



# Apogee Instruments SI-111 Infrared Radiometer Forecasting Ice Formations

Campbell Scientific has incorporated Apogee Instruments' SI-111 infrared radiometer sensors into a cost-effective system:

"To many, the name Italy is associated with sun and warm weather. This is often a true enough picture. But Italy is also a country of mountains; snow and ice could show up anywhere, throughout winter. This is why the Province of Perugia, in the very center of Italy, has set up a program for forecasting of ice formation on road surfaces. The program is operated by the University of Perugia and Ecosearch.

The first part of the program is aimed to verify: 1) The relation between meteorological parameters indicating possible ice formation and the actual formation of ice in three selected sites and 2) the variability of road surface temperature.

Based on the results of this first part of the program, an extended network of meteorological stations would be implemented in the future."



A CR10X is embedded in a protective travel case; data are accessed via a DataView display



An odometer fitted to one of the roadmap vehicles in the Perugia, Italy, road ice project, makes precise measurements of distance travelled.



The sensors mounted on the front of the roadmap vehicle are a Garmin geographic position sensor and an IRTS precision infrared thermometer.

## Application Summary

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Forecasting ice formation on road surfaces using infrared radiometers on a mobile system.

### Apogee Sensors Used

SI-111

### Contributing Organization

University of Perugia and Ecosearch

### Location

Perugia, Italy