Sentry™ Visibility Sensor Test Report

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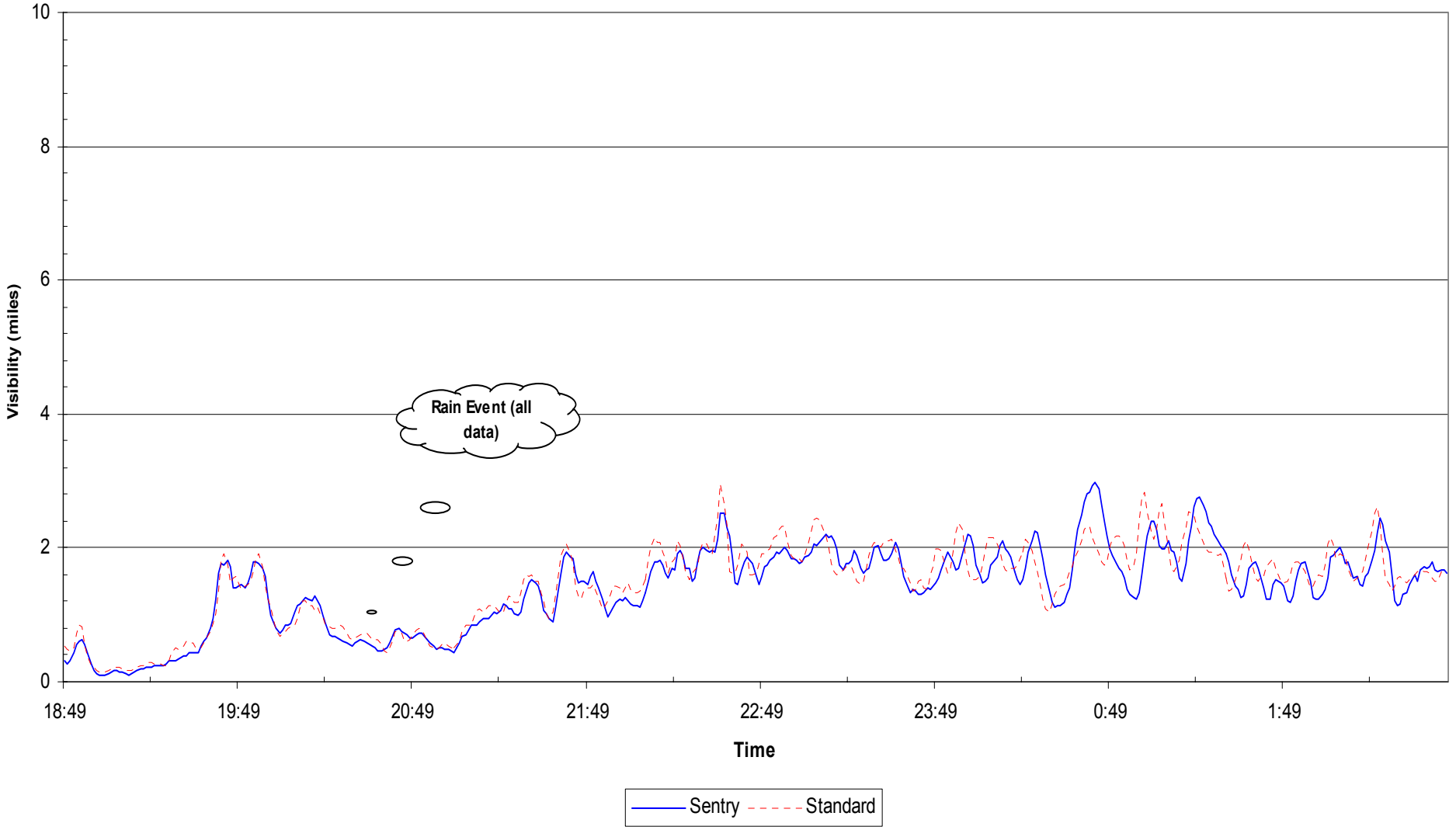
Test Methodology

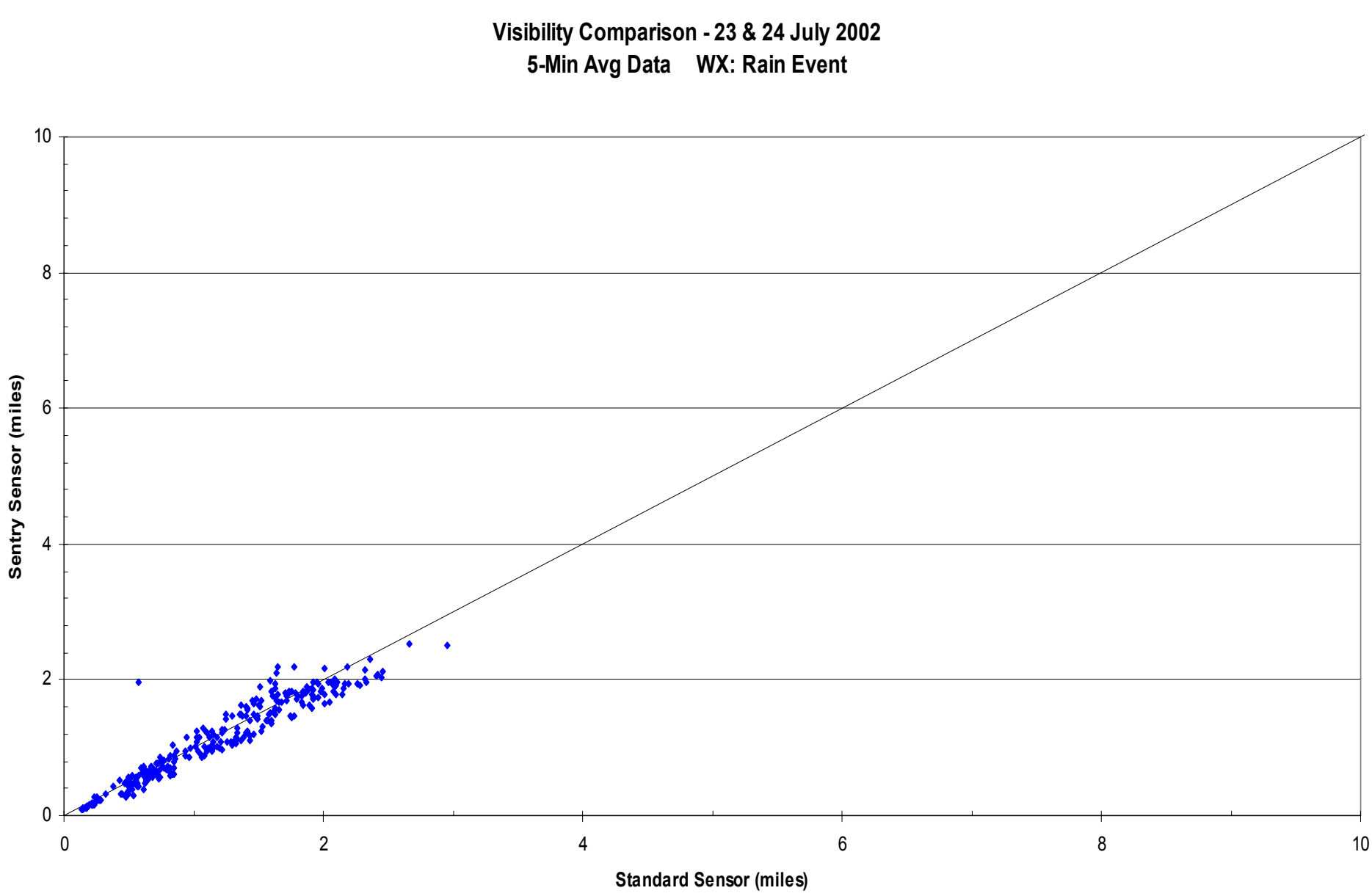
- The Sentry™ Visibility Sensor and standard sensor (reference) are installed in a test bed at EnviroTech Sensors
- Sensors are installed 2.8 m (8 feet) above the ground and are collocated to insure they measure the same environment
- Data from both sensors is automatically collected once per minute
- Key weather including periods of rain, fog, haze, and “no-precip” conditions are presented
- Data for each event is presented two ways:
  - Time series of visibility from both sensors versus time
  - X-Y comparison plot of the Sentry™ versus the standard sensor
- Data is shown over the Sentry™ 10 mile visibility range

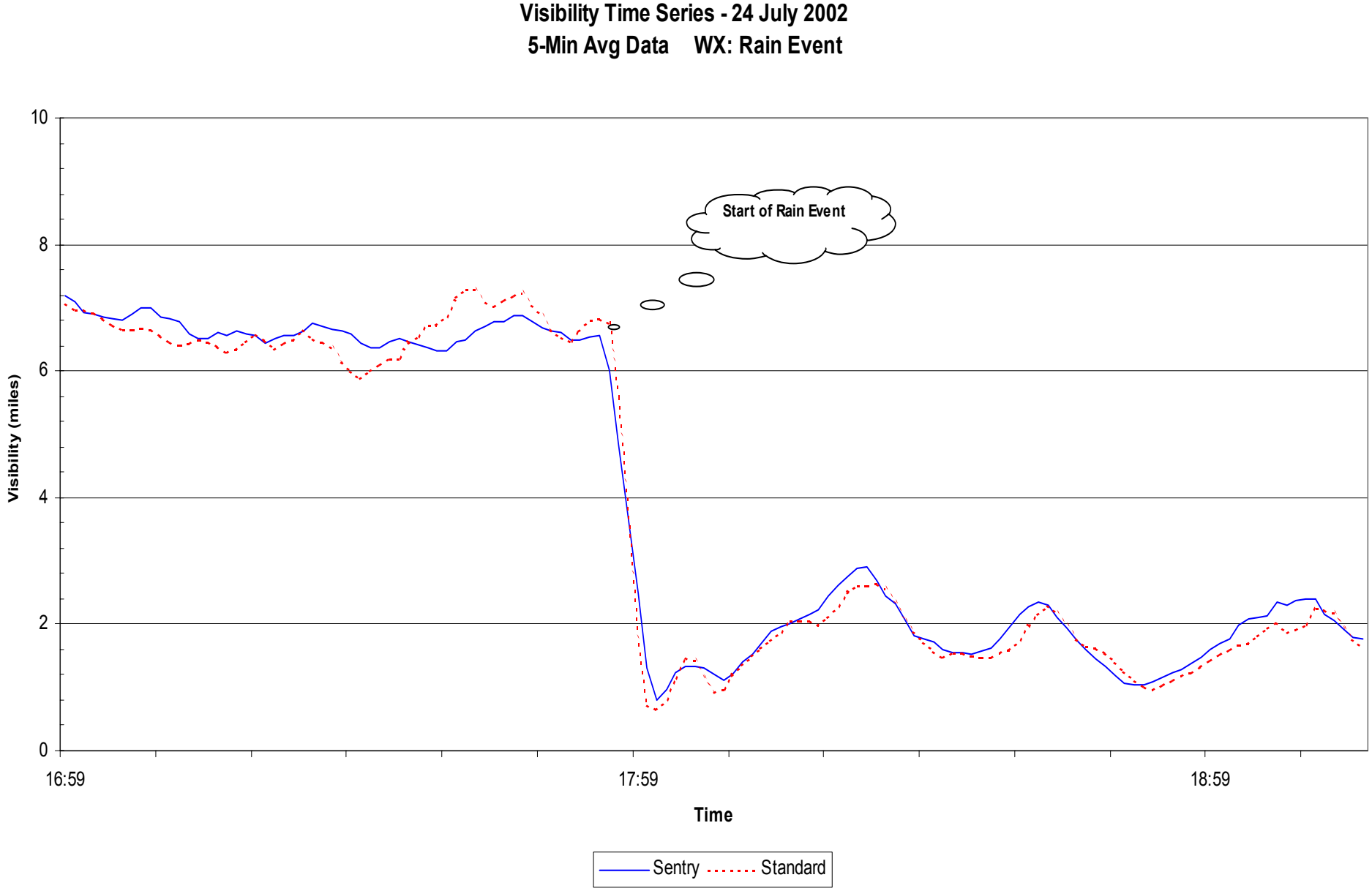
Discussion of Data

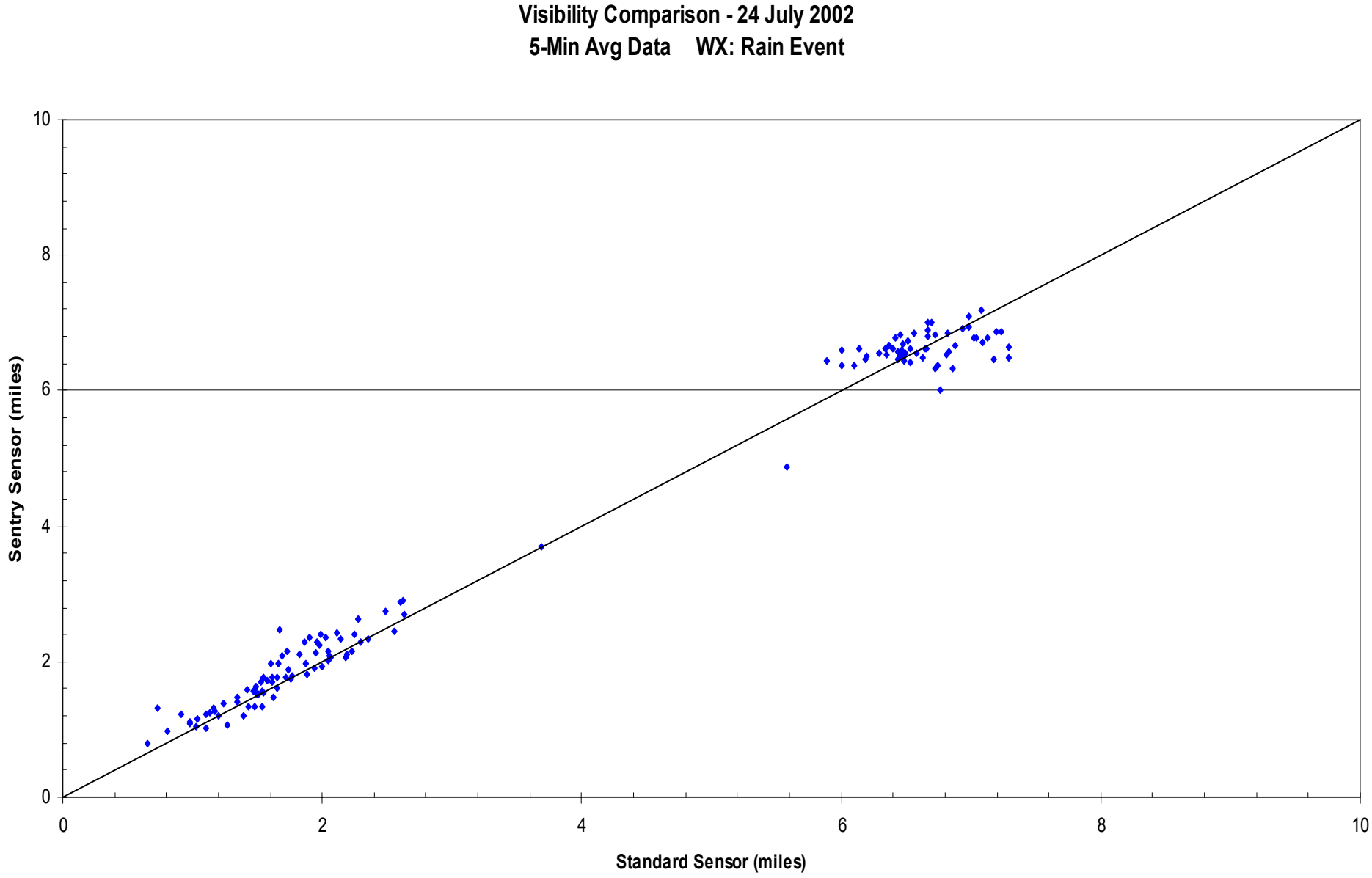
- 23-24 July –Steady rain overnight, visibility <2 miles with lowest recorded visibility of 0.1 miles (~550 feet).
- 24 July – Clouds & haze with sudden rain at 17:55 with visibility dropping from 6-7 miles to 1 mile.
- 25 July – Visibility drops from >10 miles to 0.2 miles (~1100 ft) during morning shower.
- 27-28 July – 36 hour period of no precipitation. Light fog during morning of the 27th and haze during overnight of the 28th.
- 30 July-1 Aug - 48 hour period of no precipitation. Light fog during both mornings.
- 2-3 Aug – 18 hour period with late afternoon rain shower and overnight light fog.

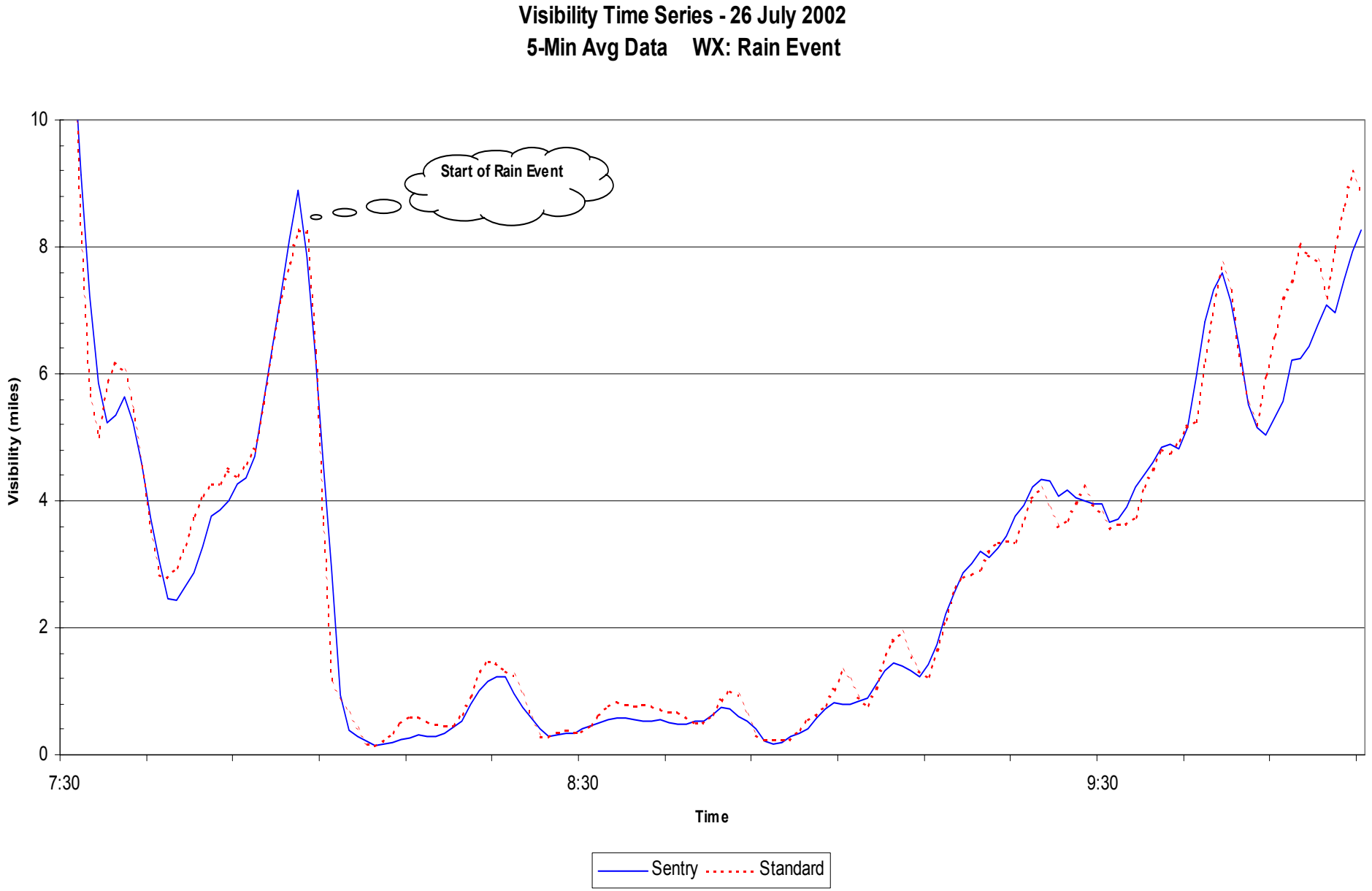
Visibility Time Series - 23 & 24 July 2002
5-Min Avg Data WX: Rain Event

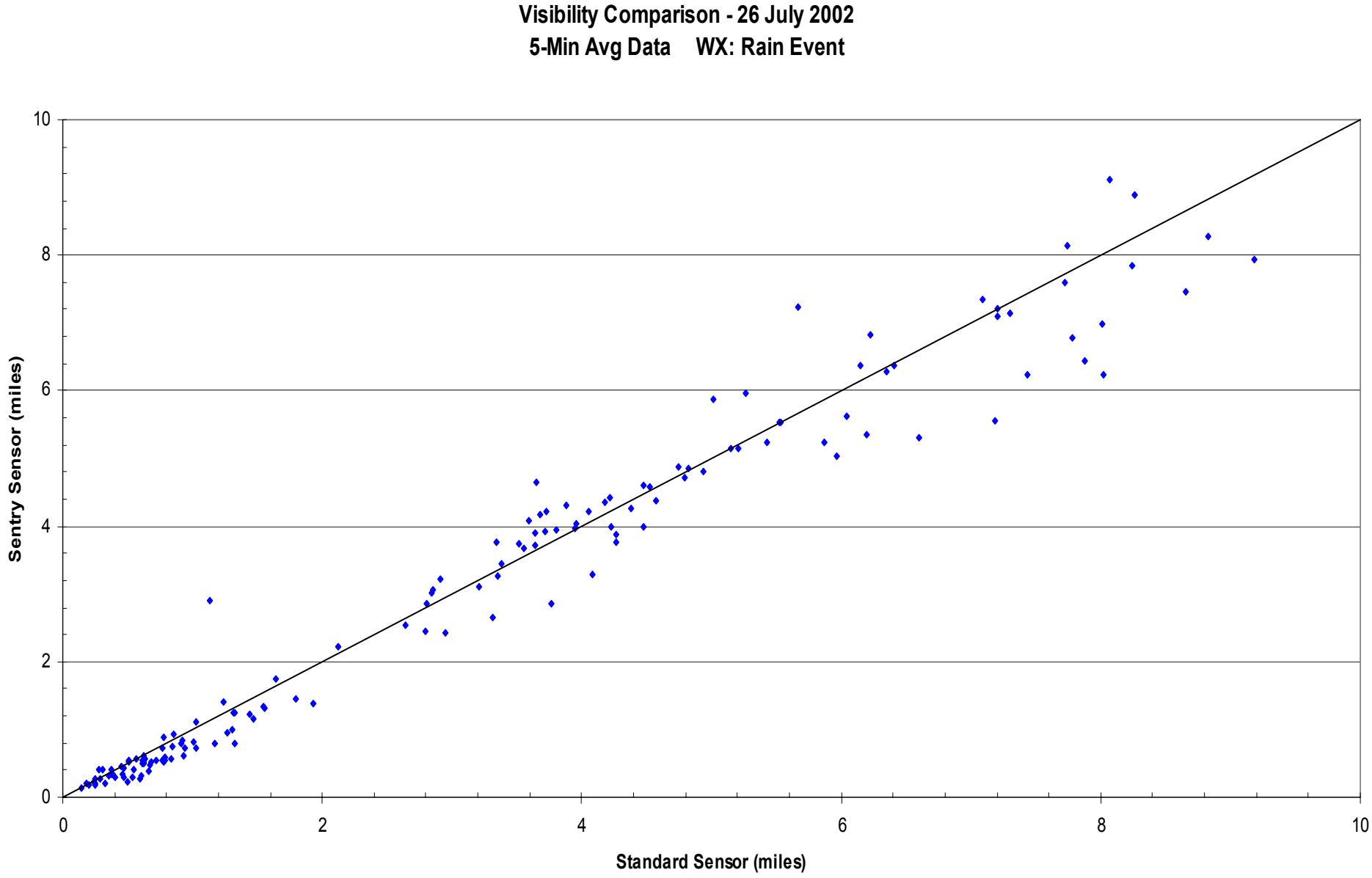


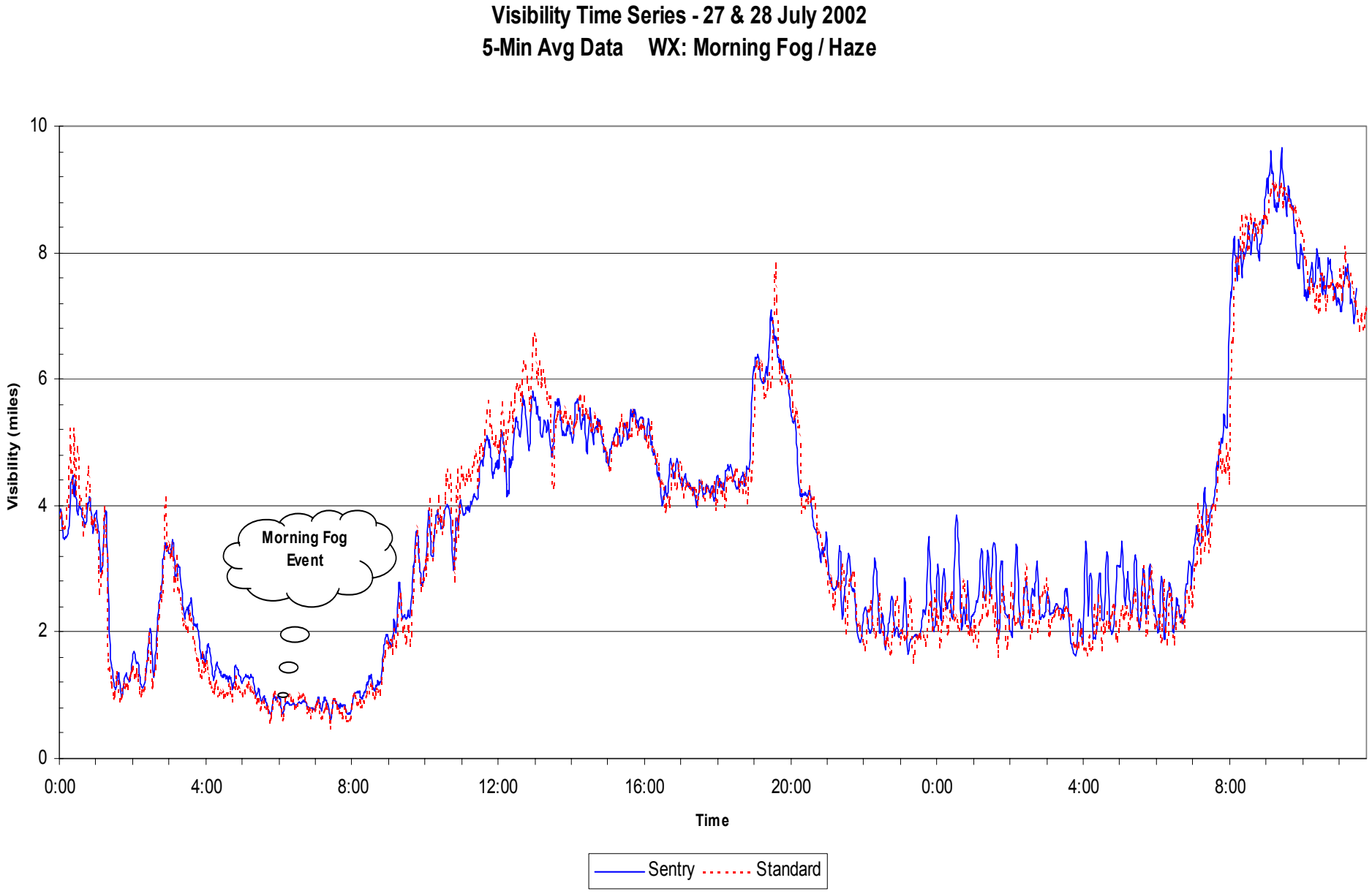

Visibility Comparison - 23 & 24 July 2002
5-Min Avg Data WX: Rain Event
Sentry Sensor (miles)
Standard Sensor (miles)
0
2
4
6
8
10

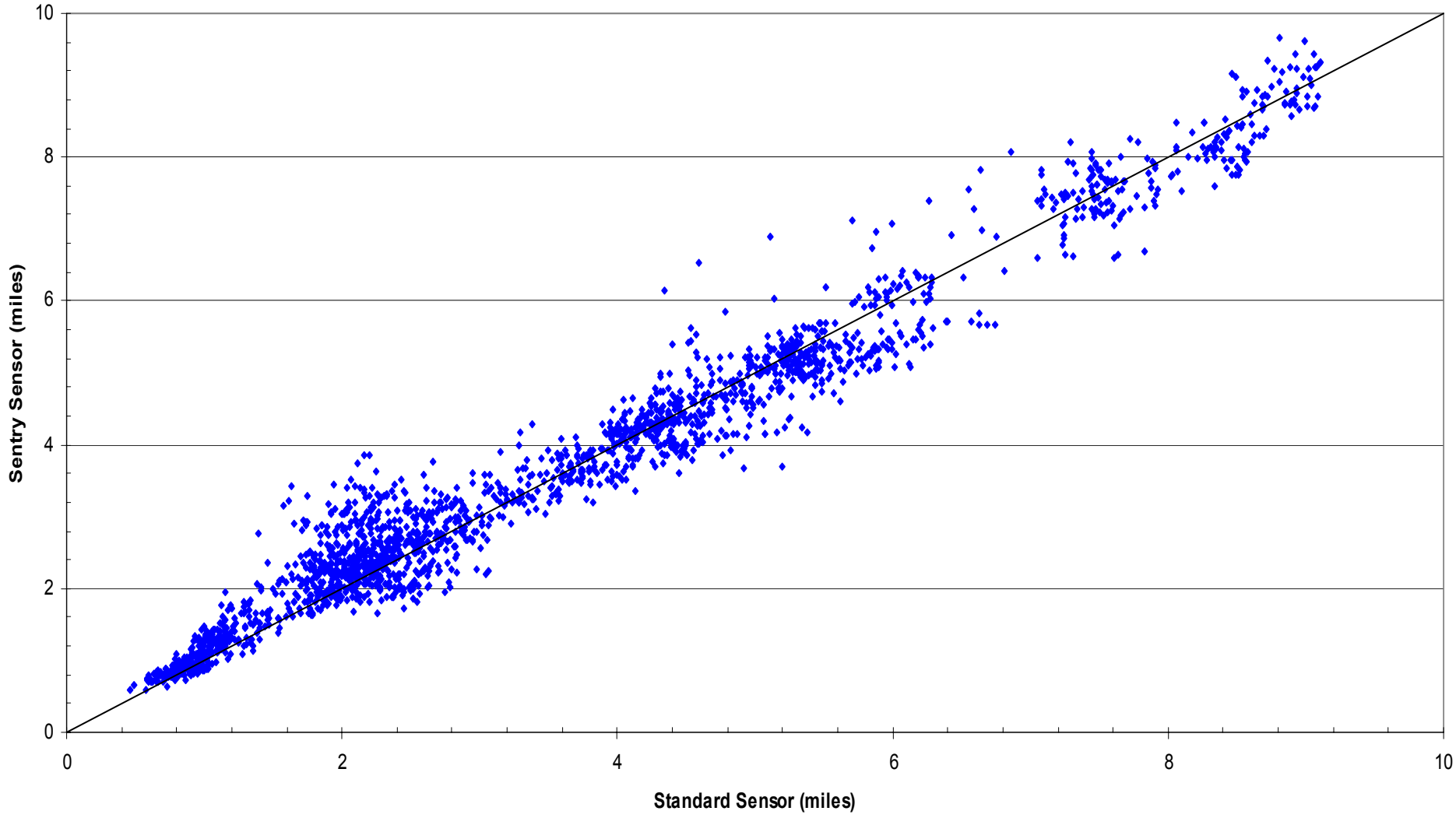

Visibility Time Series - 24 July 2002
5-Min Avg Data WX: Rain Event
Start of Rain Event
Visibility (miles)
10
8
6
4
2
0
16:59
17:59
18:59
Time
Sentry
Standard

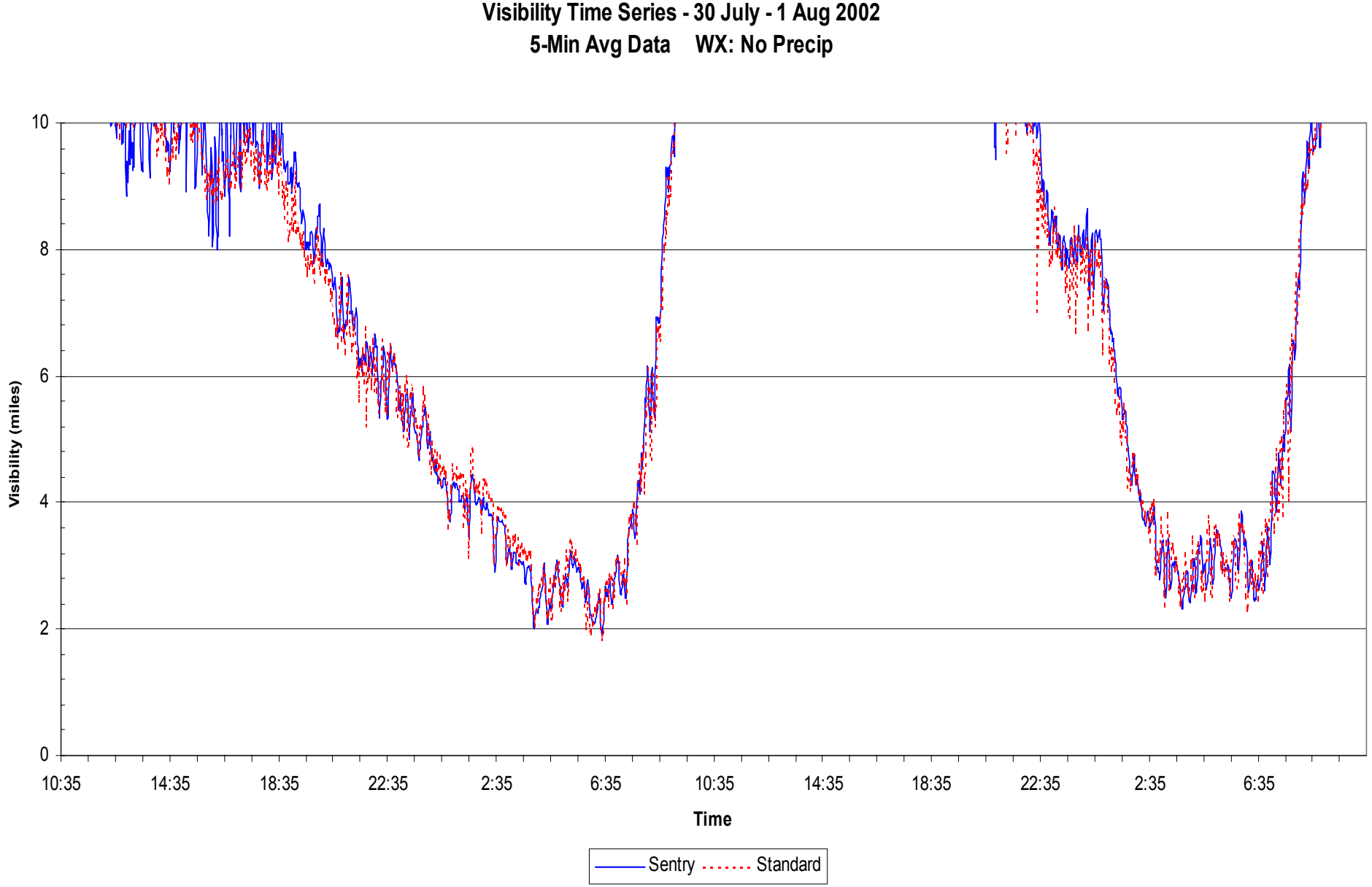

Visibility Comparison - 24 July 2002
5-Min Avg Data WX: Rain Event
Sentry Sensor (miles)
Standard Sensor (miles)
0
2
4
6
8
10

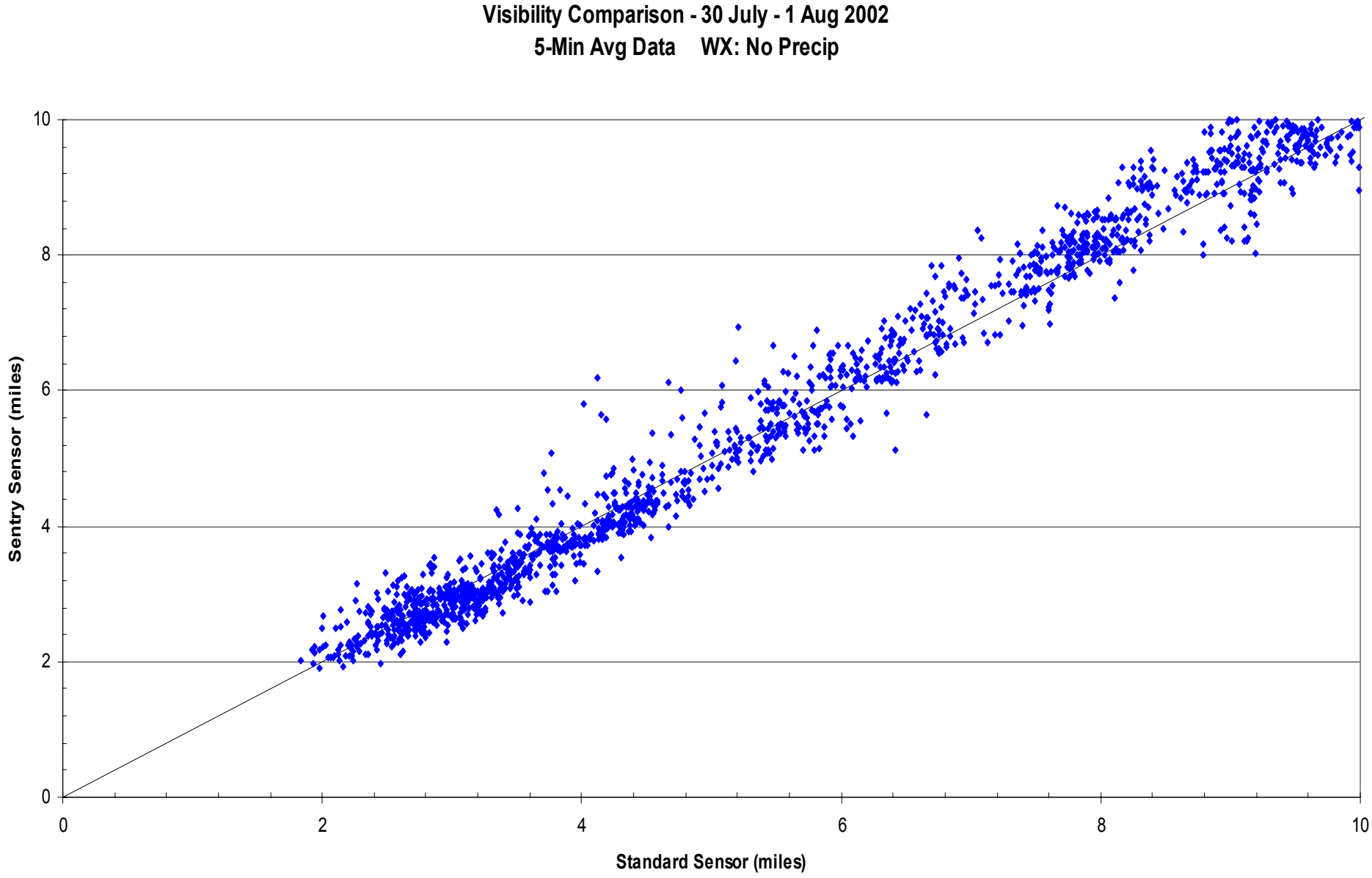

Visibility Time Series - 26 July 2002
5-Min Avg Data WX: Rain Event
Start of Rain Event
Visibility (miles)
10
8
6
4
2
0
7:30
8:30
9:30
Time
Sentry
Standard

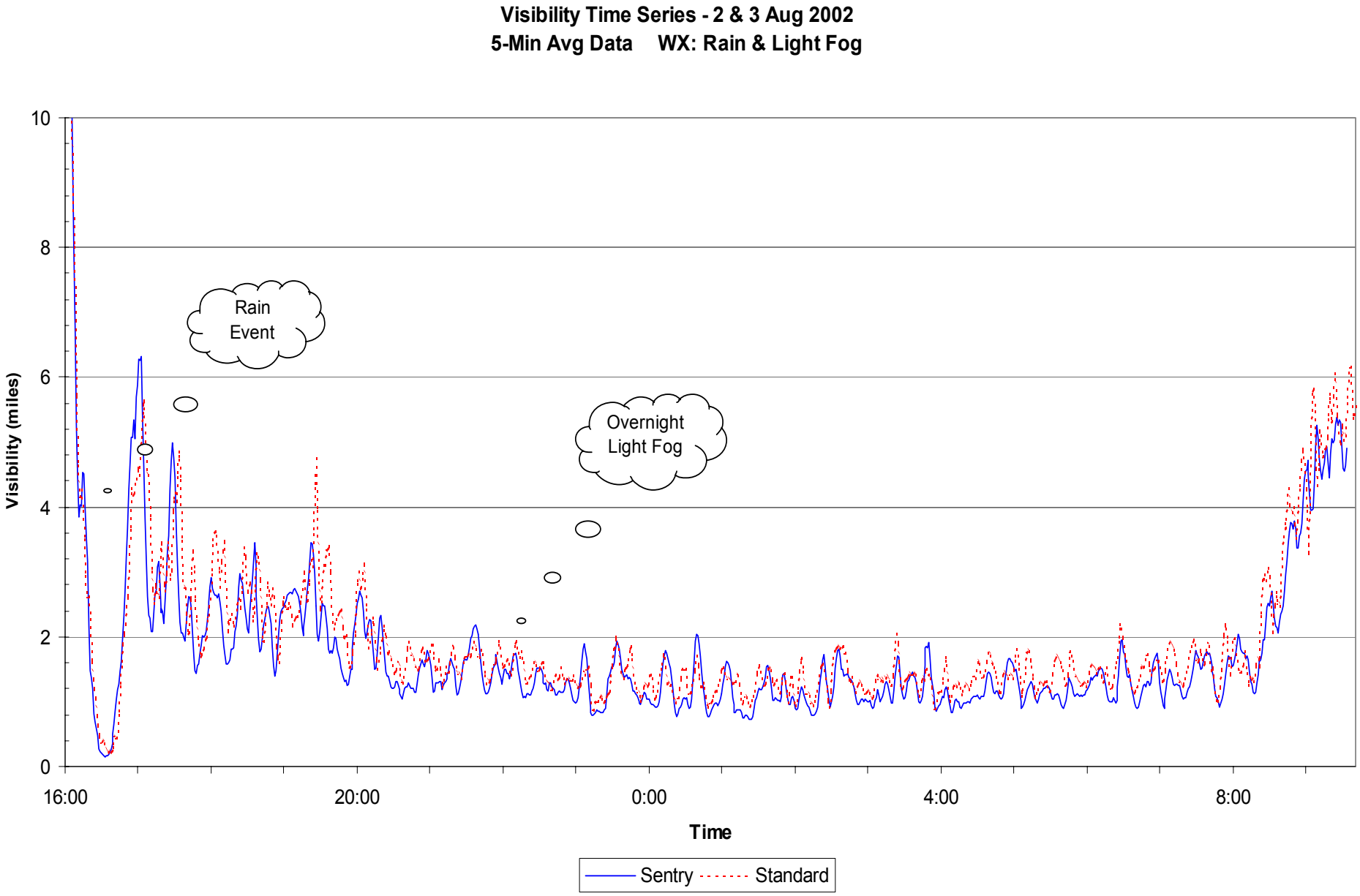

Visibility Comparison - 26 July 2002
5-Min Avg Data WX: Rain Event
Sentry Sensor (miles)
Standard Sensor (miles)
0
2
4
6
8
10

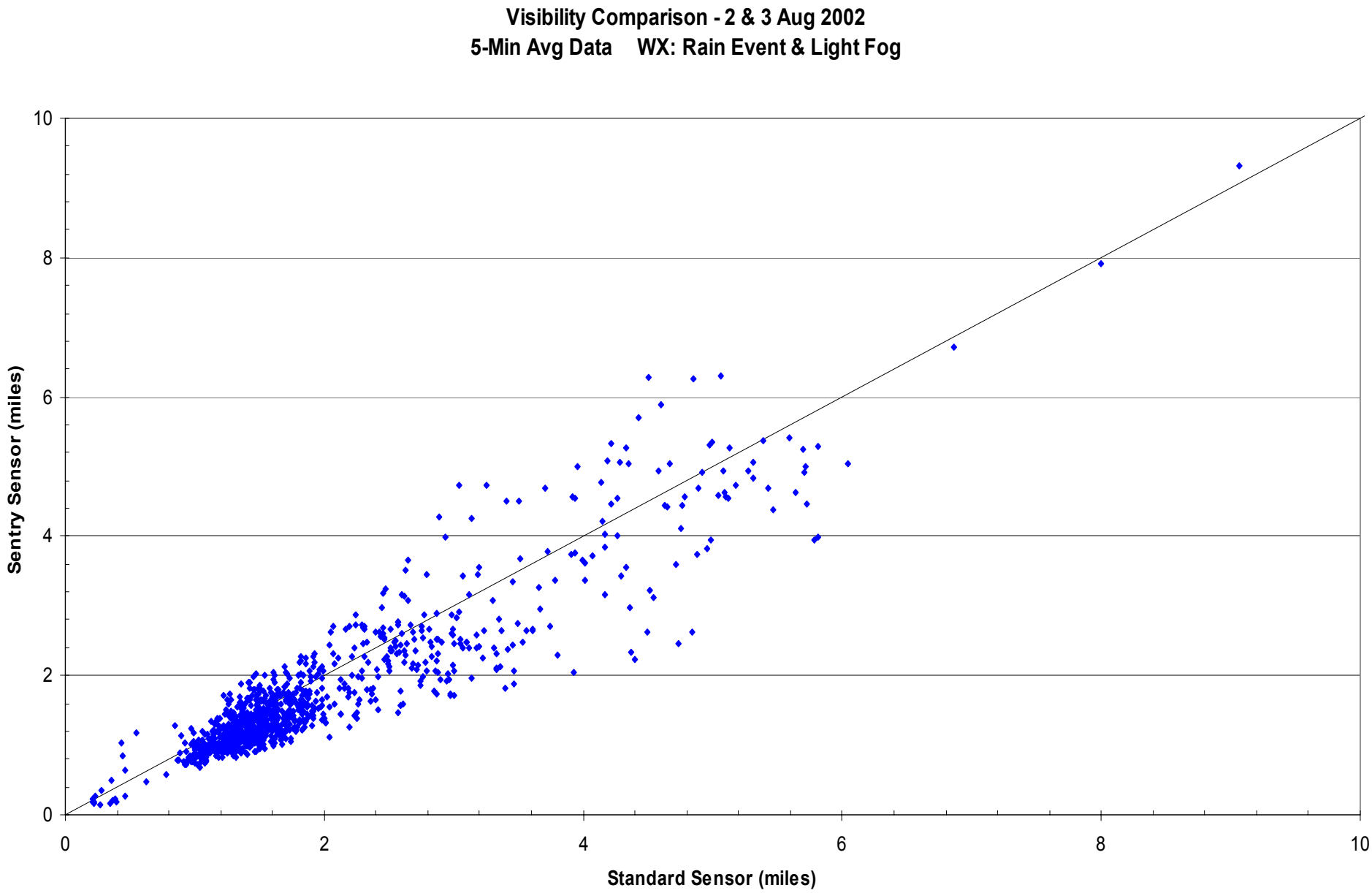

Visibility Time Series - 27 & 28 July 2002
5-Min Avg Data WX: Morning Fog / Haze
Visibility (miles)
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
4:00
8:00
Time
Morning Fog Event
Sentry
Standard


Visibility Comparison - 27 & 28 July 2002
5-Min Avg Data WX: Morning Fog / Haze
Sentry Sensor (miles)
Standard Sensor (miles)
0
2
4
6
8
10


Visibility Time Series - 30 July - 1 Aug 2002
5-Min Avg Data WX: No Precip
Visibility (miles)
10
8
6
4
2
0
10:35
14:35
18:35
22:35
2:35
6:35
10:35
14:35
18:35
22:35
2:35
6:35
Time
Sentry
Standard


Visibility Comparison - 30 July - 1 Aug 2002
5-Min Avg Data WX: No Precip
Sentry Sensor (miles)
Standard Sensor (miles)
0
2
4
6
8
10


Visibility Time Series - 2 & 3 Aug 2002
5-Min Avg Data WX: Rain & Light Fog
Visibility (miles)
10
8
6
4
2
0
Rain Event
Overnight Light Fog
16:00
20:00
0:00
4:00
8:00
Time
Sentry
Standard


Visibility Comparison - 2 & 3 Aug 2002
5-Min Avg Data WX: Rain Event & Light Fog
Sentry Sensor (miles)
Standard Sensor (miles)
0
2
4
6
8
10