **Goswami B. N.** 1994: Dynamical predictability of seasonal mean monsoon rainfall: Problems and Prospects, ***Proc. Ind. Natl. Sci. Aca. Part A***, 60, 101-120.

156. **Goswami B. N.,** Sudha Selvarajan and Krishnamurthy V 1993: Mechanisms of variability and predictability of the tropical ocean-atmosphere system. ***Proc. Ind. Academy Sci. (Earth & Planet. Sci.),*** 102, 49-72.

157. Krishnamurthy V., **Goswami B. N.** and Legnani R 1993: A conceptual model for the aperiodicity of Interannual variability in the tropics, ***Geophys. Res. Letts.*** 20, 435-438.

158. **Goswami B. N.** and Shukla J. 1993: Aperiodic variability in the Cane-Zebiak model: A diagnostic study. J. Climate, 6, 628-638

159. **Goswami B. N.** and Goswami P. 1992: Mechanisms of some tropical intraseasonal oscillations, ***Geophys. Res. Letts.,*** 19, 681-684.

160. Selvarajan Sudha and **Goswami B. N.** 1992: On the stability of a coupled ocean atmosphere system in the presence of wave-CISK, ***Proc. Indian Aca. Sci. (Earth & Planetary Sci.),*** 101, 153-176

161. **Goswami B. N.** and Selvarajan Sudha 1991: Convergence feedback and unstable low frequency oscillations in a simple coupled ocean-atmosphere model, ***Geophys. Res. Lett.,*** 18, 991-994.

162. Goswami P. and **Goswami B. N.** 1991: Modification of n = 0 equatorial waves due to interaction between convection and dynamics, ***J. Atmos. Sci.,*** 48, 2231-2244.

163. Selvarajan Sudha, **Goswami B. N.** and Sankar Rao M. 1991: Regional and seasonal dependence of the stability of a tropical coupled ocean-atmosphere system. ***Atmospheric Research,*** 26, 425-444.

164. **Goswami B.N.** and Shukla, J. 1991: Predictability and variability of a coupled ocean atmosphere model, ***J. Marine Systems,*** 1, 217-228.

165. **Goswami B.N**. and Shukla, J. 1991: Predictability of a coupled ocean atmosphere model, ***J. Climate,*** 4, 3-22.

166. **Goswami, B.N**. 1988: Potential marine deck sampling problems over monsoonal oceans, ***Trop. Ocean-Atmos. Newsletter*** Jan. issue (pp 2-4).

167. Rao, Kusuma G., **Goswami B. N.**, 1988: Interannual Variations of Sea Surface Temperature over the Arabian Sea and the Indian Monsoon: A New Perspective. **Monthly Weather Review**, 116, 558–568.

168. **Goswami B.N**. 1987: A mechanism for the West Northwest movement of the monsoon depressions, ***Nature,*** 326, 376-370.

169. **Goswami B. N.** 1985: The sensitivity of the NH summer mean meridional circulation to changes in the large scale eddy forcing. ***Proc. Indian Academy of Sciences (Earth and Planet. Sci.),*** 94, 219-235.

170. **Goswami, B.N.**, J. Shukla, E.K. Schneider and Y. Sud 1984: Study of the dynamics of the Inter-tropical convergence zone with a symmetric version of the GLAS Climatic Model, ***J. Atmos. Sci.***, 41, 5-19.

171. **Goswami, B.N.** and J. Shukla, 1984: Quasi-periodic oscillations in a symmetric general circulation model, ***J. Atmos. Sci.,*** 41, 20-37.

172. **Goswami, B.N**. 1983: Theoretical study of multiple equilibria in simple axisymmetric tropical circulations, ***Tellus,*** 35A, 119-1335.

173. Jain, R.K. and **Goswami, B.N.** V. Satyan, and R.N. Keshavamurty, 1981: Envelope soliton solution for Finite Amplitude Equatorial Waves, ***Proc. Indian Academy of Sciences (Earth and Planet. Sci.),*** 90, 305-326.

174. Satyan, V., Keshavamurty, R.N., **Goswami, B.N.**, Dash, S.K. and H.S. Sinha, 1980: Monsoon Cyclogenesis and Large Scale Flow Patterns over South Asia, ***Proc. Indian Academy of Sciences (Earth and Planet. Sci.),*** 89, 277-292.

175. **Goswami, B.N**., R.N. Keshavamurty, and V. Satyan, 1980: Role of Barotropic-Baroclinic Instability on the Growth of Monsoon Depressions and Mid-tropospheric cyclones, ***Proc. Indian Academy of Sciences (Earth Planet. Sci.),*** 89, 79-97.

176. Keshavamurty, R.N., Satyan, V., and **Goswami, B.N.** 1978: Indian Summer Monsoon cyclogenesis and its variability, ***Nature,*** 274, 576-578.

177. **Goswami, B.N.** and Sinha, Mukul, 1978: Effect of Cold Electron in the Linear and Nonlinear Ion Acoustic Waves, ***Plasma Phys.***, 20, 91-93.

178. **Goswami, B.N**., Satya, Y.S. and Kulkarni, V.H., 1977: Drift dissipative instability in a two temperature plasma, ***Pramana,***9, 171-178.

179. Sinha, Mukul and **Goswami, B.N**. 1977: Magnetosonic wave in the presence of a lower hybrid turbulence and plasma heating, ***Phys. Fluids***, 20, 2145.

180. Satya Y.S. and **Goswami, B.N.** 1977: Ion Acoustic Solitary Waves in the presence of a high frequency electric field, ***Phys. Lett.,*** 61A, 388-390.

181. **Goswami, B.N**. and Buti, B., 1977: Finite Amplitude Drift Waves in a Collisional Plasma, ***Plasma Phys.,*** 19, 53-61.

182. **Goswami, B.N**. and Sinha Mukul, 1976: Ion Acoustic Solitary Waves in Inhomogeneous Media with Temperature Inhomogeneity, ***Pramana,*** 7, 141-145.

183. **Goswami, B.N.** and Buti, B., 1976: Ion Acoustic Solitary Waves in a two-electron temperature plasma, ***Phys. Lett.***,57A, 149-150.

184. **Goswami, B.N**. and Buti B., 1975: Cross-field current driven electrostatic instability in plasma with generalized distribution function, ***Nucl. Fusion,*** 15, 991-997.

185. **Goswami, B.N.,** Lakhina, G.S., and Buti, B. 1974: Return-current instability and its effects on Beam-Plasma System, ***Pramana, 3, 10-27.***
