

Update on IEEE 1366

Major Event Definition

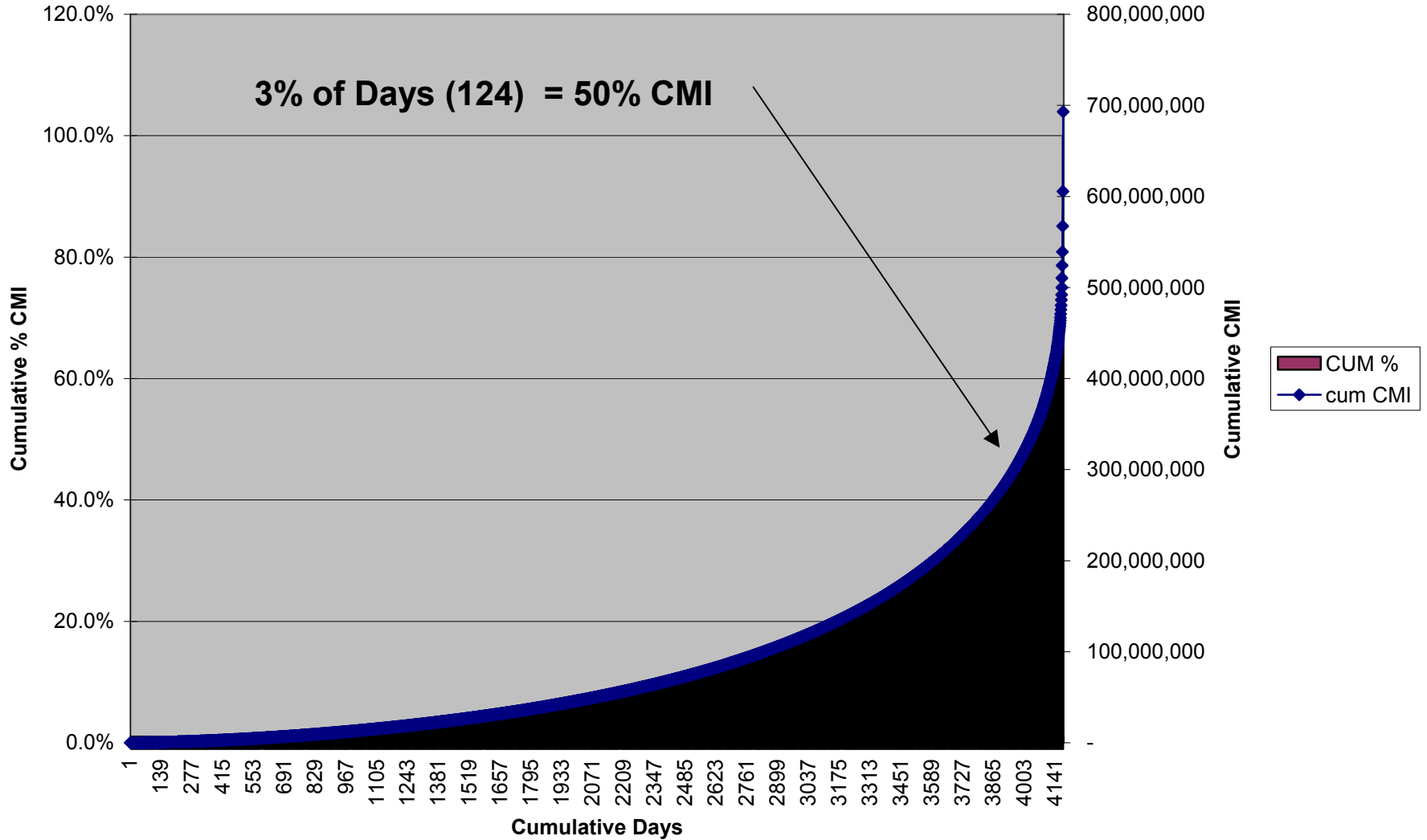
Working Group on System Design

C. Williams - Senior Member - IEEE

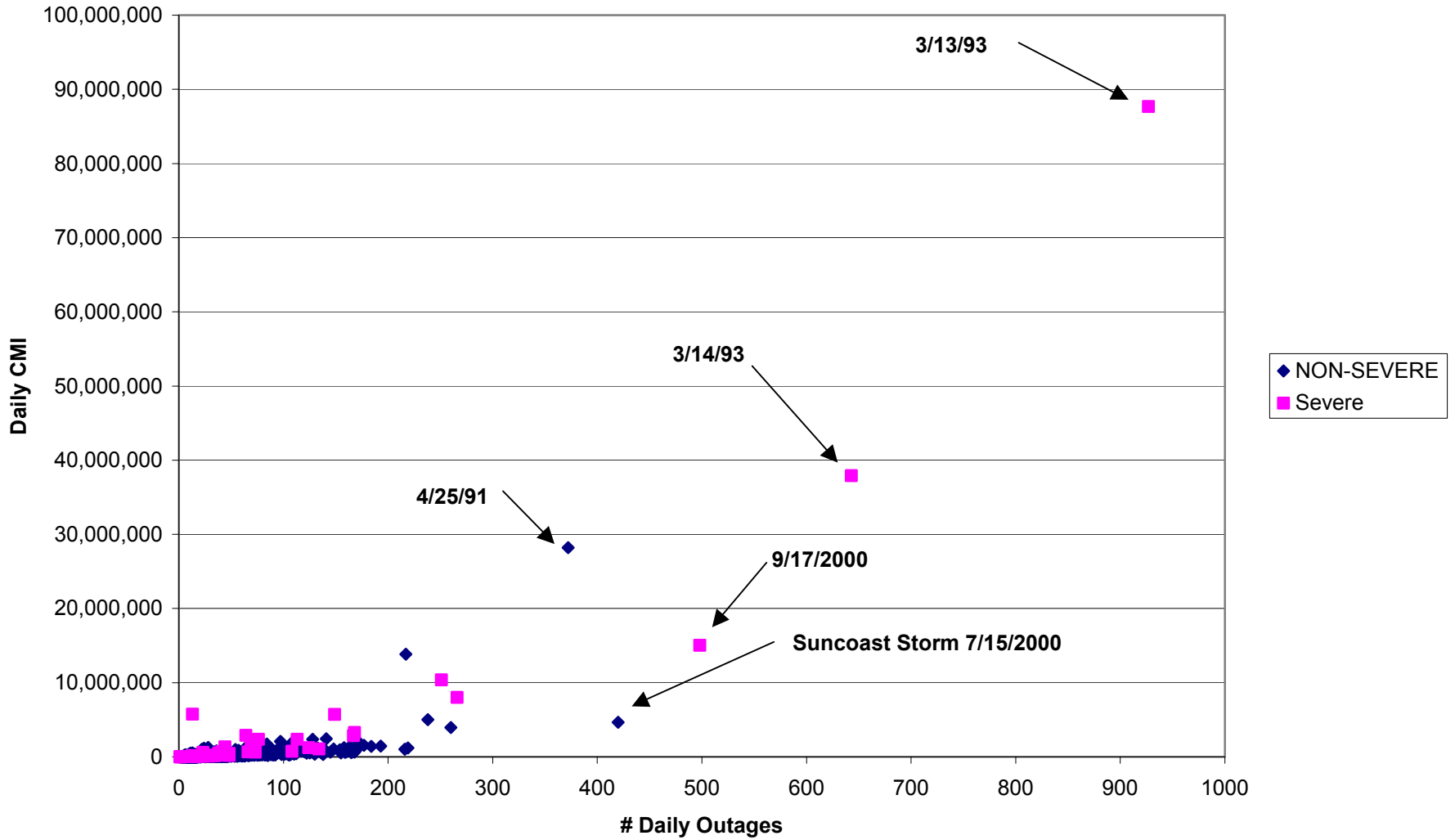
IEEE 1366

- Defines Reliability Indices
 - SAIDI, SAIFI, CAIDI, CEMI, etc
- Includes Reporting Guidelines
- Defines “Major” or “Severe” Events
- Major Event = 10% of customers in an operating area are out in a 24 hour period.

Suncoast Daily CMI



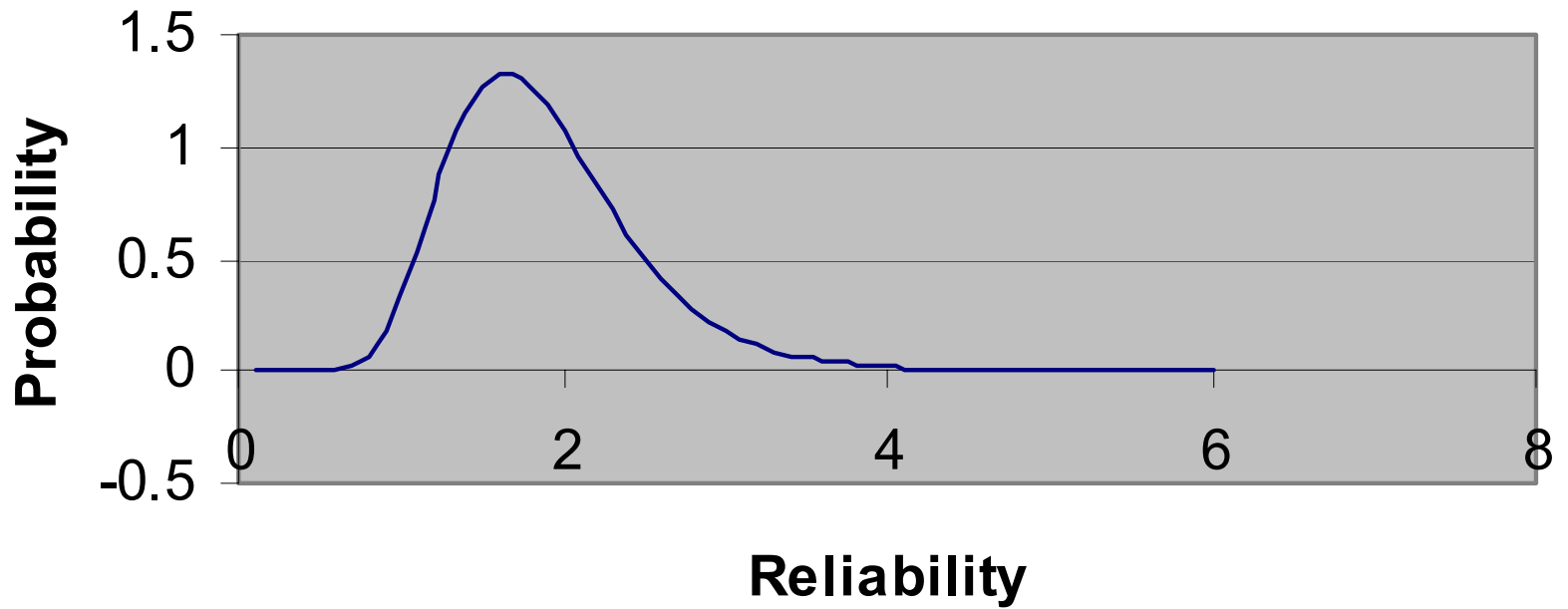
Severe vs Non-Severe Weather Suncoast Region



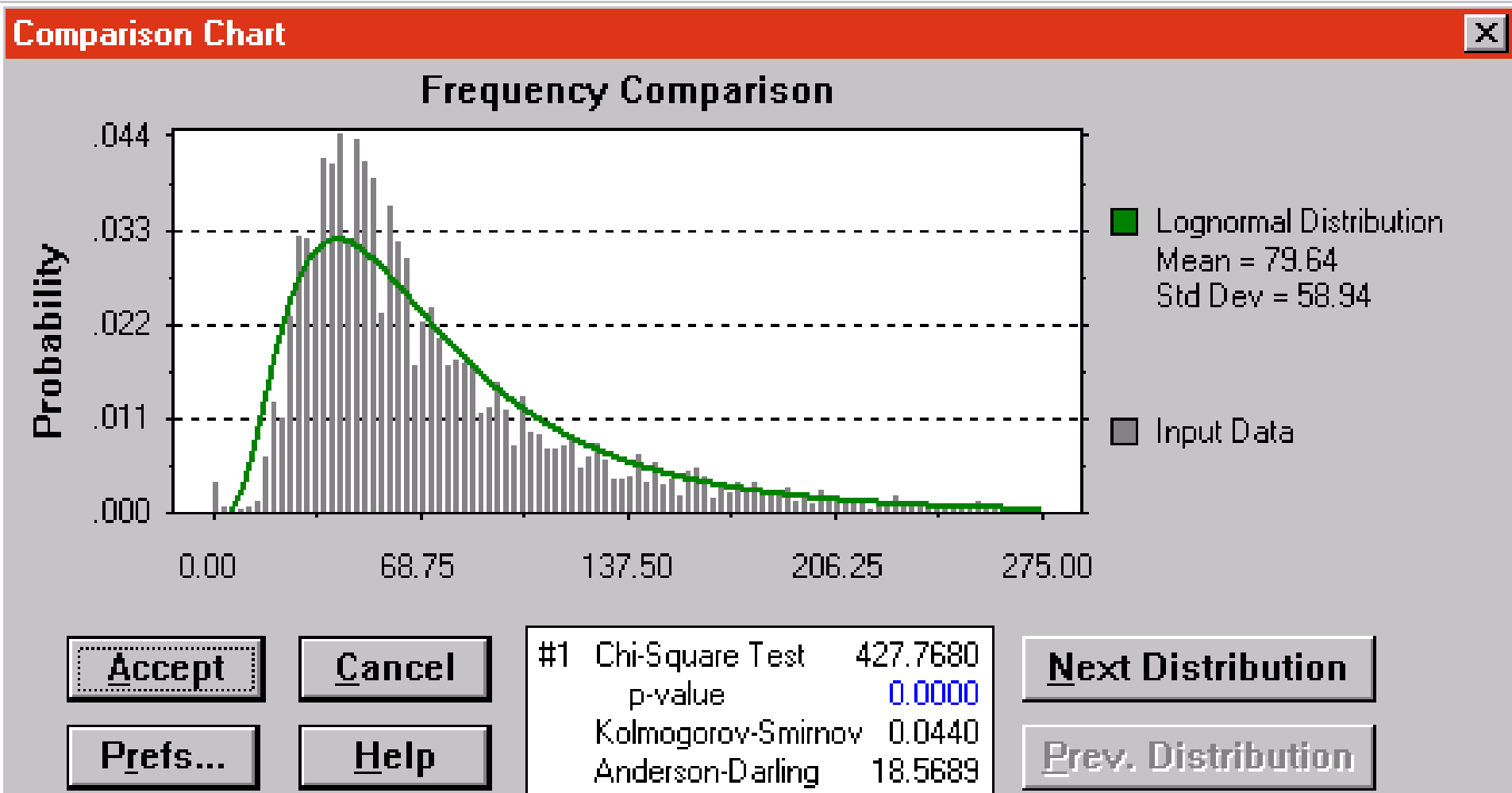
New Major Event Definition Proposal

- Takes a statistical approach
- Proposal
 - 6 sigma of log normal distribution on daily CMI by region
 - non arbitrary
 - applied by region
 - applied to individual historical performance and events

Fig. 4 - Typical Log-Normal Distribution



System Daily Outages

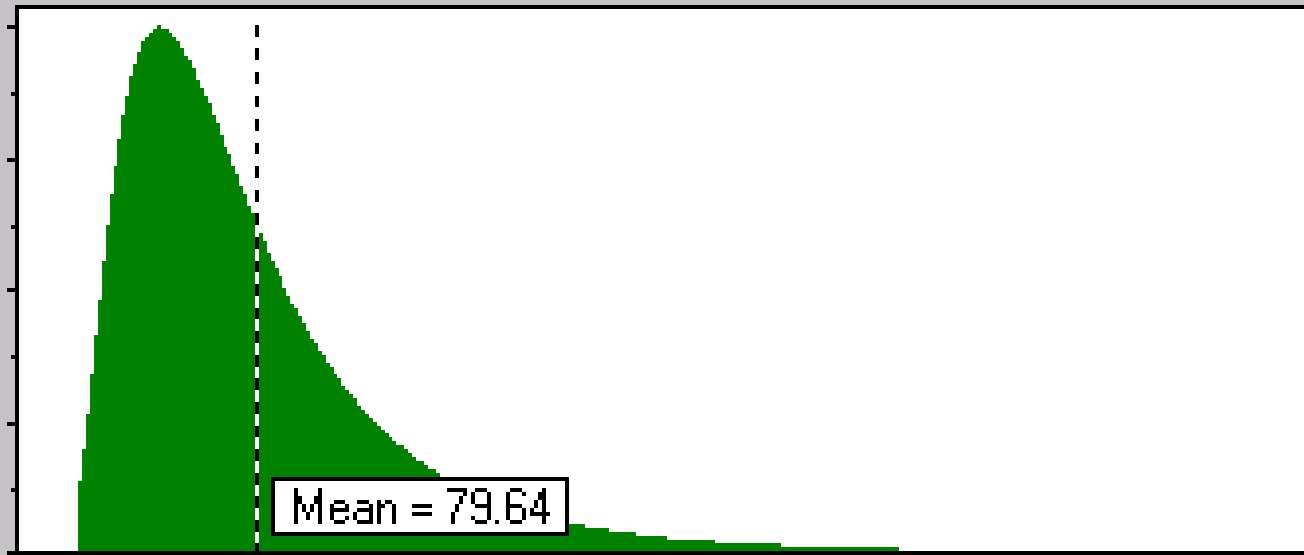


System Daily Outages

Cell G5: Lognormal Distribution

Assumption Name:

Probability



8.81

122.84

236.86

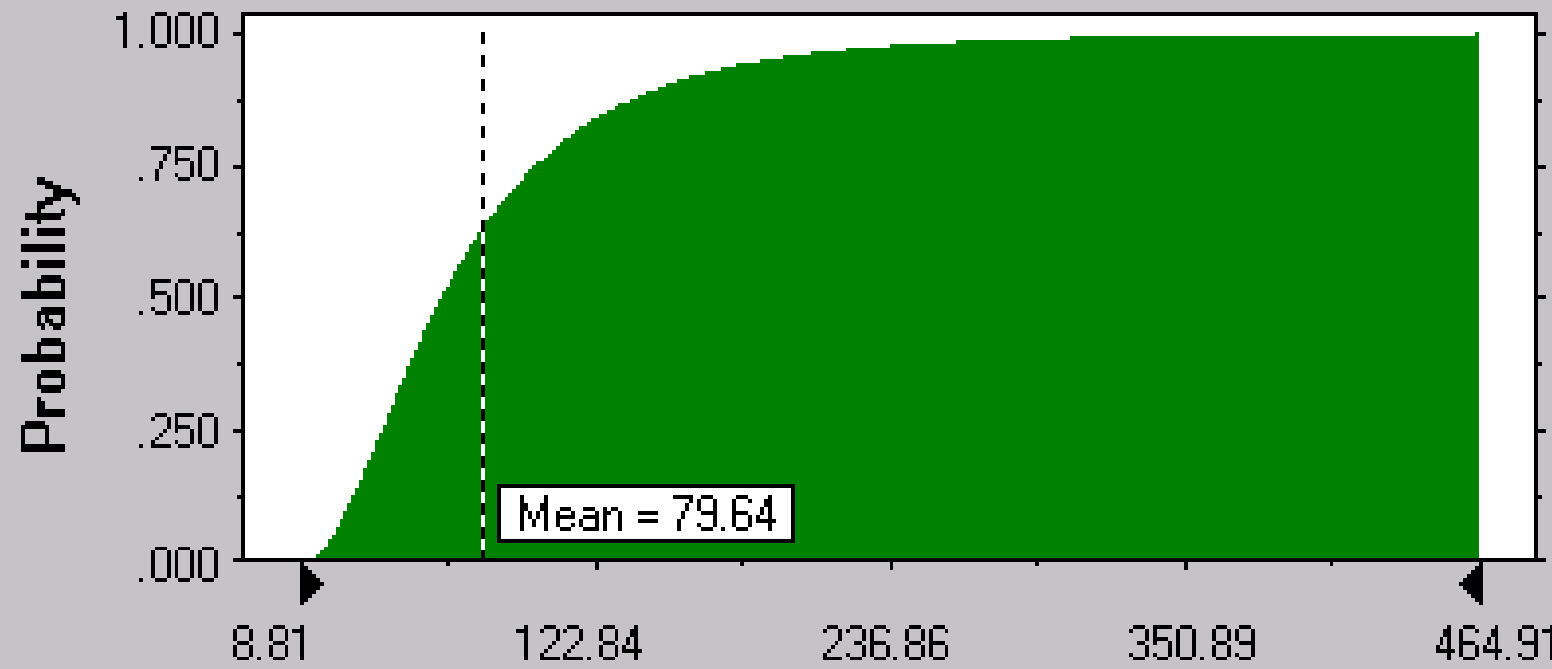
350.89

464.91

Mean

Std Dev

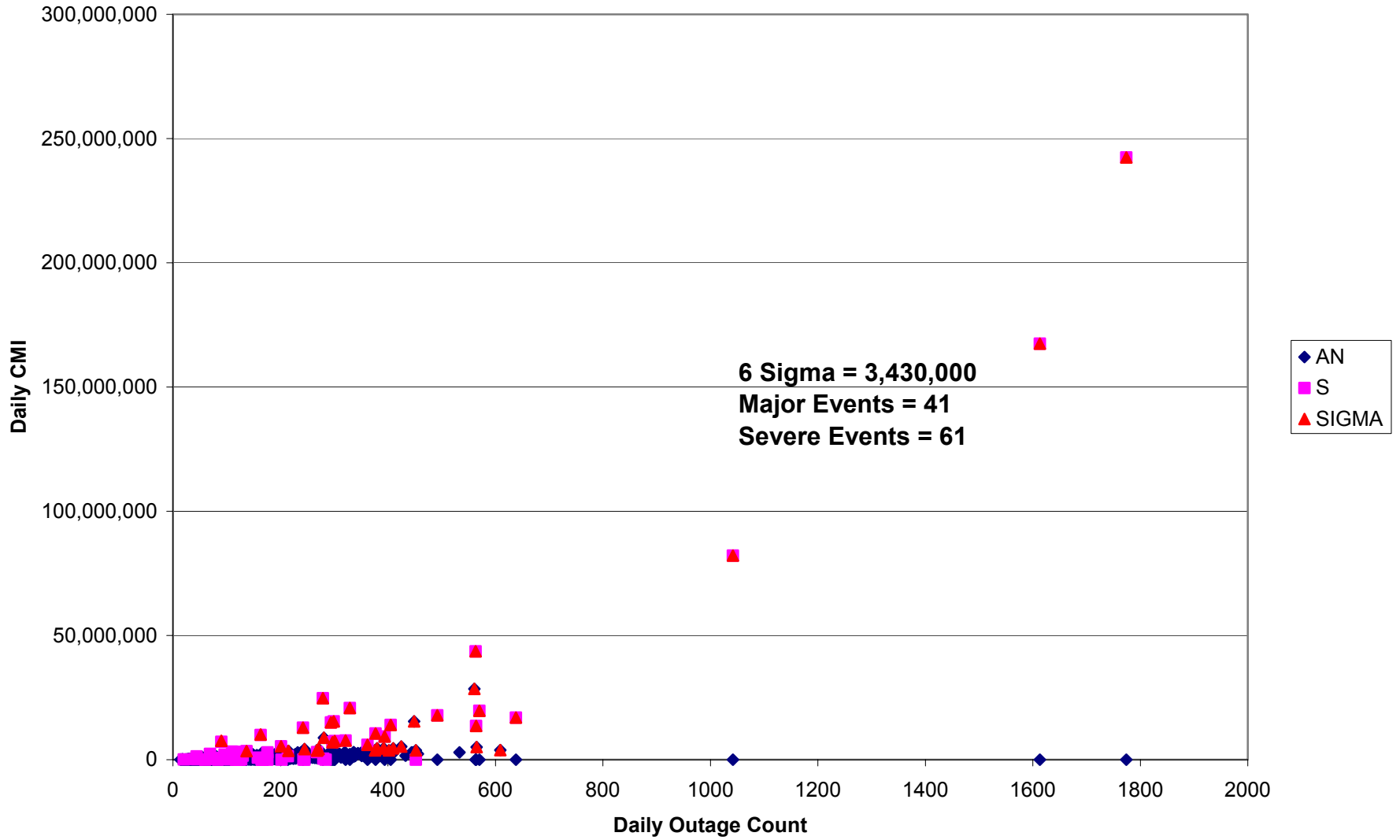
Assumption Name:



Mean

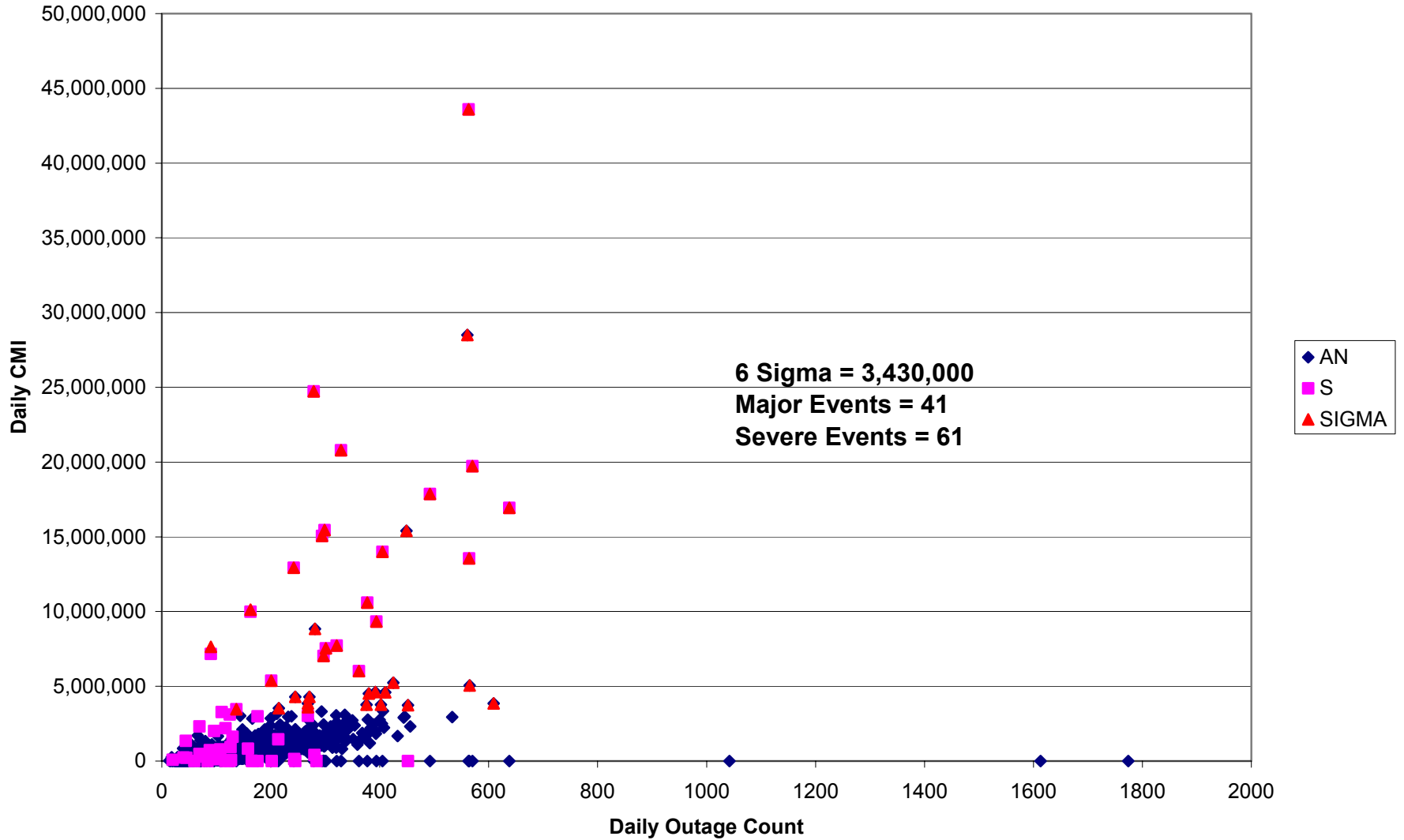
Std Dev

System Data



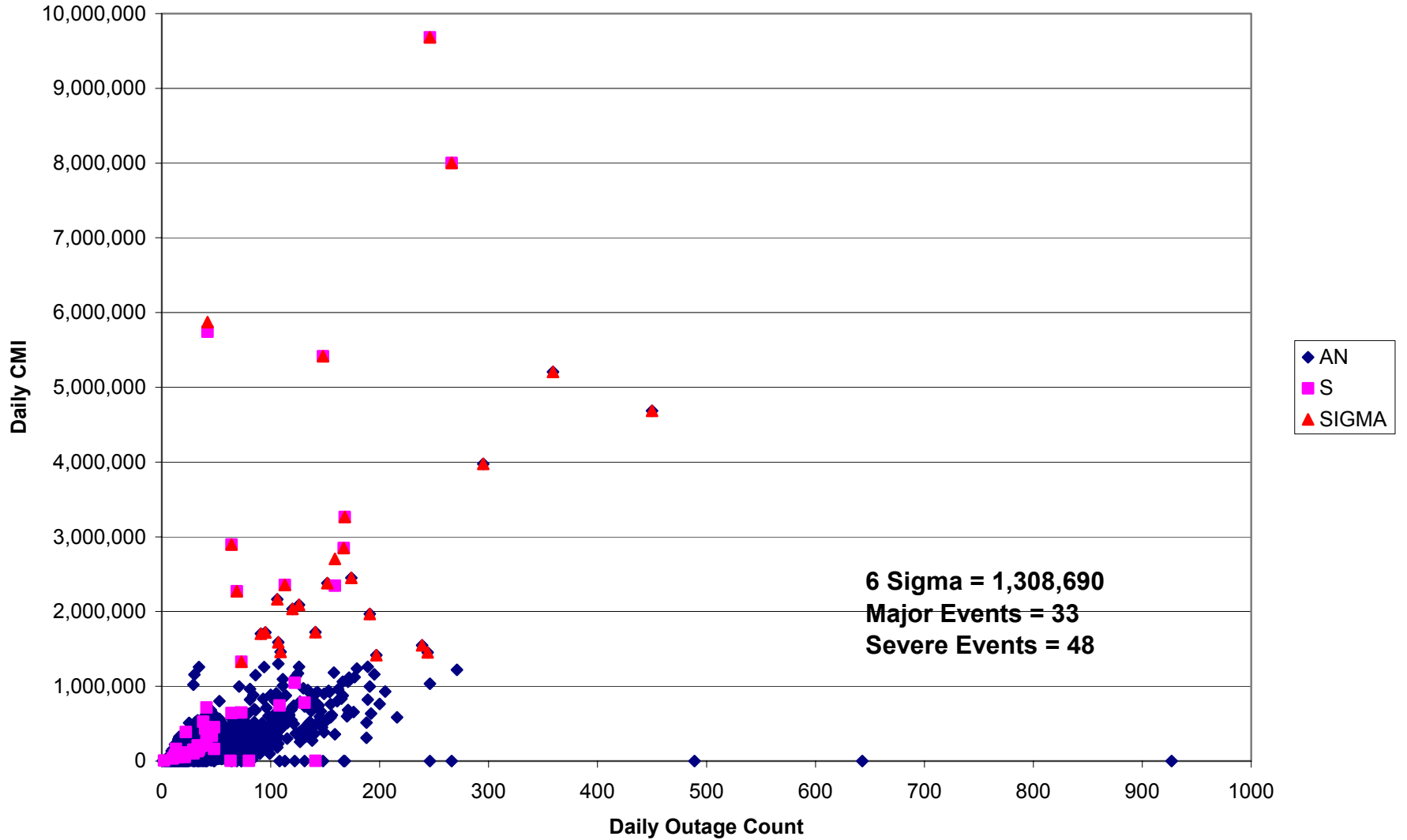
RESCALED

System Data

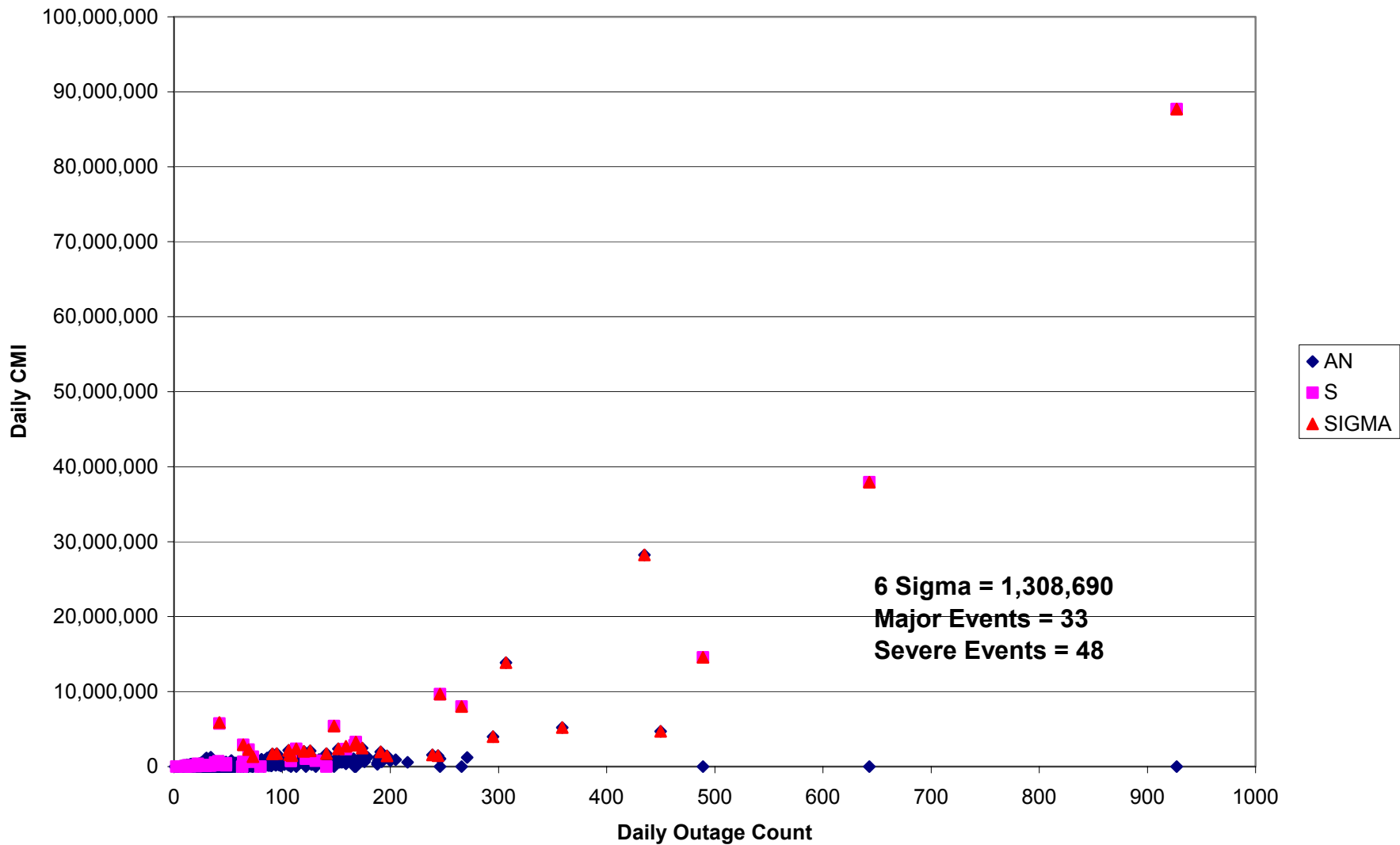


RESCALED

Suncoast Data



Suncoast Data



Comparison of Major Events 6 SIGMA / Present Definition

- **System**
- CMI Excluded = 60%
- Events (days) = 67%
- **Regional**
- CMI Excluded = 110%
- Events (days) = 40%

Paper by Dr. Christie

- Proposes Statistical definition
- Prompted by discussions at Vancouver IEEE SPM.
- Web site with paper and spread sheet example
- <http://www.ee.washington.edu/people/faculty/christie/>

IOU Committee Challenge

- Each IOU to review daily CMI history
- Develop Log Normal Distribution
- Compare Historical Exclusions to 6 Sigma approach
- Report findings at next IOU meeting
- Feedback to IEEE W.G. on System Design

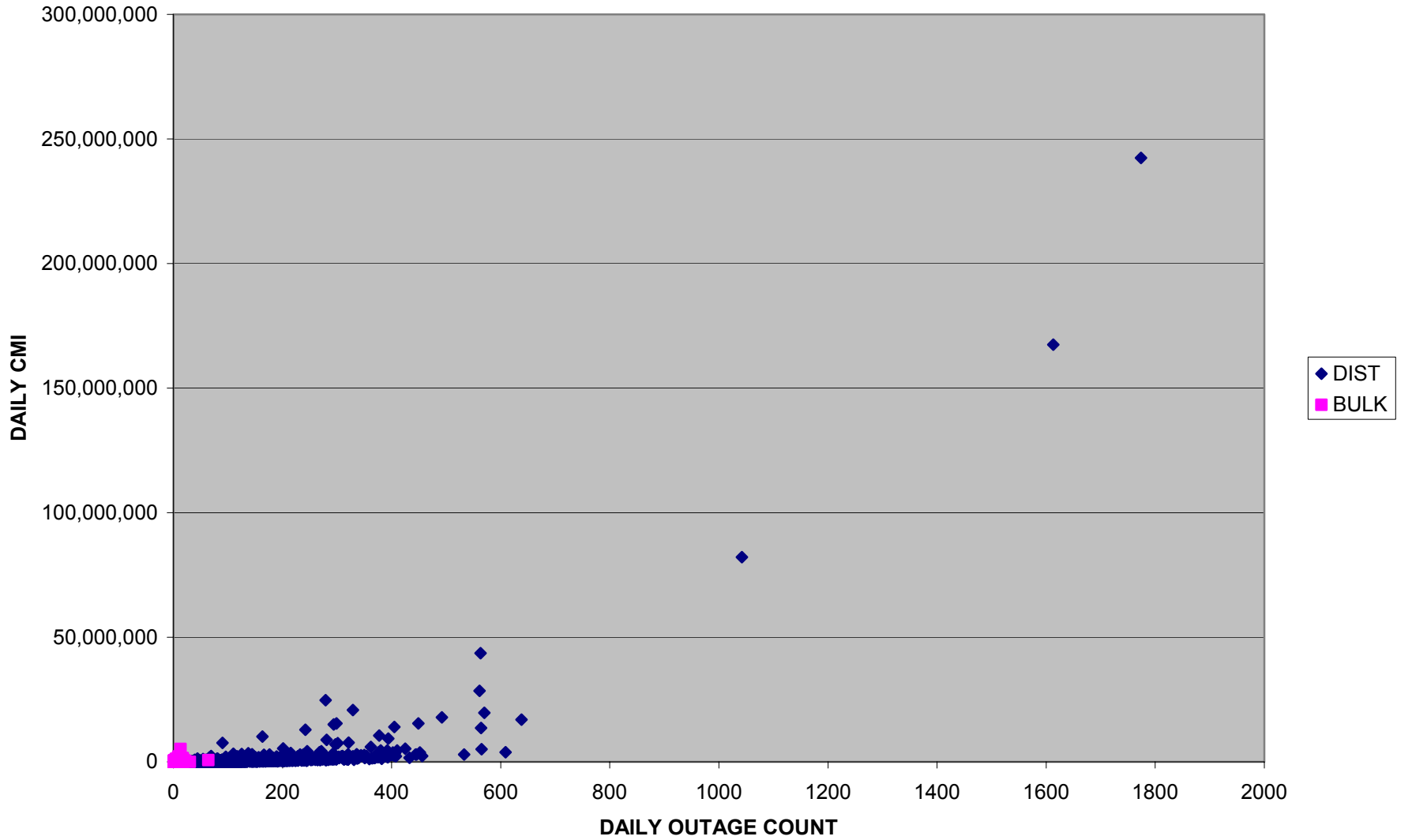
For further info contact:

Chairman of W.G. on System Design

Cheri Warren

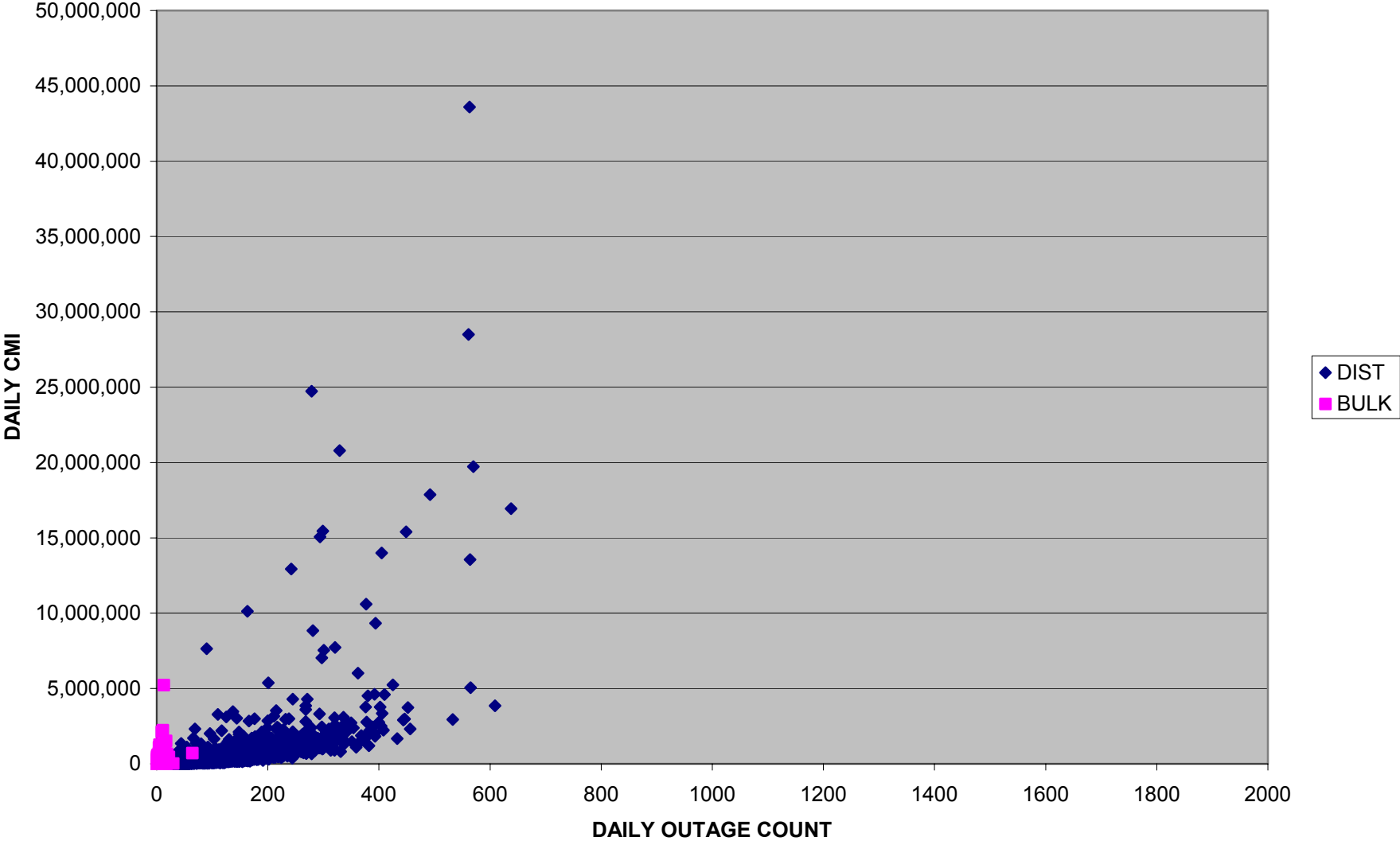
cwarren@rcgroup.com

SYSTEM BULK+DIST DATA



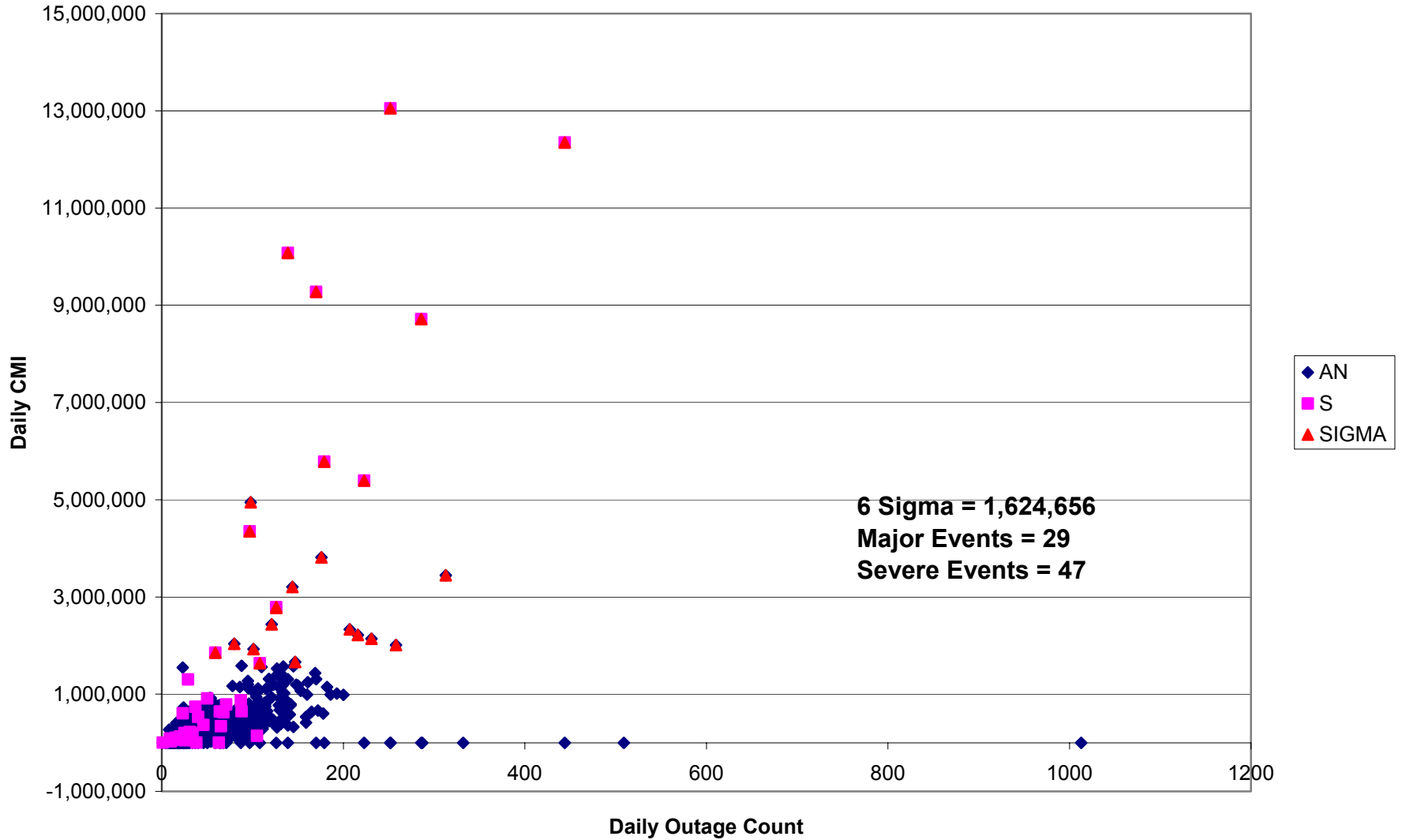
RESCALED

SYSTEM BULK+DIST DATA

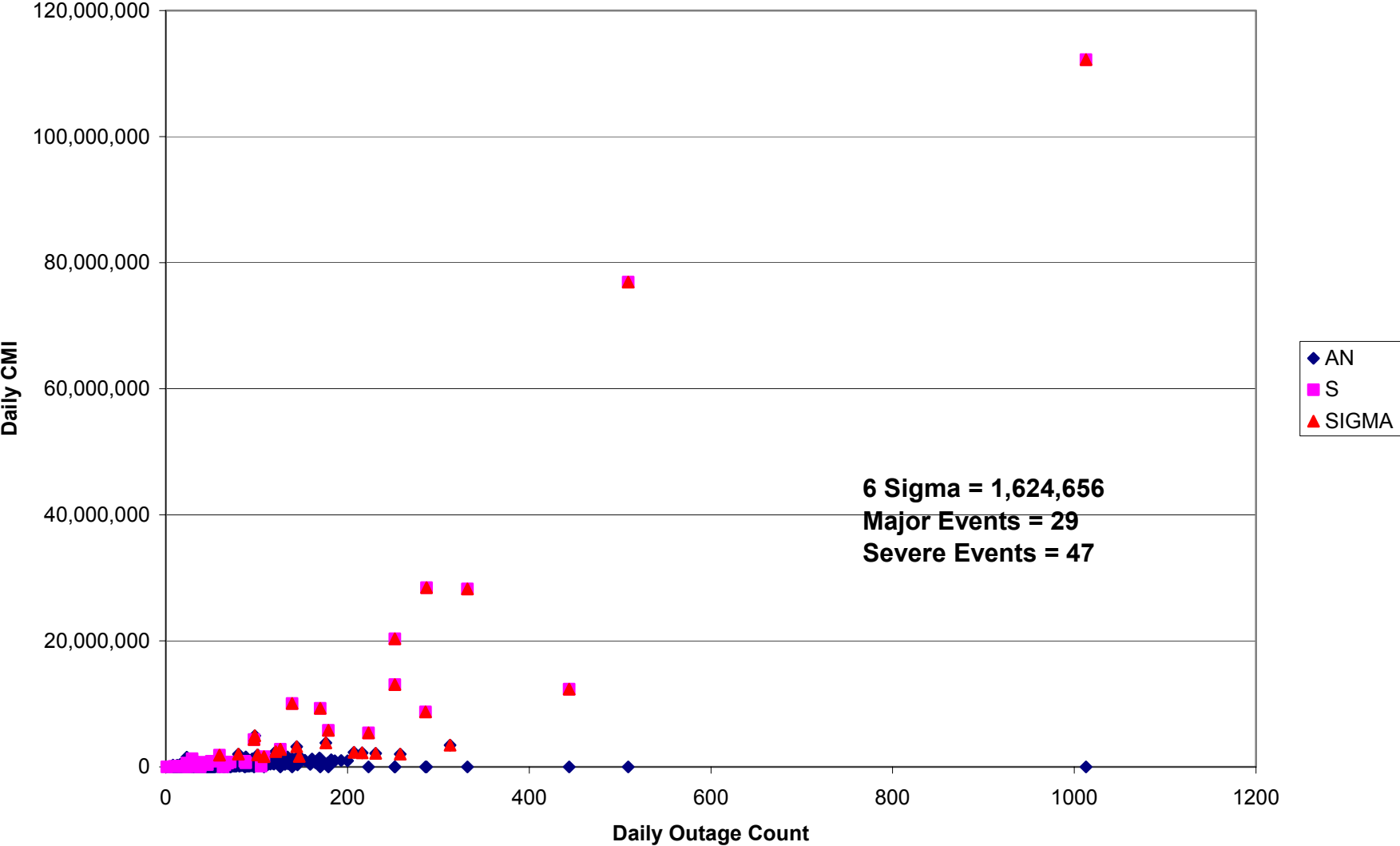


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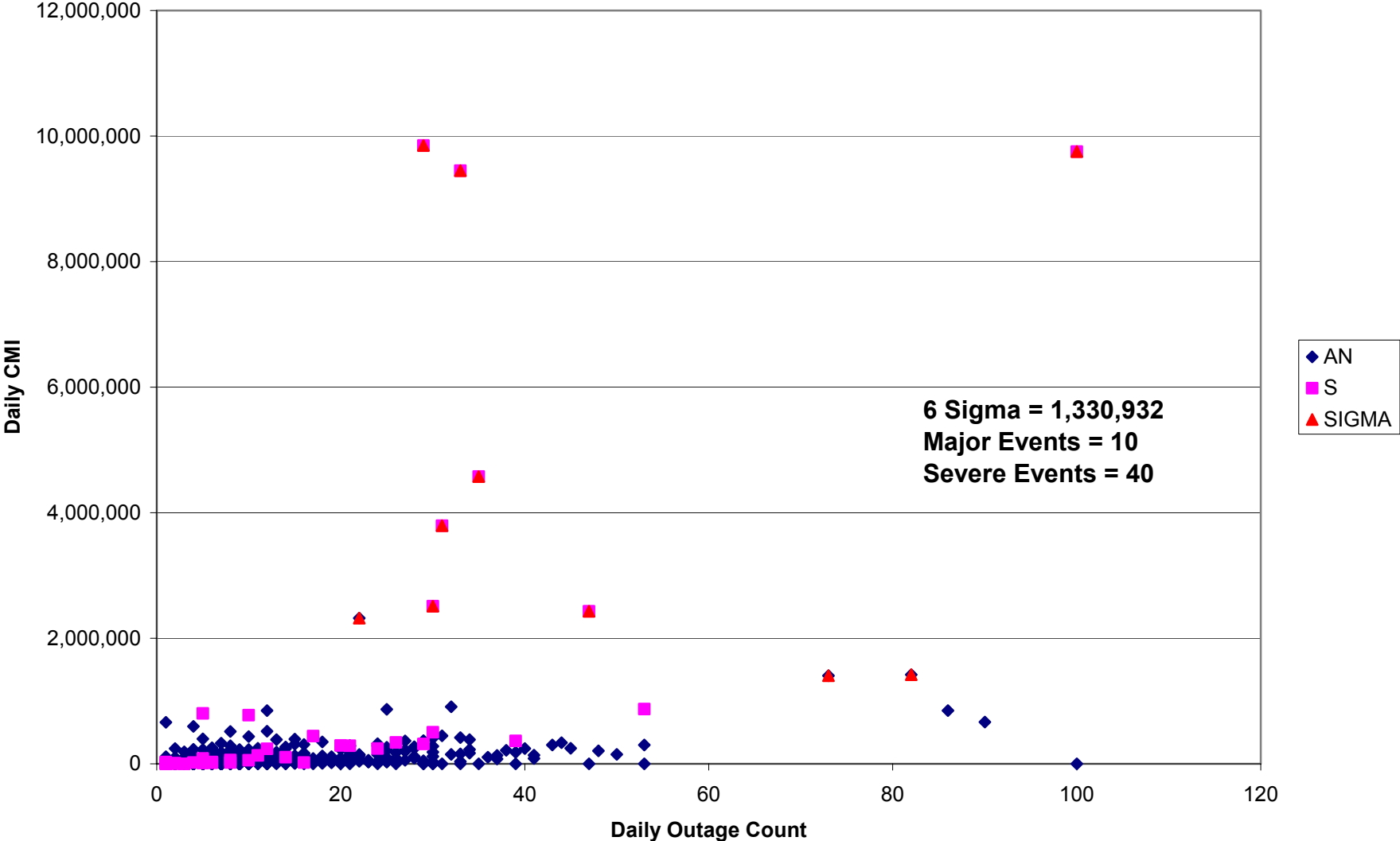
NOCEN DATA



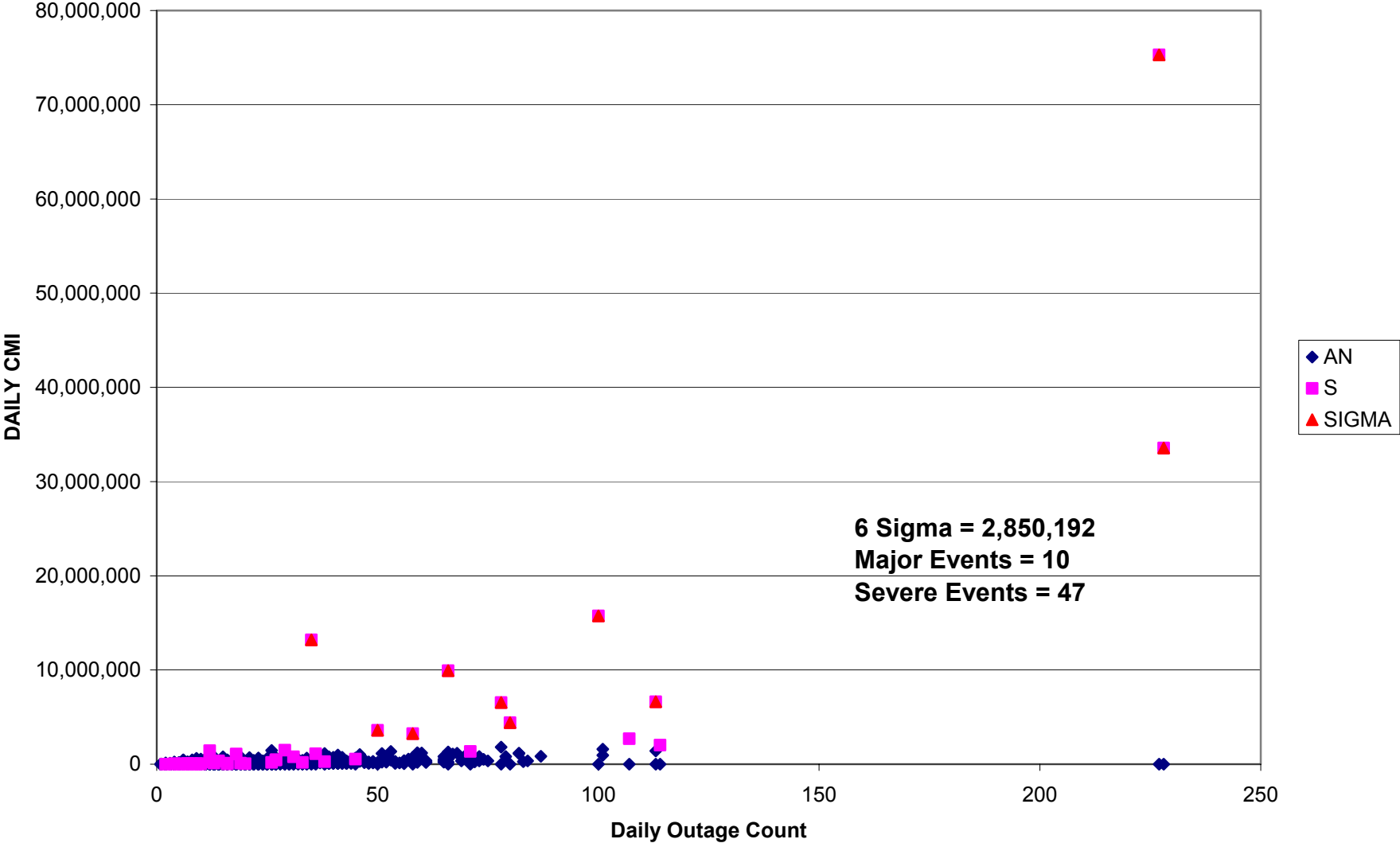
NOCEN DATA



NORTH DATA

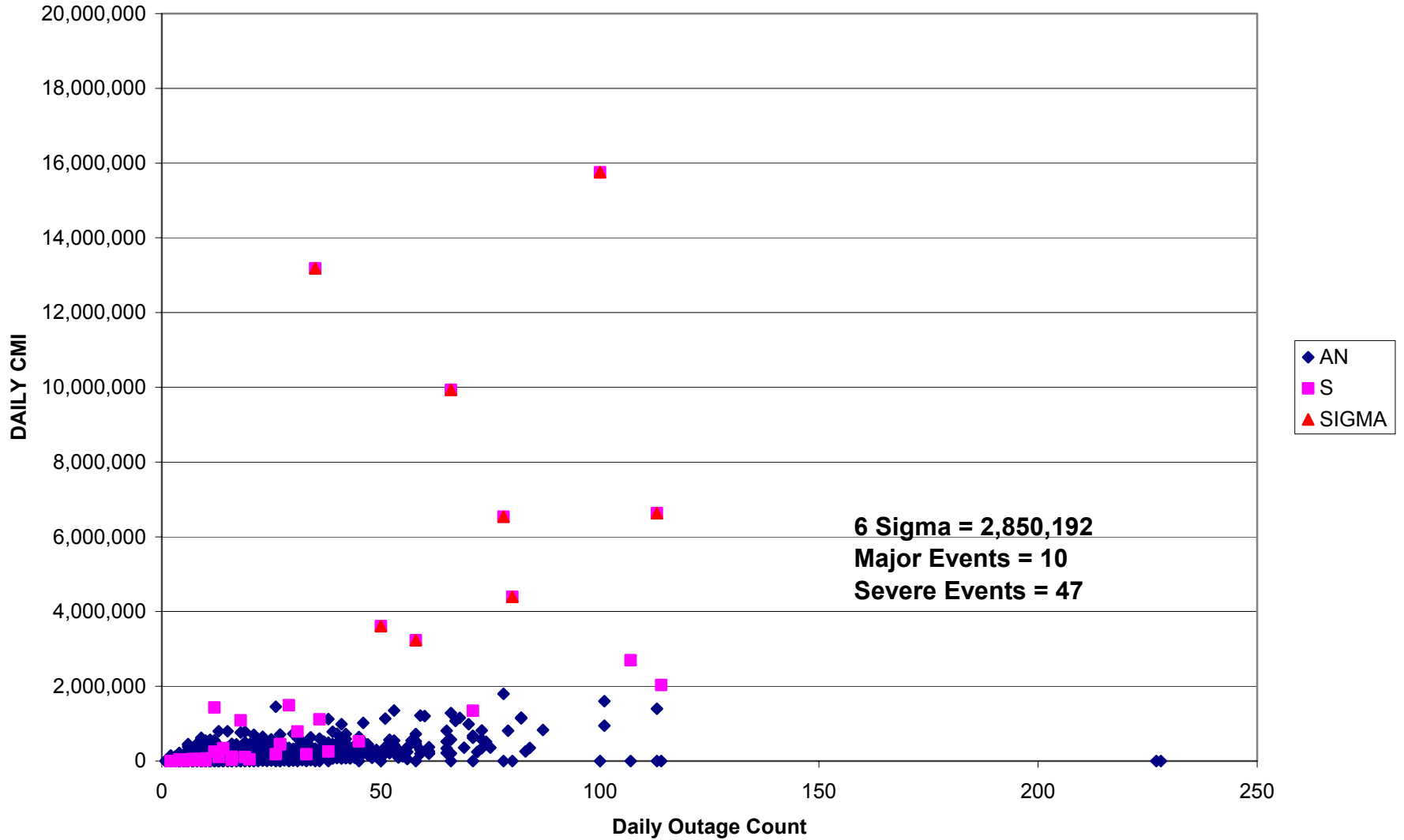


OCALA DATA



RESCALED

OCALA DATA



SOCEN DATA

