

CURRICULUM VITAE



AKHILESH KUMAR

Date of Birth : 30 JUNE 1992 **Address:** VILLAGE – KHANUWAI
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EDUCATIONAL QUALIFICATIONS

- **Ph. D. (Submitted)** in Atmospheric Physics, Banaras Hindu University 2015 - 2021
- **M. Sc. in Physics (77.1 %)**, Banaras Hindu University 2015
- **B. Sc. (Hons.) in Physics (70 %)**, Banaras Hindu University 2013
(Physics, Mathematics, Statistics)
- **Intermediate (81.4 %)**, UP Board (G.S. Inter College) 2010
(Hindi, English, Physics, Chemistry, Mathematics)
- **High School (67 %)**, UP Board (G.S. Inter College) 2008
(Hindi, English, Science, Mathematics, Social Science, Drawing)

ACHIEVEMENTS & SKILLS

- **INSPIRE FELLOW (JRF/SRF)**
- **CSIR – JRF** (December – 2015), Physical Science, AIR: **138**
- **GATE** (March – 2016), Physics, AIR: **364**
- **JEST** (March – 2016), Physics, AIR: **59**
- **Computer Skills:** MATLAB, LINUX, ORIGIN, EXCEL

INSTRUMENTS KNOWLEDGE

- Dust Monitoring Using **High Volume Sampler**.
- Aerosol Optical Depth measurement using **MICROTOPS – II Sun-photometer**.
- Radiative Forcing measurement using **Net Radiometer**.
- **Aethalometer** for black carbon (BC) measurement.

AREA OF INTEREST

- Properties of Atmospheric Aerosols
- Aerosol – Cloud Interaction
- Atmospheric Aerosols Chemistry
- Biomass Burning, Radiative Forcing

Papers Published/Communicated

1. **Akhilesh Kumar**, Vineet Pratap, Sanjay Kumar, A. K. Singh, “Performance of water vapour retrieval from MODIS and ECMWF and their validation with ground based GPS measurements over Varanasi”, *Journal of Earth System Science* (2021) 130: 41.
2. Shani Tiwari, **Akhilesh Kumar**, Vineet Pratap, A.K. Singh, “Assessment of two intense dust storm characteristics over Indo–Gangetic basin and their radiative impacts: A case study”, *Atmospheric Research*, 228 (2019) 23–40.
3. Vineet Pratap, **Akhilesh Kumar** et al., ”Chemical characteristics of particulate matters and their emission sources over Varanasi during winter season”, *Journal of Atmospheric Chemistry* (2020), 77, 83-99.
4. Vineet Pratap, Upal Saha, **Akhilesh Kumar**, A. K. Singh, “Analysis of air pollution in the atmosphere due to firecrackers in the Diwali period over an urban Indian region”, “*Advances in Space Research* (2021)”.
5. Pradeep Kumar, Vineet Pratap, **Akhilesh Kumar** et al., “Assessment of atmospheric aerosols over Varanasi: Physical, optical and chemical properties and meteorological implications”, *Journal of Atmospheric and Solar–Terrestrial Physics*, 209 (2020) 105424.
6. **Akhilesh Kumar**, Vineet Pratap, Sarvan Kumar, A. K. Singh, “Atmospheric aerosols properties over Indo-Gangetic Plain: A trend analysis using ground- truth AERONET data for the year 2009 – 2017”, *Advances in Space Research* (revision).
7. Vineet Pratap, Akhilesh Kumar, A. K. Singh, “Overview of Solar eclipse of 21st June 2020 and its impact on solar irradiance, Surface Ozone and different meteorological parameters over eight cities of India”, “*Advances in Space Research* (2021)”.
8. Vineet Pratap, **Akhilesh Kumar**, A. K. Singh, “Short Term Air Quality Degradation by Firecrackers Used during Diwali Festival in Varanasi, India”, *IJIRSET*(2017).
9. Akhilesh Kumar, Vineet Pratap, A. K. Singh, “Variation of Aerosol Index (AI) over Indo – Gangetic Basin during COVID – 19 Outbreaks”, (Under Review).
10. Vineet Pratap, S. Tiwari, **Akhilesh Kumar**, A.K. Singh, “COVID-19 lockdown induced air pollution reduction over India: a lesson for future air pollution mitigation strategies, “*Journal of Earth System Science* (2021)”.

1. **Akhilesh Kumar**, Vineet Pratap, Pradeep Kumar, A. K. Singh. "Frequency distribution of aerosol optical depth over Varanasi during 2011." In *2020 URSI Regional Conference on Radio Science (URSI-RCRS)*, pp. 1-2. IEEE, 2020.
2. **Akhilesh Kumar**, Vineet Pratap, Pradeep Kumar, A. K. Singh. "Effect on aerosol optical depth during Diwali festival in Varanasi, India." In *2020 URSI Regional Conference on Radio Science (URSI-RCRS)*, pp. 1-3. IEEE, 2020.
3. **Akhilesh Kumar**, Vineet Pratap, Pradeep Kumar, A. K. Singh. "Characteristics of dust particles during Fani Cyclone over Indian region." In *AGU Fall Meeting Abstracts*, vol. 2019, pp. A41N-2823. 2019.
4. **Akhilesh Kumar**, Shani Tiwari, Vineet Pratap, A. K. Singh. "Impacts of severe dust storms on aerosol characteristics over Kanpur." In *AGU Fall Meeting Abstracts*, vol. 2018, pp. A21I-2806. 2018.
5. **Akhilesh Kumar**, A. K. Singh, , Sanjay Kumar, Vineet Pratap, R. P. Singh, Meenakshi Singh, and Manoj Srivastava. "Variability of Aerosol Optical Depth and its effect on climatic Parameter over Varanasi during 2011-2016." *42nd COSPAR Scientific Assembly 42* (2018): A1-1.
6. **Akhilesh Kumar**, sanjay Kumar, A.K. Singh, "Performance of water vapor retrieval from MODIS and its validation with ground based GPS measurement" One Day Conference At: Dept of Physics, Banaras Hindu University, Varanasi.
7. Vineet Pratap , **Akhilesh Kumar**, A. K. Singh. "Variability in air pollutants and AOD over Varanasi region for years 2005-2010." In *2019 URSI Asia-Pacific Radio Science Conference (AP-RASC)*, pp. 1-1. IEEE, 2019.
8. Vineet Pratap, **Akhilesh Kumar**, Pradeep Kumar, A. K. Singh. "Pre-monsoon study of aerosol parameters and particulate matters over Varanasi for 2017." In *2020 URSI Regional Conference on Radio Science (URSI-RCRS)*, pp. 1-2. IEEE, 2020.
9. Vineet Pratap, **Akhilesh Kumar**, Pradeep Kumar, A. K. Singh. "Seasonal Variability of Atmospheric Aerosols over Varanasi Region during 2010-2016." In *2020 URSI Regional Conference on Radio Science (URSI-RCRS)*, pp. 1-3. IEEE, 2020.
10. Vineet Pratap, **Akhilesh Kumar**, Pradeep Kumar, A. K. Singh, "Chemical Characterization of Atmospheric Aerosols over Varanasi, "Conference of Indian Aerosol Science and Technology Association 2018 At: Delhi
11. A. K. Singh, Upal Saha, Vineet Pratap, and **Akhilesh Kumar**. "Long Term Trends in Variability of Air Pollutants and Particulate Matters over Varanasi, India." *42nd COSPAR Scientific Assembly 42* (2018): A1-1.