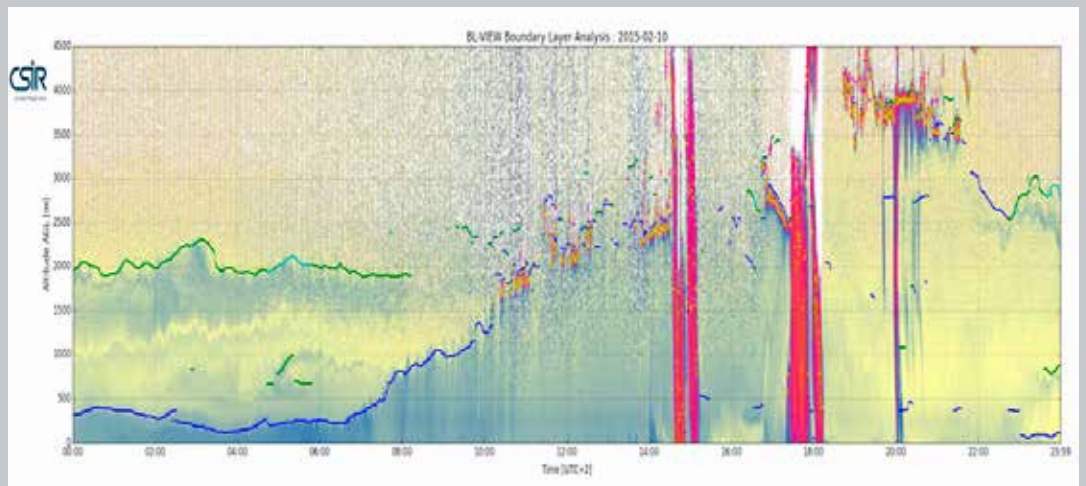


# Focus on CSIR

## Services in Optronic Sensor Systems Atmospheric Studies



In long-range surveillance applications, the atmosphere is often the strongest contributor to image quality degradation. The CSIR's Optronics Sensor Systems researchers are actively investigating the influence of the atmosphere on long-range surveillance imagery.

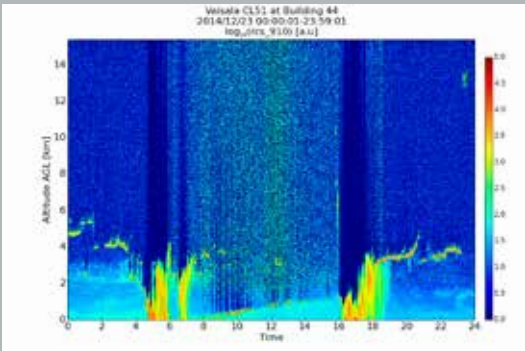


Boundary Layer Development Data from CL51 Ceilometer



Robotic Sunphotometer

The CSIR has established an extensive atmospheric characterisation measurement suite permanently stationed at a peri-urban site in Pretoria. This suite is primarily used to characterise and understand the atmospheric phenomena that influence image quality of surveillance footage. The year-round measurements at the site are supplemented by medium- and long-term field trials in other regions of interest.

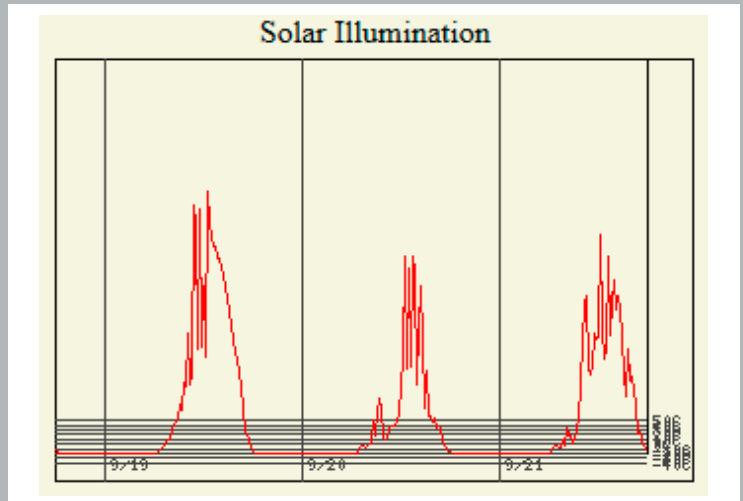


15 km Altitude Aerosol Content from CL51 Ceilometer

The in-depth knowledge of opto-mechanical system design, as well as the understanding of the atmospheric influence are used to model and simulate the overall effect on surveillance equipment in generic or specific deployment theatres. By taking this system effectiveness capability one step further, simple desktop trade-off studies and optimisation exercises can be carried out prior to any field deployment.



Davis Weather Station



Solar Irradiance from Davis Weather Station



Nephelometer with PM2.5 and PM10 Impaction Filters

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