



D. BALA SUBRAHAMANYAM
SCIENTIST “SF”, SPL, VSSC

NUMERICAL ATMOSPHERE MODELLING BRANCH
SPACE PHYSICS LABORATORY
VIKRAM SARABHAI SPACE CENTRE
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Area of Specific Research Interests

Boundary-Layer Meteorology; Regional Atmospheric Modelling; Parametrization and Initialization; Large Eddy Simulations; Nowcasting and Short-range Weather Predictions; Air-Sea Interaction Processes

Educational Background

- Doctorate in Philosophy [Ph.D.]** [2004] : Physics under the Faculty of Sciences
Mahatma Gandhi University, Kottayam, INDIA
- Masters of Science [M.Sc.]** [1994 - 1996] : Physics (Specialization in Electronics)
Pt. Ravishankar Shukla University, Raipur, INDIA
- Bachelor of Science [B.Sc.]** [1991 - 1994] : Physics, Mathematics and Chemistry
Pt. Ravishankar Shukla University, Raipur, INDIA

Professional Background

- Scientist “SF” [Jan 2016 - Present]** : Space Physics Laboratory, Vikram Sarabha Space Centre
Scientist “SE” [Jul 2011 - Dec 2015] : Department of Space, Government of India
Scientist “SD” [Mar 2006 - Jun 2011] : Indian Space Research Organisation
ISRO P.O., Thiruvananthapuram - 695022, INDIA
- Invited Scientist** : Ocean Climate and Environment Research Division
[Feb 2005 - Feb 2006] : Korea Ocean Research and Development Institute
ANSAN P.O. Box No. 29
Seoul - 425 600, KOREA
- Project Scientist-C** : Indian National Centre for Ocean Information Services
[May 2003 - Jan 2005] : An Autonomous Body under the Ministry of Earth Sciences
Government of India, “Ocean Valley”, Pragathi Nagar (BO)
Nizampet (SO), Hyderabad - 500 090, INDIA
- Research Associate** : Space Physics Laboratory, Vikram Sarabha Space Centre
[Apr 2003 - May 2003] : Department of Space, Government of India
Indian Space Research Organisation
ISRO P.O., Thiruvananthapuram - 695022, INDIA
- ISRO Research Fellow** : Space Physics Laboratory, Vikram Sarabha Space Centre
[Apr 1998 - Apr 2003] : Department of Space, Government of India
Indian Space Research Organisation
ISRO P.O., Thiruvananthapuram - 695022, INDIA
- Asst. Professor (On adhoc basis)** : Govt. Arts and Science College, Durg
[Dec 1996 - Mar 1998] : Affiliated to Pt. Ravishankar Shukla University
Raipur, INDIA

Important Projects and Programme:

Principal Investigator [2008 - Present]	: Location-specific weather predictions in support of PSLV/GSLV Missions [SPL's Focal Point in the ISRO's Inter-Centre Weather Expert Team]
Co-Investigator [2006 - 2009; 2018]	: Integrated Campaign for Aerosols, gases and Radiation Budget [ISRO's Geosphere Biosphere Program]
Co-Investigator [2006 - 2014]	: Network of Observatories for Boundary-Layer Experiments (NOBLE) [ICARB: ISRO's Geosphere Biosphere Program]
Co-Investigator [2010 - 2011]	: Sooryagrahan 2010 Program: Atmospheric Boundary Layer Studies [SPL's inter-disciplinary field experiment on 15 January 2010]
Co-Investigator [2006 - 2013]	: Prediction of Regional Weather through Observational Meso-Network & Atmospheric Modelling [PRWONAM: ISRO's Inter-Centre Program]
Co-Investigator [2006]	: ISRO Sponsored Research (RESPOND) Project In collaboration with Indian Institute of Technology, New Delhi
Invited Scientist [2005 - 2006]	: KORDI Projects: (1) Development of Korean Ocean Prediction System; (2) International Cooperation in Ocean Observations through ARGO
Project Scientist [2003 - 2005]	: Advanced Ocean State Forecasting under Dept. of Ocean Development Indian National Centre for Ocean Information Services (INCOIS)

Major Responsibilities and Projects at Space Physics Laboratory

- **Short-range Weather Predictions in support of PSLV/GSLV and RLV-TD Missions:**

As an integral part of the "Inter-Centre Weather Forecast Expert Team" constituted by SDSC (SHAR), I am serving as one of the core members of this team since its first constitution during the Chandrayaan-1 mission and representing the SPL (VSSC). My responsibilities include weather predictions for SHAR region through COSMO: a regional non-hydrostatic atmospheric model.

- **HRM and COSMO Model related Research and Development Activities:**

In the capacity of the Focal Point for the HRM and COSMO models for the Indian domain, I am responsible for different R & D activities with the aid of these atmospheric models. I've contributed in devising a NEW surface-layer parametrization scheme and in redefining the master length scale in the ABL parametrization schemes, the first of its kind for the Indian region.

- **Integrated Campaign for Aerosols, gases and Radiation Budget (ICARB):**

I am one of the Principal Investigators and also a cruise participant in the ship-borne oceanic component of the W-ICARB campaign. I took the lead role in characterization of the marine atmospheric boundary layer (MABL) and its association with the atmospheric aerosols over the Bay of Bengal region.

- **Network of Observatories for Boundary-Layer Experiments (NOBLE):**

As part of this ISRO-GBP Project, I am involved in setting-up of new network stations and coordination with the Principal Investigators for meeting the scientific objectives of this project. The ultimate goal of the NOBLE project lies on the characterization of the atmospheric boundary layer over different geographical and climatic conditions.

- **Tropical Tropopause Dynamics (TTD) Field Experiment:**

Under the umbrella of "Climate and Weather of the Sun-Earth System (CAWES)- India Program", I am contributing as one of the Lead Investigators of the TTD field experiment with specific objectives on the characterization of the coastal ABL over Thiruvananthapuram.

Other Institutional Responsibilities at Space Physics Laboratory

- **Research Supervision of Ph.D Scholars and Post-Graduate Students:**

As part of the SPL's Academic Programme, I am involved in supervision of the Doctoral and Post-Graduate students for their projects. As of now, one research scholar has completed her Ph.D under my supervision, and two more scholars are pursuing their research work for their Ph.D. About ten post-graduate students have completed their academic projects under my supervision.

- **Chairman**

- **SPL Website Team (Since 2018 - Present)**

- **Responsibilities in the capacity of Webmaster of the SPL Website:**

- * Web-design and layout of the main homepage and other branch pages
- * Construction of an independent bi-lingual database and their hyper-linkings
- * Maintaining a similarity in all the branch pages and their contents
- * Handling the Content Management System (CMS) in the Intranet and internet
- * Updating the SPL Website on a regular basis (and as per the requirements)

- **System Administration of the Parallel Computing Facility at SPL:**

- **Data Management of the GME/ICON global model database at Surya FTP Server of VSSC**

- **Member**

- Academic Committee (Since 2011)
- Annual Report Compilation Committee (Since 2011)
- Functional Committee for World Space Week Celebrations at Schools (Since 2012)
- Digital India Week 2018 Celebrations at VSSC (2018)

My Major Accomplishments in past at INCOIS and KORDI

Korea Ocean Research and Development Institute [2005 - 2006]:

- Operationalization of KEY (Korean Sea, East Sea and Yellow Sea) Circulation Model (modified version of Princeton Ocean Model) with different set of Sea Surface Temperature data as forcing files (e.g., Multi Channel SST, Pathfinder SST, New Generation SST)
- AVISO Sea Surface Height anomaly data assimilation in KEY Circulation Model through Optimal Interpolation Techniques In Research Mode
- Assimilation of the ARGO floats data into the KEY model and data management of the ARGO floats for Korean Ocean Prediction System
- Development of supporting tools for pre-processing and post-processing of model products

Indian National Centre for Ocean Information Services [2004 - 2005]:

- Customization of third-generation WAVE Model (WAM) for Experimental Ocean State Forecasting with wind forcing from T-80 and Eta models (NCOMRWF)
- Setting up (Porting) of Simulating WAVES Nearshore (SWAN) model on SGI for Coastal Ocean State Forecasting with wind forcing from T-80 and Eta models (NCOMRWF)
- Sensitivity studies of SWAN Model to Bathymetry and Wind field
- Climate Runs of Modular Ocean Model (MOM) Indian Ocean Version
- Analysis of meteorological and oceanographic datasets obtained during IOGOOS Cruise

Awards, Honours and Recognition

- Core Member, “Inter-Centre Weather Forecasting Expert Team” since Chandrayaan-1:



Serving as one of the core members in the “Inter-Centre Weather Forecasting Expert Team” constituted by Satish Dhawan Space Centre, Sriharikota for providing short-range weather predictions in support of ISRO’s all the PSLV and GSLV missions.

The team was constituted for the very first time during PSIV-C11 (Chandrayaan-1) mission in October 2008, and since then I am continuing as one of the core members, and have supported a total of about 40 missions.

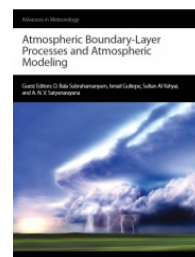
- Lead Guest Editor: **Advances in Meteorology - An Open Access Journal:**

Special Issue of **ADVANCES IN METEOROLOGY** Journal on
“**ATMOSPHERIC BOUNDARY-LAYER PROCESSES AND ATMOSPHERIC MODELING**”

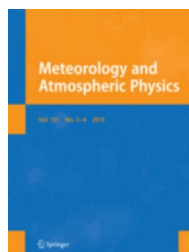
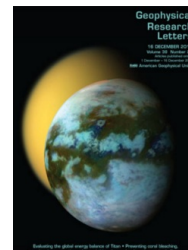
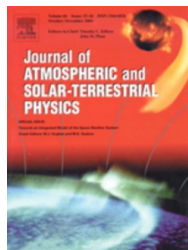
Lead Guest Editor: **D. Bala Subrahmanyam**

Co-Editors: **Ismail Gultepe, Sultan Al-Yahyai and A. N. V. Satyanarayana**

2015 (Published Special Issue) - <http://www.hindawi.com/journals/amete/si/158576/>



- Reviewer of various Peer-reviewed Journals:



- Ph.D. Thesis Adjudicator/Examiner and Recognized Guide:

- Acharya Nagarjuna University, Guntur - 522 006, INDIA [*Thesis Adjudicator*]
 - Osmania University, Hyderabad - 500 007, INDIA [*Examiner*]
 - University of Kerala, Thiruvananthapuram - 695 034, INDIA [*Recognized Ph.D. Guide*]
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- Guest Faculty at Indian Institute of Space Science and Technology (IIST) [2008 - 2009]:

As part of the IIST, Thiruvananthapuram Academic Programme, I was invited to deliver lectures on “Elements of the Atmospheric Sciences” for the Graduate/Post-Graduate engineering students.

- Session Chairman in International/National Conferences:

Chaired a scientific session on “Data Assimilation in Numerical Atmospheric Models” at the **Third International HRM Workshop** organized by Hanoi University of Sciences, Hanoi, Vietnam (November 24 - 28, 2008)

Awards, Honours and Recognition ...

- **Internal Expert, Departmental Promotion Committee (DPC) for promotion to Scientist “SD”:**
 - National Atmospheric Research Laboratory, Gadanki [2018]
 - Satish Dhawan Space Centre, Sriharikota [2018]

- **Best Research Paper Award in TROPMET-2011 under Numerical Weather Prediction Session:**

Best Research Paper Award for “[Short-Range Weather Predictions in support of PSIV and GSLV Launch activities: Role of High-resolution Regional Model](#)” by: [D. Bala Subrahmanyam](#) and [T. J. Anurose](#) under “Numerical Weather Prediction & Data Assimilation” session of TROPMET 2011, organized by the Indian Meteorological Society at Hyderabad (14 - 16 December 2011)

- **Second Prize in National Library Week Celebrations 2014 (Team Event):**

Central level Debate Competition on “[Open Access Publishing - Is it the future of science communication?](#)”, at VSSC, Thiruvananthapuram (November 14, 2014).

- **Most Popular Research Article in Boundary-Layer Meteorology (Jun - Sep 2011):**

[D. Bala Subrahmanyam et al., “Atmospheric Surface-Layer Response to the Annular Solar Eclipse of 15 January 2010 over Thiruvananthapuram, India”, 141\(2\): 325 - 332, 2011](#) was selected as the most popular research article during Jun 2011 - Sep 2011 in Boundary-Layer Meteorology Journal.

- **Award of Fellowships for Higher Studies/Education:**
 - **Postdoctoral Research Fellowship:** Korea Ocean Research and Development Institute (2005 - 2006)
 - **ISRO Research Associateship Program:** Space Physics Laboratory (2005)
 - **ISRO Research Fellowship Program:** Space Physics Laboratory (1998 - 2003)

- **Awards for promotion of the national language “Hindi” in various platforms:**
 - First Prize in Gagan for Best Hindi Article: (VSSC Hindi Journal):
 - * Vol. 46 (Oct 2017 - Mar 2018) - Aaj ke sandarbh me Gurukul kii paanch preranadayak baaten
 - * Vol. 43 (Apr 2016 - Sep 2016) - DPC Kaa Bhoot
 - * Vol. 41 (Apr 2015 - Sep 2015) - Samay Ke Saath Badalate Rishte
 - * Vol. 39 (Oct 2013 - Mar 2014) - Saadhe Chaar Sau Ka Rishta
 - * Vol. 38 (Apr 2014 - Sep 2014) - Ek Asantulit Samaaz
 - * Vol. 36 (Jun 2012 - Dec 2012) - Ek Avismaraniy Mulakaat
 - First Prize, Hindi Technical Seminar, IIST, Thiruvananthapuram, October 30 - 31, 2018.
 - Second Prize, Central Level Hindi Technical Seminar, VSSC, Thiruvananthapuram, May 16, 2014.
 - First Prize, National Hindi Workshop on “Ocean Modelling”, DOD, MoES, New Delhi, October 23, 2004
 - First Prize, National Hindi Workshop on “Oceanic Services”, INCOIS, Hyderabad, September 01, 2003
 - First Prize, Hindi Seminar, Vikram Sarabhai Space Centre, Thiruvananthapuram, November 26, 2001
 - First Prize, Inter Centre Technical Hindi Seminar, ISAC, Bangalore, September 13, 2001

Scientific Recognition in terms of Publications

h-index*	=	14*
Research Gate (RG) Score and RG Impact Points**	=	28.99** and 76.69**
Total number of Publications in Peer-reviewed Journals	≈	50 (>20 with Lead Authorship)
Total number of Citations	>	250
My Scopus Author ID	:	6507025594
My ORCID Page	:	orcid.org/0000-0003-1970-8458

* An author has index h if h of his N_p papers have at least h citations each, and the other $(N_p - h)$ papers have at most h citations each.

**RG Score and Impact Points are based on my [Research Gate Profile](#).

Computer Skills

- **OPERATING SYSTEMS:**
 - LINUX : OpenSuSe, RedHat, Fedora, Ubuntu, and other open source LINUX platforms
 - UNIX : AIX IBM Mainframe, HP-UX, IRIX, Solaris
 - WINDOWS : (Windows XP, Windows NT, Windows ME, Windows 2000, Windows8 ...)
- **PROGRAMMING LANGUAGES:**
 - FORTRAN : FORTRAN77, FORTRAN90, and FORTRAN95
- **WORD PROCESSOR AND GRAPHICAL USER INTERFACE (GUI) TOOLS:**
 - WORD PROCESSOR : LaTeX, Microsoft Office, Apache OpenOffice, LibreOffice
 - PLOTTING TOOLS : GrADS, gnuplot, QtiPlot, Origin, Surfer, SciDAVis, Ferret, GMT
- **FAMILIARITY WITH DIFFERENT TYPES OF DATA FORMATS:**
 - DIFFERENT FORMATS : ASCII, Binary, GRIB, NetCDF, HDF
- **FAMILIARITY WITH THE WEB-BASED APPLICATIONS:**
 - LANGUAGES AND SCRIPTS : HTML, PHP, SQL, mySQL, JAVA, PYTHON
 - CONTENT MANAGEMENT SYSTEM : JOOMLA!

Membership in Professional Bodies

- **Life Member**, INDIAN METEOROLOGICAL SOCIETY, THIRUVANANTHAPURAM CHAPTER
- **Complimentary Member**, EUROPEAN GEOSCIENCE UNION - 2015
- **COSPAR Associate**, COSPAR - COMMITTEE ON SPACE RESEARCH
- **Member**, ISRO SPACE SCIENTISTS ASSOCIATION, THIRUVANANTHAPURAM

Participation in Training Course/Workshops

- **Highly Web Secured Applications Training Program (September 08 - 10, 2015):**
Human Resource Development Department, ATF, VSSC, Thiruvananthapuram,
- **Structured Training Program (STP) on “Remote Sensing Applications” (September 08 - 12, 2014):**
National Remote Sensing Center, Hyderabad.
- **Advanced JAVA Training Program (June 17 - 19, 2014):**
Human Resource Development Department, ATF, VSSC, Thiruvananthapuram.
- **Software Project Management Programme (June 03 - 05, 2013):**
Human Resource Development Department, ATF, VSSC, Thiruvananthapuram.
- **Summer School on Data Assimilation (December 17 - 21, 2012):**
Indian Institute of Remote Sensing, Dehradun.
- **National Workshop on Geospatial Technology for Coastal Resources Management (May 28 - 29, 2012):**
Indian Institute of Space Science and Technology, Thiruvananthapuram.
- **Regional Numerical Weather Prediction and Data Assimilation Training Workshop (July 19 - 30, 2010):**
Meteorological Training and Conference Centre, Deutscher Wetterdienst, Langen (GERMANY).
- **Indo-Russian Workshop on Regional Climate Change (October 08 - 09, 2009):**
Nansen Environmental Research Centre, Cochin.
- **Third International High-resolution Regional Model (HRM) Workshop (November 24 - 28, 2008):**
Hanoi University of Sciences, Hanoi (VIETNAM).
- **Workshop on Atmospheric Chemistry Modelling and Tutorial on WRF/Chem Model (November 30, 2006):**
Centre for Development of Advanced Computing, Pune University Campus, Pune.
- **Intensive Course cum Workshop on Inverse Modelling (June 19 - July 01, 2006):**
CSIR Centre for Mathematical Modelling and Computer Simulations, Bangalore.
- **Intensive Course cum Workshop on Large Scale Ocean Modelling (October 04 - 14, 2004):**
CSIR Centre for Mathematical Modelling and Computer Simulations, Bangalore.
- **Second SERC School on Numerical Weather Prediction (March 12 - April 07, 2001):**
Centre for Atmospheric Sciences, Indian Institute of Technology, New Delhi.

Detailed List of Publications in Books and Peer-Reviewed Journals

Books:

1. **D. Bala Subrahmanyam** and Radhika Ramachandran, "Marine Atmospheric Boundary Layer Studies during INDOEX: Observational and Modelling Studies of the Marine Atmospheric Boundary Layer over the Tropical Indian Ocean during INDOEX", Archive No.: V177160; ISBN (eBook): 978-3-640-98865-5; ISBN (Book): 978-3-640-98891-4, 2011.
2. S. Indira Rani, Radhika Ramachandran and **D. Bala Subrahmanyam**, "Atmospheric Modelling Studies over India through HRM and ARPS Models: Studies on Lower Atmospheric Processes over South India using Numerical Atmospheric Models and Experiments", Archive No.: V178406; ISBN (eBook): 978-3-656-00569-8; ISBN (Book): 978-3-656-00584-1, 2011.

Invited Chapters in Books:

3. **D. Bala Subrahmanyam** and Radhika Ramachandran, "Applications of Mesoscale Atmospheric Models in Short-Range Weather Predictions during Satellite Launch Campaigns in India", Chapter in Book titled "Atmospheric Model Applications" Edited by Ismail Yucel; Published by InTech, Janeza Trdine 9, 51000 Rijeka, Croatia. ISBN 978-953-51-0488-9, pp 25 - 42. 2012.
[DOI : [10.5772/32518](https://doi.org/10.5772/32518)]

Editorial Papers in Peer-reviewed Journals:

1. **D. Bala Subrahmanyam**, Ismail Gultepe, Sultan Al-Yahyai, and A. N. V. Satyanarayana, "Atmospheric Boundary-Layer Processes and Atmospheric Modeling", Advances in Meteorology, Vol. 2015, Article ID 985353, 2 pages, 2015. [DOI : [10.1155/2015/985353](https://doi.org/10.1155/2015/985353)]

Peer-reviewed Journals:

2. **D. Bala Subrahmanyam**, Radhika Ramachandran, K. Nalini, Freddy P. Paul and S. Roshny, "Performance Evaluation of COSMO Numerical Weather Prediction Model in Prediction of OCKHI - One of the Rarest Very Severe Cyclonic Storms over the Arabian Sea: A Case Study", Natural Hazards (In Press, 2018).
[DOI : [10.1007/s11069-018-3550-2](https://doi.org/10.1007/s11069-018-3550-2)]
3. Roshny S., **D. Bala Subrahmanyam**, T. J. Anurose and Radhika Ramachandran, "Impact analysis of dynamical downscaling on the treatment of convection in a regional NWP model - COSMO: a case study during the passage of a very severe cyclonic storm OCKHI", Natural Hazards and Earth System Science Discussions, nhess-2018-288, 2018.
[DOI : [10.5194/nhess-2018-288](https://doi.org/10.5194/nhess-2018-288)]
4. T. J. Anurose, **D. Bala Subrahmanyam** and S. V. Sunilkumar, "Two years observations on the diurnal evolution of coastal atmospheric boundary layer features over Thiruvananthapuram (8.5°N, 76.9°E), India", Theoretical and Applied Climatology 131: 77 - 90, 2018.
[DOI : [10.1007/s00704-016-1955-y](https://doi.org/10.1007/s00704-016-1955-y)]
5. Jyoti Bhate, Amit P. Kesarkar, Anandakumar Karipot, **D. Bala Subrahmanyam**, M. Rajasekhar, V. Sathiyamoorthy and C.M. Kishtawal, "A sea breeze induced thunderstorm over an inland station over Indian South Peninsula - A case study", Journal of Atmospheric and Solar-Terrestrial Physics 148: 96 - 111, 2016. [DOI : [10.1016/j.jastp.2016.09.002](https://doi.org/10.1016/j.jastp.2016.09.002)]
6. T. J. Anurose and **D. Bala Subrahmanyam**, "Evaluation of ABL parametrization schemes in the COSMO, a regional non-hydrostatic atmospheric model over an inhomogeneous environment", Modeling Earth Systems and Environment 1(4):1 - 13, 2015.
[DOI : [10.1007/s40808-015-0045-y](https://doi.org/10.1007/s40808-015-0045-y)]

7. Sandhya K. Nair, Thara V. Prabha, N. Purushothaman, S. Sijikumar, S. Muralidharan, N. V. P. Kirankumar, D. B. Subrahmanyam, T. J. Anurose, S. S. Prijith and K.V. S. Namboodiri, "Diurnal variations of the low-level jet over peninsular India during the onset of Asian summer monsoon", *Theoretical and Applied Climatology* 120(1): 287 - 298, 2015.
[DOI : [10.1007/s00704-014-1168-1](https://doi.org/10.1007/s00704-014-1168-1)]
8. T. J. Anurose and **D. Bala Subrahmanyam**, "Assessment of a surface-layer parameterization scheme in an atmospheric model for varying meteorological conditions", *Annales Geophysicae* 32: 669 - 675, 2015. [DOI : [10.5194/angeo-32-669-2014](https://doi.org/10.5194/angeo-32-669-2014)]
9. T. J. Anurose and **D. Bala Subrahmanyam**, "Improvements in Sensible Heat-Flux Parametrization in the High-Resolution Regional Model (HRM) Through the Modified Treatment of the Roughness Length for Heat", *Boundary-Layer Meteorology* 147(3): 569 - 578, 2013.
[DOI : [10.1007/s10546-013-9799-9](https://doi.org/10.1007/s10546-013-9799-9)]
10. T. J. Anurose, **D. Bala Subrahmanyam**, C. B. S. Dutt, N. V. P. Kiran Kumar, Sherine Rachel John, Sandhya K. Nair, M. Santosh, Mannil Mohan, P. K. Kunhikrishnan, S. Sijikumar and S. S. Prijith, "Vertical Structure of Sea-Breeze Circulation over Thumba (8.5°N, 76.9°E, India) in the Winter Months and A Case Study during W-ICARB Field Experiment", *Meteorology and Atmospheric Physics*, 115(3): 113 - 121, 2012. [DOI : [10.1007/s00703-011-0178-0](https://doi.org/10.1007/s00703-011-0178-0)]
11. **D. Bala Subrahmanyam**, T. J. Anurose, N. V. P. Kiran Kumar, Mannil Mohan, P. K. Kunhikrishnan, Sherine Rachel John, S. S. Prijith and C. B. S. Dutt, "Spatial and Temporal Variability in Vertical Structure of the Marine Atmospheric Boundary Layer over Bay of Bengal during Winter Phase of Integrated Campaign for Aerosols, gases and Radiation Budget", *Atmospheric Research* 107: 178 - 185, 2012. [DOI : [10.1016/j.atmosres.2011.12.014](https://doi.org/10.1016/j.atmosres.2011.12.014)]
12. **D. Bala Subrahmanyam**, Radhika Ramachandran, S. Indira Rani, S. Sijikumar, T. J. Anurose and Asish Kumar Ghosh, "Location-specific weather predictions for Sriharikota (13.72°N, 80.22°E) through numerical atmospheric models during satellite launch campaigns", *Natural Hazards* 61(3): 893 - 910, 2012. [DOI : [10.1007/s11069-011-9942-1](https://doi.org/10.1007/s11069-011-9942-1)]
13. **D. Bala Subrahmanyam**, T. J. Anurose, Mannil Mohan, M. Santosh, N. V. P. Kiran Kumar and S. Sijikumar, "Impact of Annular Solar Eclipse of 15 January 2010 on Atmospheric Boundary Layer Characterization over Thumba: A Case Study", *Pure and Applied Geophysics* 169(4): 741 - 753, 2012. [DOI : [10.1007/s00024-011-0336-9](https://doi.org/10.1007/s00024-011-0336-9)]
14. S. Naseema Beegum, K. Krishna Moorthy, **D. Bala Subrahmanyam**, N. V. P. Kiran Kumar, S. Suresh Babu and M. Mohan, "Short period variations of the aerosol mass concentrations over Bay of Bengal: Association with quasi-periodic variations in the Marine Atmospheric Boundary Layer parameters and fluxes", *Journal of Atmospheric and Solar-Terrestrial Physics*, 77: 78 - 84, 2012.
[DOI : [10.1016/j.jastp.2011.11.012](https://doi.org/10.1016/j.jastp.2011.11.012)]
15. S. Srivastava, S. Lal, S. Venkataramani, I. Guha and **D. Bala Subrahmanyam**, "Airborne measurements of O₃, CO, CH₄ and NMHCs over the Bay of Bengal during winter", *Atmospheric Environment* 59: 597 - 609, 2012. [DOI : [10.1016/j.atmosenv.2012.04.054](https://doi.org/10.1016/j.atmosenv.2012.04.054)]
16. **D. Bala Subrahmanyam**, T. J. Anurose, Mannil Mohan, M. Santosh, N. V. P. Kiran Kumar, S. Sijikumar, S. S. Prijith and Marina Aloysius, "Atmospheric Surface-Layer Response to the Annular Solar Eclipse of 15 January 2010 over Thiruvananthapuram, India", *Boundary-Layer Meteorology* 141(2): 325 - 332, 2011. [DOI : [10.1007/s10546-011-9627-z](https://doi.org/10.1007/s10546-011-9627-z)]
17. **D. Bala Subrahmanyam** and T. J. Anurose, "Solar Eclipse induced Impacts on Sea/Land Breeze Circulation over Thumba: A Case Study", *Journal of Atmospheric and Solar-Terrestrial Physics* 73(5-6): 703 - 708, 2011. [DOI : [10.1016/j.jastp.2011.01.002](https://doi.org/10.1016/j.jastp.2011.01.002)]
18. **D. Bala Subrahmanyam**, N. V. P. Kiran Kumar, C. B. S. Dutt, T. J. Anurose, P. K. Kunhikrishnan and Mannil Mohan, "Characterization of Air-Sea Interaction Processes over the Bay of Bengal during the Winter Phase of Integrated Campaign for Aerosols, gases and Radiation Budget (W-ICARB) Field Experiment", *Atmospheric Research* 99(1): 97 - 111, 2011.
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