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Computer Software AirDAC for Complex Air Quality Data Acquisition

A flexible, high-capacity on-site computer system provides user-friendly data processing, quality control, and real-time monitoring for agricultural air quality studies.

Purdue University researchers have developed an on-site computer system (OSCS) that offers flexibility, high capacity, user-friendliness, and high level quality assurance/quality control for agricultural air quality (AAQ) research in the field and laboratory. Currently, 29 OSCSs have been built in 13 states for AAQ studies, handling more than 3 billion data points.

This system adapted a set of data processing algorithms, as well as some novel features, including all-data display and dynamic runtime configuration (DDRC), digital output DDRC, real-time sampling system monitoring and protection, global channel, traceable configuration, and post-measurement data processing. This system also integrated two standalone instruments, an Innova multi-gas analyzer and an Environics multi-port gas dilution system, which are popular in AAQ research.

Advantages:

-User friendly

-Flexible and reliable

-Can process large amounts of data

-Integrates popular AAQ instruments

Potential Applications:

-Computer technology

-Data processing

-Air quality measurement

TRL: 7

Technology ID

65522

Category

Agriculture, Nutrition, & AgTech/Precision Agriculture & Smart Farming

GreenTech/Environmental Remediation & Pollution Control

Authors

Albert Heber

Jiqin Ni

Further information

Parag Vasekar

psvasekar@prf.org

View online

Intellectual Property:

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