

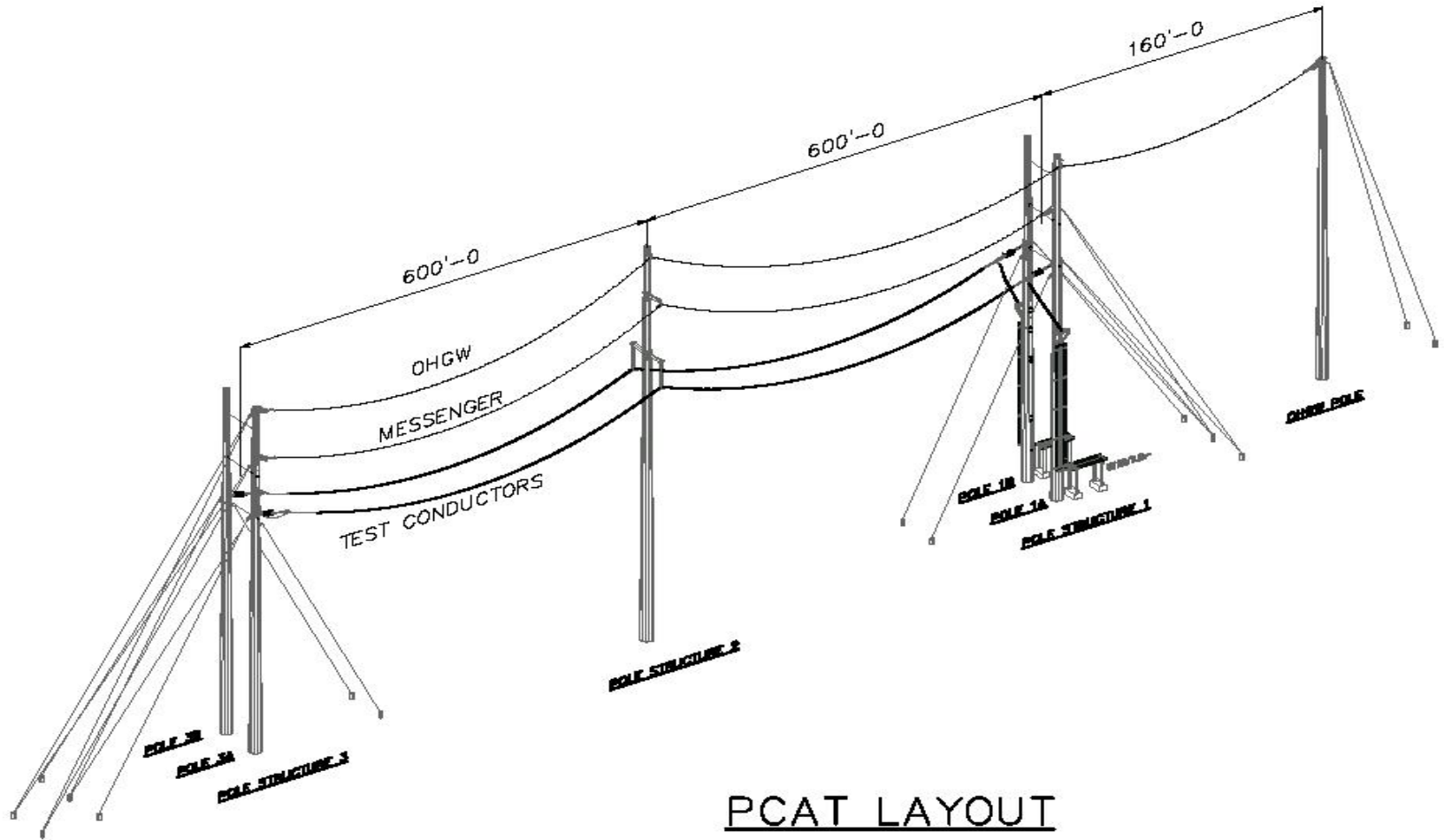
# The Valley Group

a Nexans company

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## **Temperature Sensor Test at ORNL**

Tapani Seppa, Robert Mohr, John Stovell

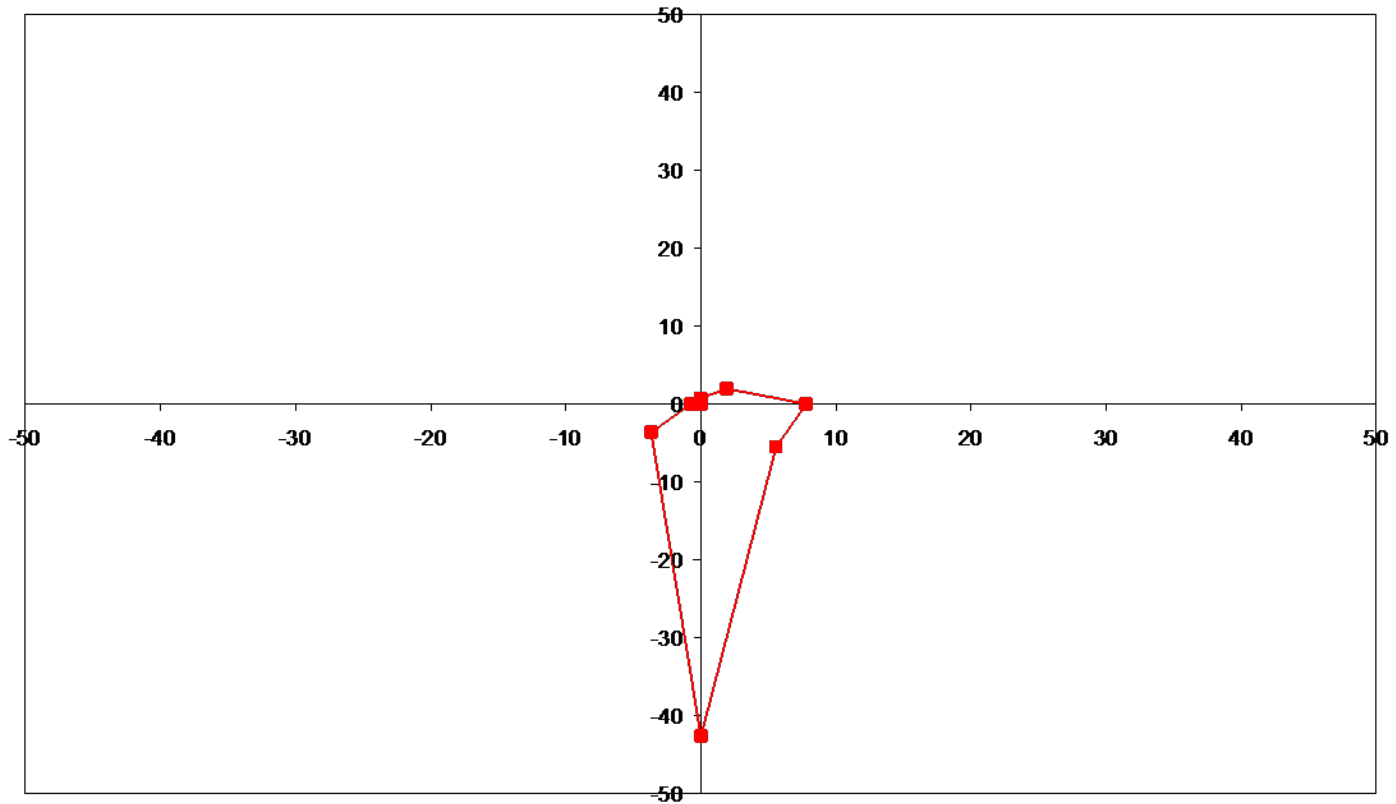


PCAT LAYOUT

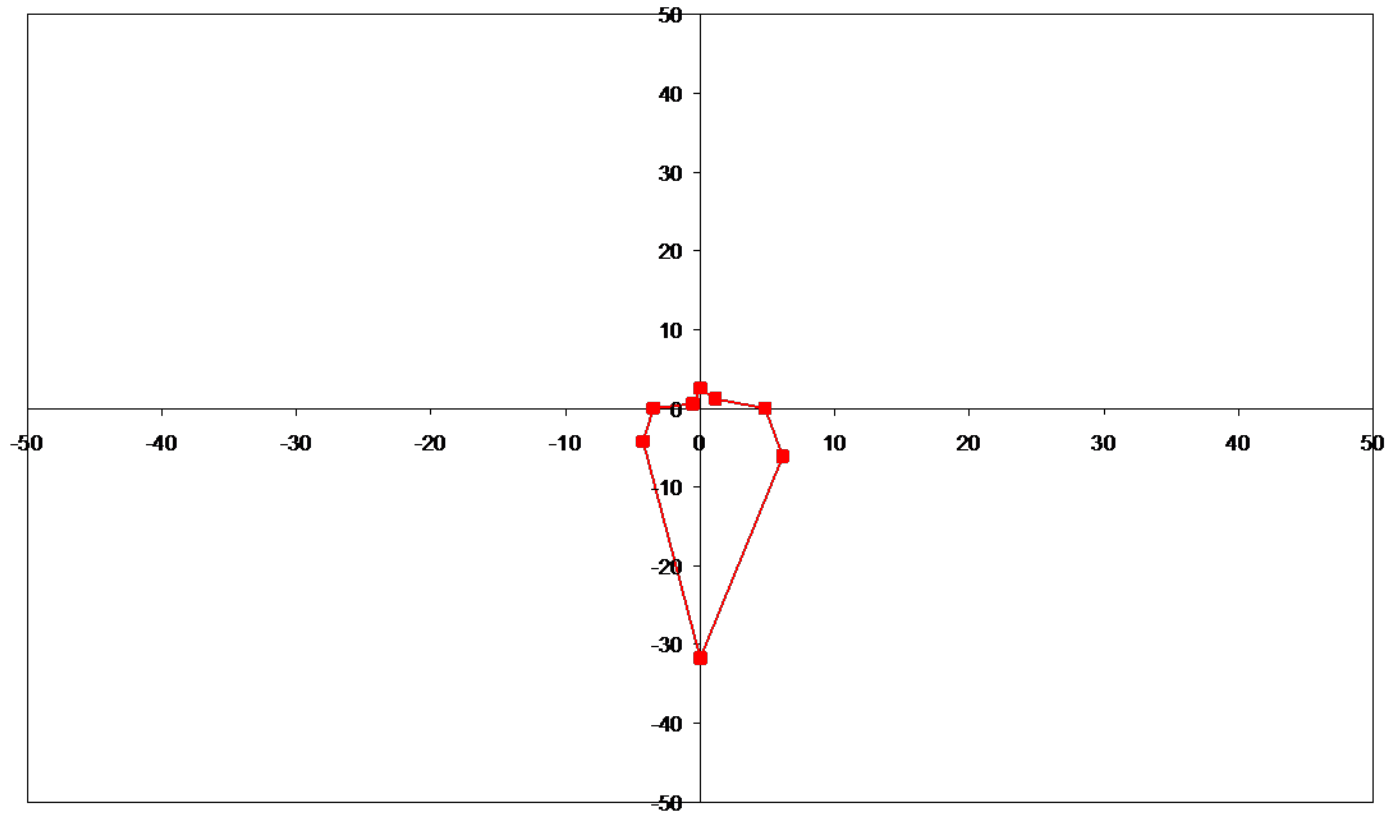
## Power Line Conductor Accelerated Testing (PCAT)

- Outdoor transmission line testing with the ability to simulate loading conditions.
- User facility began operation in March 2003 and has been used for testing of:
  - high-temperature low-sag conductors,
  - conductor accessories, and
  - conductor monitoring devices.

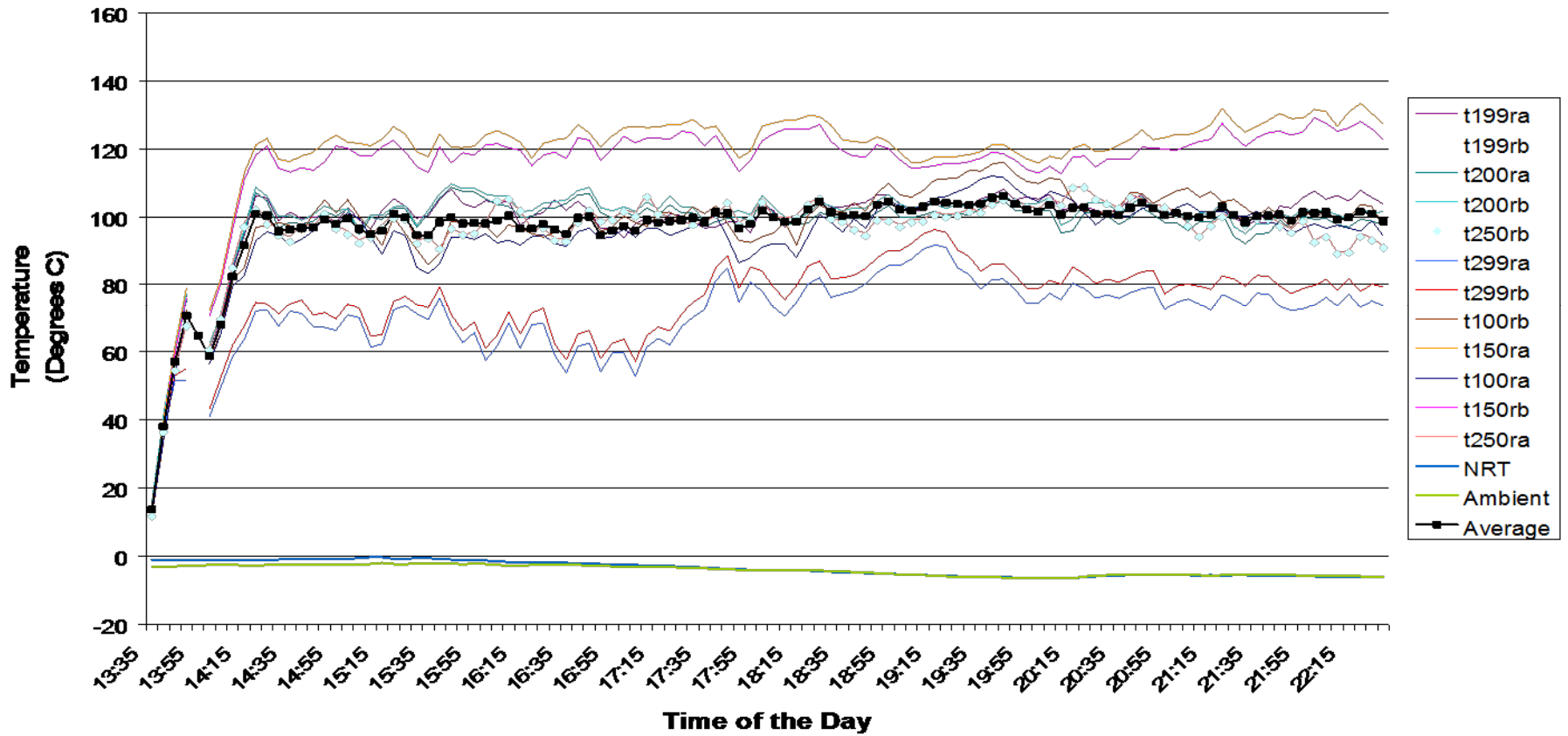
## Wind Angle Analysis, % of Observations Jan 4, 2010



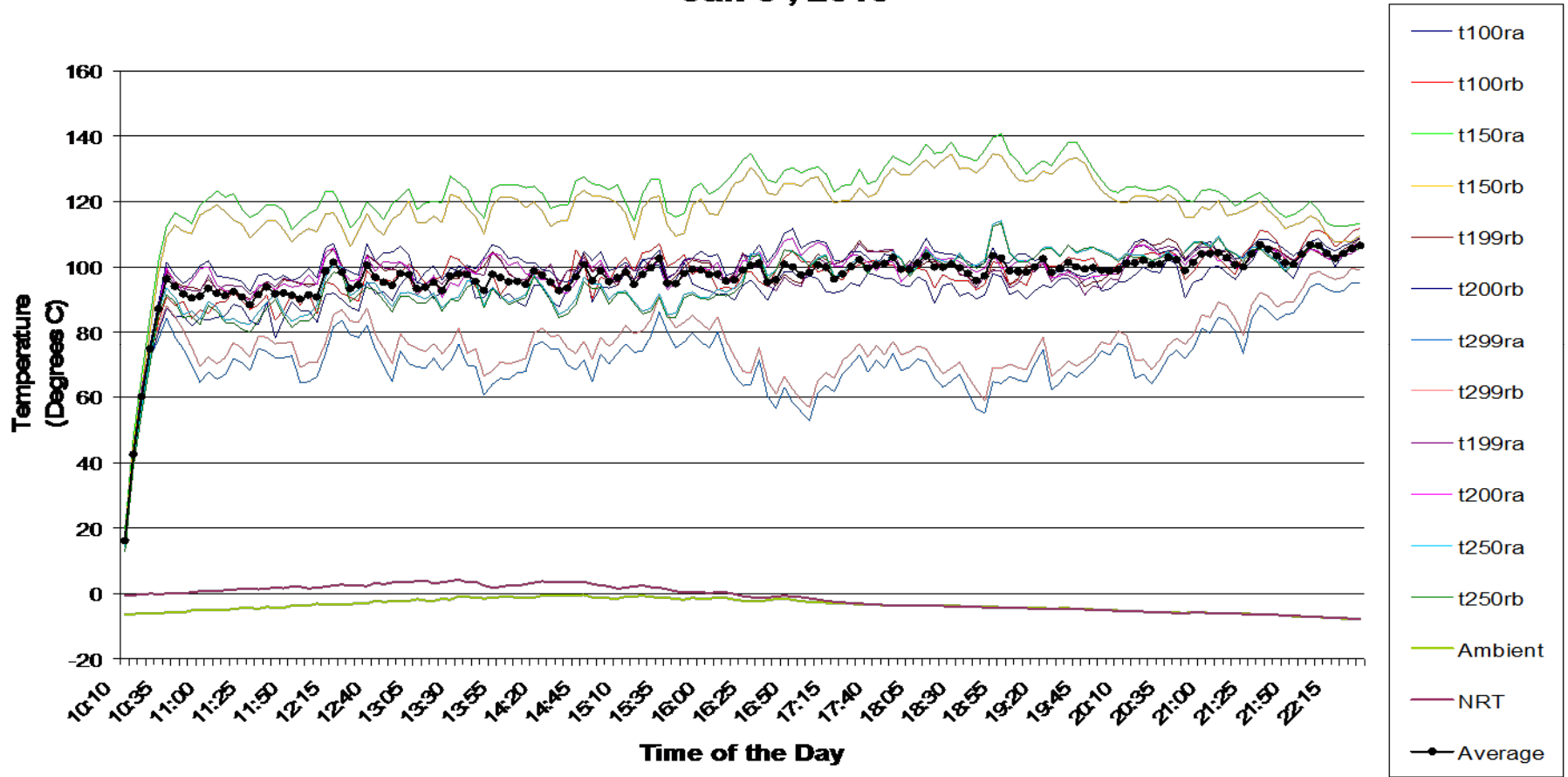
## Wind Angle Analysis, % of Observations Jan 5, 2010



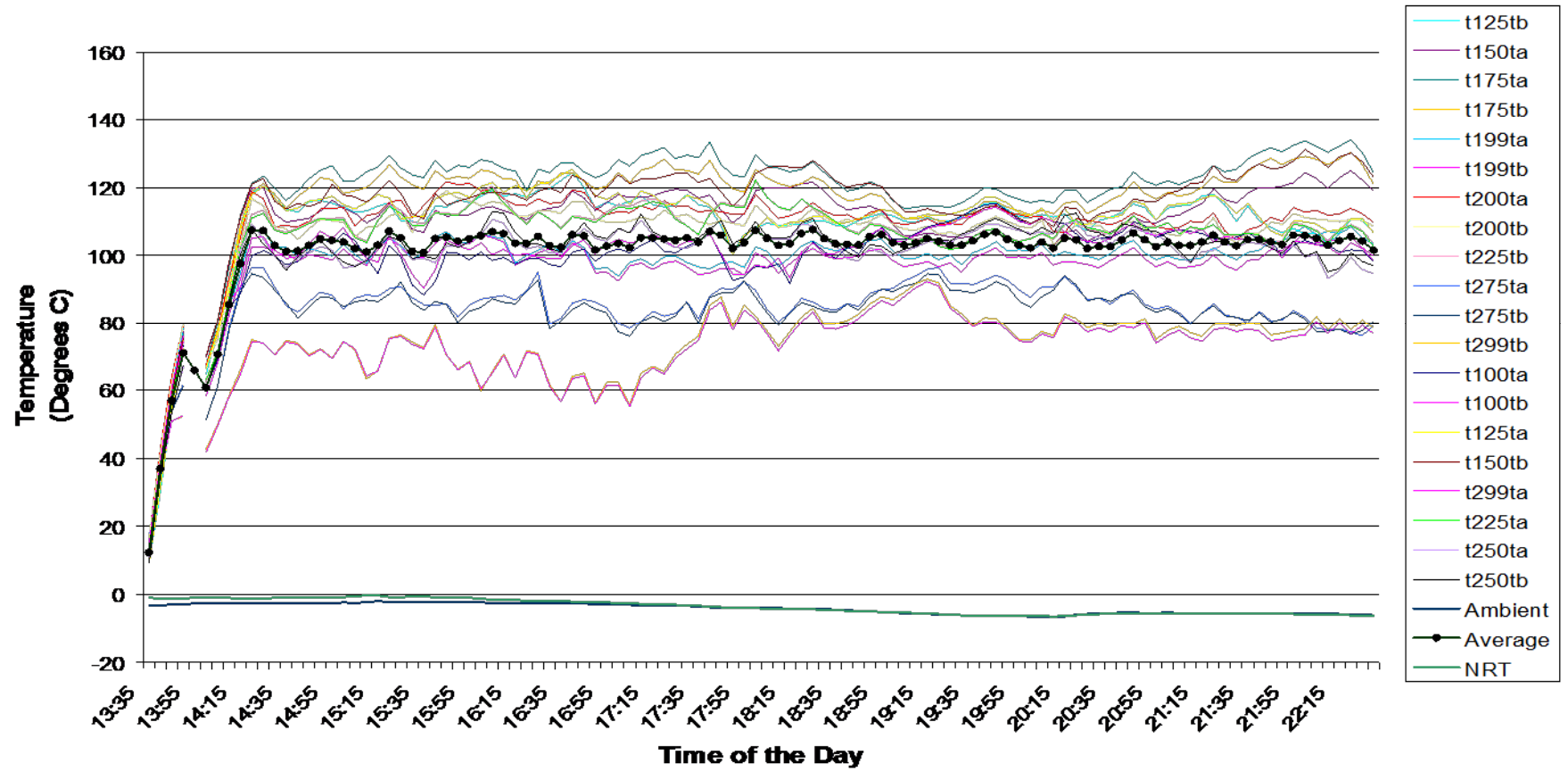
## Roadside Temp vs. Time of the Day Jan 4 , 2010



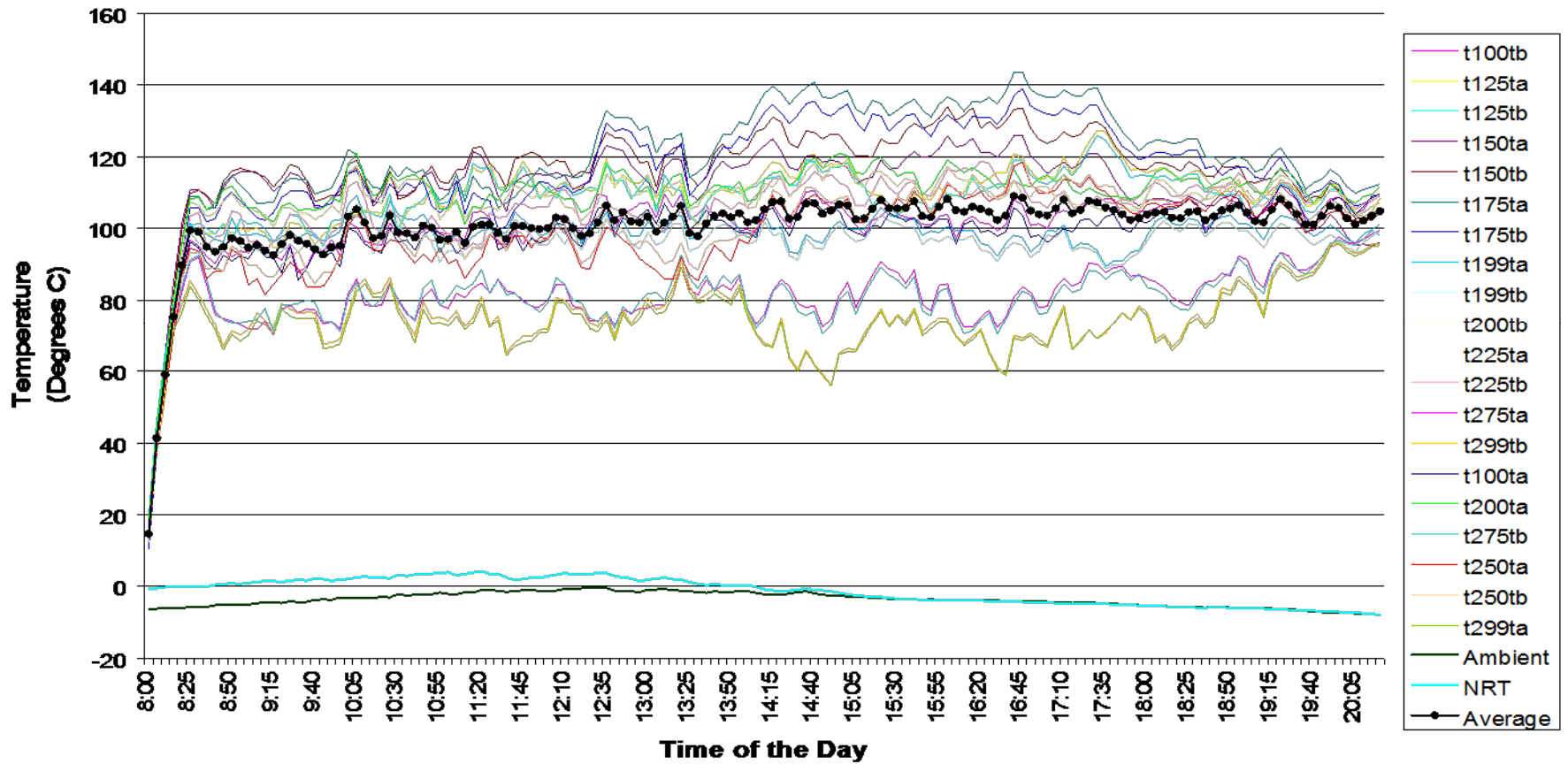
## Roadside Temp vs. Time of the Day Jan 5, 2010



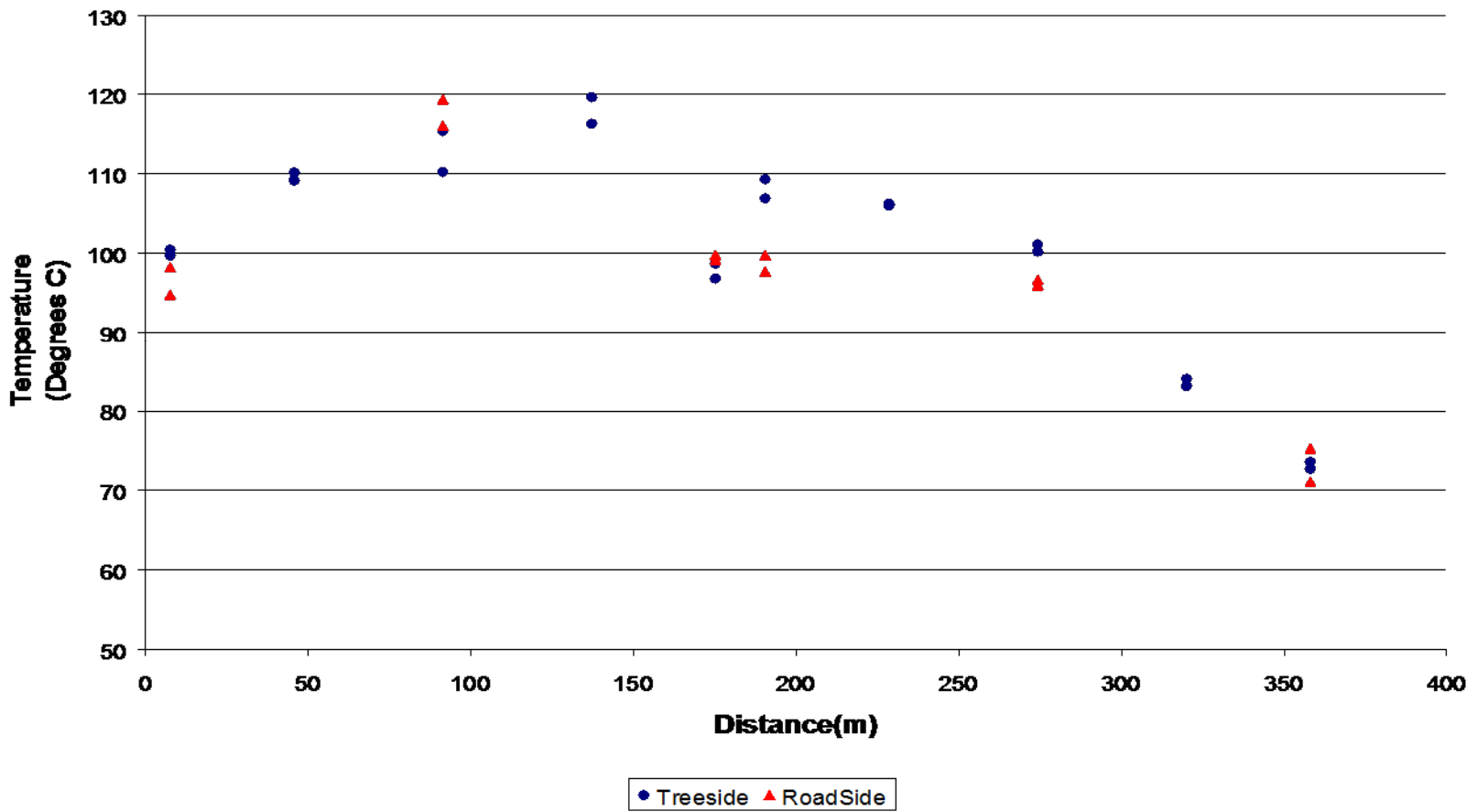
## Treeside Temp vs. Time of the Day Jan 4, 2010



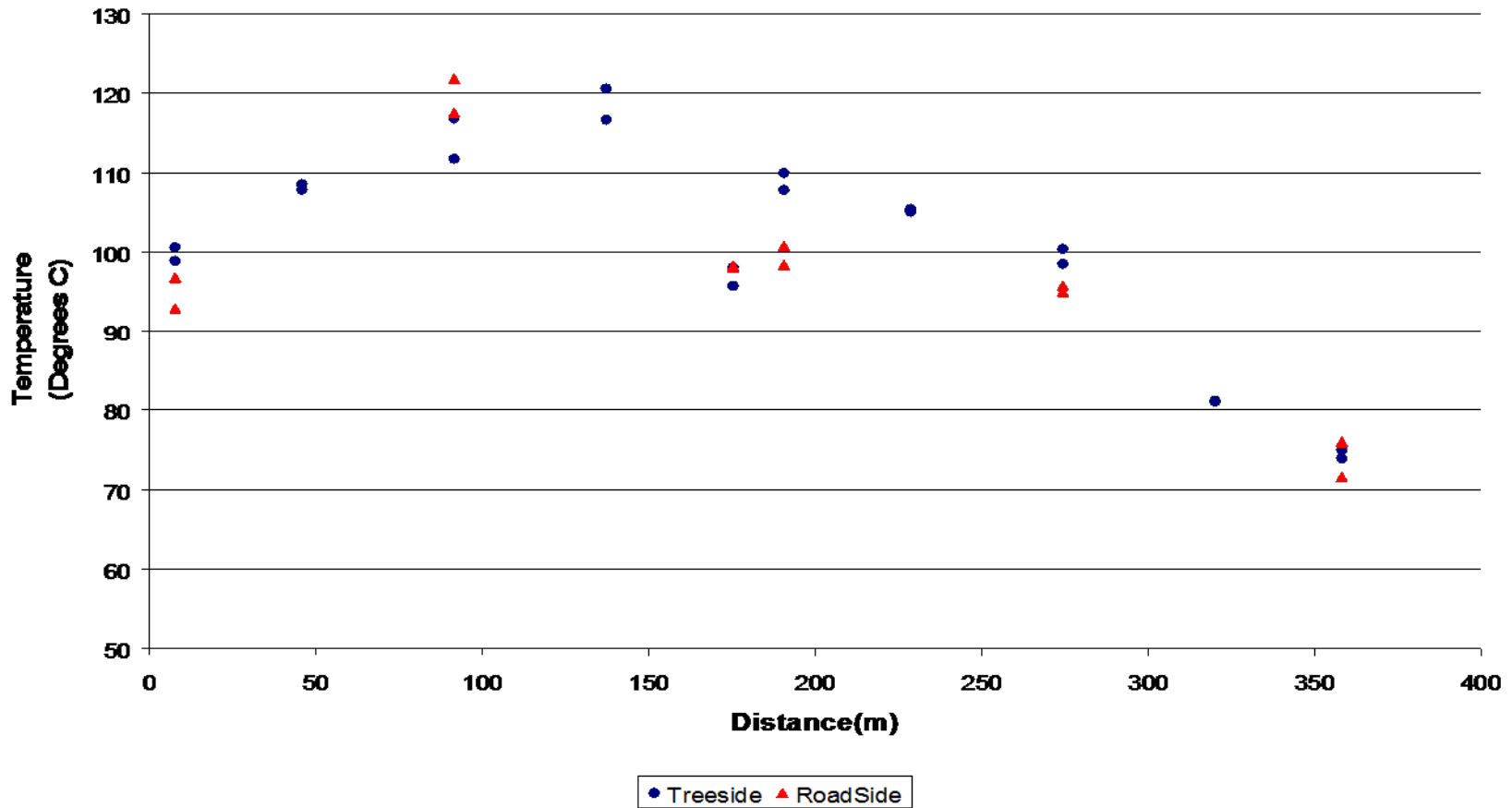
## Treeside Temp vs. Time of the Day Jan 5, 2010

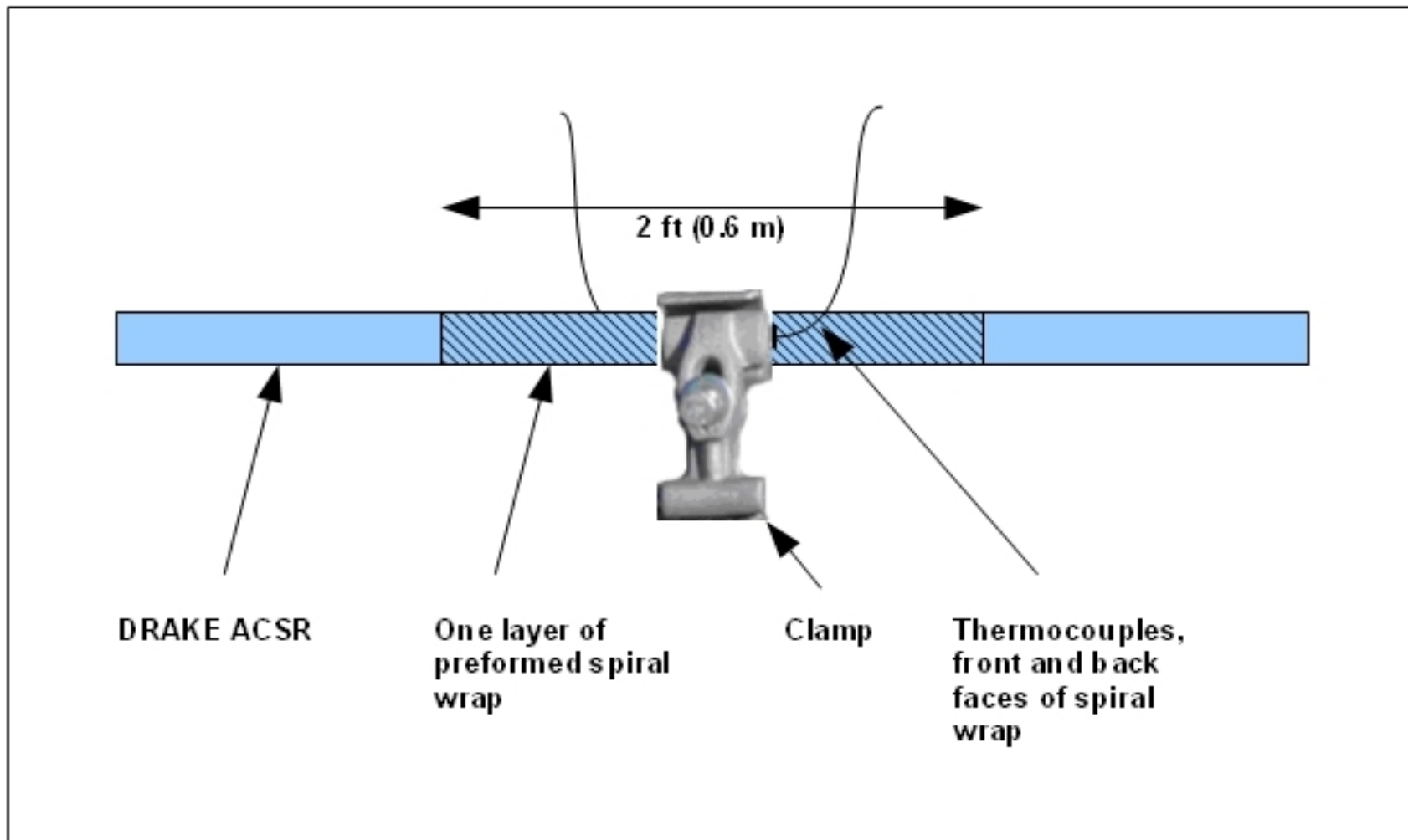


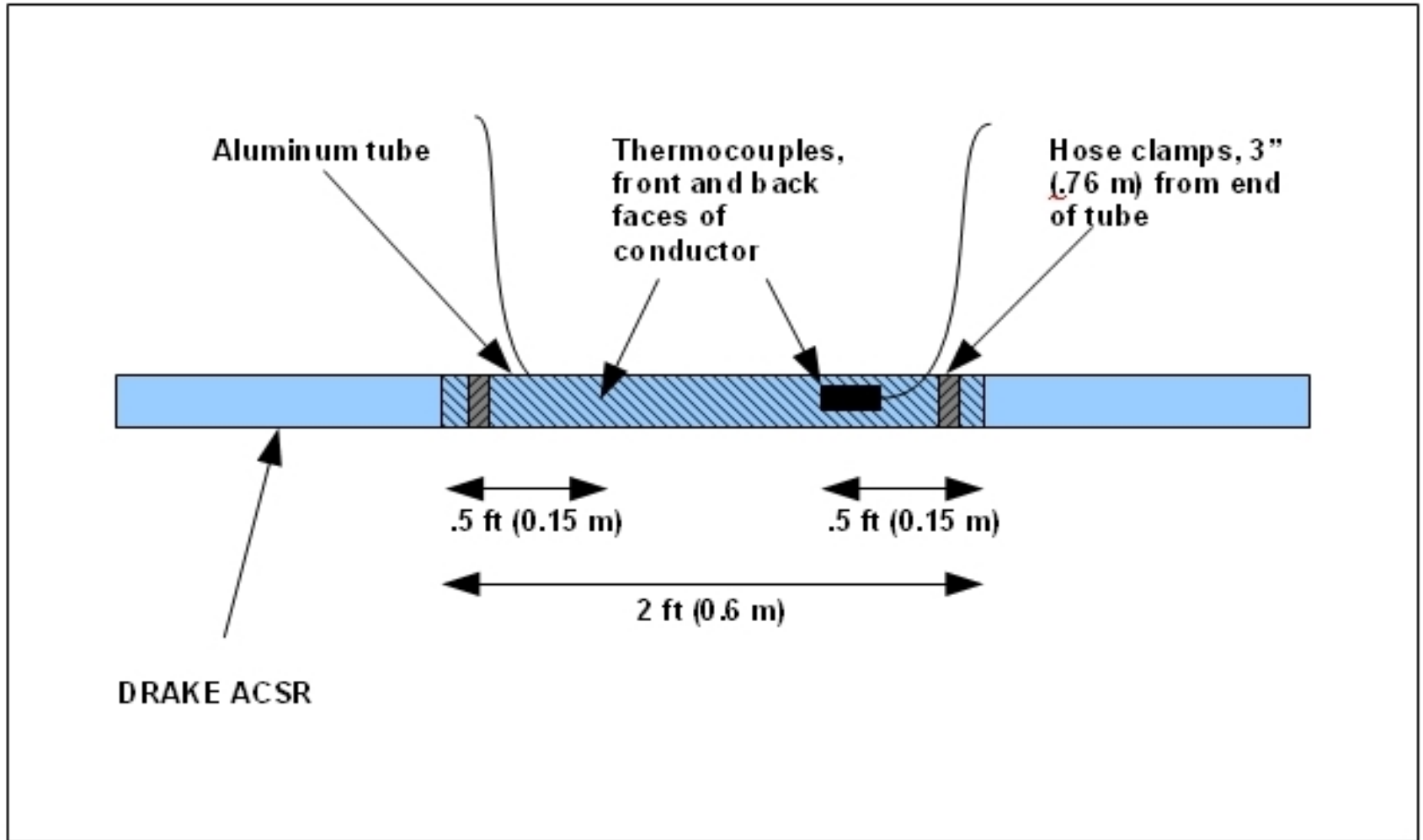
## Variation of Average Daily Temperature Along the Line Jan 4, 2010



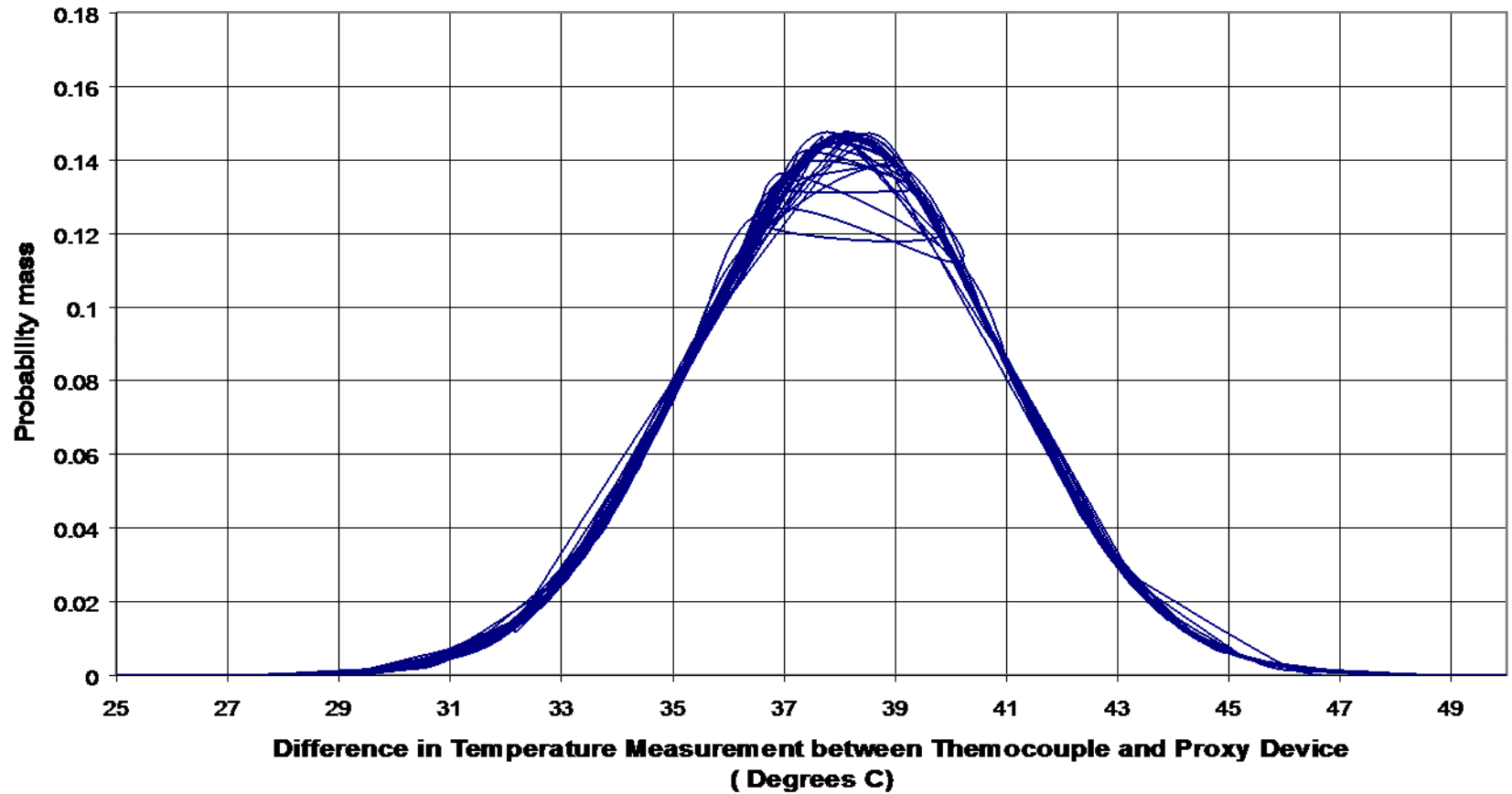
## Variation of Average Daily Temperature Along the Line Jan 5, 2010







**Temperature Difference Distribution, Sensor 1 - Conductor**  
**Apr 14, 2010**



## Temperature Difference Distribution - Sensor 2 Conductor Apr 14, 2010

