MONTHLY WORK REPORT

(To be filled by the Candidate)

Candidates Name: Mr. Moses Charlie Yalla	**Designation:** WBL Trainee
Period: 14 May 2025 – 13 June 2025	**WBL Level:** I
Department: Industrial Material and Systems Division	**Employee Code:** 210
Name of the Supervisor: Mr. Abhishek Jha	**Name of the HoD:** Smt. Poornima Srivastava

Name of the Project: Development of Retrieval algorithm for Liquid water Path and Integrated Water Vapor from ground-based Microwave radiometer

Technology Area: Atmospheric Science

Details of the work done

Objective: To generate clear and informative visualizations of atmospheric measurement datasets using scientific computing tools, enabling further analysis and interpretation.

Tools & Technologies Used:
1) Python (libraries: matplotlib, pandas, numpy)
2) MATLAB (basic plotting functions)
3) Jupyter Notebook (new_env)
4) Anaconda Navigator (Anaconda3)

Key Tasks Performed:

1. Environment Setup

Anaconda Navigator

Jupyter Notebook

- Configured a new virtual environment (new_env) using Anaconda.
- Installed essential Python libraries (matplotlib, pandas, etc.)

2. Data Handling
- Loaded atmospheric data (e.g., brightness temperature, IWV, LWP) from .csv and .xlsx files
- Pre-processed raw datasets (e.g., filtering, formatting time series).

3. Data Visualization
- Created line plots, scatter plots, time-series plots using jupyter Notebook and Google Colab.
- Annotated plots with legends, labels, and titles for scientific clarity.
- Exported plots in PNG format for reports.

4. Documentation
- Maintained a Jupyter Notebook documenting the steps and plots.
- Added markdown comments to explain code and results.

Learning Outcomes

- Strengthened understanding of scientific data structures and time-series analysis.
- Developed proficiency in using Python and MATLAB for technical plotting.
- Learned best practices for documenting code and creating meaningful visual outputs.
- Built a foundation for further work in data retrieval and analysis of atmospheric profiles.

Appendix: Visualizations and Results

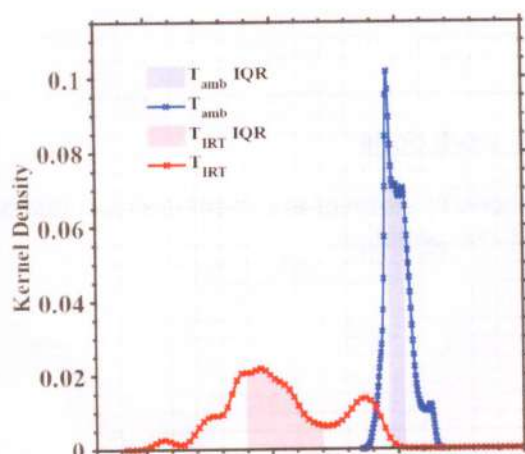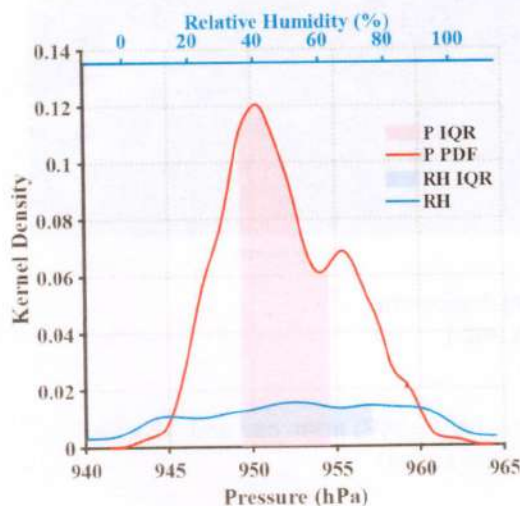**Figure 1:** Surface Sensor and Infrared Thermometer (IRT) measurements showing temperature trends.

Figure 2: Surface sensor readings for temperature, humidity, or pressure.

Signature of the Candidate	Signature of Supervisor	Signature of HoD
Moses Charlie		
Date: 07-08-2025	Date: 07-08-2025	Date: 07-08-2025

CANDIDATE FEEDBACK

(To be filled and signed by the Supervisor/HoD)

Candidates Name: Mr. Moses Charlie Yalla	**Designation:** WBL Trainee
Month & Year: June 2025	**WBL Level:** I
Department: Industrial Material and Systems Division	**Employee Code:** 210
Name of the Supervisor: Mr. Abhishek Jha	**Name of the HoD:** Smt. Poornima Srivastava

Name of the Project: Development of Retrieval algorithm for Liquid water Path and Integrated Water Vapor from ground-based Microwave radiometer

Sr. No.	Criterion	Marks in the Scale of 1-10 (1-Poor, 10-Excellent)
1	Initiative (personal drive, enthusiasm)	7
2	Acceptance of responsibility	8
3	Technical knowledge, problem solving skills and expertise	8
4	Work quality and output	8
5	Communication (Oral/Written) skills	7
6	Behavior, tact and courtesy	9
7	Attitude/willingness to work	8
8	Time management	8
9	Punctuality and regularly	8
10	Self-improvement	8
	Overall Score (1-10)	8/10

Signature of Supervisor	Signature of HoD
[signature] 08/08/25	*[signature]* 8.8.25
Date: 07-08-2025	**Date:** 07-08-2025

Evaluation Guidelines:

1. Candidate will submit monthly work report to the supervisor.

2. Supervisor will submit his feedback on the work report to concerned Head of the Division.

3. Supervisor will forward the monthly report along with supervisor's feedback to center coordinator Shri. Vijay Sarode, WBL Coordinator (Email: vijay@sameer.gov.in)

4. Supervisor feedback should be in the format given above.

5. The Mid-term and End of term review of WBL candidates by TECH-MEC would be carried out based on evaluation of survey/Study, Design aspects, technology understanding, Initial Prototyping etc.