Newsletter of the Physical Research Laboratory

THE SPECTRUM

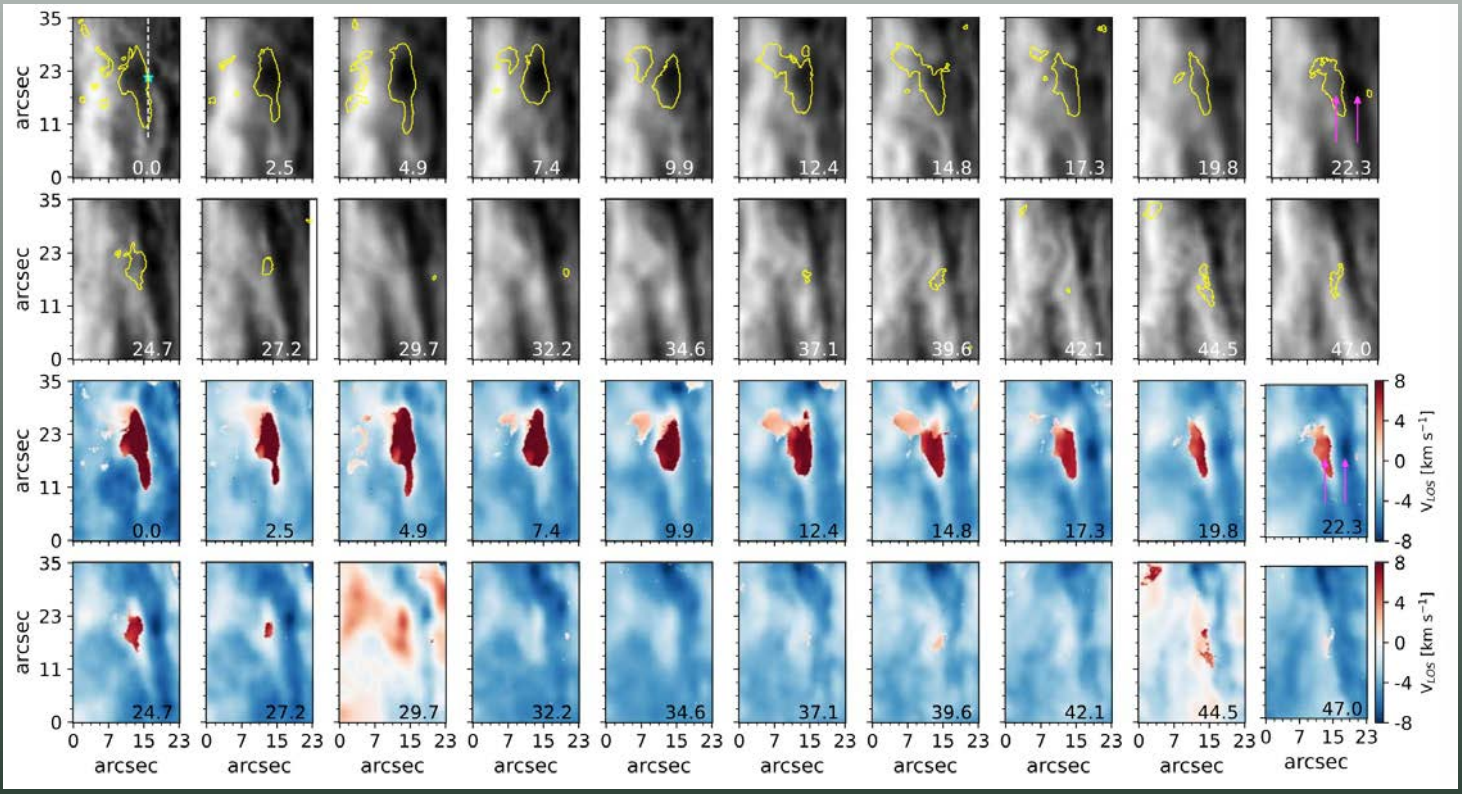

Image of the Month

Temporal evolution of the bi-directional flows in one of the regions of interest analysed inside the quiescent prominence utilizing observations from the MAST telescope at the Udaipur Solar Observatory, PRL. Grey and colored panels are line centre intensity and line of sight velocity evolution, respectively, overplotted with yellow contours of bi-directional flow patches.

June 2025

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Star formation efficiency and scaling relations in parsec-scale cluster-forming clumps

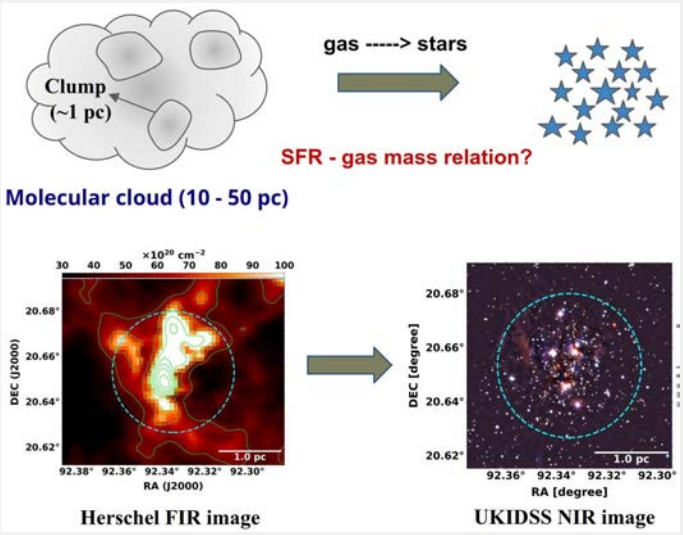
(**Vineet Rawat**, *M. R. Samal, A. Zavagno, Sami Dib, Davide Elia, J. Jose, D. K. Ojha, K. Srivastav)*

The Author

Vineet Rawat

Stars, including our Sun, are born in cold (~10 K) and dense (~100 particles per cubic centimetre) clouds (~10 pc or 3.1 × 10^{14} km in size) of gas and dust, popularly known as molecular clouds (MCs). Within MCs, the interplay of gravity, turbulence, magnetic fields, and stellar feedback gives rise to a hierarchy of dense structures: parsec-scale clumps, 0.1 pc-wide filaments, and compact cores (<0.1 pc). Individual stars form in cores, while clusters of stars form in clumps. In a simplistic analogy, these MCs can be thought of as machines that convert gas into stars. This leads to an obvious question: what is the rate and efficiency of this conversion, i.e., the star formation rate (SFR) and star formation efficiency (SFE)—and how are these quantities related to input material such as gas mass or gas mass surface density (Σ_{gas})? These relations, popularly known as "star formation scaling laws", are well studied at the extragalactic scale (~tens of kpcs) in the form of the Kennicutt-Schmidt relation ($\Sigma_{SFR} \propto \Sigma^{1.4}_{gas}$), where Σ_{SFR} is the SFR surface density. At the cloud scale, studies have reported varying behaviour in these relations depending on the dataset used, spatial resolution, and methodology. However, since gas-to-star conversion takes place at more localised levels—in clumps and cores—it is essential to investigate the behaviour of scaling relations from cloud to clump to core scales to better understand the physical processes regulating star formation. We conducted a statistical study of 17 nearby cluster-forming clumps to examine the star formation scaling relations (i.e. Σ_{SFR} versus Σ_{gas}) at the clump scale (Figure a). Using near-infrared (NIR) data of young stars from UKIRT and *Herschel* dust emission data of parent clumps, we derived the radii, ages, gas masses, and stellar masses of the clusters. We obtained the best-fit scaling relations as $\Sigma_{SFR} \propto \Sigma^{1.46}_{gas}$ and $\Sigma_{SFR} \propto (\Sigma_{gas}/t_{ff})^{0.80}$ for the studied clumps, where t_{ff} is the free-fall timescale of clump collapse. Comparing our results with existing scaling relations at cloud and extragalactic scales, we found that while the power-law exponent obtained in this work is similar to those found at these scales, the SFR surface densities are relatively higher for similar Σ_{gas} values (Figure b). We obtained an instantaneous median SFE of ~20% and SFE per free-fall time (ε_{ff}) of ~13%. The εff value obtained in this work is much higher than the constant value of 1% derived mostly for cloud scales and numerically calculated for a supersonically turbulent medium, hinting towards the role of local environment and physical processes at smaller scales in setting star formation scaling relations. Overall, our findings do not favour a universal relation between SFR and gas mass that can explain the star formation process across all scales, from galaxies and GMCs to clumps.

Source/Reference of the Work:https://doi.org/10.1093/mnras/staf807



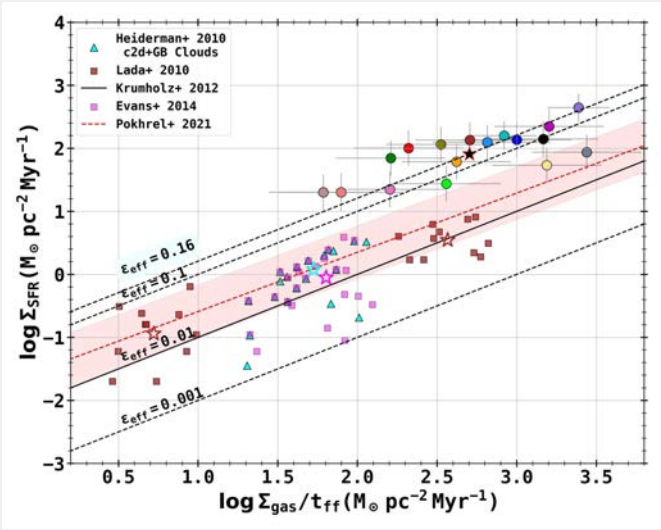


Figure: (a) Illustration of a clump within MC giving rise to a stellar cluster. NIR and far-IR image of a young star cluster, IRAS 06063+2040 and its parent clump, respectively. (b) The Σ_{SFR} versus Σ_{gas}/t_{ff} relation obtained in our work and its comparison with other studies at the cloud scales.

Investigating Bidirectional Flows in a Quiescent Prominence Using MAST Ca II 8542 Å Line Scan Observation

*(**Sandeep K. Dubey**, Andrew Hillier, and Shibu K. Mathew)*

The Author

Sandeep K. Dubey

Quiescent prominences are large magnetic structures hosting cool plasma in surrounding million-degree solar coronae. Prominences host different flows that may distort magnetic field lines, which may lead to magnetic reconnection inside the prominence body. In this study, we investigate bidirectional flow patches in a quiescent prominence. The investigation included the analysis of velocities in the line of sight (LOS) and the plane of sky (POS) of the prominence, complemented with intensity at different spectral positions of the Ca II 8542 Å line. The LOS velocities were obtained using Gaussian fitting to the observed Ca II spectra, whereas the POS velocities were derived from a position−time diagram along a vertical slit in the region of interest (ROI). Complementary to Ca II 8542 Å line scans, EUV intensity images from the Atmospheric Imaging Assembly (AIA) on board the Solar Dynamics Observatory were analysed to investigate the multithermal nature of the observed bidirectional flows. Out of two ROIs, in the first ROI, a large central patch of bidirectional flow was present initially that merged with other patches and disappeared approximately 30 minutes from the beginning, followed by the generation of another set of patches. Cospatial with diverging LOS motions of order 10 km s^{-1} associated with patch dynamics, POS motions of similar order were also observed in the ROI. Diverging intensity enhancements in different AIA channels, indicating a multithermal nature of bidirectional flows, were observed cospatially with diverging flows in the POS. Similar dynamics were observed in the second ROI. Bidirectional flow patches and the associated dynamics in LOS and POS may be related to magnetic reconnection inside the prominence.

Source/Reference of the Work: https://doi.org/10.3847/1538-4357/adc91a

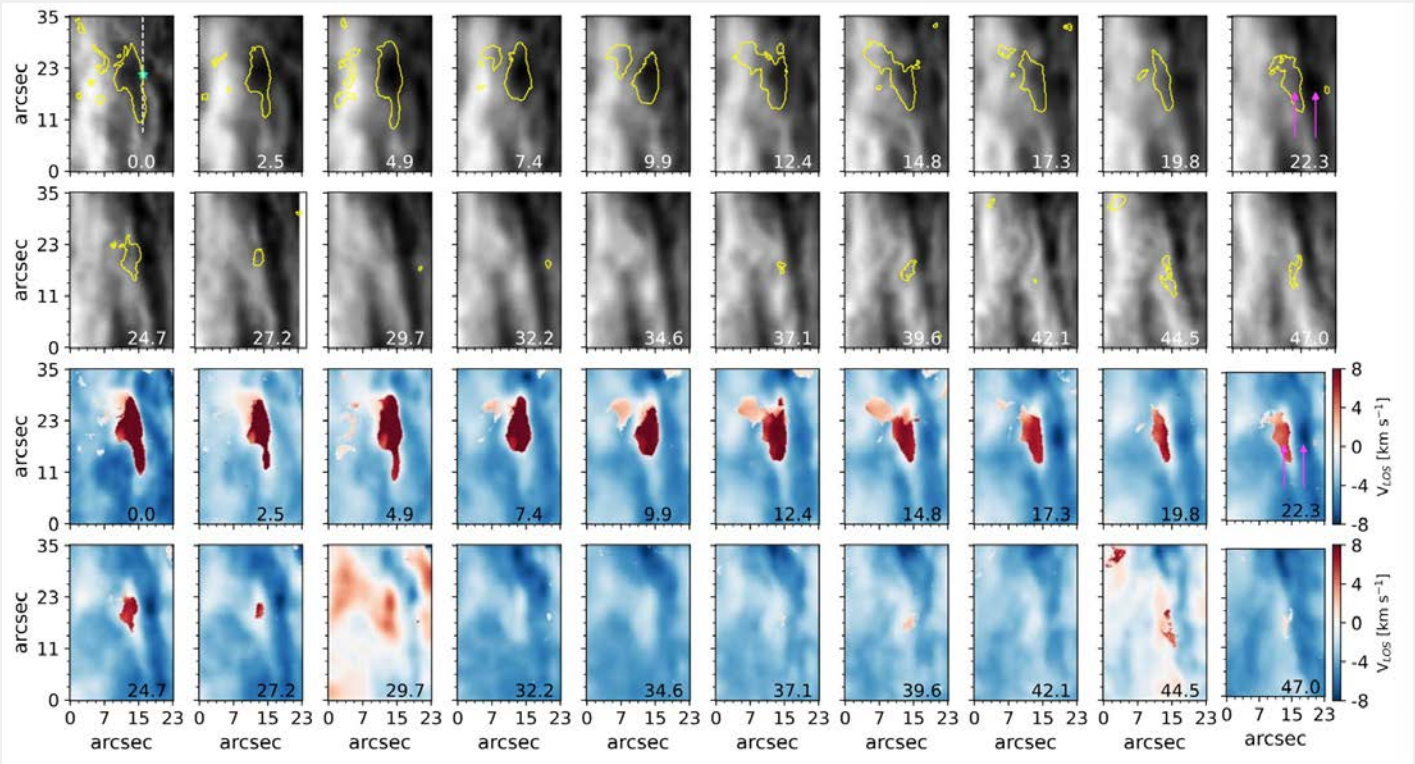


***Figure Caption**: Temporal evolution of the bi-directional flows in one of the ROI analysed inside the quiescent prominence. Grey and colored panels are line centre intensity and LOS velocity evolution, respectively, overplotted with yellow contours of bi-directional flow patches.*

Dynamics of mid-level stratiform clouds over the semi-arid regions of Western India: a post-monsoon case study

*(**Dharmendra Kumar Kamat**, Som Kumar Sharma, Prashant Kumar, Kondapalli Niranjan Kumar, Aniket Patel, Sourita Saha, Hassan Bencherif, Aditya Vaishya & Ruchita Shah)*

The Author

Dharmendra Kamat

Stratiform clouds, which form under stable atmospheric conditions, play a crucial role in negative cloud radiative forcing. Utilizing a combination of ground-based observations, satellite data, and reanalysis datasets, the study investigates the formation of stratiform clouds over Udaipur (24.58° N, 73.71° E, 598 meters above mean sea level) compared to Ahmedabad (23.02° N, 72.57° E, 56 meters above mean sea level) in the semi-arid region of Western India during the post-monsoon period. Ground-based Lidar observations indicated consistent cloud occurrences between 2 and 4 km over Udaipur during post-monsoon. Conversely, cloud occurrence over Ahmedabad is found to be lower despite the city having higher levels of columnar water vapor during this period. During the post-monsoon period of 2022–2023, the total cloud occurrence between 2 and 4 km altitude over Udaipur (about 4 %) was approximately double that observed over Ahmedabad (about 2 %). This disparity is linked to higher relative humidity near the 750 hPa level over Udaipur, sustained by surface moisture lifted to the 2–4 km range. Vertical moisture transport is facilitated by persistent low-level convergence at about 950 hPa and upper-level divergence at about 750 hPa, creating favorable conditions for vertical air motion and mid-level cloud formation. This study explores the influence of surface water bodies, orography, and local meteorological conditions on cloud dynamics in semi-arid urban areas. The insights from this study into cloud formation and atmospheric dynamics over the semi-arid Western-Indian region can contribute to improving regional weather forecasting.

Source/Reference of the work: https://doi.org/10.1007/s40808-025-02449-1

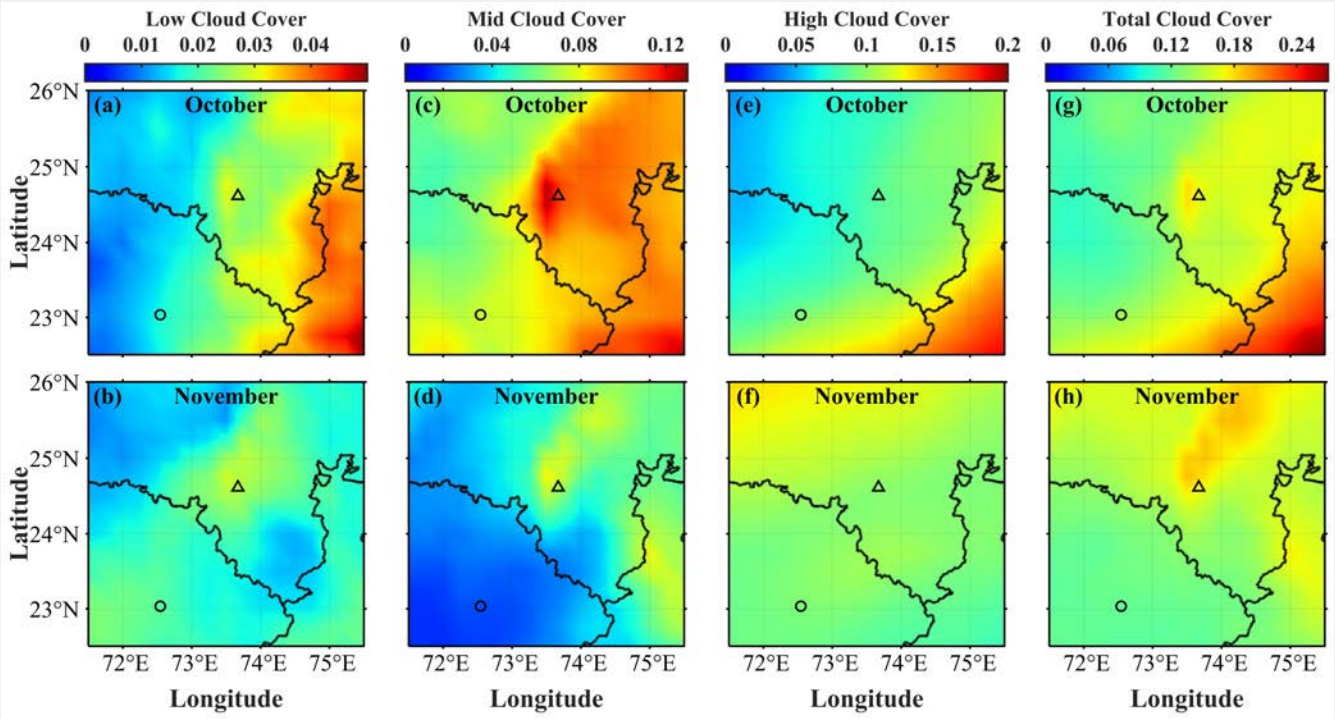


***Figure Caption**: Monthly mean low cloud cover (a-b), mid cloud cover (c-d), high cloud cover (e-f), and total cloud cover (g-h) over the Western Indian region in post-monsoon during 2022–2023. The black circle and triangle represent the Ahmedabad and Udaipur regions, respectively.*

Fire Mock Drill at PRL main Campus

A Fire Mock Drill was successfully conducted at PRL main campus on 16th May 2025, as part of ongoing preparedness measures to educate staff on fire safety systems available and their utilization in case of fire emergencies. Mr. Nayan Kumar Gadhvi, Fire Safety Officer (FSO) from the Ahmedabad Municipal Corporation, conducted a comprehensive training session for PRL staff and contractual workers. He provided valuable insights into the classification of fire extinguishing media and explained their appropriate usage for different types of fire emergencies along with a live demonstration of the fire hydrant system installed at the PRL main campus. Staff members actively participated in this hands-on activity, including operating the system and turning on the fire pump, gaining practical understanding of the in-house firefighting infrastructure.

The mock drill served as an effective platform to enhance fire safety awareness, improve emergency response capabilities, and assess PRL's preparedness in managing critical situations. The activity was well-organized by CMG and successfully achieved all its intended objectives.

Glimpses of the event

24वां पीआरएल अमृत राजभाषा व्याख्यान (पर्व)

पीआरएल अमृत राजभाषा व्याकरण (पर्व) ने 24वें व्याकरण के अवसर पर, जो 14.05.2025 को आयोजित किया गया था, पर्व ने 2 (दो) वर्ष पूरे कर लिए हैं। इस अवसर की प्रख्यात वक्ता सुश्री काम्या कार्तिकेयन, पर्वतारोही, प्रधानमंत्री राष्ट्रीय बाल पुरस्कार विजेता थीं।
PRL Amrit Rajbhasha Vyakhyaan (PARV) has on 24th Vyakhyaan, which was organized on 14.05.2025, completed 2 (Two) years. The eminent speaker for the occasion was Ms. Kaamya Karthikeyan, Mountaineer, Pradhan Mantri Rashtriya Bal Puraskar Awardee.

सुश्री काम्या नेपाल की ओर से माउंट एवरेस्ट पर चढ़ने वाली दुनिया की दूसरी सबसे कम उम्र की लड़की हैं और माउंट एकॉनकागुआ, माउंट डेनाली और माउंट एल्ब्रस सहित 7 चोटियों पर चढ़ने वाली दुनिया की सबसे कम उम्र की लड़की होने का गौरव रखती हैं। वह माउंट एल्ब्रस से स्की करके नीचे उतरने वाली सबसे कम उम्र की व्यक्ति भी थीं और सिर्फ 9 साल की उम्र में 6000 मीटर से अधिक की चोटी पर चढ़ने वाली सबसे कम उम्र की व्यक्ति थीं| उनके योगदान को प्रधानमंत्री राष्ट्रीय बाल शक्ति पुरस्कार, मन की बात में प्रधानमंत्री द्वारा उल्लेख और विभिन्न राष्ट्रीय और अंतर्राष्ट्रीय गणमान्य व्यक्तियों की प्रशंसा से मान्यता मिली है।
Ms. Kaamya is the second youngest girl in the world to climb Mount Everest from the Nepal side and holds the distinction of being the youngest girl in the world to climb 7 summits including Mount Aconcagua, Mount Denali and Mount Elbrus. She was also the youngest to ski down Mount Elbrus and the youngest to climb a peak over 6000m, at just 9 years old. Her contributions have been recognized with the Pradhan Mantri Rashtriya Bal Puraskar Award, also mentioned by the Prime Minister in Mann Ki Baat and praised by various national and international dignitaries.

व्याख्यान का शीर्षक था/ The vyakhyaan was titled "Summiting New Heights – शिखर तक मेरी यात्रा"

व्याख्यान में काम्या कार्तिकेयन ने अपनी चार साल की आयु से पहाड़ों को देखकर जिज्ञासु सवाल पूछने से लेकर, हर महाद्वीप की सबसे ऊँची चोटी पर चढ़ने वाली दुनिया की सबसे कम उम्र की महिला बनने तक के सफर पर चर्चा की| काम्या की यात्रा साहस, जिज्ञासा और अटूट समर्पण की एक प्रेरणादायक कहानी थी। उनका लक्ष्य पर्वतारोहण ग्रैंड स्लैम को पूरा करना है जिसमें 7 शिखर और दोनों ध्रुवों यानी उत्तरी ध्रुव और दक्षिणी ध्रुव से स्की करना शामिल है।
In the lecture, Kaamya Karthikeyan discussed her journey from being a four-year-old and asking curious questions about mountains, to becoming the youngest girl in the world to climb the highest peak on every continent. Kaamya's journey was an inspiring story of courage, curiosity and unwavering dedication. She aims to complete mountaineer's grand slam which includes 7 summits & ski from both poles i.e. North pole and South pole.

अपने प्रेरणादायक व्याख्यान के माध्यम से काम्या ने श्रोताओं को पर्वतारोहण के रोमांचकारी अनुभवों, बर्फ से ढकी चोटियों, कठोर प्रशिक्षण और मानसिक–शारीरिक संघर्षों की दुनिया से रूबरू कराया। उन्होंने आगे बताया कि पर्वतारोहण केवल शारीरिक श्रम और साहस की कहानी नहीं है, यह आत्मविश्वास, धैर्य और मूल्यों की कहानी है जो केवल पहाड़ ही सिखा सकते हैं।
Through her inspirational lecture, Kaamya took the listeners through the world of thrilling mountaineering experiences, snow-capped peaks, rigorous training and mental-physical struggles. She further discussed that mountaineering is not just a story of physical labour and courage, it is a story of self-confidence, patience and values that only mountains can teach.

व्याख्यान के बाद एक रोचक प्रश्नोत्तर सत्र हुआ, जिसमें श्रोताओं को विषय पर नए दृष्टिकोण और अधिक जानकारी प्रदान की गई। इसके बाद, सुश्री काम्या को निदेशक, पीआरएल द्वारा सम्मानित किया गया। कार्यक्रम का समापन धन्यवाद ज्ञापन एवं व्याख्यान में आमंत्रित दर्शकों, परिवार के सदस्यों और पीआरएल के बच्चों के साथ काम्या के संवाद के साथ हुआ।

The lecture was followed by an interesting Q&A session, which provided the audience with new perspectives and further information on the topic. Thereafter, Ms. Kaamya was felicitated by Director, PRL. The programme concluded with vote of thanks and interaction by Kaamya with the audience, family members and kids at PRL who were invited for the lecture.

Youtube Link:
https://www.youtube.com/watch?v=uMoEV-xXcfQ&list=PL12xjTGd3IdgQXLe9_O8ygpF92DY2hj6P&index=24&pp=iAQB

104th PRL ka Amrut Vyakhyan

The 104th PRL Ka Amrut Vyakhyaan was delivered by Dr. Priyadarshini Karve (Managing Director, SAMUCHIT Enviro Tech, Pune, Maharashtra) on 21st May 2025. In this Vyakhyaan, Dr. Karve discussed the urgent need to raise awareness about climate change through various forms of education and public campaigns, as well as the importance of preparedness to face its challenges. The lecture was titled “The Challenges of Climate Change Education.”

Dr. Karve started the Vyakhyaan, discussing the latest report by the Intergovernmental Panel on Climate Change (IPCC), which has indicated the following: a) A number of climate change impacts are now irreversible, and thus, a certain level of damage is unavoidable, especially for vulnerable communities around the world, b) Global fossil fuel consumption must peak by 2030 for the world to have any realistic chance of limiting global warming to 1.5ºC, as outlined in the Paris Agreement. She then stressed that these findings highlight the urgent need for widespread climate change literacy. She discussed various forms of climate change threats in both the global and Indian contexts. She emphasized the need for action at multiple levels—local, national, and global—across several fronts, including mitigation strategies, adaptation to irreversible changes, development of response systems for impending disasters.

She stressed that these efforts must be underpinned by climate literacy, supported by science-based and logical actions, guided by both short-term and long-term visions. Also emphasized that given the emerging threat of climate change, our education system must evolve to provide effective, fast, and widespread climate change literacy, and also discussed how this can be achieved. She then elaborated on the Paris Agreement and India’s commitments such as limiting global warming to 2ºC by 2100, achieving carbon neutrality by 2070, reducing emissions intensity of GDP by 45%, increasing non-fossil fuel-based power generation to 50% by 2030.

She explained how India is actively working toward these targets and also highlighted the need for future action plans that are aligned with India’s diverse geographical and socio-economic landscape, at both national and state levels. She also discussed how she has been in raising community awareness on climate change over the years by developing a carbon calculator for urban Indians to assess their personal carbon footprints, conducting Samuchit climate-friendly lifestyle workshops, planning and promoting carbon-neutral campuses, and delivering online courses on carbon accounting as part of the curriculum in several colleges and universities Toward the end of the Vyakhyaan, Dr. Karve shared her views for developing a science- and ethics-based, solution-centric, and action-oriented national climate literacy framework, not only to mitigate climate change but also to be prepared for the future adverse conditions.
Overall, Dr. Karve’s Vyakhyaan was a highly illuminating discussion on the wide-ranging impacts of climate change and the critical role that education, literacy, and proper planning could play in limiting its effects on us.

You Tube Link: https://www.youtube.com/live/2CJD5wdYUB8I

PRL Monthly Publications Digest (June 2025)

Atomic, Molecular and Optical Physics [02]

1. L. Kopf, R. Barros, S. Prabhakar, E. Giese, and R. Fickler, 2025, Conservation of Angular Momentum on a Single-Photon Level, Physical Review Letters, Date of Publication: 20/05/2025, Impact Factor: 8.1

2. Sahil Rathi, Kapil Kumar, V.P.S. Awana, Satyendra Nath Gupta, 2025, Effect of magnetic ordering on the phonons of Co3Sn2S2: Temperature-dependent Raman study, Physica B: Condensed Matter, Date of Publication: 03/05/2025, Impact Factor: 2.8

Astronomy & Astrophysics Division [03]

1. N. Schanche, G. Hébrard, K. G. Stassun, B. Hord, K. Barkaoui, A. Bieryla, D. Ciardi, K. A. Collins, A. Collier Cameron, J. Hartman, N. Heidari, C. Hellier, S. B. Howell, M. Lendl, J. McCormac, K. K. McLeod, H. Parviainen, D. Radford, A. S. Rajpurohit, H. Relles, R. Sharma, S. Baliwal, G. Bakos, S. C. C. Barros, F. Bouchy, A. Burdanov, P. A. Budnikova, A. Chakaraborty, C. Clark, Laetitia Delrez, O. D. S. Demangeon, R. F. Díaz, J. Donnenfield, M. Everett, A. Fukui, M. Gillon, C. Hedges, J. Higuera, E. Jehin, J. M. Jenkins, F. Kiefer, D. Laloum, J. Livingston, M. Lund, P. Magain, P. Maxted, I. Mireles, F. Murgas, N. Narita, K. J. Nikitha, C. Opitom, E. Palle, Y. G. Patel, M. Rose, S. G. Sousa, I. A. Strakhov, P. Strøm, A. Tuson, R. West, and J. Winn, 2025, A Swarm of WASP Planets: Nine Giant Planets Identified by the WASP Survey, The Astronomical Journal, Date of Publication: 27/05/2025, Impact Factor: 5.1

2. Maity, A. K., L. K. Dewangan, O. R. Jadhav, Saurabh Sharma, Ram Kesh Yadav, Y. Fukui, H. Sano, and T. Inoue, 2025, Investigating Embedded Structures and Gas Kinematics in the Infrared-dark Cloud Hosting Bubble N59-North, The Astronomical Journal, Date of Publication: 22/05/2025, Impact Factor: 5.1

3. Birendra Chhotaray, G. K. Jaisawal, Sachindra Naik and Arghajit Jana, 2025, Broad-band study of the SMC pulsar RX J0032.9−7348 during its X-ray brightening in 2024, Monthly Notices of the Royal Astronomical Society, vol. 539, pp 3437–3444, Date of Publication: 19/05/2025, Impact Factor: 4.8

Theoretical Physics Division [01]

1. Ketan M. Patel, 2025, Hierarchies from deterministic non-locality in theory space Anderson localisation, Journal of High Energy Physics, Date of Publication: 02/05/2025, Impact Factor: 5.0

Space and Atmospheric Sciences Division [02]

1. LK Sahu, M Gupta, N Tripathi, R Yadav, TG Malik, M Kajino, 2025, Effect of Different Sources and Meteorological Processes on the Variability of VOC Composition in a Metropolitan City of Western India During Summer Season, JGR Atmosphere, Date of Publication: 10/05/2025, Impact Factor: 4.7

2. Gupta, M., Sahu, L. K., Tripathi, N., Sudheer, A. K., & Singh, A. , 2025, Processes controlling DMS variability in marine boundary layer of the Arabian Sea during post-monsoon season of 2021, Journal of Geophysical Research: Atmospheres, Date of Publication: 03/05/2025, Impact Factor: 3.91

Planetary Sciences Division [03]

1. S. Sahoo, A.S. Majumdar, R. Anand, D. Ray, J.M. Fuenlebrada, 2025, Petrogenesis of Mafic–Ultramafic Cumulates in the Mayudia Ophiolite Complex, NE Himalaya: Evidence of an Island Arc Root in Eastern Neo-Tethys , Minerals, Date of Publication: 27/05/2025, Impact Factor: 2.2

2. Neha Panwar, Neeraj Srivastava, Ankita Yadav, Megha Bhatt, Christian Wöhler, Anil Bhardwaj, 2025, Volcanism along the rings of the Crisium Basin on the Moon: Insights from M3 onboard Chandrayaan - 1, Icarus, Date of Publication: 11/05/2025, Impact Factor: 2.5

3. Trushit Upadhyaya, Jayesh Pabari, Arpita Patel, Upesh Patel, Killol Pandya, Poonam Thanki, Om Prakash Kumar, Siddaraj U., 2025, On-board electrically small diplexer for future radio science planetary RF subsystem applications, Results in Engineering, Date of Publication: 10/05/2025, Impact Factor: 6.0

Geosciences Division [04]

1. Modi, A., MK Roxy, S. Jain,CH Truong,QV Doan, S. Jevrejeva, A. Singh, C.Dhara, and S. Ghosh, 2025, Bridging climate science, policy, and communities: collaborative pathways for climate resilience in the Indo-Pacific, Frontiers in Climate, Date of Publication: 27/05/2025, Impact Factor: 3.3

2. Prajith, A., J. S. Ray, B. G. George, K.B. Joshi, R. Bhushan, R. Bhutani, and A. Singh, 2025, Effects of climate and sea level change on sedimentation in the eastern Bengal Fan during the late Quaternary, Quaternary Science Reviews, Date of Publication: 12/05/2025, Impact Factor: 3.2

3. Markus Patzek, Yogita Kadlag, Miriam Rüfenacht, Evelyn Füri, Andreas Pack, Addi Bischoff, Harry Becker, Robbin Visser, Timm John, Maria Schönbächler, 2025, Multi-isotope (N, O, Ti, and Cr) study of C1 and CM-like clasts—Probing unsampled C1 material, Meteoritics & Planetary Science, Date of Publication: 09/05/2025, Impact Factor: 2.9

4. Thirumalai, K., S. C. Clemens, Y. Rosenthal, S. Conde, K. Bu, S. Desprat, M. Erb, L. Vetter, M. Franks, J. Cheng, L. Li, Z. Liu, L. P. Zhou, L. Giosan, A. Singh & V. Mishra , 2025, Extreme Indian summer monsoon states stifled Bay of Bengal productivity across the last deglaciation, Nature Geoscience, Date of Publication: 01/05/2025, Impact Factor: 15.7

Udaipur Solar Observatory Division [02]

1. Sandeep K. Dubey, Andrew Hillier, Shibu K. Mathew, 2025, Investigating Bidirectional Flows in a Quiescent Prominence Using MAST Ca II 8542 Å Line Scan Observations, The Astrophysical Journal, Date of Publication: 15/05/2025, Impact Factor: 4.8

OBITUARY

Late Dr. Surendra B Khadkikar
Senior Professor – I

Date of Birth	29.06.1936
Date of Joining PRL	01.08.1962
Date of Retirement	30.06.1996
Date of Death	07.05.2025

Teary Eyes for Our Departed Member

VISITORS

1. A team of 3 students and 1 Co-ordinator from Aryabhat Foundation, Bhopal, Madhya Pradesh have visited Udaipur Solar Observatory (USO), Udaipur Campus of PRL, on 20.05.2025 in connection with educational purpose.

2. Dr. Kuntal Bhattacharya, a Postdoctoral Fellow from IIT, Guwahati visited PRL from 07.05.2025 to 14.05.2025 for research collaboration and delivered a seminar on 13.05.2025.

3. Mr. Dipak Chakraborty, a PhD student from IISER Bhopal pursuing doctoral research in social history of science/STS discipline, visited PRL Library from 5th to 15th May'2025. He visited to study and understand the scientific developments carried out over the early formative years, major scientific projects and instruments building pertaining to cosmic rays, space and atmospheric physics, among others and intellectual exchanges of PRL with other scientific institutions

4. Dr. Tanmoy Mondal an alumnus of PRL and Faculty of BITS, Pilani has visited Physical Research Laboratory, Ahmedabad on 27.05.2025 to deliver a seminar.

5. During May 2025, the following have visited Infrared Observatory, PRL, Mount Abu:-

- Nineteen (19) DOS/ISRO staff members
- Three (3) BARC/TIFR Staff members
- Fifty Five (55) students
- Seventy One (71) General Public

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