EAGLITE – ATMOSPHERE AND HUMIDITY SENSING USING CAN-SAT

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This project focuses on the development of a compact and efficient atmosphere and humidity sensing system designed for Can-Sat (Canister Satellite) applications. Can-Sats are miniature satellites enclosed within a soda can-sized container, typically deployed through high-altitude balloons or rockets for educational and research purposes. The proposed sensing system aims to enhance the capabilities of Can-Sats by providing accurate and real-time data on atmospheric conditions and humidity levels during their missions. The sensing system incorporates state-of-the-art sensors to measure atmospheric parameters such as pressure, temperature, and altitude. Additionally, it includes specialized humidity sensors to monitor the moisture content in the surrounding air. The integration of these sensors allows for a comprehensive analysis of the atmospheric conditions at various altitudes, enabling researchers and students to gain valuable insights into the environmental changes encountered during the Can-Sat's flight. The system is designed to be lightweight, power-efficient, and resilient to harsh environmental conditions, ensuring its suitability for deployment in space-constrained Can-Sat platforms. The collected data is transmitted in real-time to a ground station, providing users with the ability to monitor and analyse atmospheric and humidity variations throughout the Can-Sat's mission. This project contributes to the field of Can-Sat technology by enhancing the scientific capabilities of these miniature satellites, making them more versatile and capable of collecting valuable data for educational and research purposes. The proposed sensing system can be a valuable tool for students, researchers, and space enthusiasts interested in understanding and exploring atmospheric dynamics and humidity changes in different altitudes.

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