

CURRICULUM VITAE

Personal Profile

Name: V.Venkataraman

Date of birth: 25 June 1977

Place of birth: Nagercoil

Nationality: Indian

Work Address:

Planetary Science Branch
Space Physics Laboratory (SPL)
Vikram Sarabhai Space Center
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Research Interests

Science:

1. Infrared studies of the circumstellar environments of Eruptive Young Stellar Objects and post-Asymptotic Giant Branch stars.
2. Near-infrared studies of transient sources (Novae & Supernovae)

Instrumentation:

1. Vacuum thin film coating
2. Development of the near-infrared Imaging Fabry-Perot Spectrometer (IFPS)
3. Near-infrared Mercury Cadmium Telluride (MCT) focal plane array characterization

Education

1992: High School, Board of Matriculation Examinations, Tamilnadu, India
Percentage of marks: 70.5 %

1994: Higher Secondary, Board of Higher Secondary Examinations, Tamilnadu, India
Percentage of marks: 65.1 %

1994-1997: B.Sc. in Physics, Manonmaniam Sundaranar University, Trinelveli, India
Percentage of marks: 70.6 %

1997-1999: M.Sc. in Physics, Madurai Kamaraj University, Madurai, India
Percentage of marks: 70.6 %

2012-2015: Ph.D. (Astrophysics), Physical Research Laboratory;
Degree awarded by Mohanlal Sukhadia University, Udaipur, India
Dissertation title: *Infrared Investigations of Circumstellar matter*,
Supervised by Profs. B.G.Anandarao & P. Janardhan

Professional Experience

- Junior Research Fellow (January 2000 to October 2002)
Indira Gandhi Centre for Atomic Research, Kalpakkam,
Anna University, Chennai
- Scientist-SC(Tech) (October 2002 to December 2008)
Astronomy & Astrophysics Division, Physical Research Laboratory, Ahmedabad
- Scientist-SD(Tech) (January 2009 to June 2014)
Astronomy & Astrophysics Division, Physical Research Laboratory, Ahmedabad
- Scientist-SE(Tech) (July 2014 to November 2015)
Astronomy & Astrophysics Division, Physical Research Laboratory, Ahmedabad
- Scientist-SE (November 2015 to February 2018)
Astronomy & Astrophysics Division, Physical Research Laboratory, Ahmedabad
- Scientist/Engineer-SE (February 2018 to present)
Space Physics Laboratory, Vikram Sarabhai Space Center, Thiruvananthapuram

Experience in Astronomical Observations

- Extensively observed the science targets using Near Infrared Camera and Spectrograph (NICS) & Near Infrared Camera and Multi-Object Spectrometer at PRL's Mt. Abu Infrared Observatory
- Radio Continuum observations at 1280 MHz using Giant Meter wave Radio Telescope (GMRT)

Computer skills

- Data analysis
 - Radio Astronomy Software
Astronomical Image Processing System (AIPS)
 - Near/Mid Infrared Astronomy Softwares
Image Reduction and Analysis Facility (IRAF)
Python based IRAF (Pyraf)
Specview Spectroscopic Modeling Analysis and Reduction Tool (SMART)
Spitzer IRS Custom Extraction (SPICE)
MOsaicker and Point source EXtractor (MOPEX)
Observers SWS Interactive Analysis (OSIA)
ISO Spectroscopic Analysis Package (ISAP)

- Spectral Synthesis packages
SPECTRUM
- Plotting & data visualization
Xmgrace
Gnuplot
Origin

- Operating System
Linux, Windows, MacOS

Refereed Publications

1. **Venkata Raman, V.**, Anandarao, B. G., Janardhan, P., Rajesh Pandey, An Infrared Photometric and Spectroscopic Study of Post-AGB Stars (2017), **Monthly Notices of the Royal Astronomical Society**, 470, 1593
2. Srivastava, Mudit K., Banerjee, D. P. K., Ashok, N. M., **Venkataraman, V.**, Sand, D.J., Diamond, T., Near infrared studies of V2944 Ophiuchi (Nova Ophiuchi 2015) (2016), **Monthly Notices of the Royal Astronomical Society**, 462, 2074
3. Sand, D.J., Hsiao, E. Y., Banerjee, D. P. K.,.....**Venkataraman, V.** Post-maximum Near-infrared Spectra of SN 2014J: A Search for Interaction Signatures (2016), **The Astrophysical Journal Letters**, 822, L16
4. Banerjee, D. P. K.,Srivastava, Mudit K., Ashok, N. M., **Venkataraman, V.** Near-infrared studies of the carbon monoxide and dust-forming Nova V5668 Sgr (2016), **Monthly Notices of the Royal Astronomical Society Letters**, 455, L109
5. Joshi, Vishal, Banerjee, D. P. K., Ashok, N. M., **Venkataraman, V.**, Walter, F. M. Infrared studies of Nova Scorpii 2014: an outburst in a symbiotic system sans an accompanying blast wave (2015), **Monthly Notices of the Royal Astronomical Society**, 452, 3696
6. Marion, G. H., Sand, D. J., Hsiao, E. Y., Banerjee, D. P. K.,.....**Venkataraman, V.**.... Early Observations and Analysis of the Type Ia SN 2014J in M82 (2015), **The Astrophysical Journal**, 798, 39
7. **Venkataraman, V** and Anandarao B G Near-infrared Spectral Line Variations of Post-Asymptotic Giant Branch Stars (2015), **Asian Journal of Physics**, 24, 1049
8. **Venkataraman, V** and Anandarao B G Mass-loss during the Evolution of Intermediate Mass Stars (2015), **Asian Journal of Physics**, 24, 1057
9. **Venkataraman, V** and Anandarao B G Modelling the Spectral Energy Distributions of Eruptive Young Stellar Objects (2015), **Asian Journal of Physics**, 24, 1065
10. Amanullah, R., Goobar, A., Johansson, J., Banerjee, D. P. K., **Venkataraman, V.**.....The Peculiar Extinction Law of SN 2014J Measured with the Hubble Space Telescope (2014), **The Astrophysical Journal Letters**, 788, L21

11. Banerjee, D. P. K., Joshi, Vishal, **Venkataraman, V.**, Ashok, N. M.; Marion, G. H.; Hsiao, E. Y.; Raj, A. Near-IR Studies of Recurrent Nova V745 Scorpii during its 2014 Outburst (2014), **The Astrophysical Journal Letters**, 785, L11
12. **Venkata Raman, Veeman**, Anandarao, Boddapati G., Janardhan, Padmanabhan, Pandey, Rajesh, Near-infrared monitoring and modeling of V1647 Ori in its ongoing 2008-2012 outburst phase (2013), **Research in Astronomy and Astrophysics**, 13, 1107
13. Anandarao, B. G., **Raman, V. Venkata**, Ghosh, S. K., Ojha, D. K., Kumar, M. S. N. Near-infrared photometry and radio continuum study of the massive star-forming regions IRAS 21413+5442 and IRAS 21407+5441 (2008), **Monthly Notices of the Royal Astronomical Society**, 390, 1185
14. **Venkata Raman, V.**, Anandarao, B. G. Infrared spectroscopic study of a selection of AGB and post-AGB stars (2008), **Monthly Notices of the Royal Astronomical Society**, 385, 1076
15. Ojha, D. K., Ghosh, S. K., Tej, A.; Verma, R. P.,.....Anandarao, B. G.; **Venkataraman, V.** Post-outburst phase of McNeil's nebula (V1647 Orionis) (2006), **Monthly Notices of the Royal Astronomical Society**, 368, 825
16. **Venkata Raman, V.**, S. Rajagopalan, P.Manoravi, A.K.Balamurugan, A. Ramalingam, A.K.Tyagi, Formation of interface silicides at room temperature in pulsed laser deposited Ti thin films on Si <100> (2003), **Materials Research Bulletin**, 38, 1835

**Non-
refereed
Publications**

1. Banerjee, D. P. K., Ashok, N. M., **Venkataraman, V.**, Srivastava, M. Near-IR observations of Nova Oph 2015 (2015), **The Astronomer's Telegram**, 7446
2. Banerjee, D. P. K., Ashok, N. M., **Venkataraman, V.**, Srivastava, M CO detected strongly in emission in Nova Sgr 2015 #2 (2015), **The Astronomer's Telegram**, 7303
3. Srivastava, M., Ashok, N. M., Banerjee, D. P. K., **Venkataraman, V.** Near-infrared observations of Nova Sco 2015 and the luminous red variable in M31 (2015), **The Astronomer's Telegram**, 7236
4. **Venkataraman, V.**, Anandarao, B. G., Infrared investigation of the eruptive young stellar object V1647 Ori during its recent outburst and quiescent phases (2014), International Conference on Interstellar Dust, Molecules and Chemistry, Tezpur, India
5. Joshi, Vishal, Srivastava, Mudit, Banerjee, D. P. K., **Venkataraman, V.**, Ashok, N. M., Near-infrared observations of supernova SN2014dt in M61 (2014), **The Astronomer's Telegram**, 6772
6. Joshi, Vishal; Srivastava, Mudit; Ashok, N. M.; Banerjee, D. P. K.; **V. Venkataraman, V.** Near-infrared observations of blue transient ASASSN-14jv (2014), **The Astronomer's Telegram**, 6707

7. Joshi, Vishal, Banerjee, D. P. K., **Venkataraman, V.** Ashok, N. M. Near-infrared observations of Nova Sco 2014; a likely symbiotic nova (2014), **The Astronomer's Telegram**, 6032
8. Ashok, N. M., Banerjee, D. P. K., **Venkataraman, V.**, Joshi, Vishal Nova Cephei 2014; Near-IR observations (2014), **The Astronomer's Telegram**, 5996
9. Banerjee, D. P. K., **Venkataraman V.**, Joshi, Vishal, Raj, Ashish, Ashok, N. M. Near-infrared observations of recurrent nova V745 Sco (2014), **The Astronomer's Telegram**, 5865
10. **Venkataraman, V.**, Banerjee, D. P. K., Joshi, Vishal, Ashok, N. M., Bhalerao, Varun, Near-infrared observations of the supernova in M82 (PSNJ09554214+6940260) (2014), **The Astronomer's Telegram**, 5793
11. **Venkataraman, V.** Investigation of the behaviour of the eruptive young stellar object V1647 Ori since its outburst in 2008, **31st ASI Meeting**, ASI Conference Series, 2013, Vol. 9, pp 122 Edited by Pushpa Khare & C. H. Ishwara-Chandra
12. Banerjee, D. P. K., Ashok, N. M., **Venkataraman, V.** Infrared observations show that Nova Mon 2012 is now in the coronal line phase (2012), **The Astronomer's Telegram**, 4542
13. Raj, Ashish, **Venkataraman, V.**, Ashok, N. M., Banerjee, D. P. K., Near-IR photometric observations of PG 1553+113 (2012), **The Astronomer's Telegram**, 4107
14. Raj, Ashish, Ashok, N. M., Banerjee, D. P. K., **Venkata Raman, V.** Infrared Observations of Nova Sagittarii 2012 = Pnv J17452791-2305213 (2012), **The Astronomer's Telegram**, 4093
15. Raj, Ashish, Ashok, N. M., Banerjee, D. P. K., **Venkataraman, V.** Near-infrared photometric observations of Nova Ophiuchi 2012 (2012), **The Astronomer's Telegram**, 4027
16. **Venkat, V.**, Anandarao, B. G., V1647 Orionis (2011), **Central Bureau Electronic Telegrams**, 2647, #1
17. D. Garcia-Alvarez, N.J. Wright, J.J. Drake..... **Venkat V** Multi-Wavelength Study of the 2008-2009 Outburst of V1647 Ori (2011), **Proceedings of the 16th Workshop on Cool Stars, Stellar Systems, and the Sun**, (PASP conference series)
18. **Venkataraman, V.**, Anandarao, B. G. Near-infrared studies of the recent (2008) outburst of V1647 Ori, **Proceedings of the 29th Meeting of the Astronomical Society of India**, held 23-25 February, 2011. ASI Conference Series, Vol. 3, Edited by P. Khare and C.H. Ishwara-Chandra, 2011, p. 129
19. **Venkat, V.**, Anandarao, B. G., V1647 Orionis (2008), **Central Bureau Electronic Telegrams**, 1596, #1
20. Dewangan, L. K., **Venkat, V.**, Jain, J., Vadawale, S., Anandarao, B. G. GRB 080212: mount abu NIR observations, (2008) **GRB Coordinates Network, Circular Service**, 7321, #1

21. Dewangan, L. K., **Venkat, V.**, Purohit, R., Jain, J., Vadawale, S., Anandarao, B. G. Transient XRF 080109 / SN 2008D: mount abu NIR observations, (2008), **GRB Coordinates Network, Circular Service**, 7191, #1
22. **Venkataraman, V.**, Anandarao, B. G. Infrared spectroscopy of AGB/post-AGB stars, **Proc. 25th meeting of ASI (2007)**, p. 52
23. **Venkat, V.**, Anandarao, B. G., V1647 Orionis (2006), **IAU Circ.**, 8694, #2
24. Anandarao, B. G., **Venkataraman, V.**, Near-infrared H and K band Spectroscopy of a selection of AGB stars, (2006), **14th Cambridge workshop on Cool stars, Stellar Systems and the Sun**, Pasadena, USA
25. Anandarao, B. G., **Venkataraman, V.**, Ghosh, S. K., Ojha, D. K., Vig, S. Near-infrared photometry and radio continuum observations of the massive star-forming region IRAS 21413+5442, (2005), **Bulletin of the Astronomical Society of India**, 33, 392
26. **Venkataraman, V.** Anandarao, B. G. A near-infrared photometric study of the massive star forming region IRAS 21413+5442, (2005), **Bulletin of the Astronomical Society of India**, 33, 141

Participation in Training program Structured Training Program (STP) on "Challenges in Space Science and Exploration for ISRO Scientist and Engineers" during 13 to 17 March 2017 at Vikram Sarabhai Space Centre, Thiruvananthapuram.

Selected recent Presentations Infrared Investigations of Circumstellar matter (2016), **34th Meeting of the Astronomical Society of India**, Kashmir University, Srinagar

Mid Infrared dust and molecular features in proto-planetary nebulae (2016), **Electromagnetic Scattering as a tool in Astronomy and Astrophysics, IUCAA workshop**, MK Bhavnagar University, Bhavnagar, India

Mid-infrared dust and molecular features in Post-Asymptotic Giant Branch/Proto-Planetary Nebulae (2016), **Area Seminar**, Astronomy & Astrophysics Division, Physical Research Laboratory, Ahmedabad