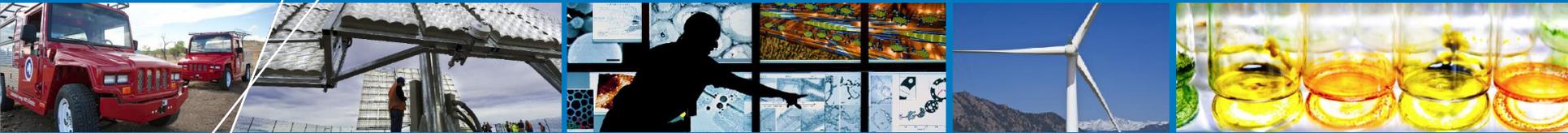


# Fleet DNA Project Data Summary Report



**Kevin Walkowicz**

**Adam Duran**

**Evan Burton**

**8/1/2014**

**PR 5400 57992**

# The Fleet DNA Project:

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The Fleet DNA Project aims to accelerate the development of advanced vehicle technologies while supporting the strategic deployment of market-ready technologies that reduce costs, fuel consumption, and emissions.

Designed by the U.S. Department of Energy's National Renewable Energy Laboratory in partnership with Oak Ridge National Laboratory, the data summaries contained within this report are designed to illustrate the broad operation range of many of today's vehicle vocations and to provide insight into key observable statistical trends.

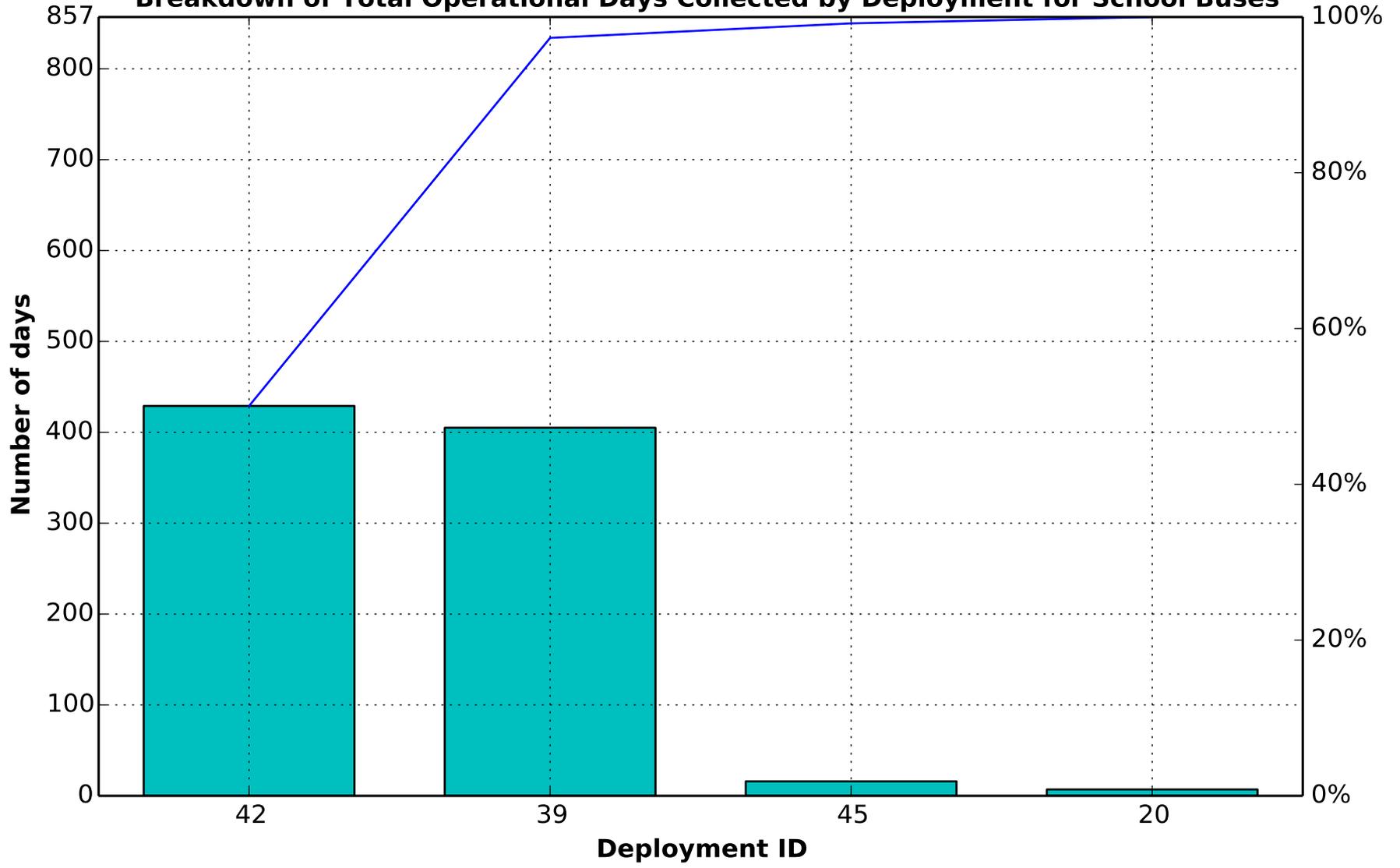
# Within This Report:

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Contained within this report are graphical data summaries based on real-world “genetics” of medium- and heavy-duty commercial fleet vehicles operating within a chosen vocation.

These graphical data summaries have been selected to highlight key statistical trends observed in past U.S. DOE fleet studies, and to provide insight into potential areas of interest for the continued development of technology to reduce costs, fuel consumption, and emissions.

# Breakdown of Total Operational Days Collected by Deployment for School Buses

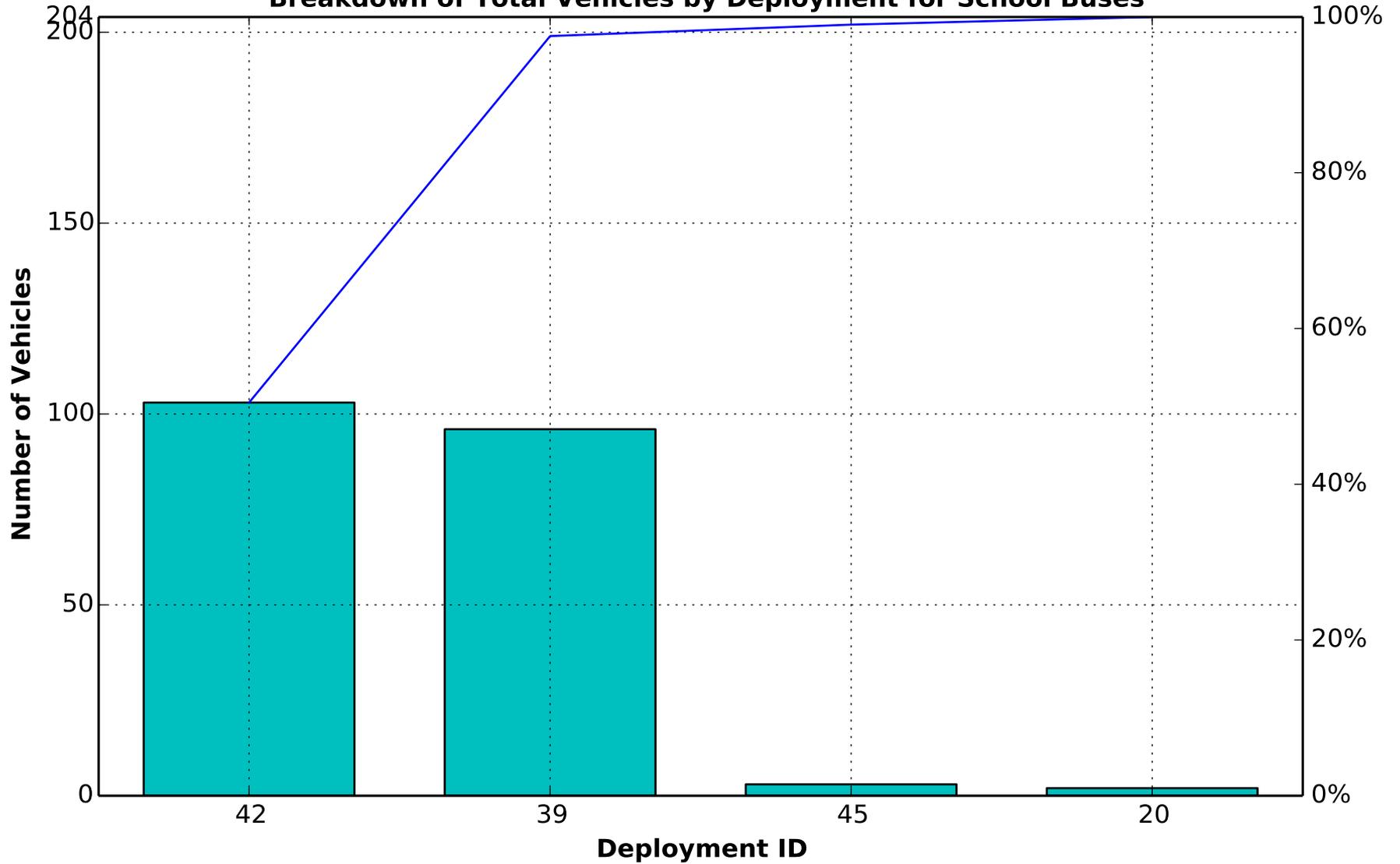


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857

### Breakdown of Total Vehicles by Deployment for School Buses

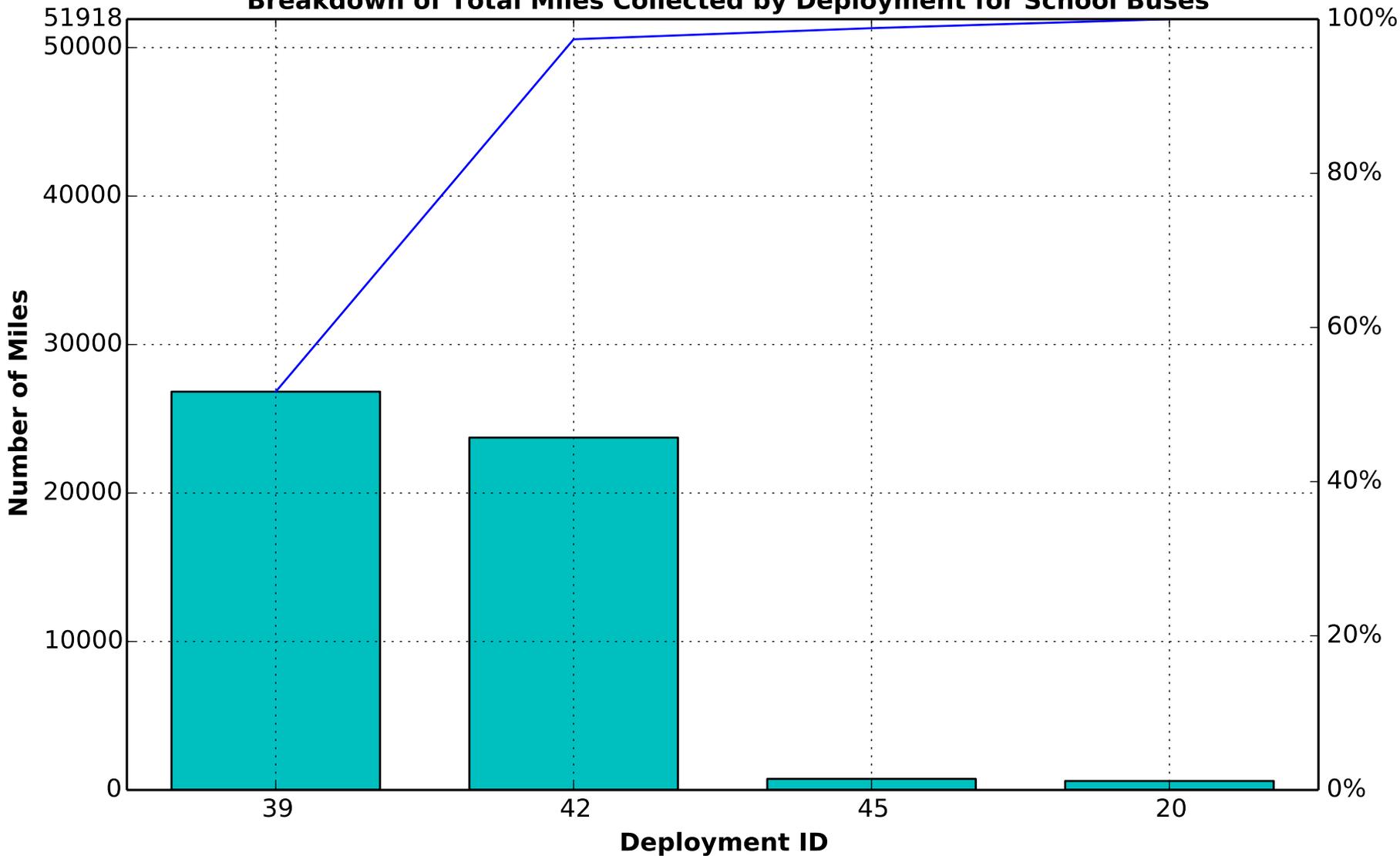


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857

### Breakdown of Total Miles Collected by Deployment for School Buses

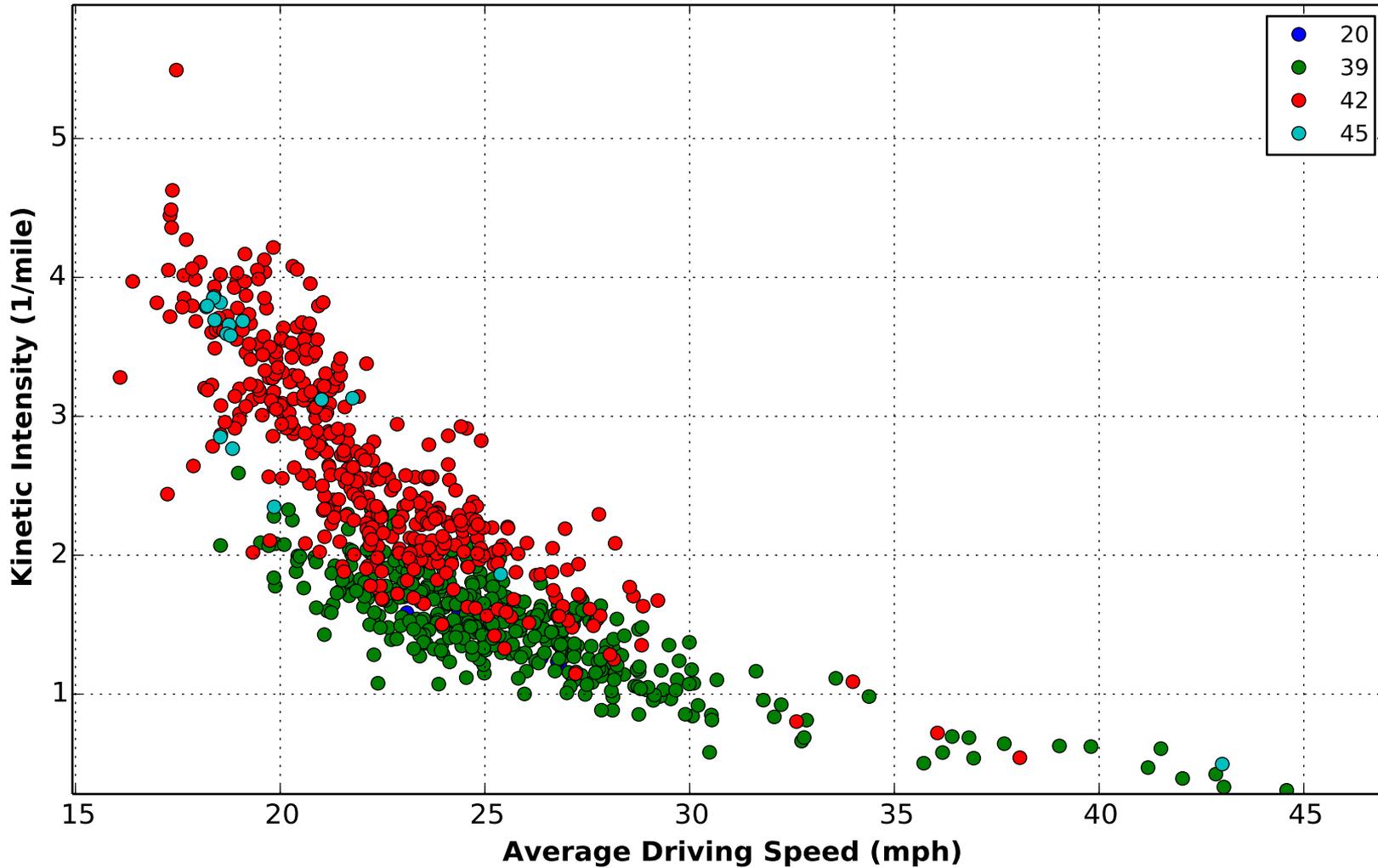


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857

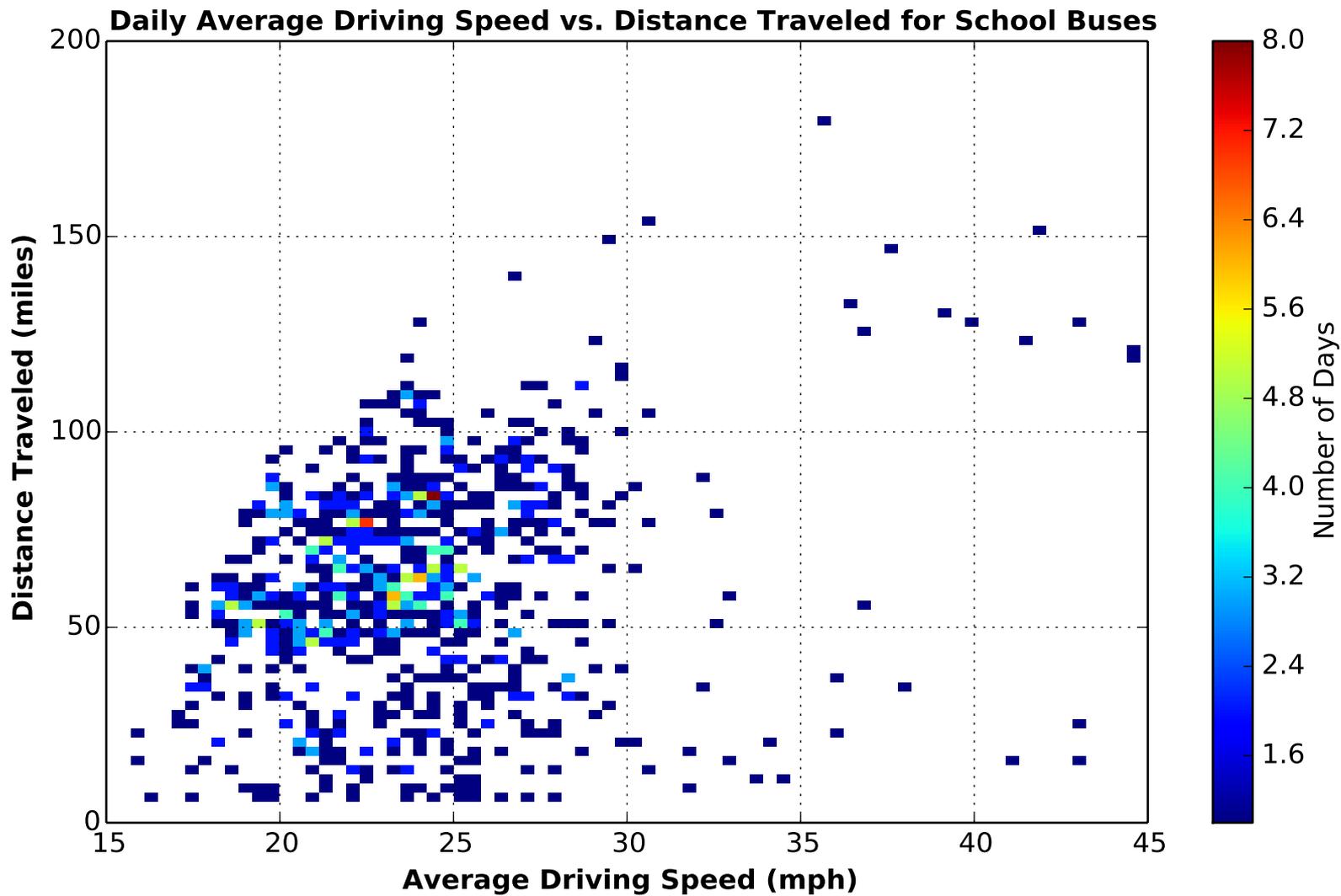
### Daily Average Driving Speed vs. Kinetic Intensity for School Buses



# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 854

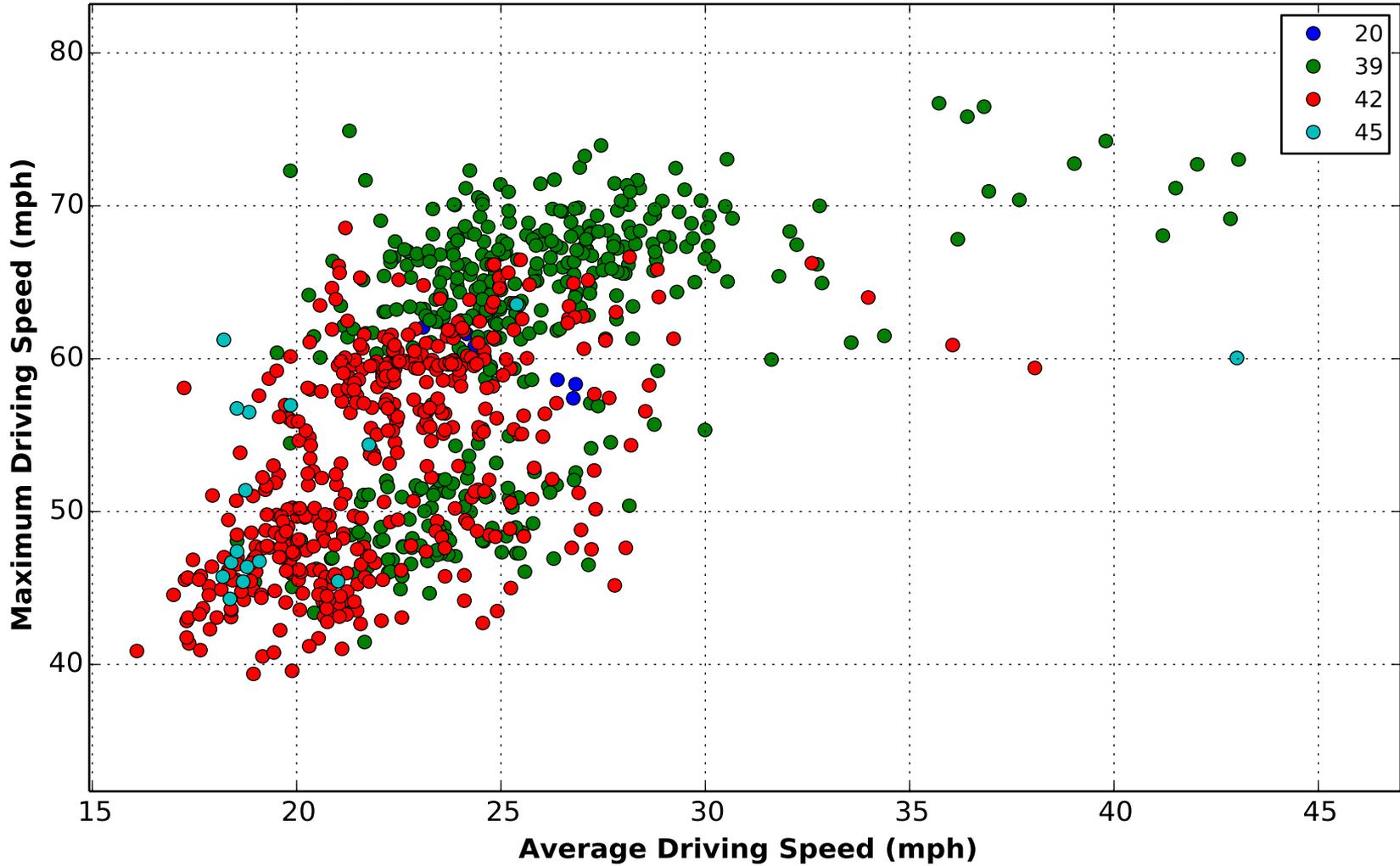


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857

### Daily Average vs. Maximum Driving Speed for School Buses

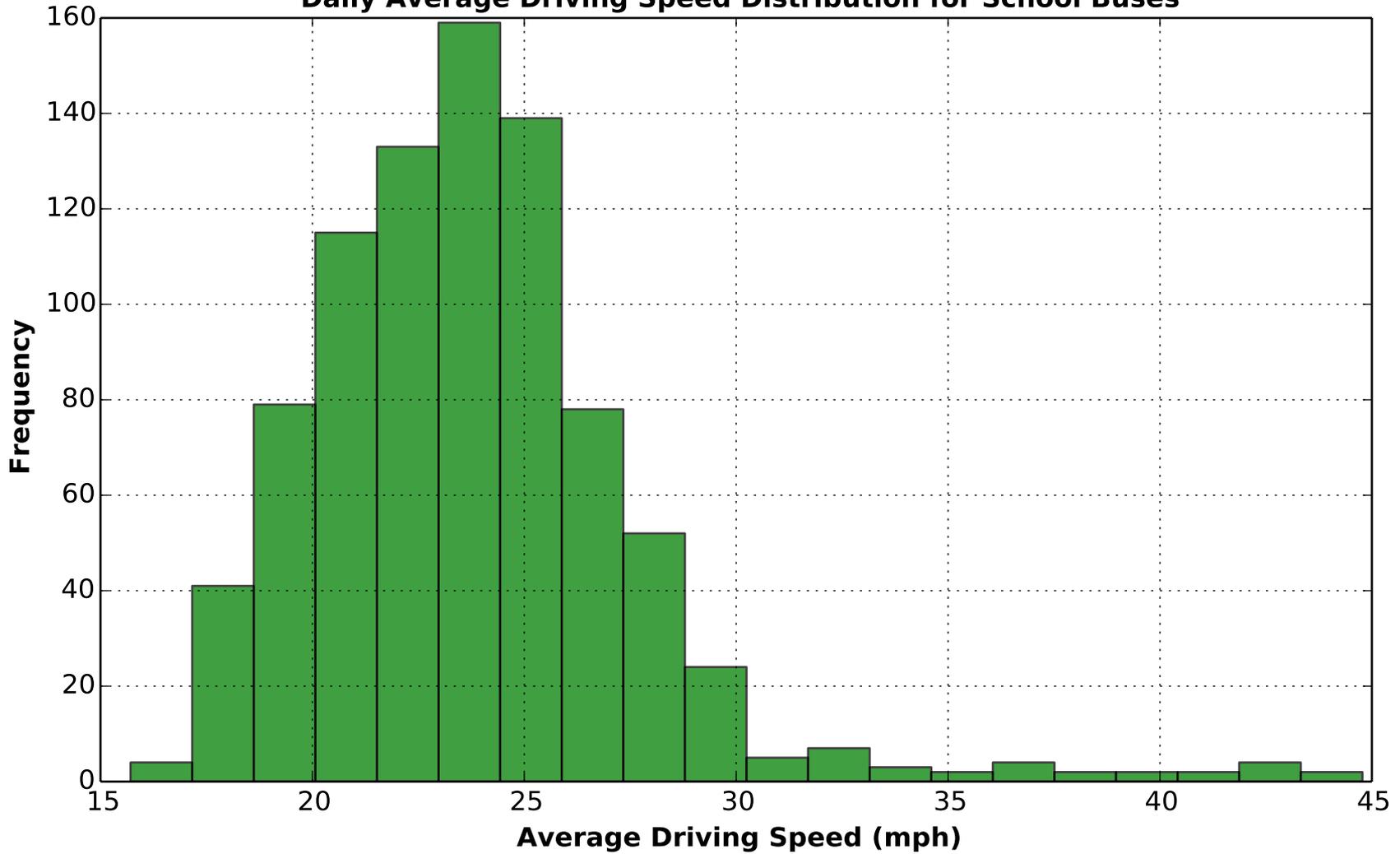


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 853

**Daily Average Driving Speed Distribution for School Buses**

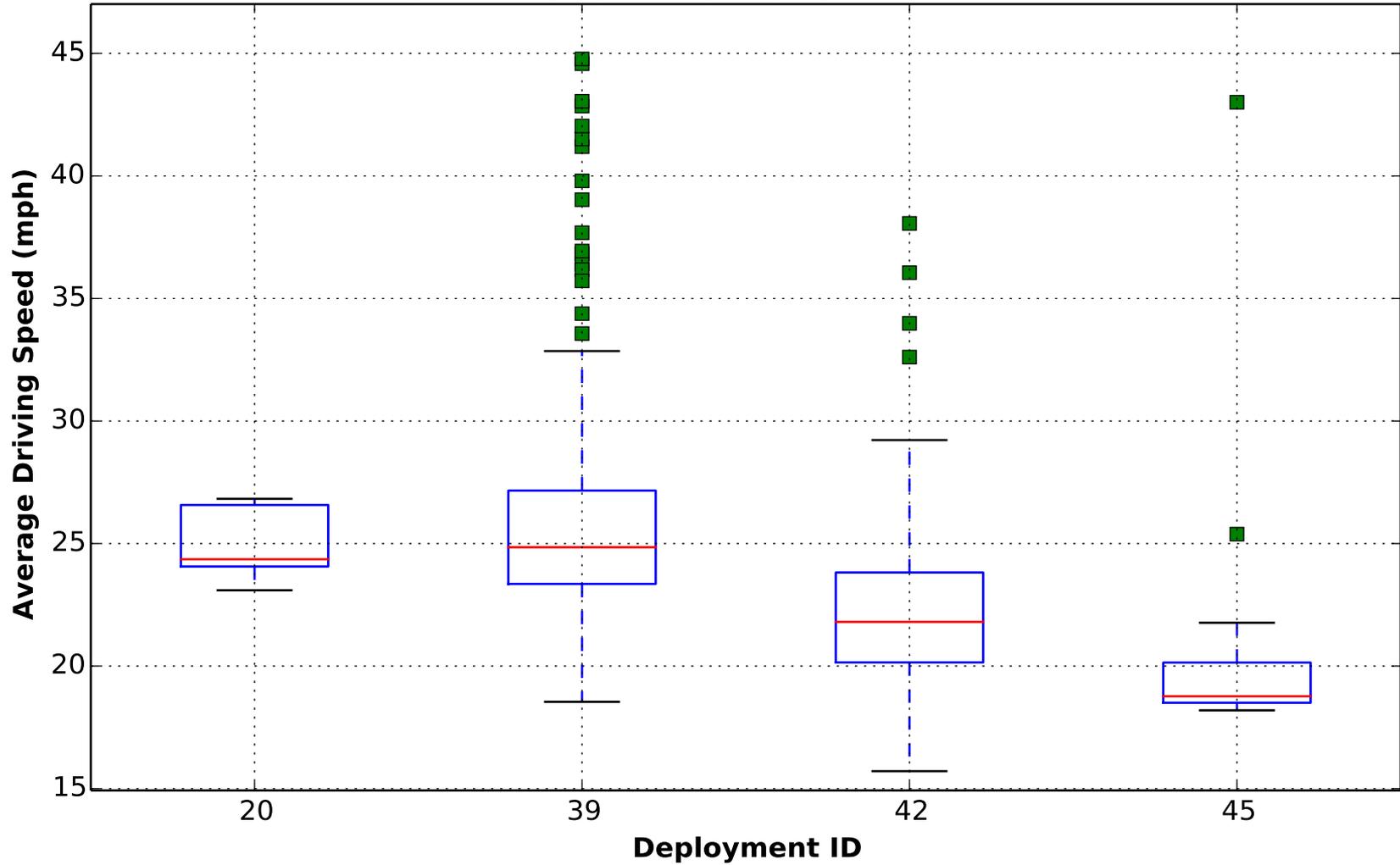


**# of Vehicles Reporting: 204**

**Generated: Thu Aug 07, 2014**

**# of Days Included: : 857**

# Average Driving Speed by Deployment for School Buses

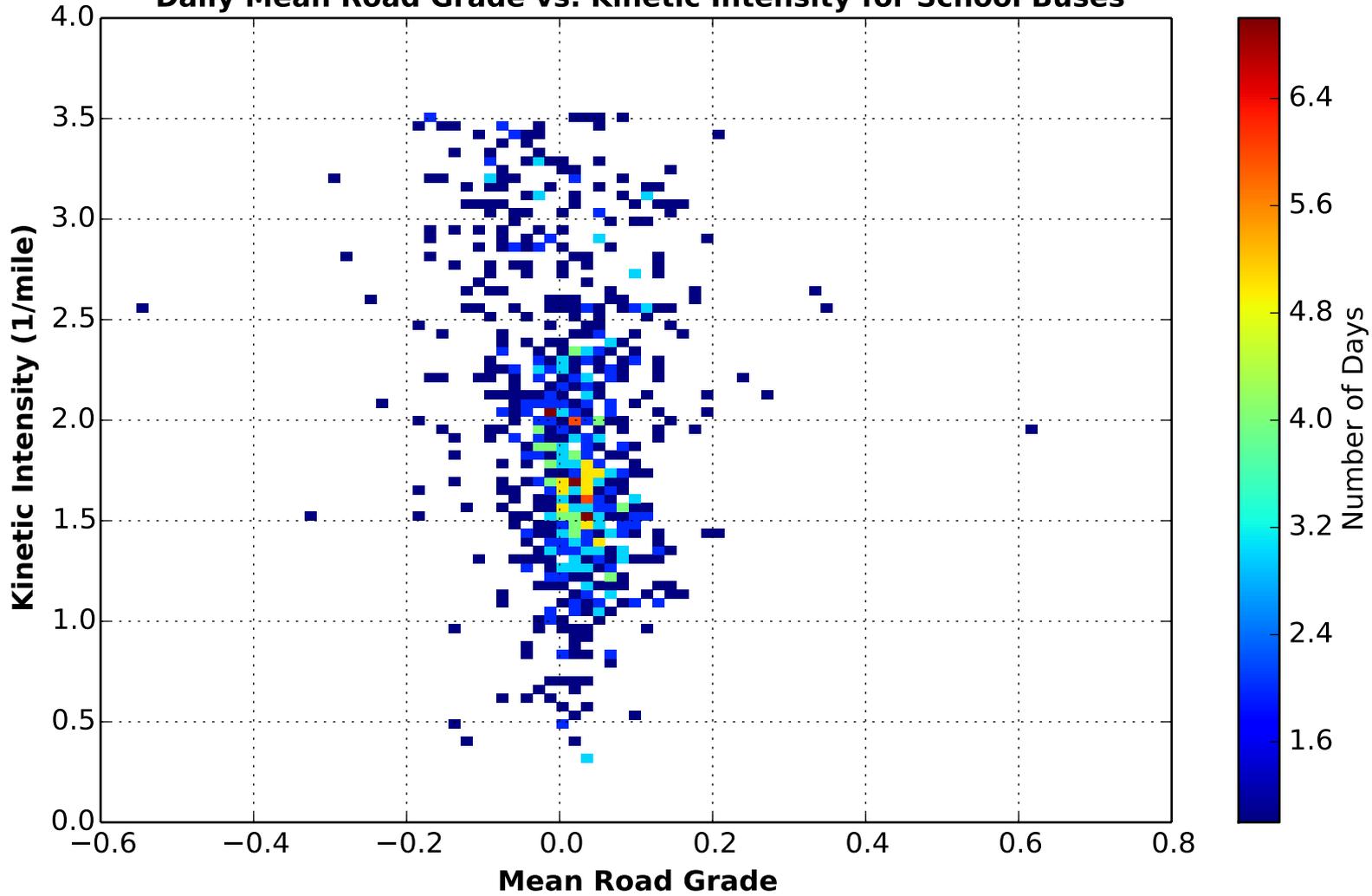


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: : 857

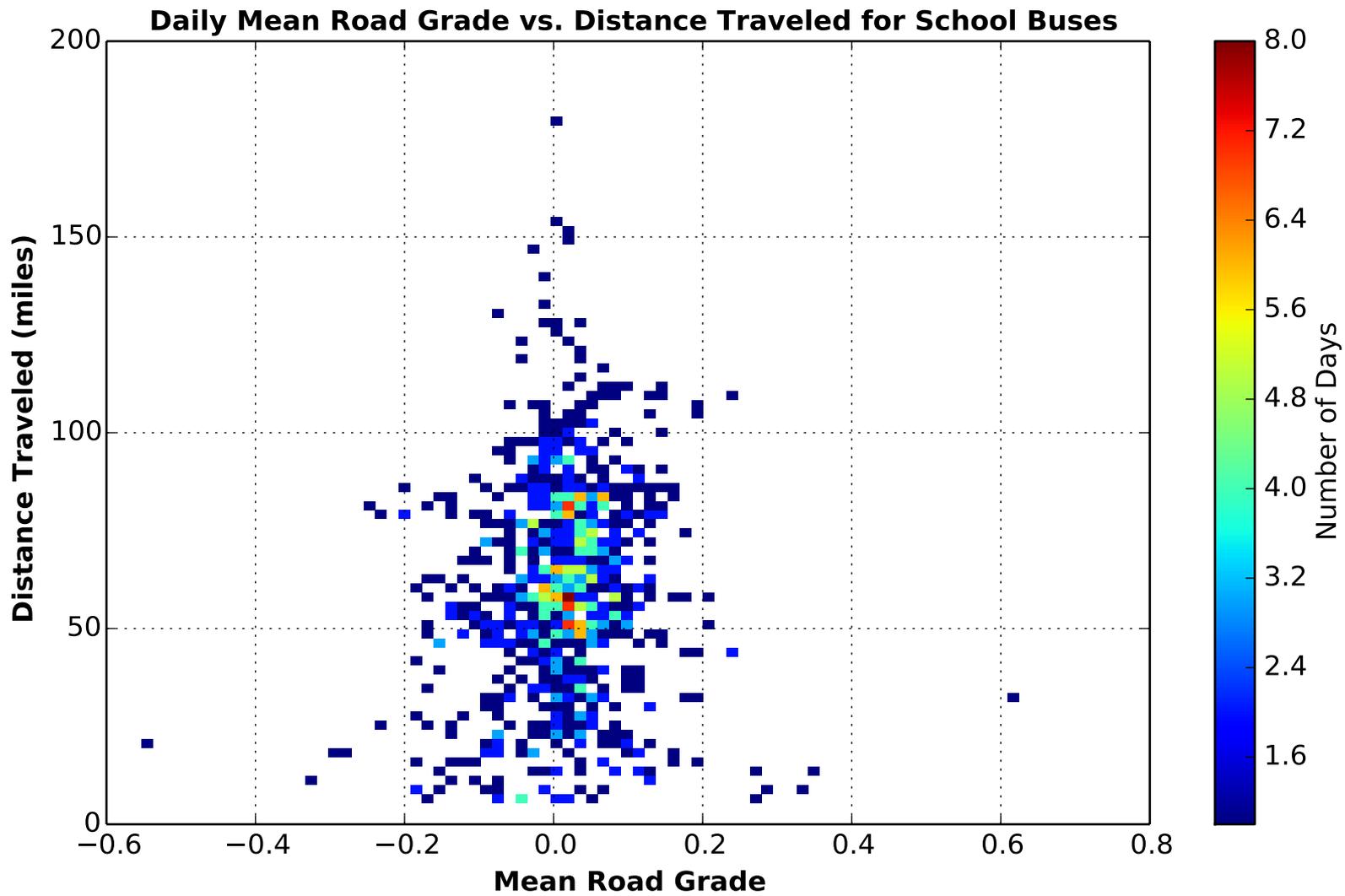
### Daily Mean Road Grade vs. Kinetic Intensity for School Buses



# of Vehicles Reporting: 197

Generated: Thu Aug 07, 2014

# of Days Included: 784

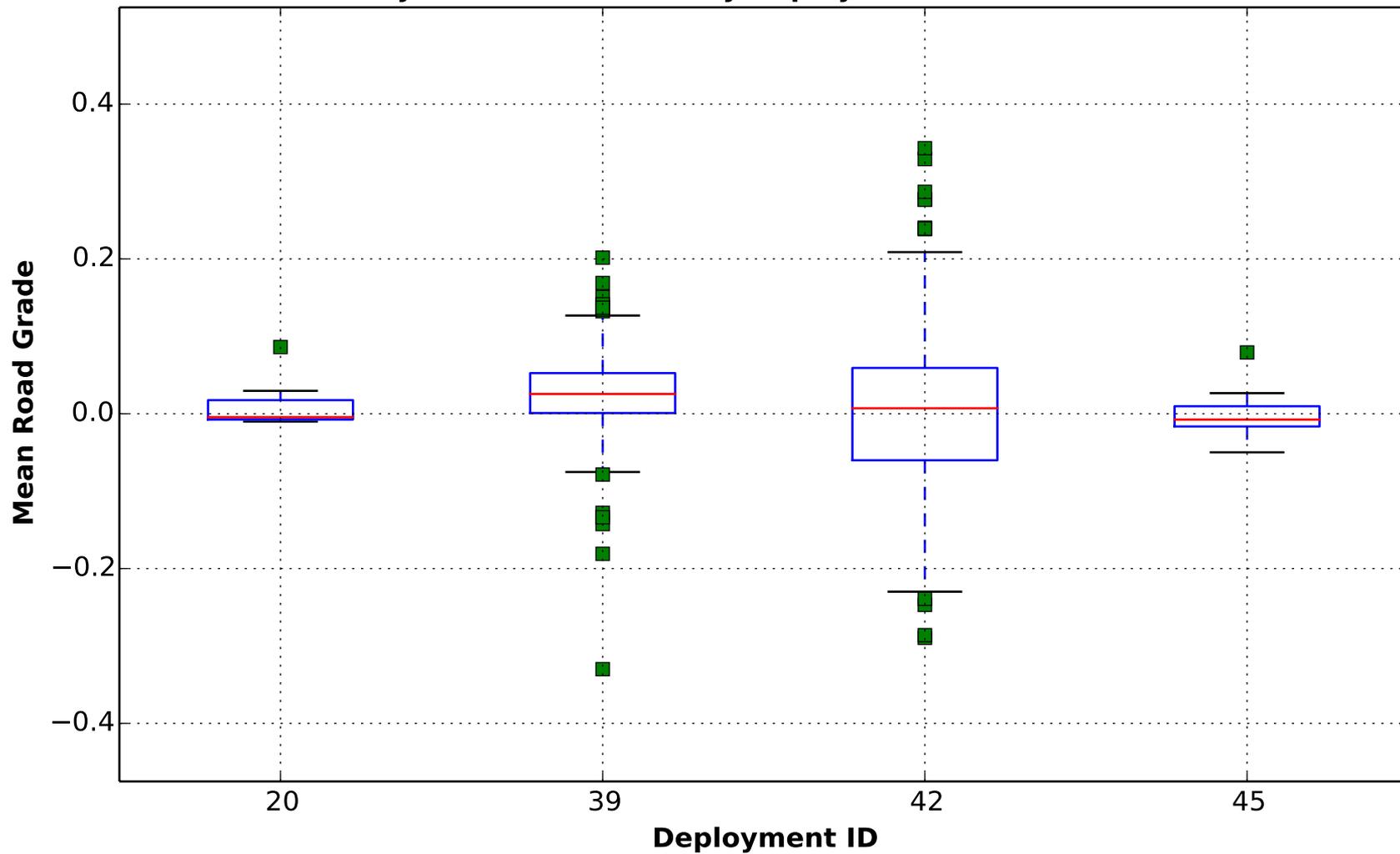


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857

### Daily Mean Road Grade by Deployment for School Buses

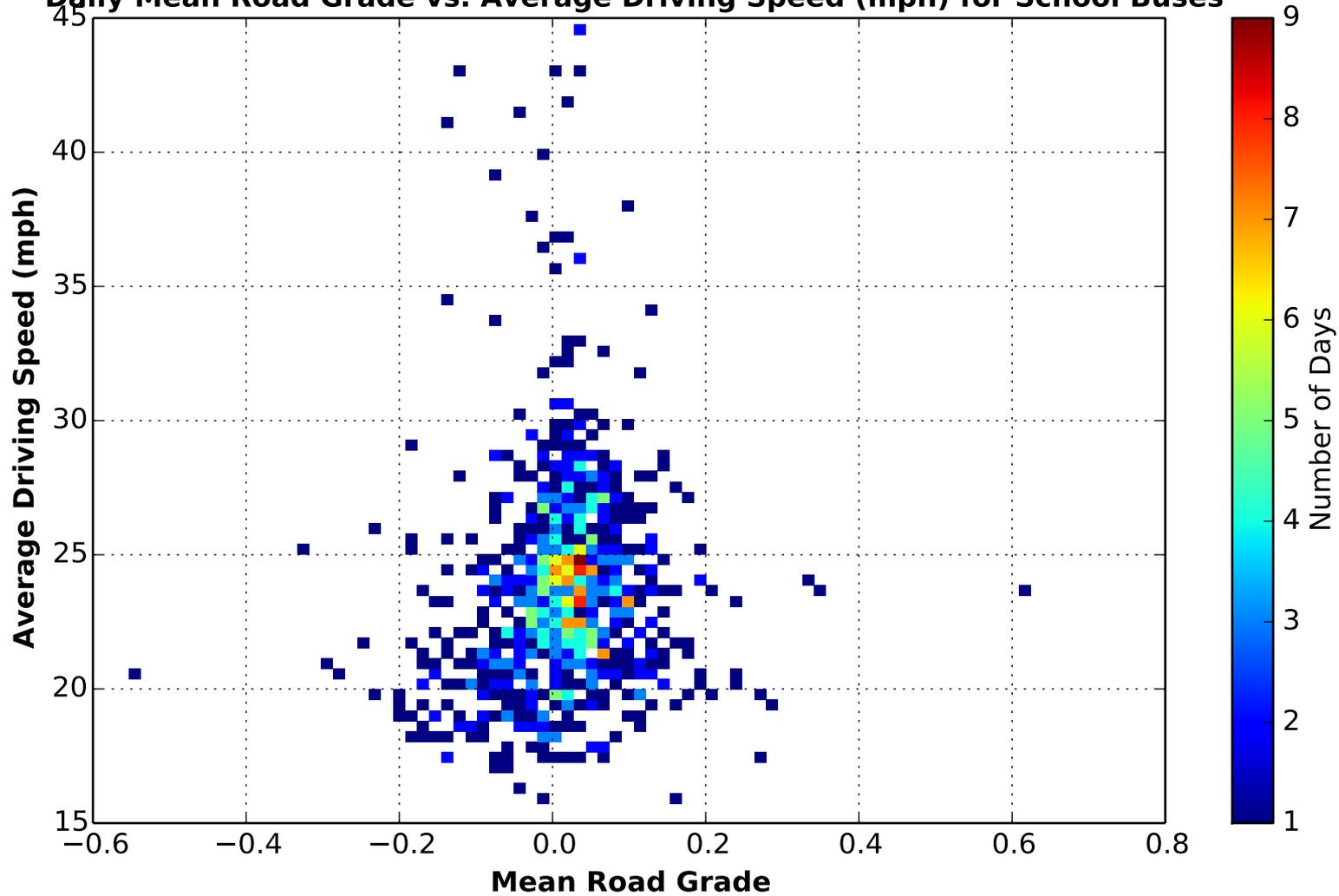


# of Vehicles Reporting: 203

Generated: Thu Aug 07, 2014

# of Days Included: 855

Daily Mean Road Grade vs. Average Driving Speed (mph) for School Buses

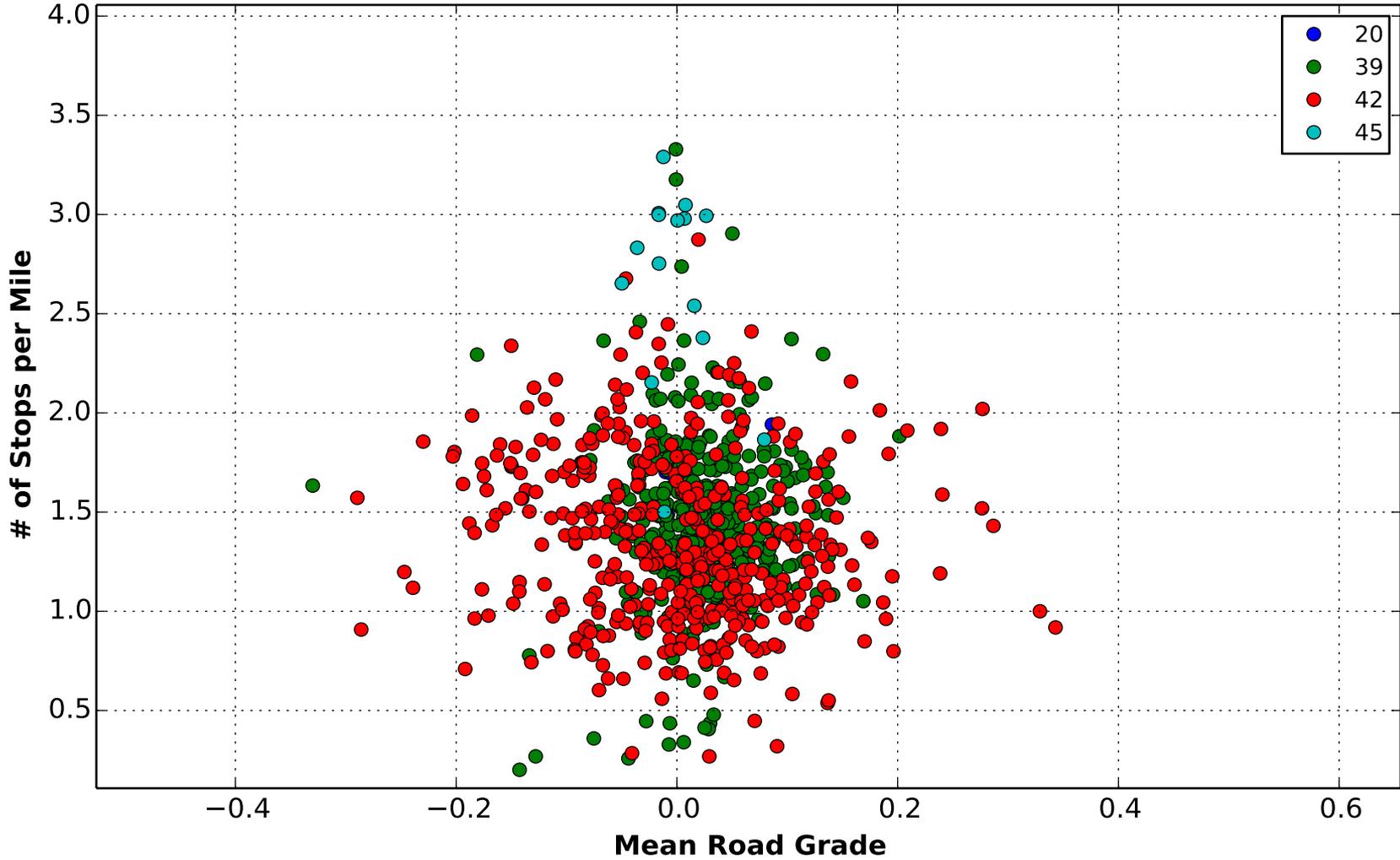


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857

**Daily Mean Road Grade vs. # of Stops per Mile for School Buses**

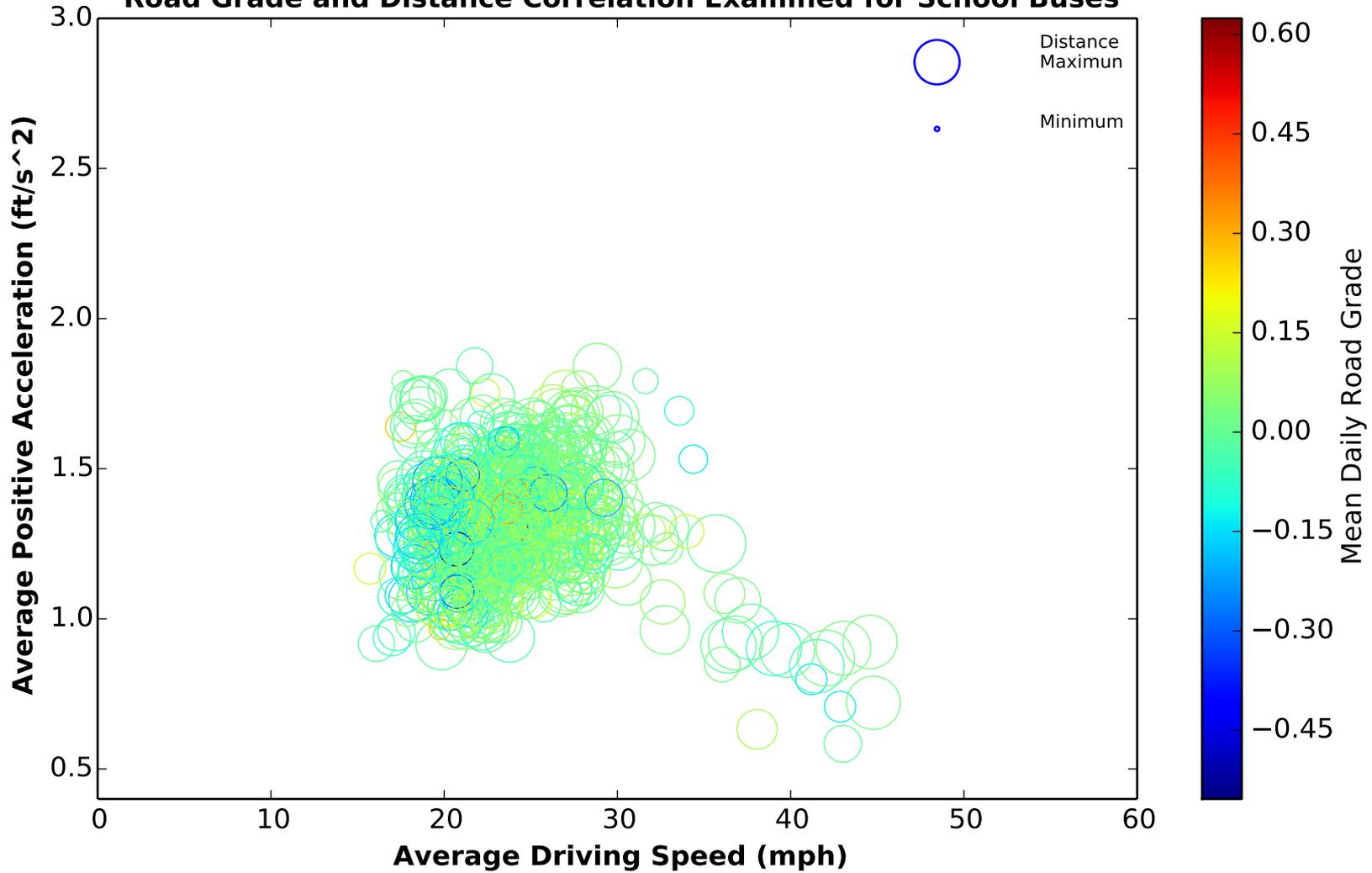


**# of Vehicles Reporting: 203**

**Generated: Thu Aug 07, 2014**

**# of Days Included: 853**

# Road Grade and Distance Correlation Examined for School Buses

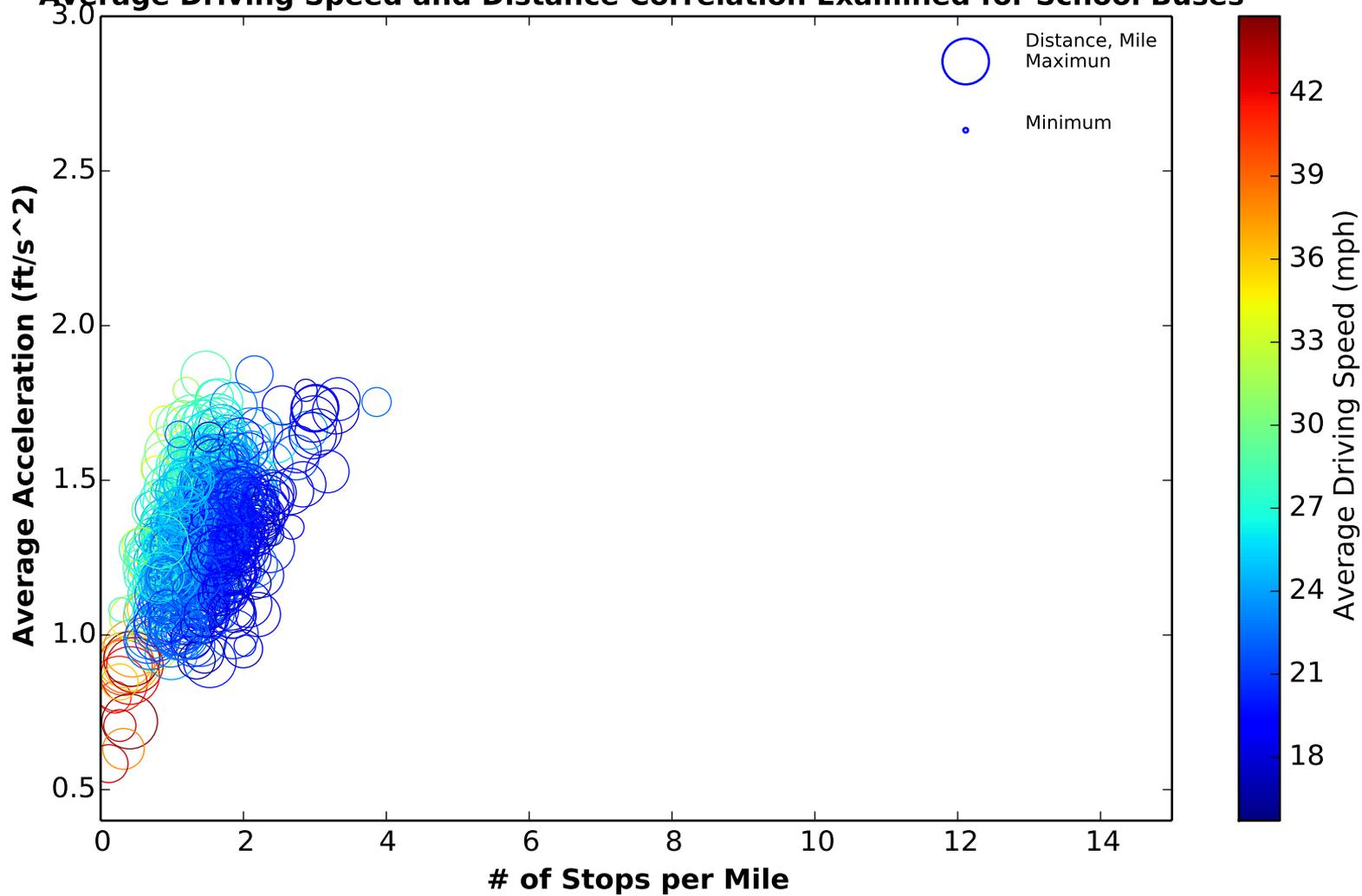


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857

# Average Driving Speed and Distance Correlation Examined for School Buses

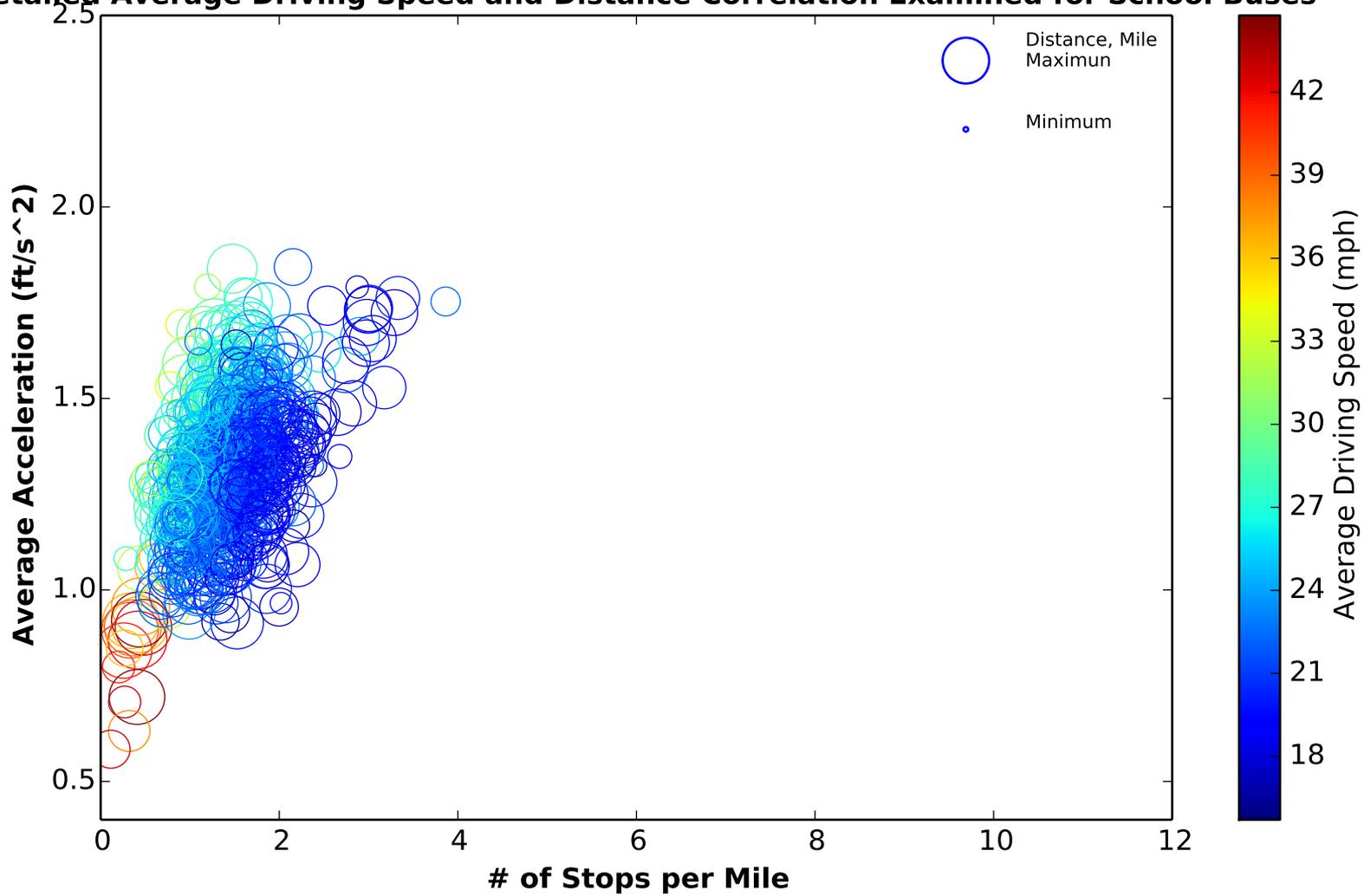


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857

# Detailed Average Driving Speed and Distance Correlation Examined for School Buses

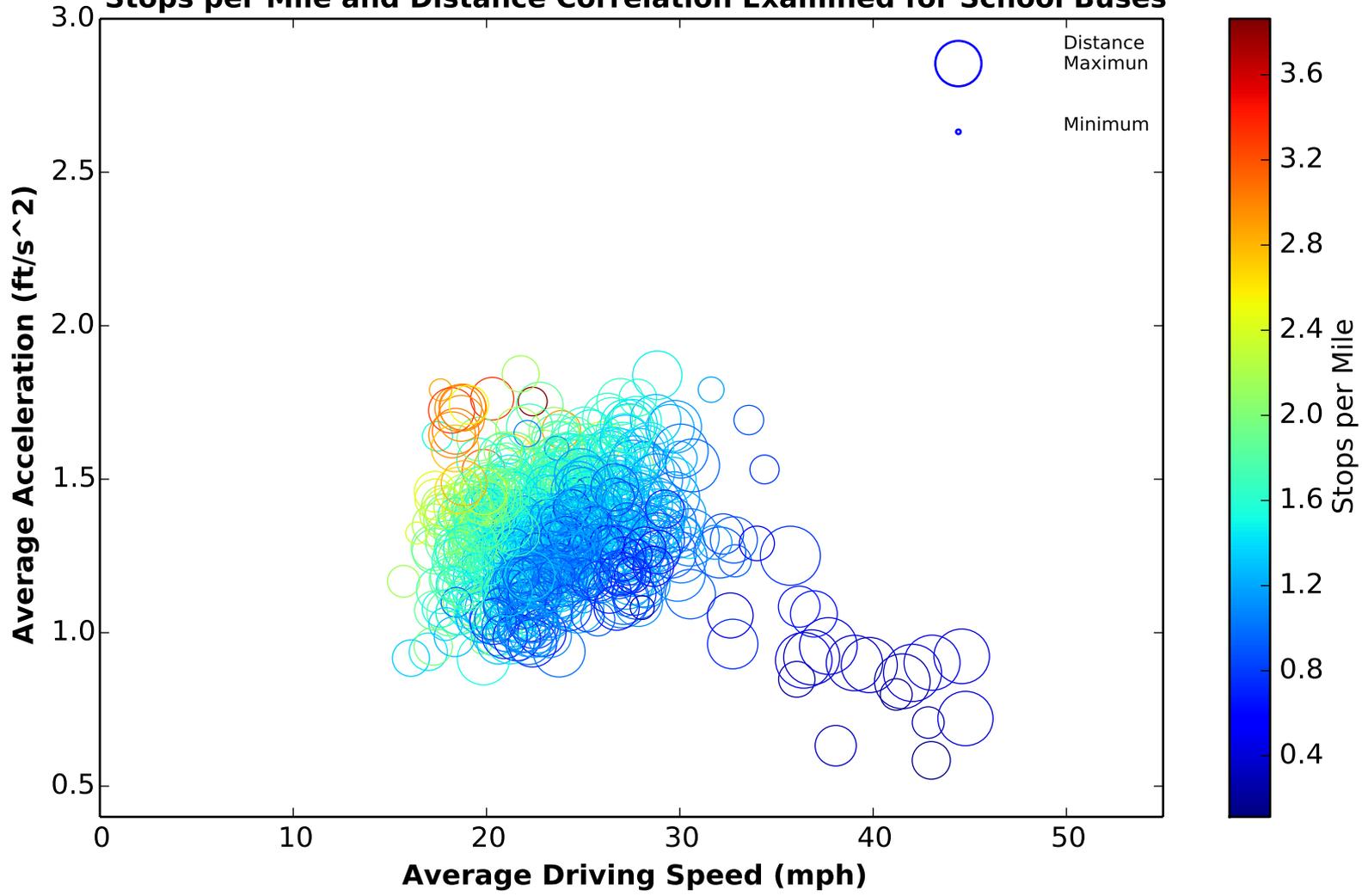


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857

# Stops per Mile and Distance Correlation Examined for School Buses

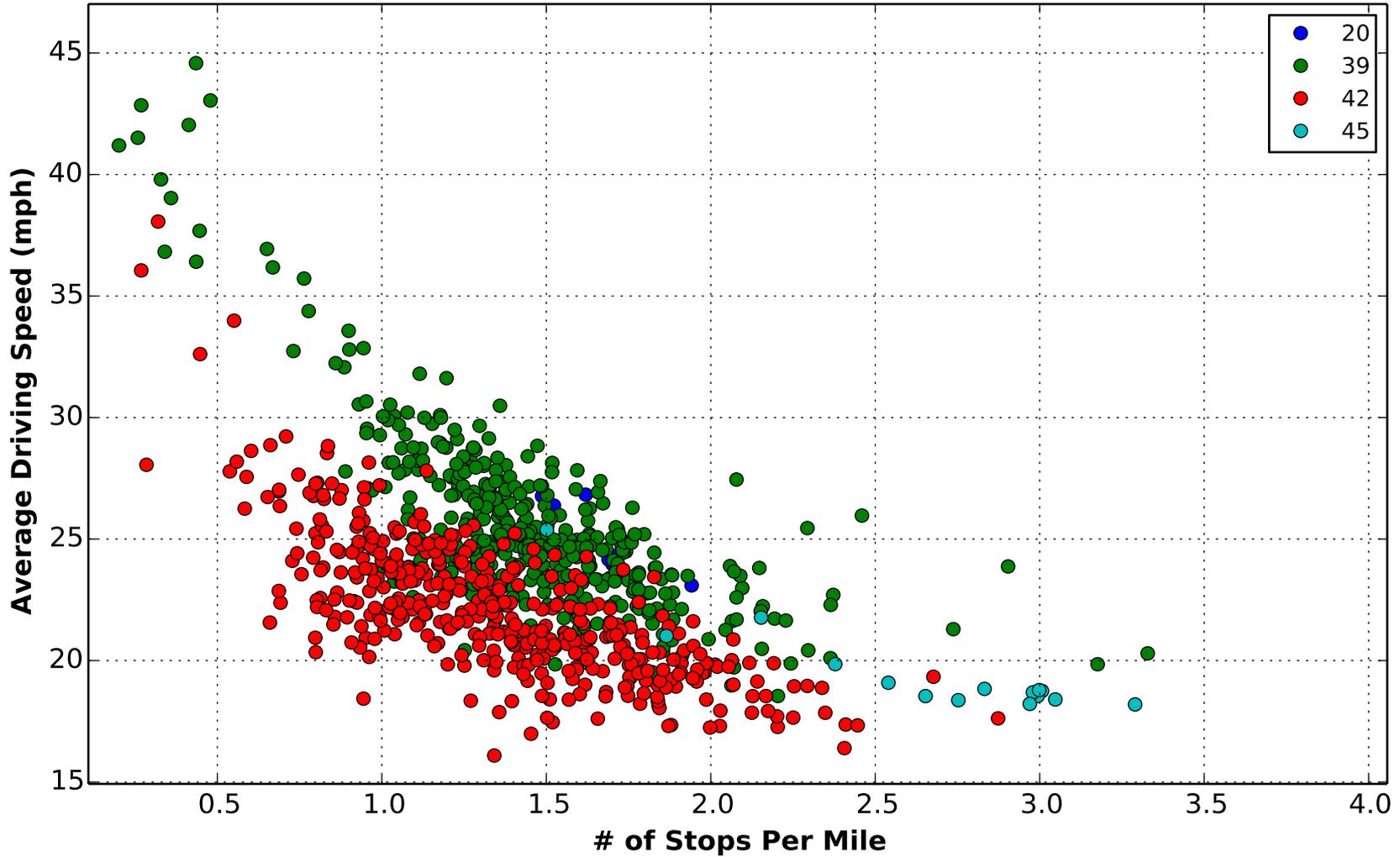


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857

### Daily Stops per Mile vs. Average Driving Speed for School Buses

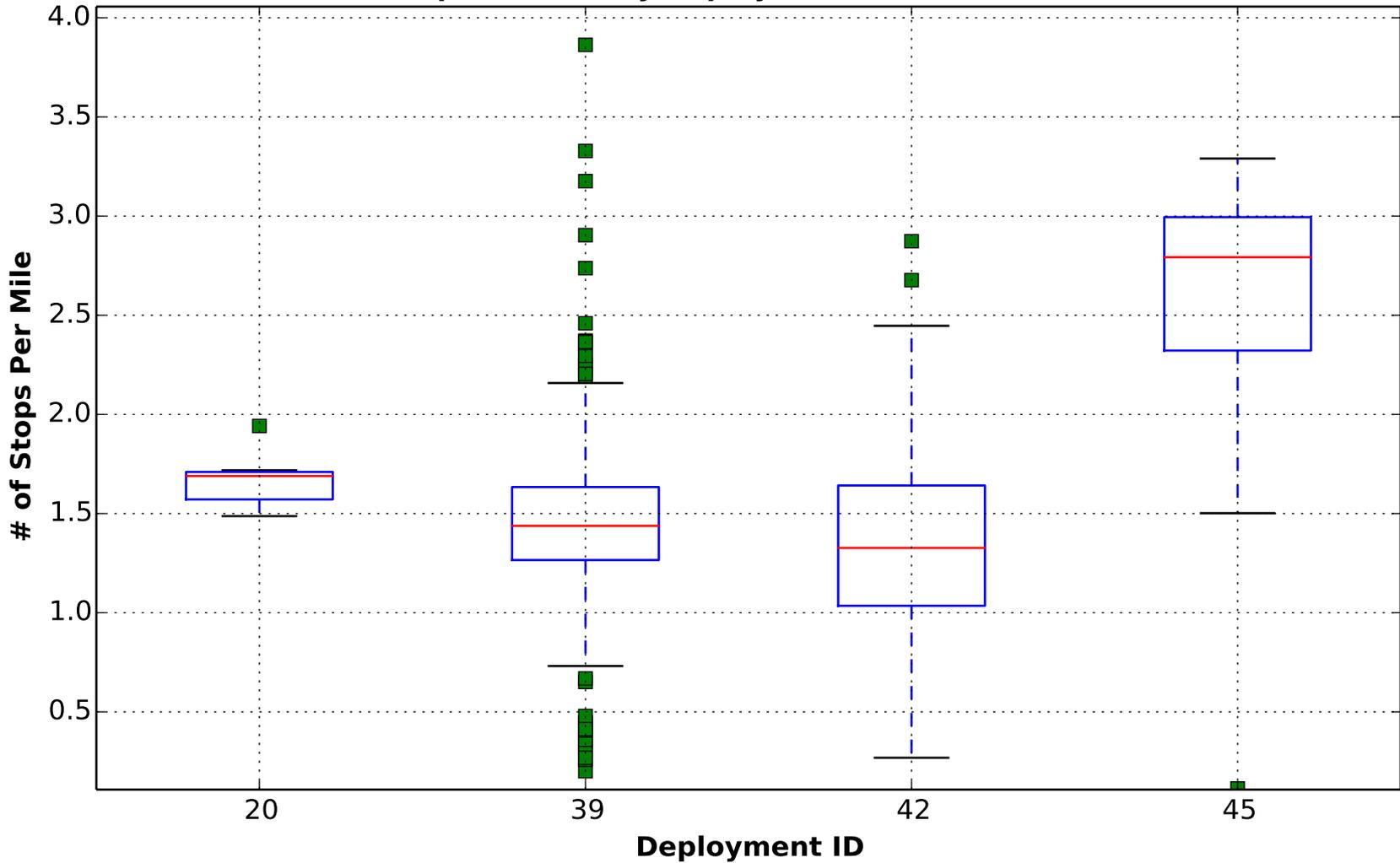


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 853

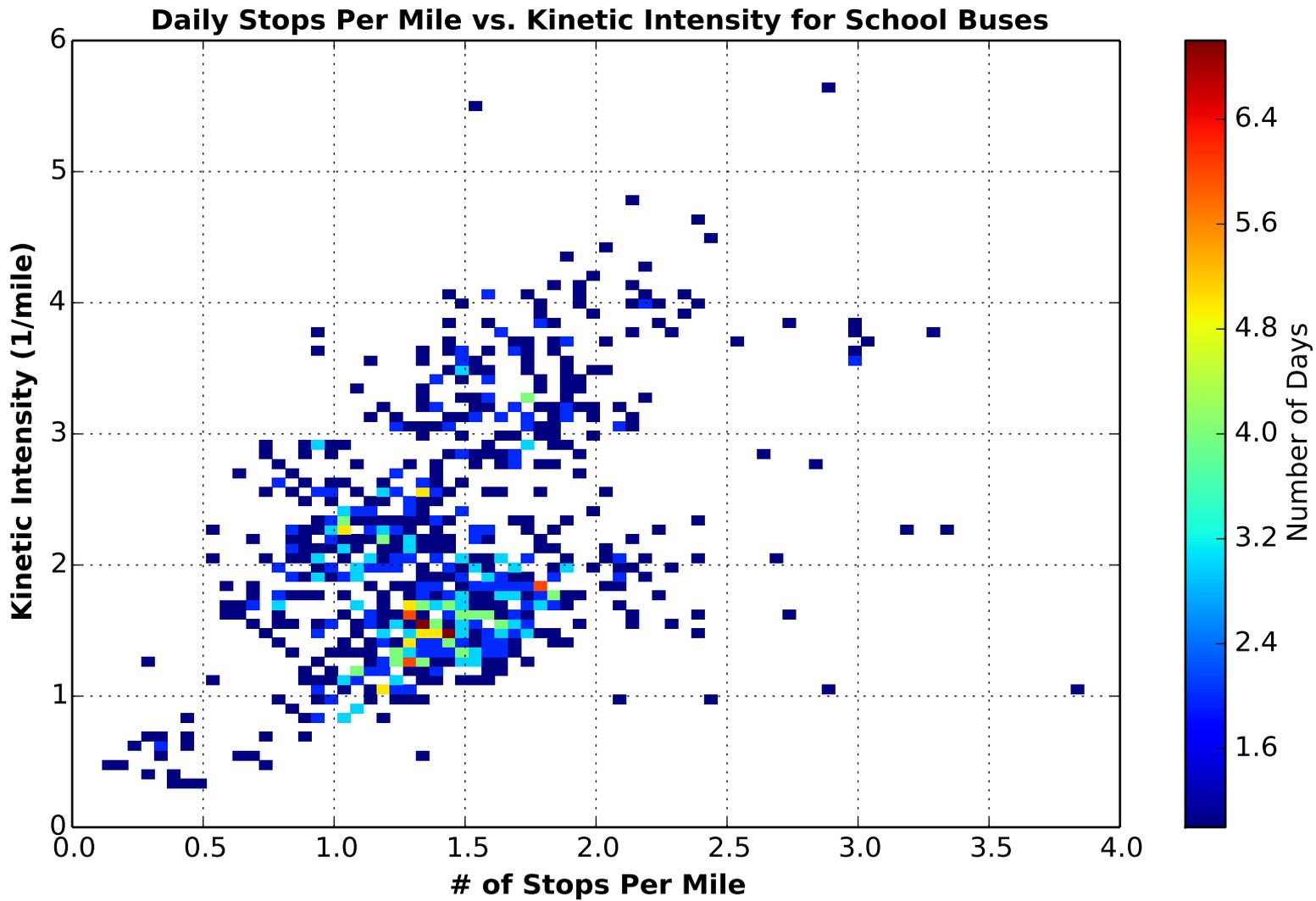
### Stops Per Mile by Deployment for School Buses



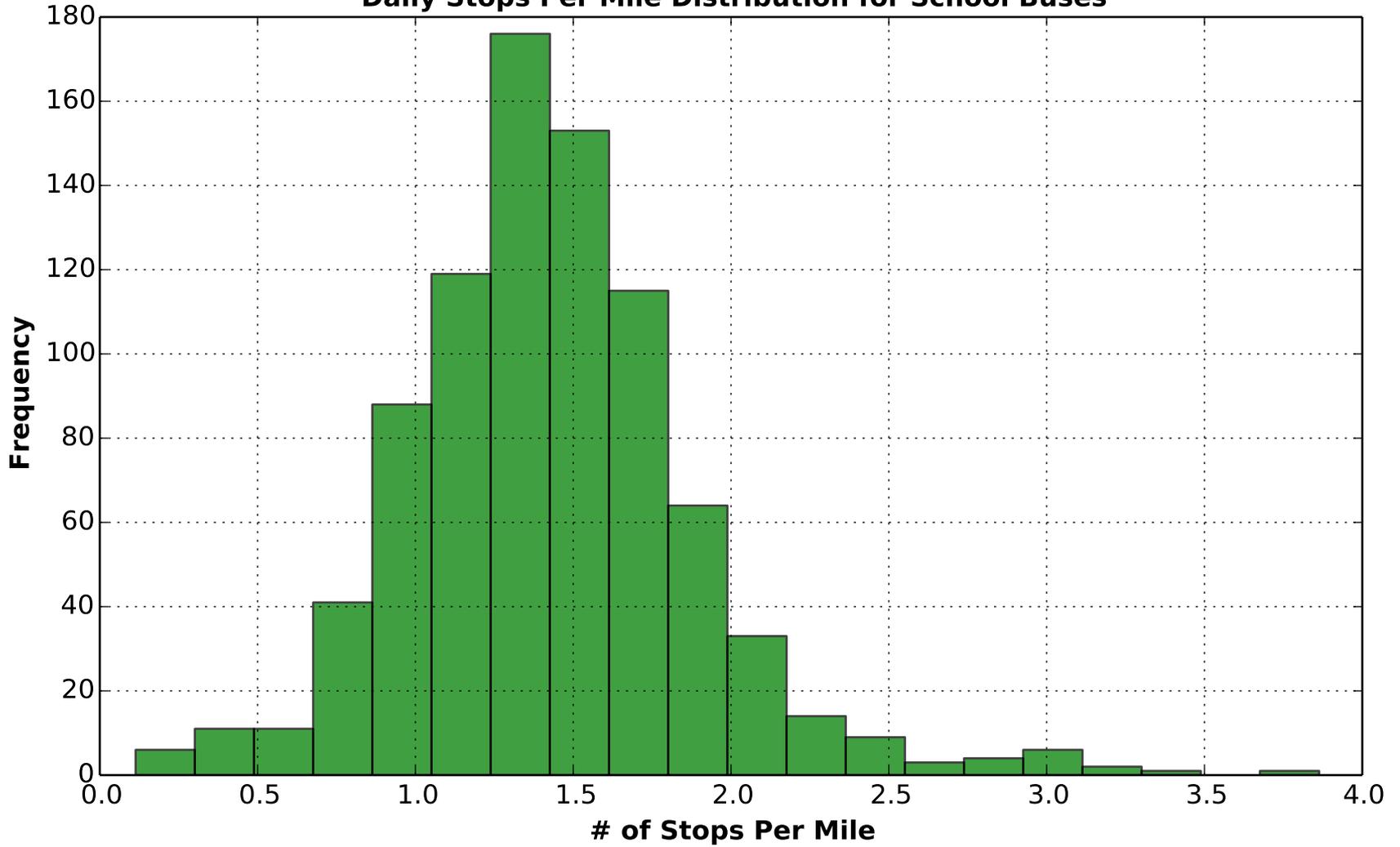
# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857



### Daily Stops Per Mile Distribution for School Buses

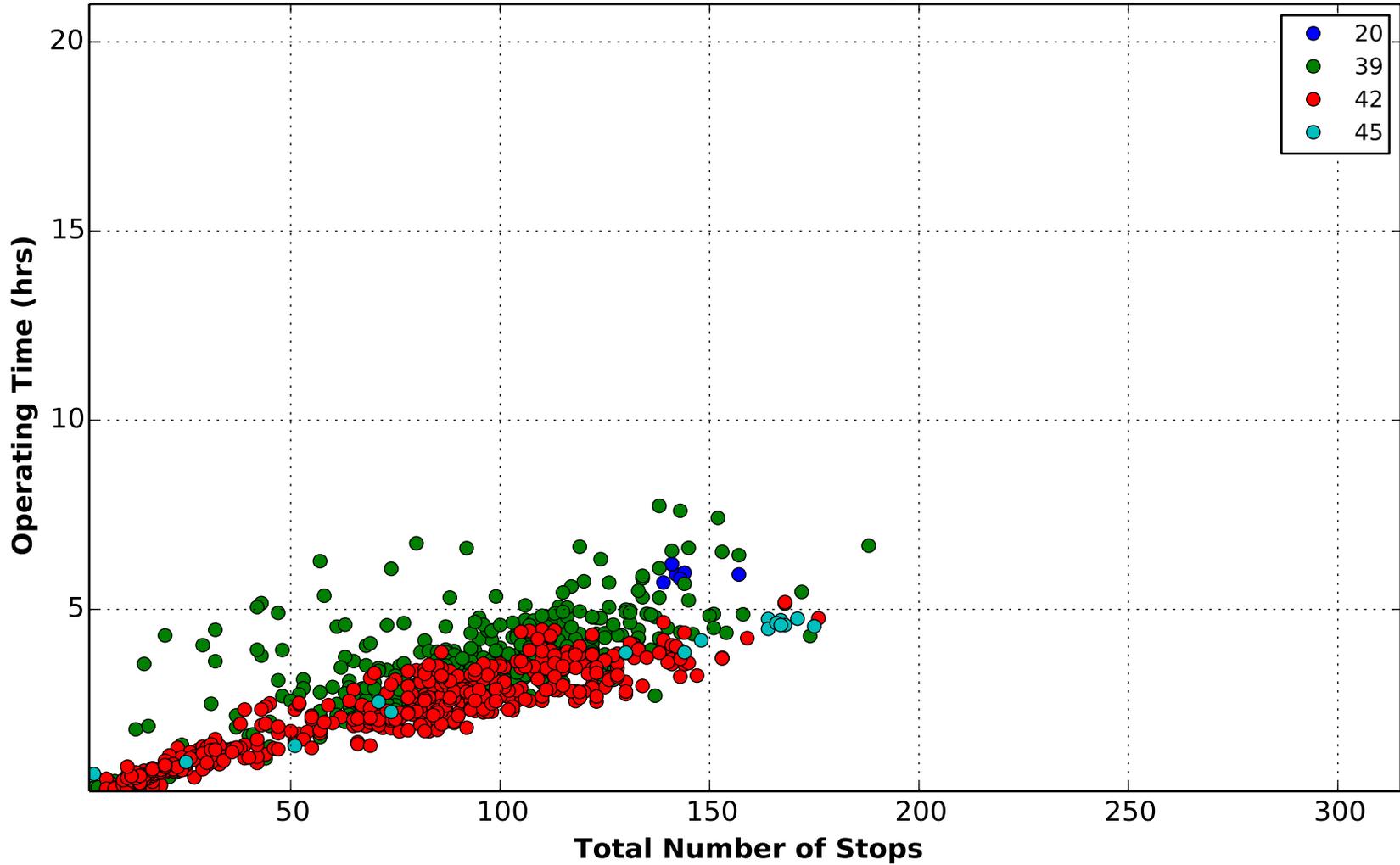


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857

### Daily Total Number of Stops vs. Operating Time for School Buses

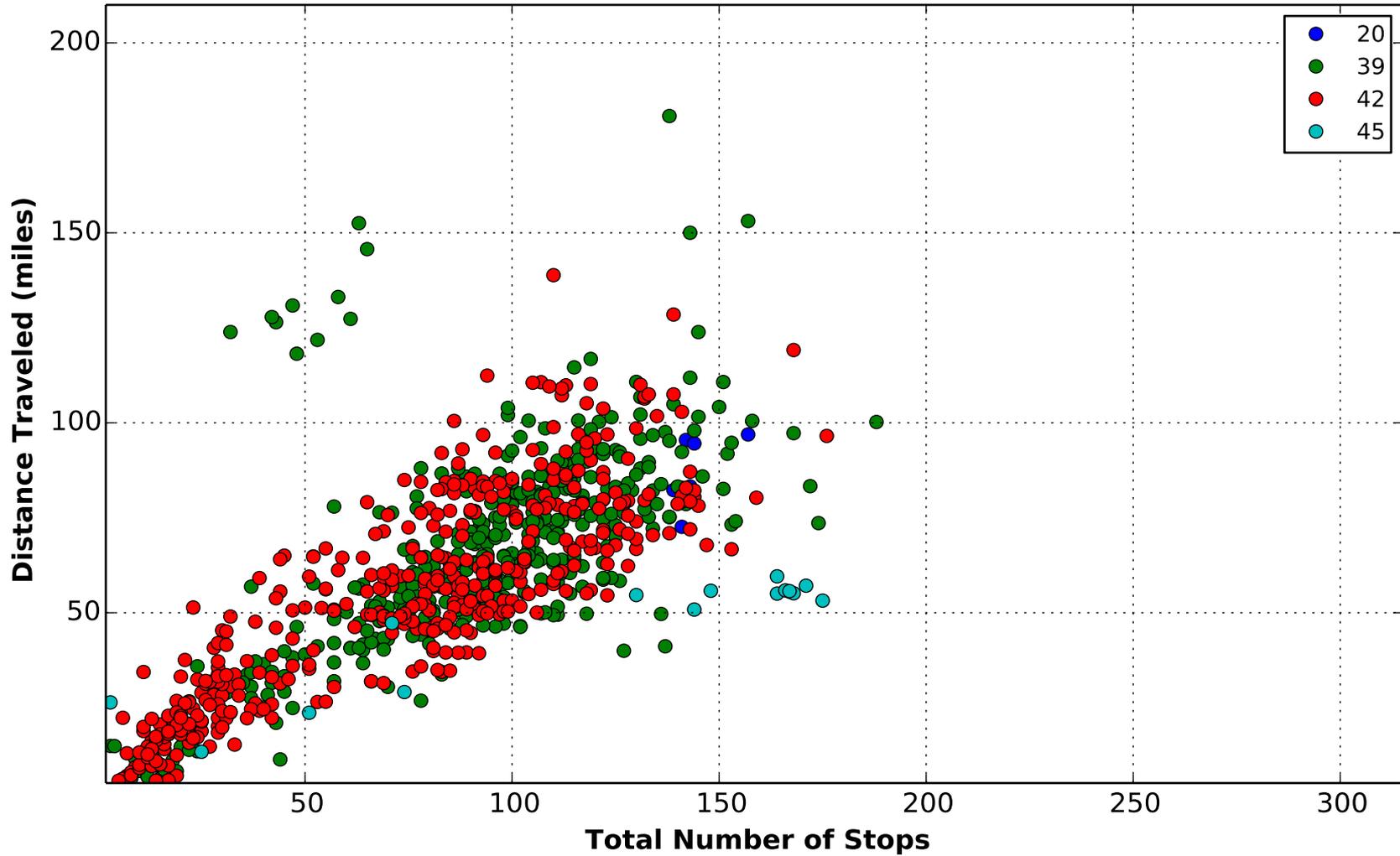


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 855

### Daily Total Number of Stops vs. Distance Traveled for School Buses

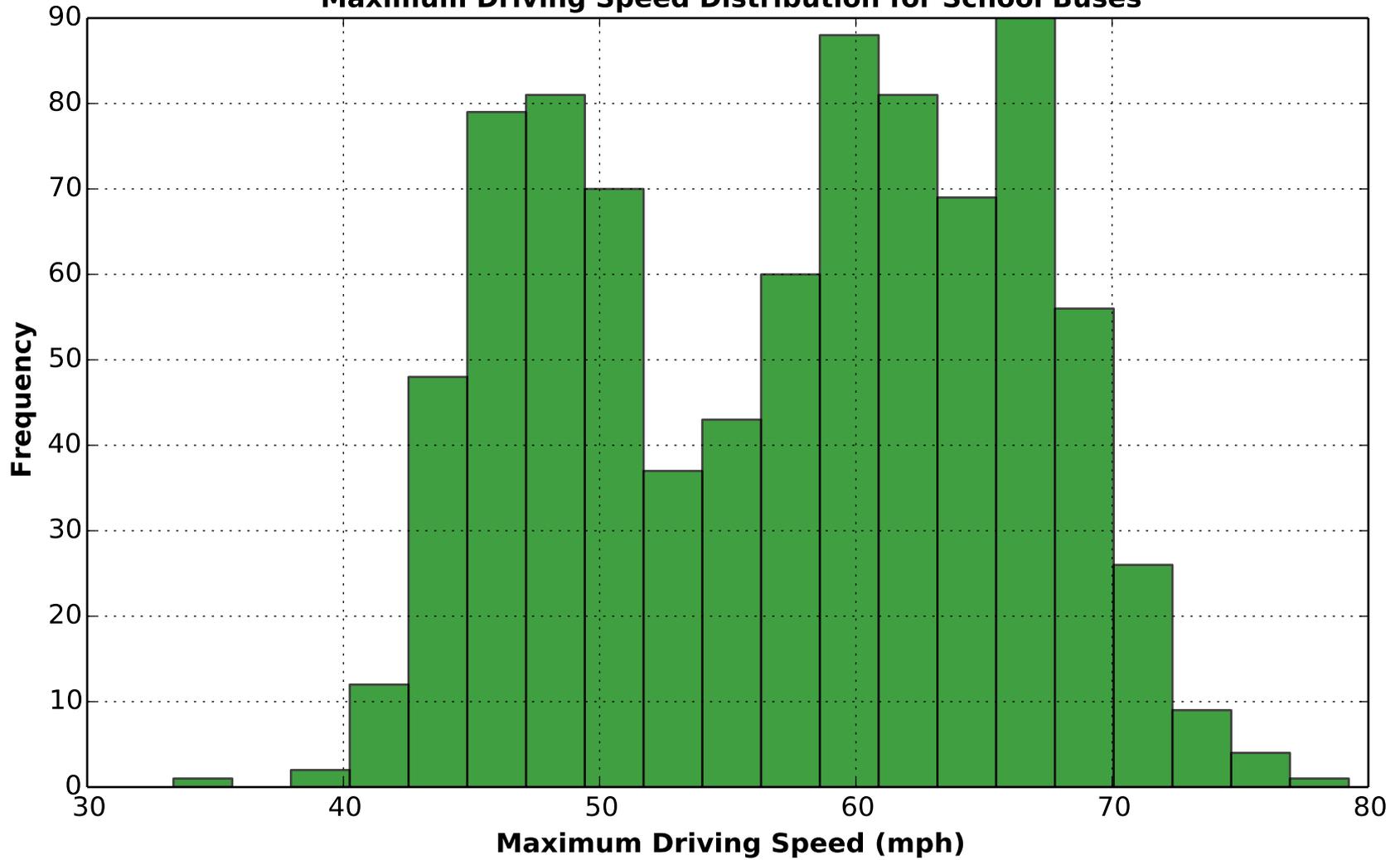


# of Vehicles Reporting: 203

Generated: Thu Aug 07, 2014

# of Days Included: 855

### Maximum Driving Speed Distribution for School Buses

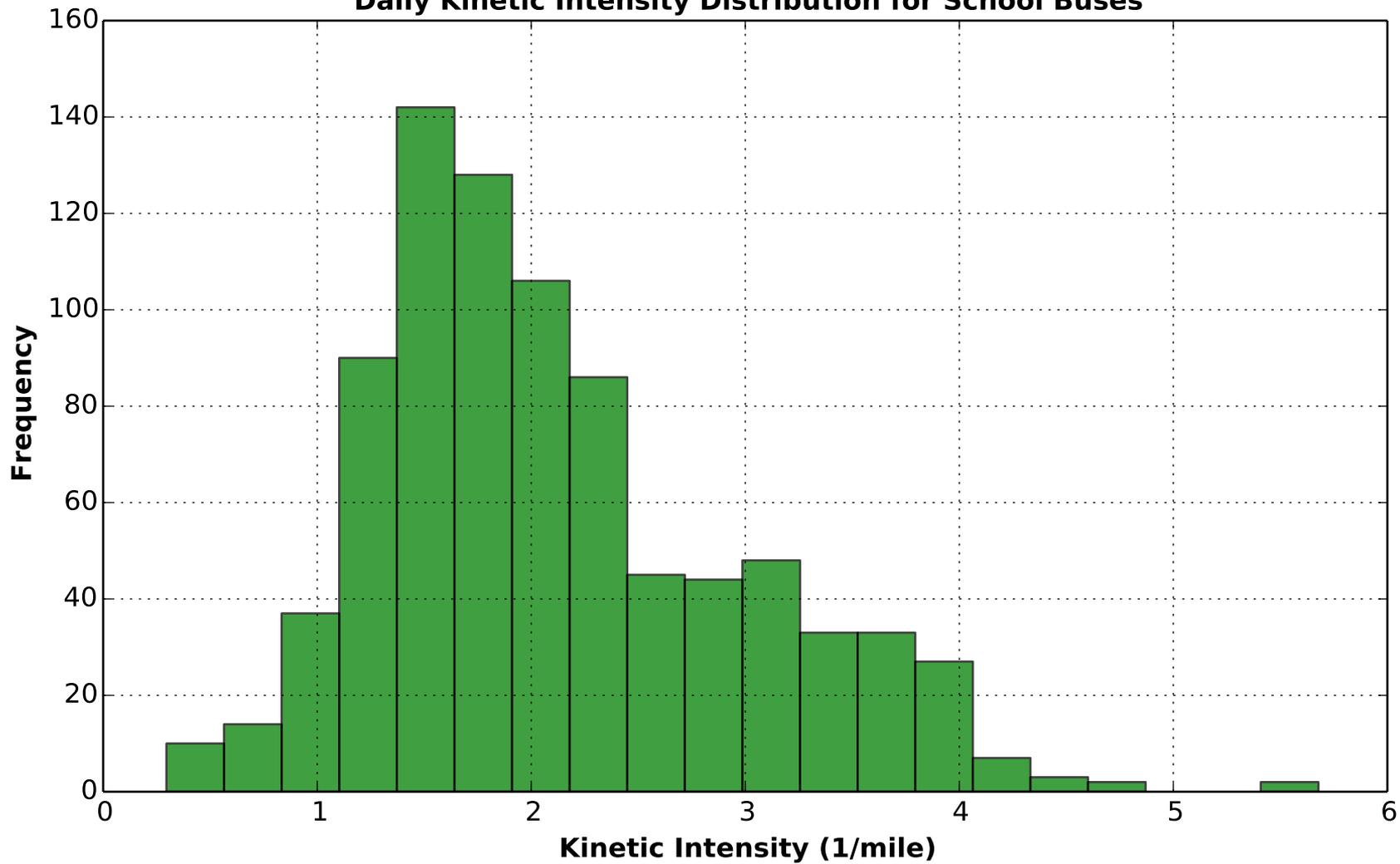


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857

### Daily Kinetic Intensity Distribution for School Buses

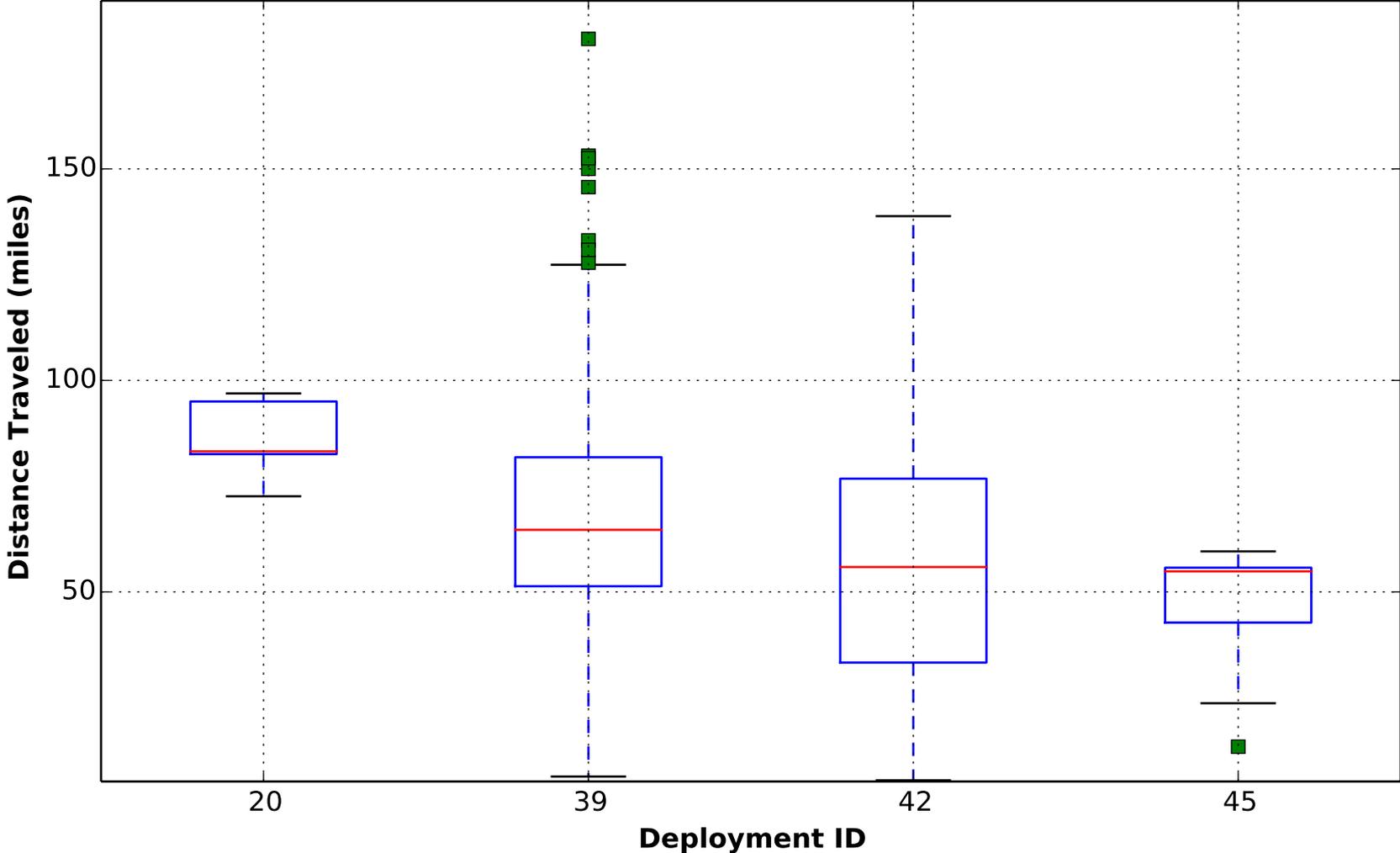


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857

# Daily Distance Traveled by Deployment for School Buses

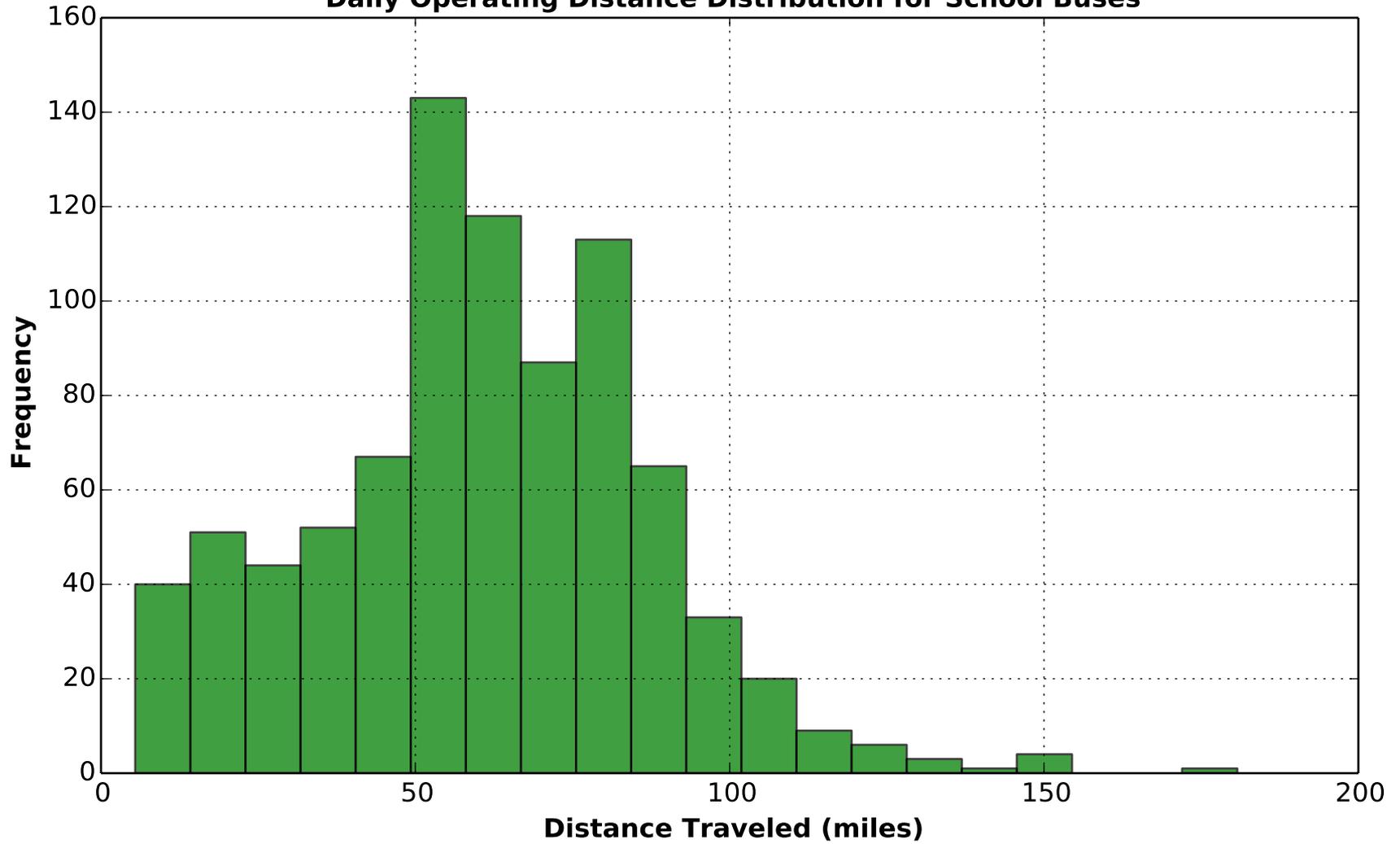


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857

### Daily Operating Distance Distribution for School Buses

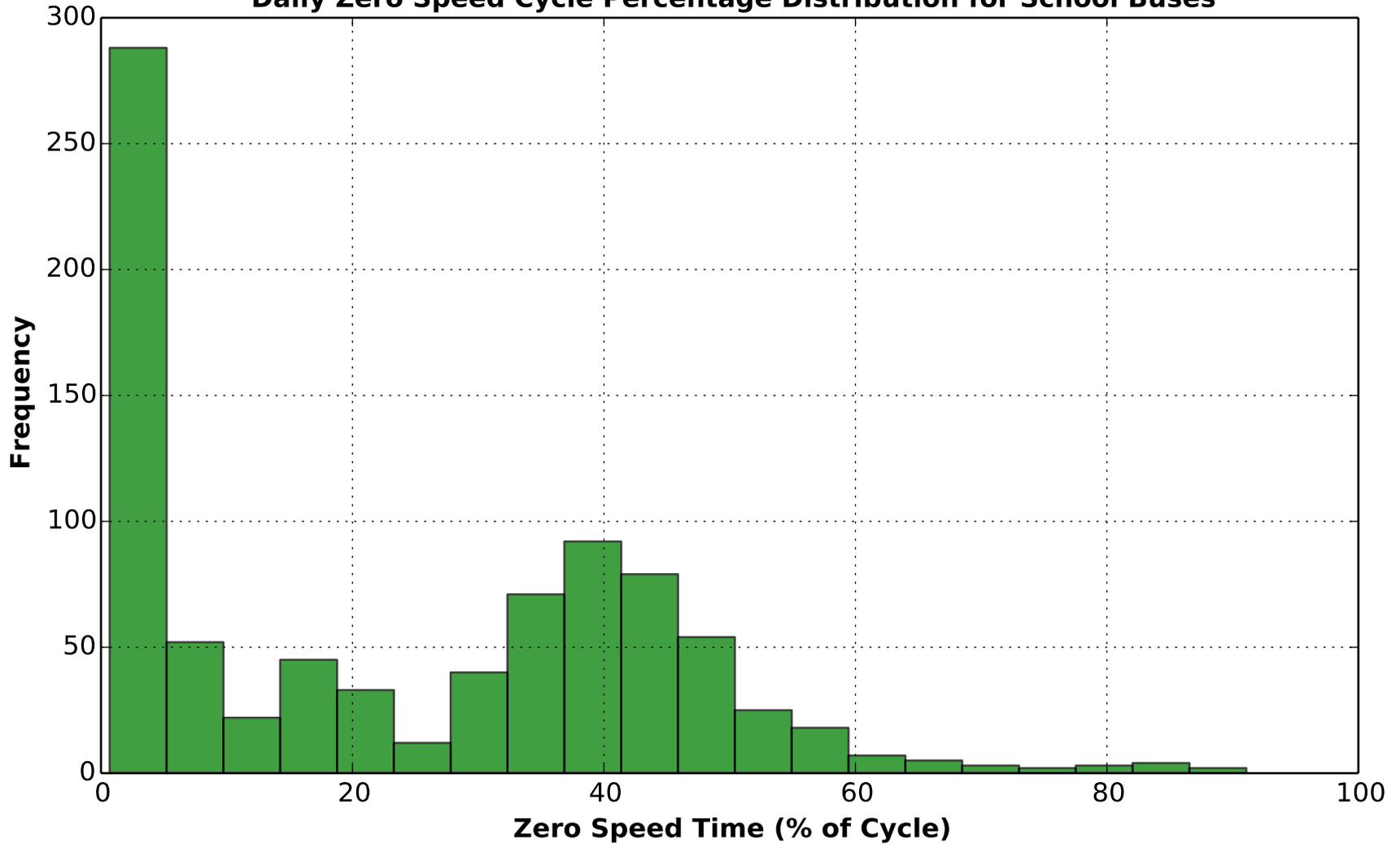


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857

# Daily Zero Speed Cycle Percentage Distribution for School Buses

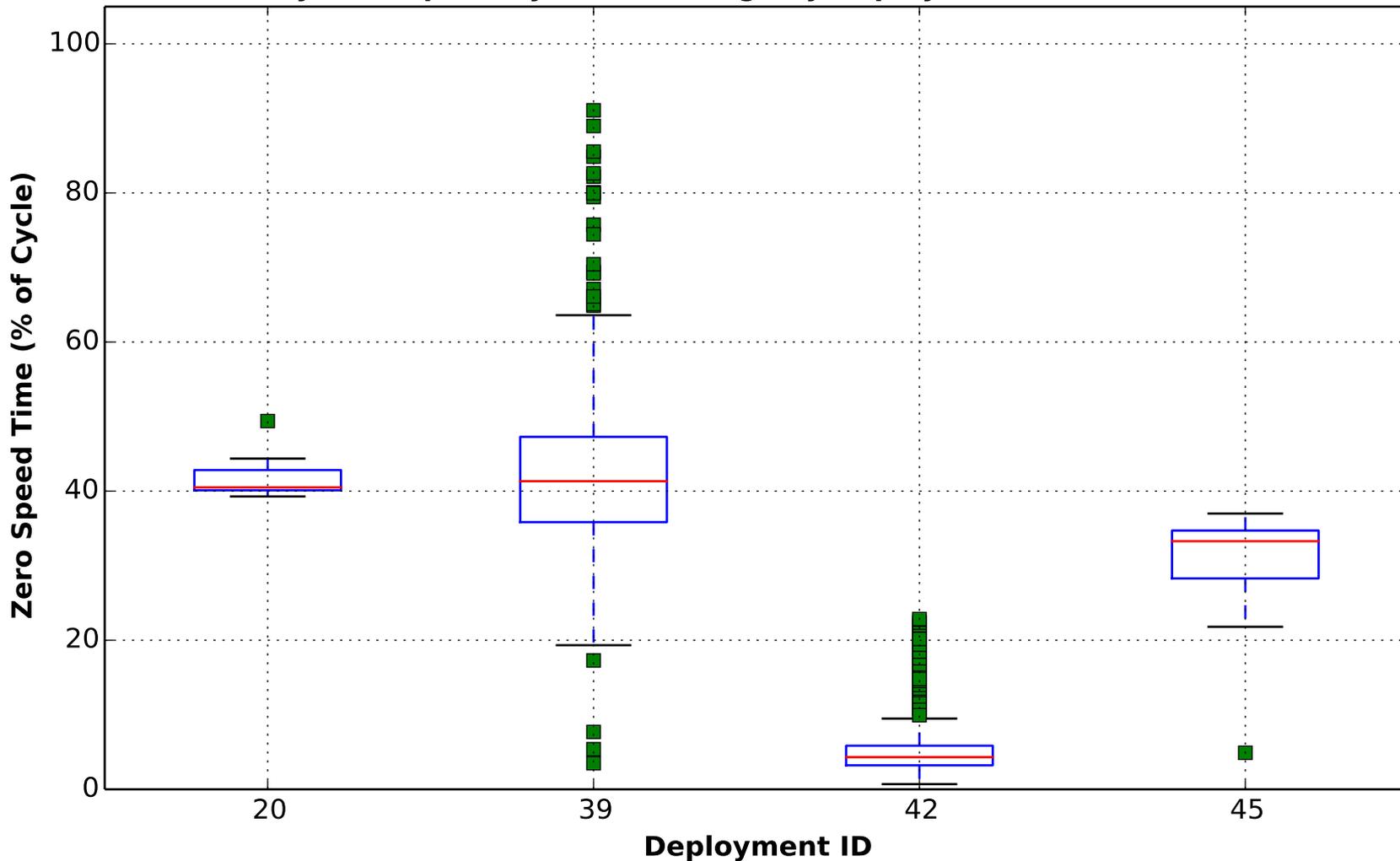


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857

# Daily Zero Speed Cycle Percentage by Deployment for School Buses

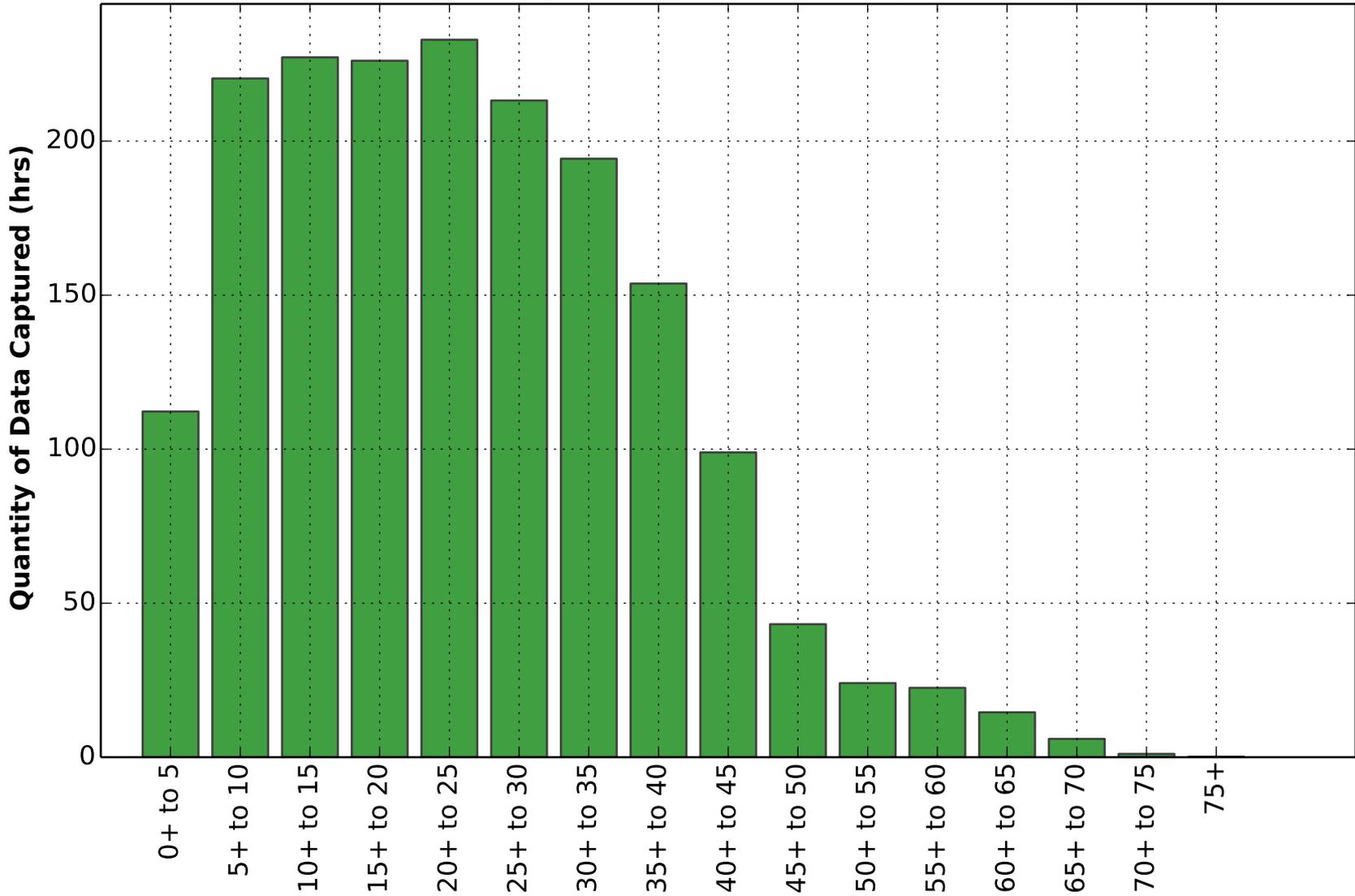


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857

### Captured Operating Time by Speed Bin (mph) for School Buses

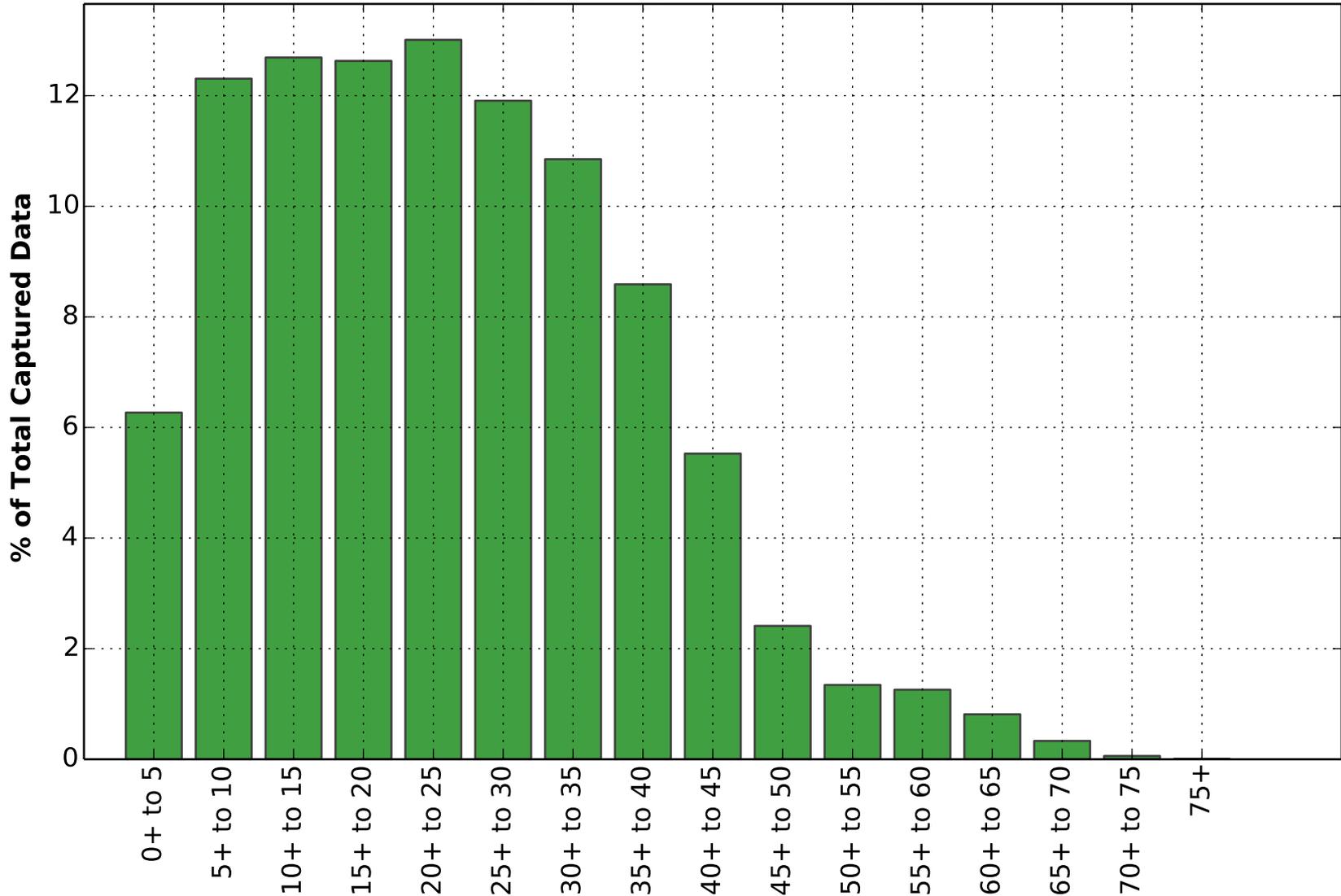


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857

### Captured Operating Time by Speed Bin (mph) for School Buses

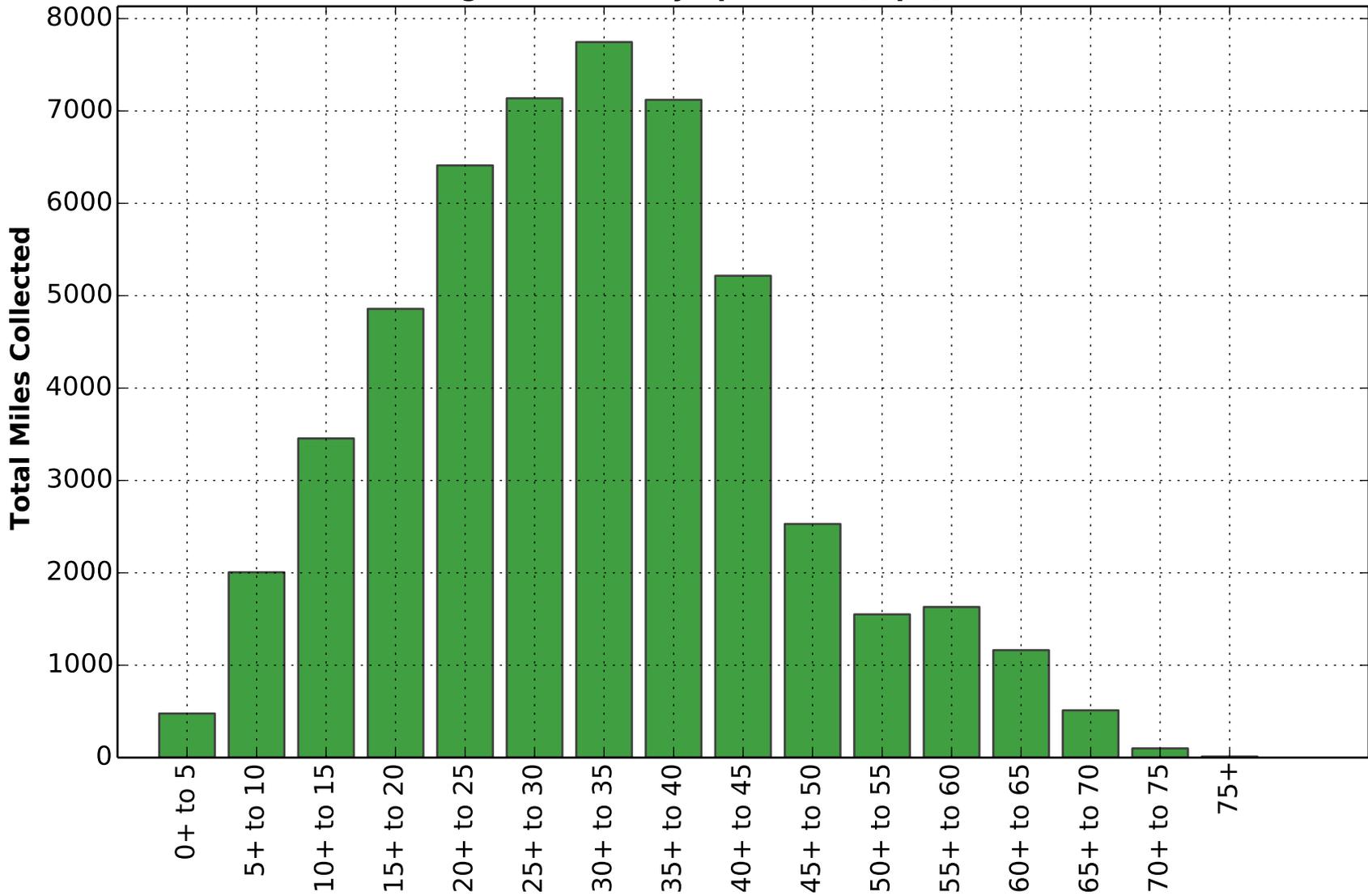


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857

### Total Mileage Collected by Speed Bin (mph) for School Buses

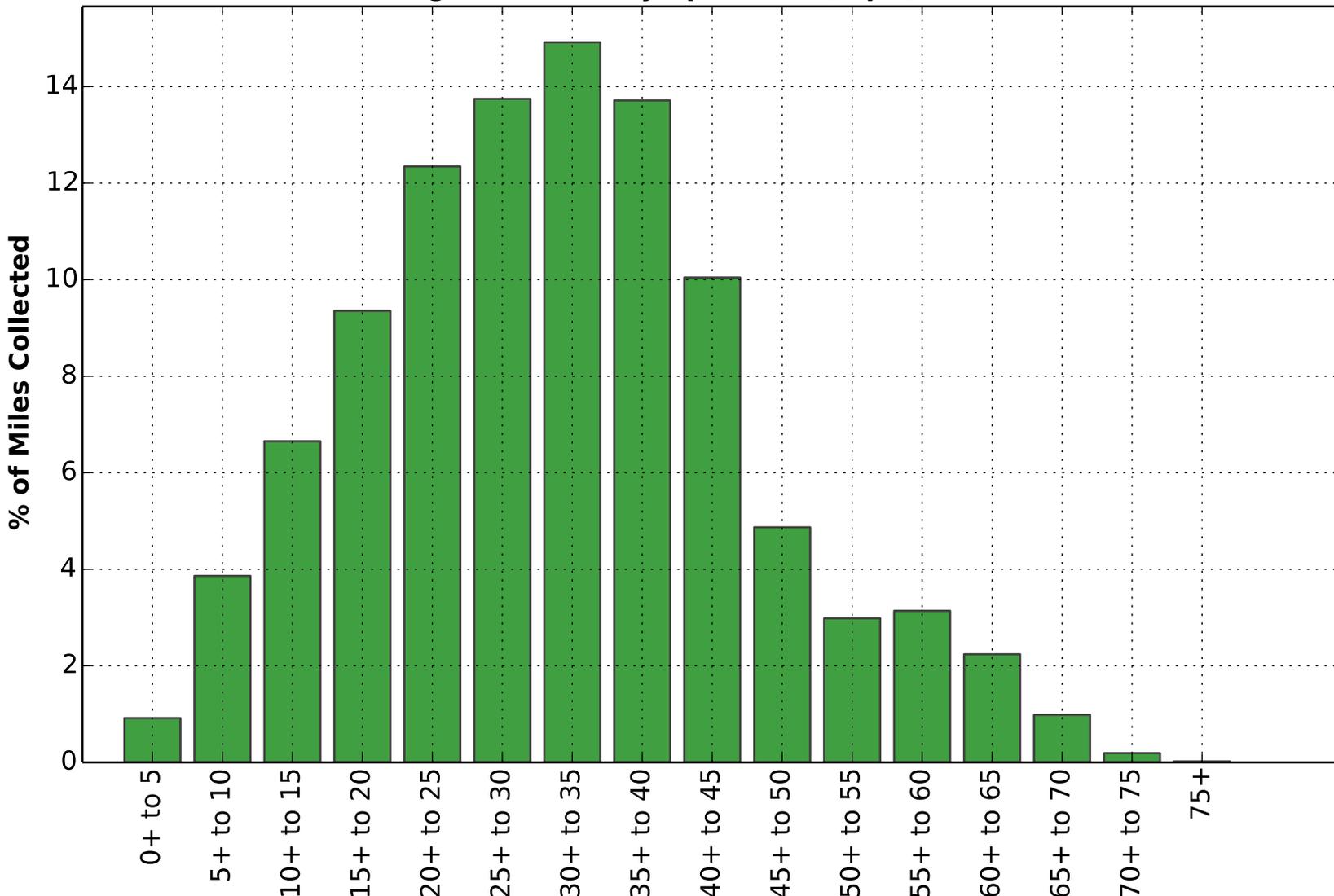


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857

### Total Mileage Collected by Speed Bin (mph) for School Buses

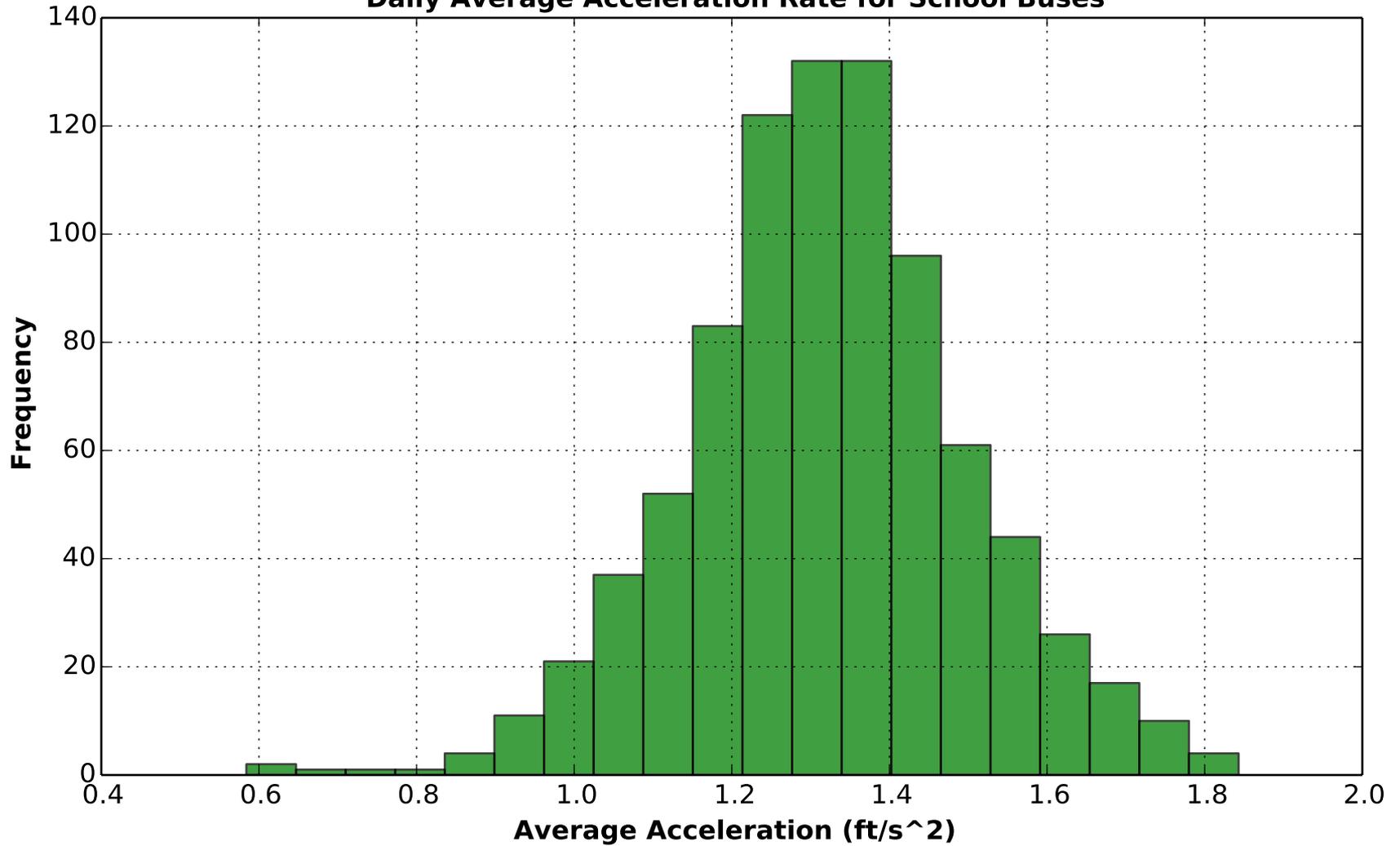


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857

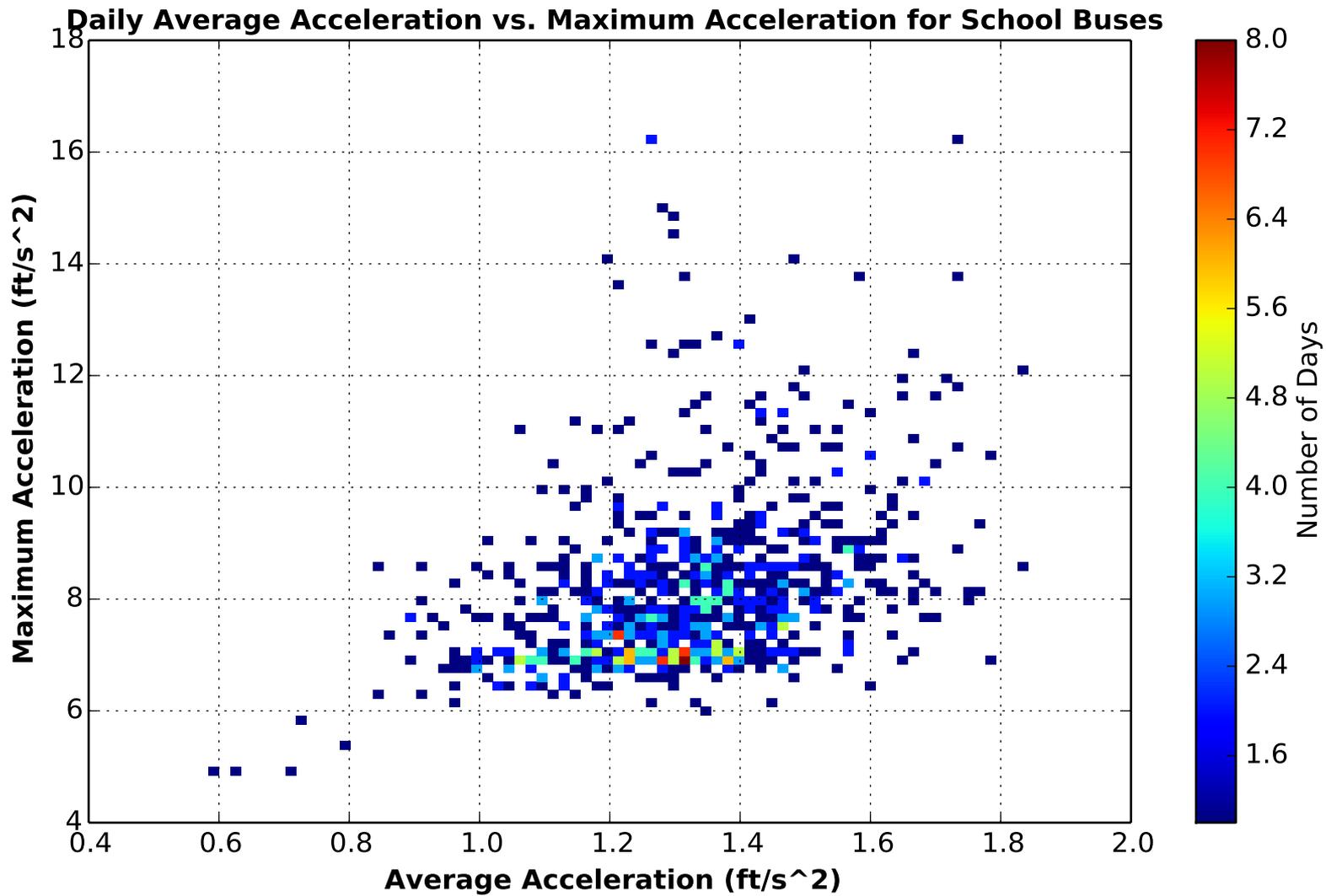
### Daily Average Acceleration Rate for School Buses



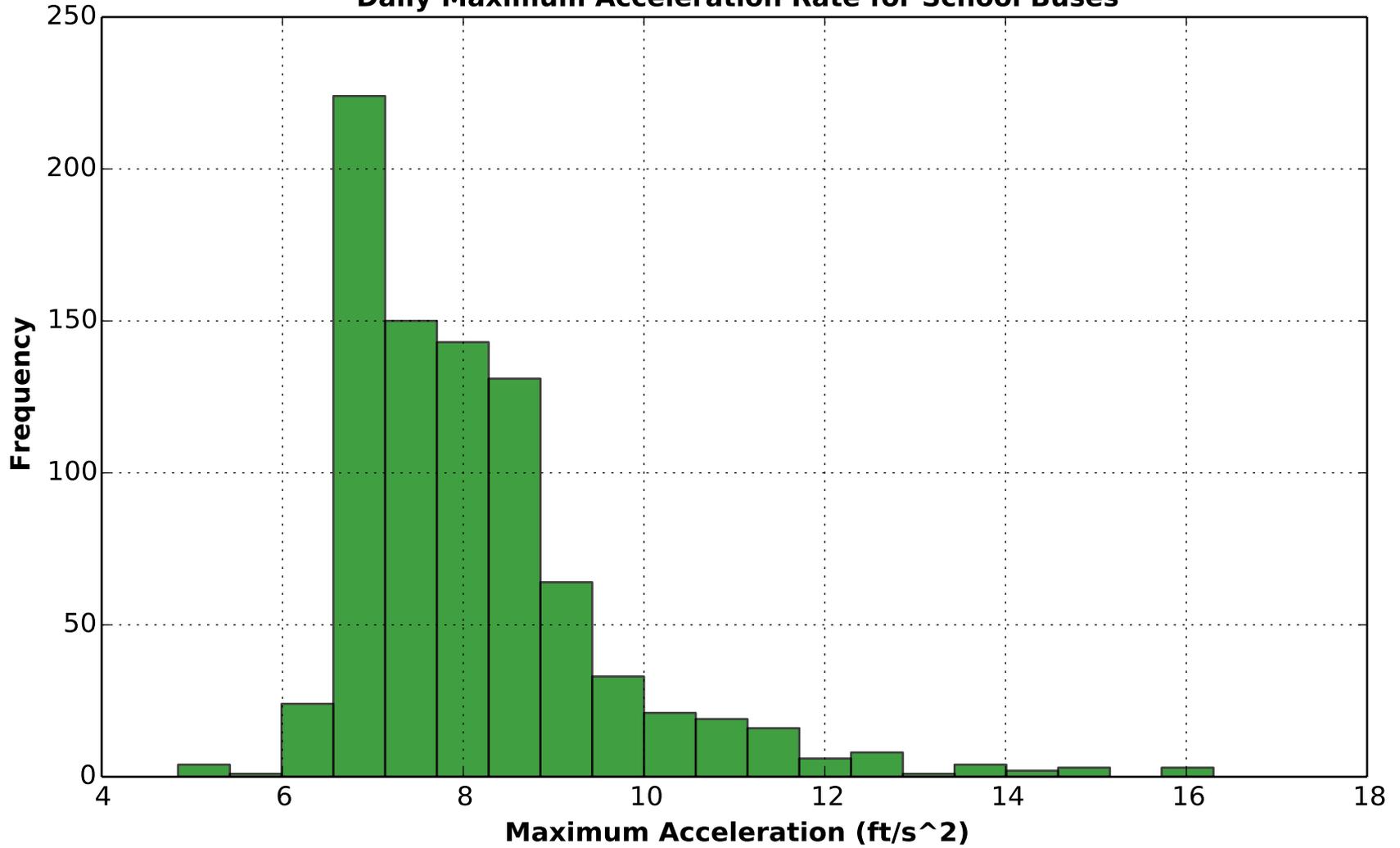
# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857



### Daily Maximum Acceleration Rate for School Buses

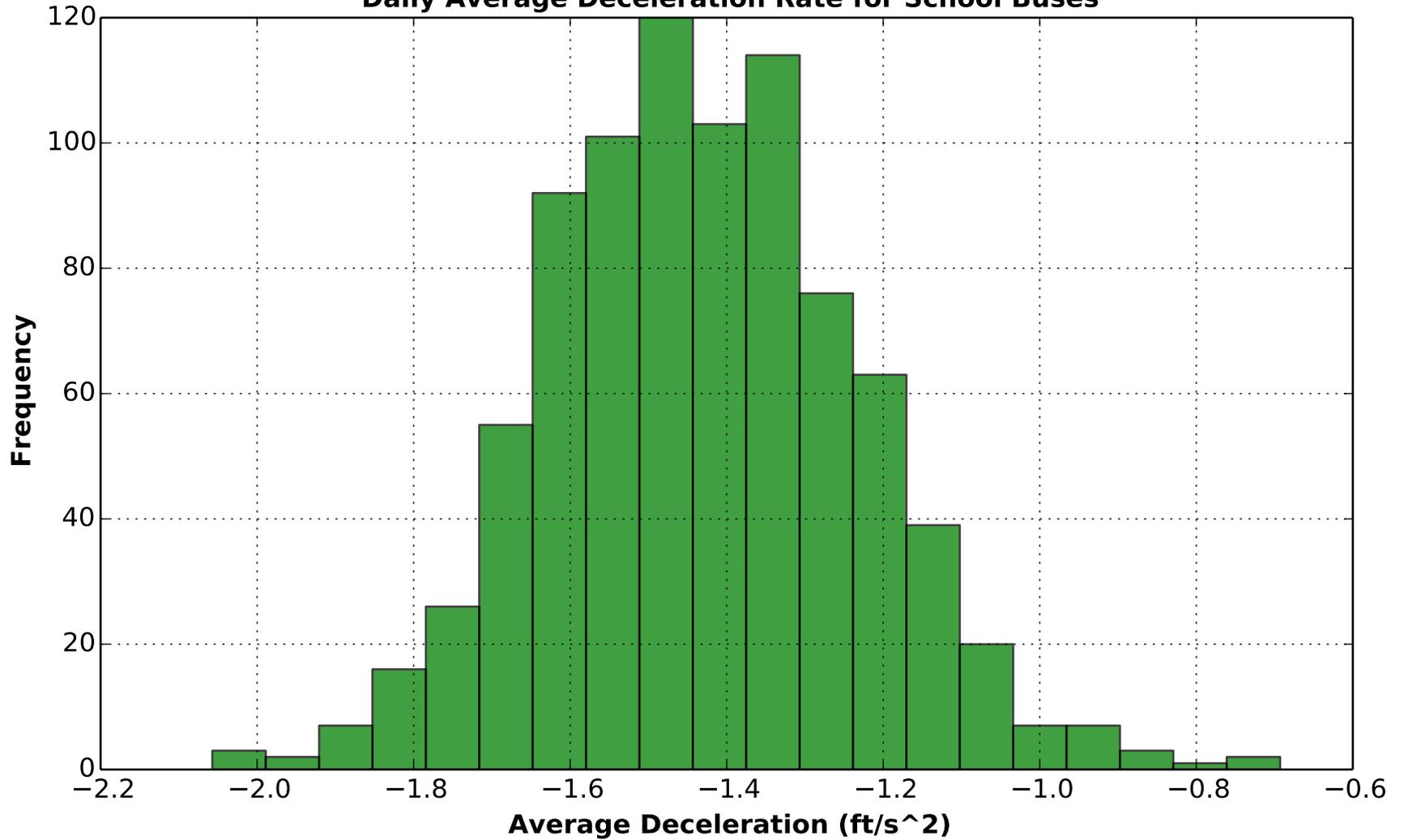


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857

### Daily Average Deceleration Rate for School Buses

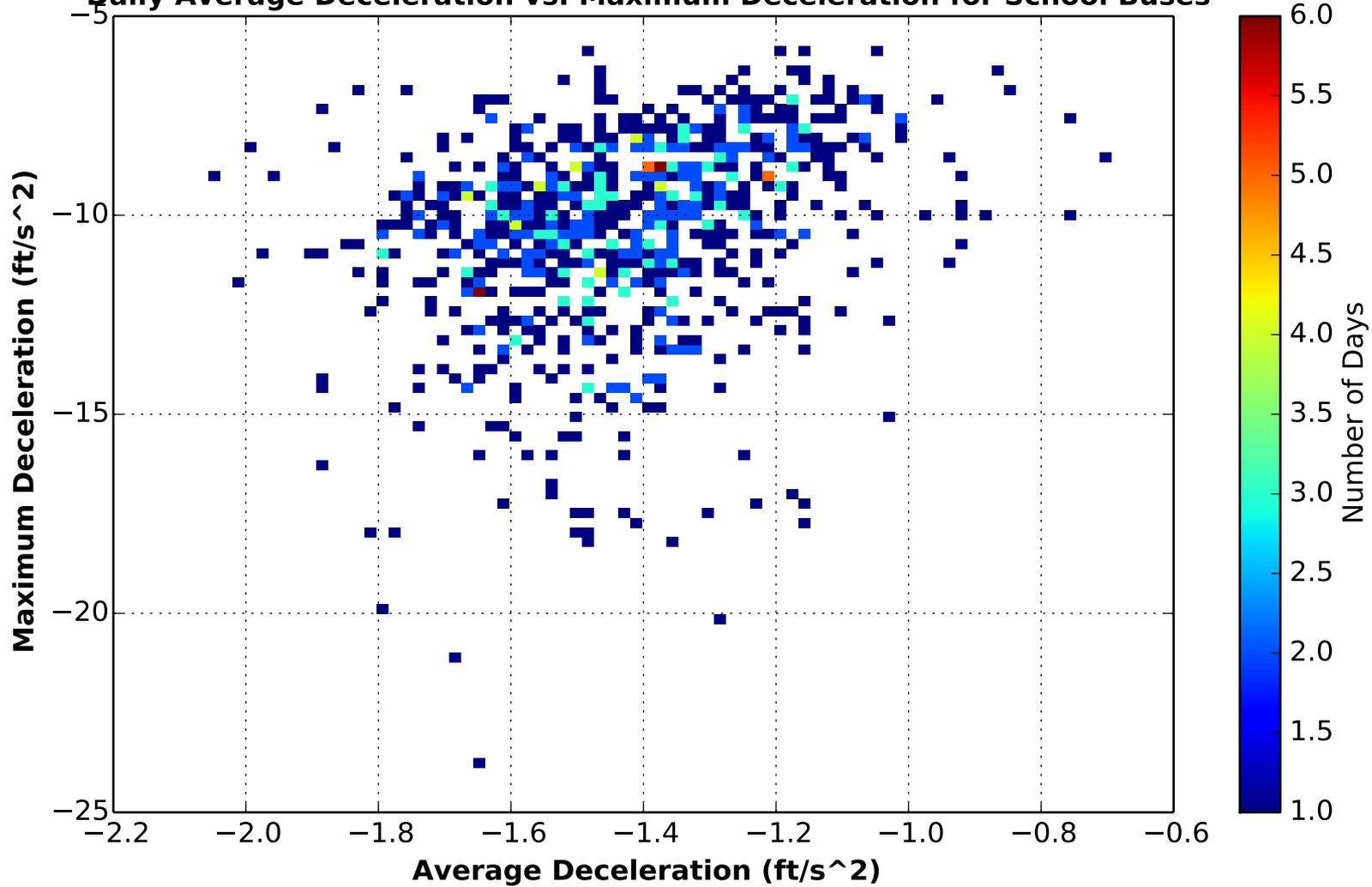


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857

# Daily Average Deceleration vs. Maximum Deceleration for School Buses

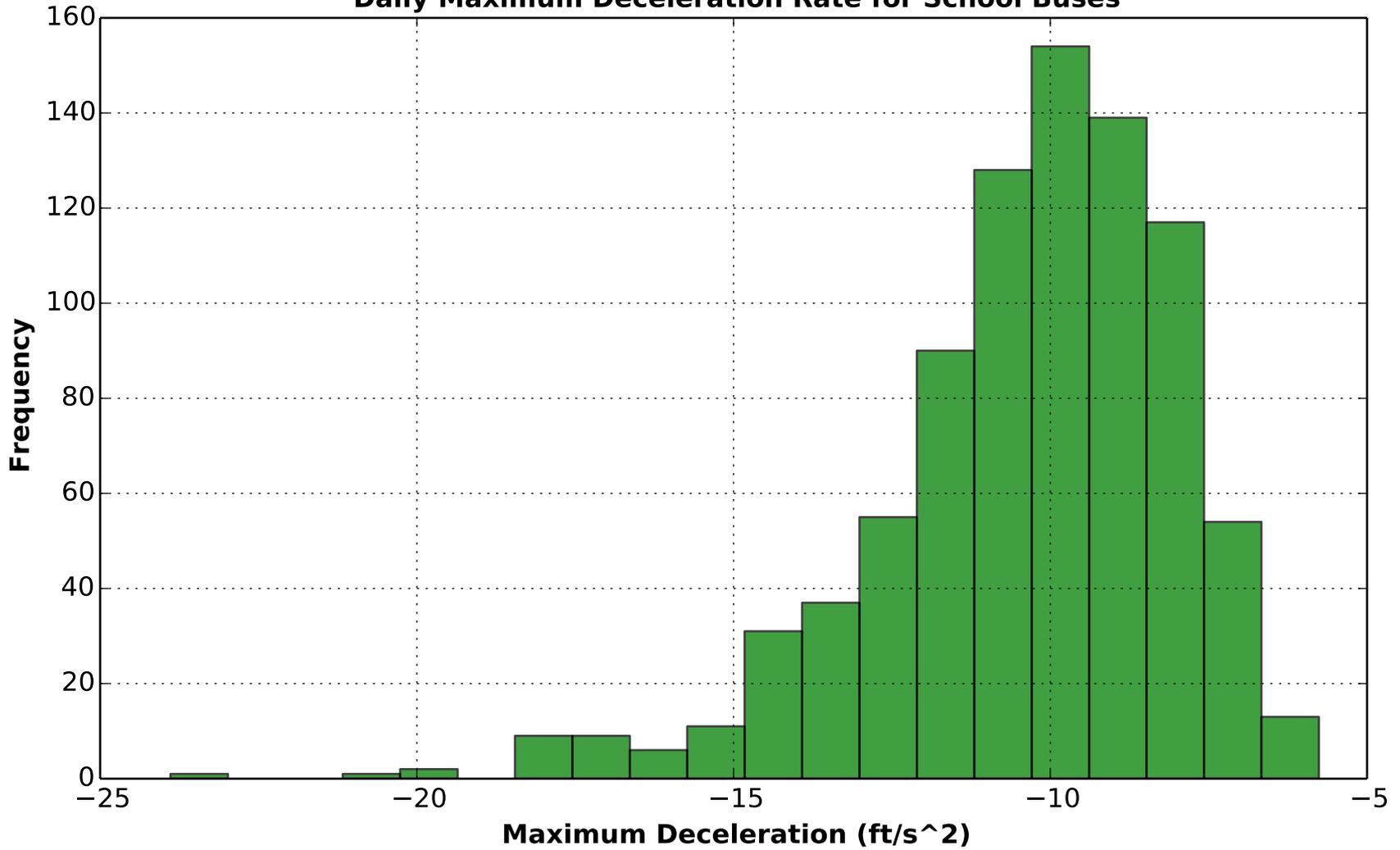


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857

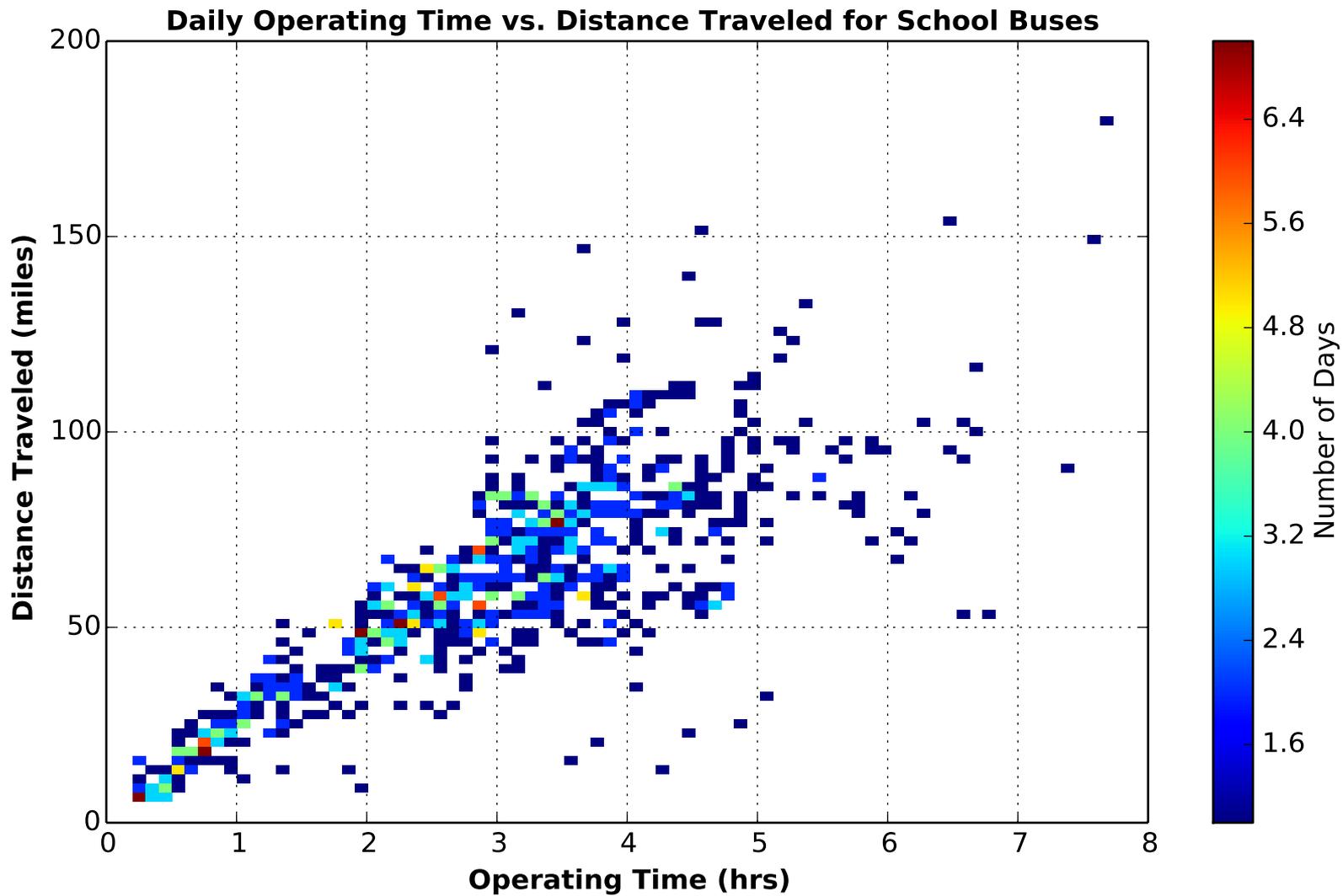
### Daily Maximum Deceleration Rate for School Buses



# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857

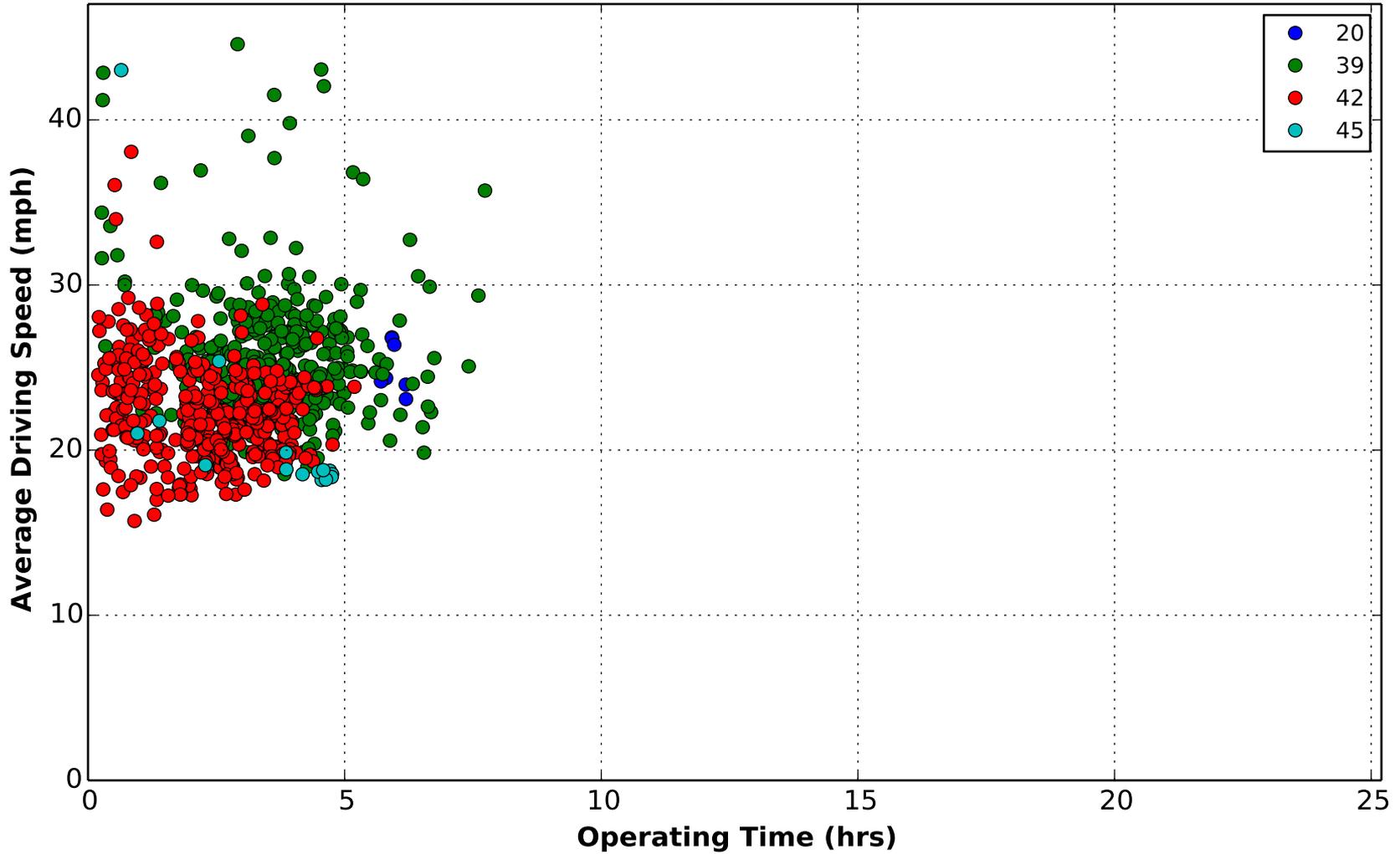


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857

Daily Operating Time vs. Average Driving Speed for School Buses

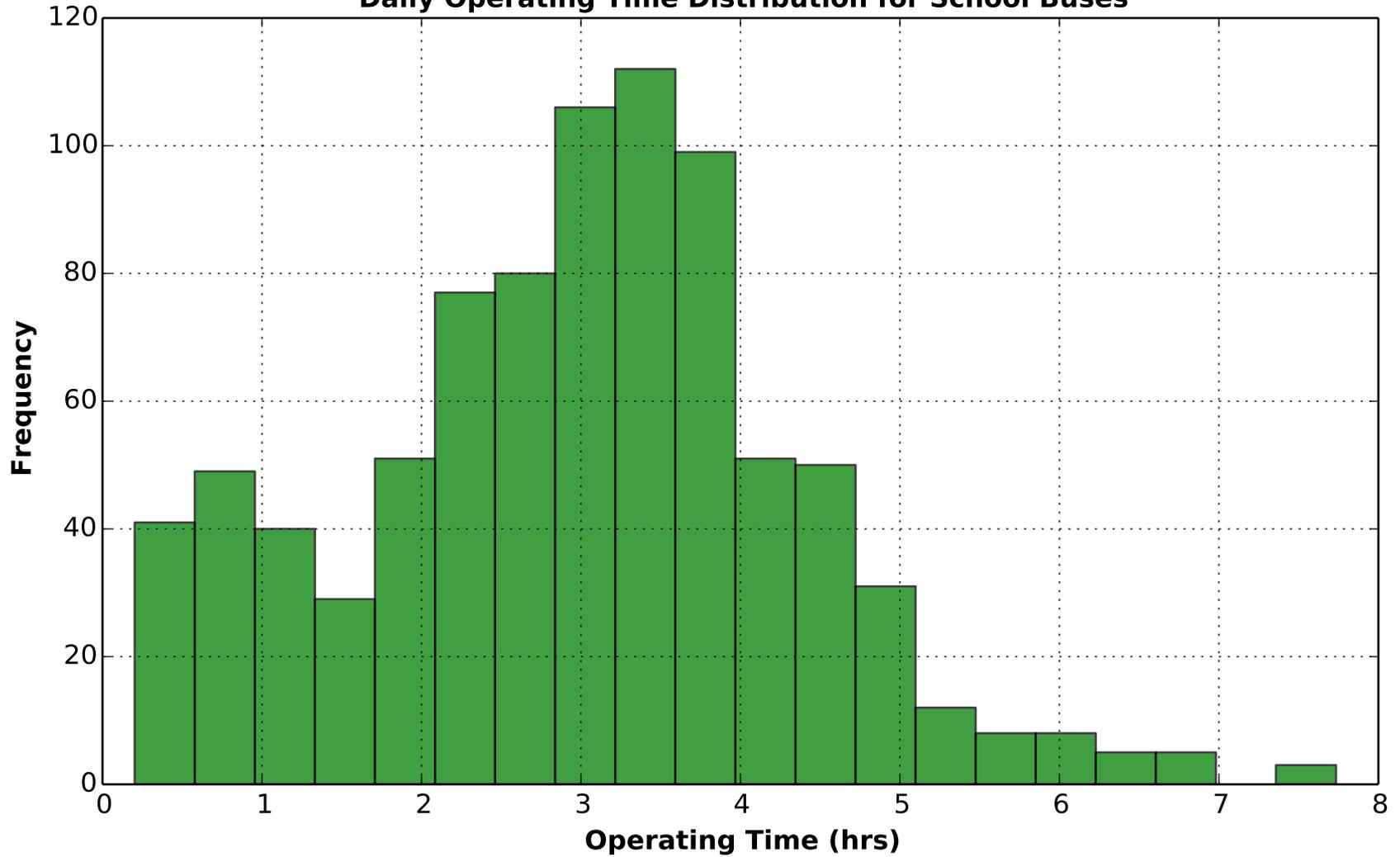


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 856

### Daily Operating Time Distribution for School Buses

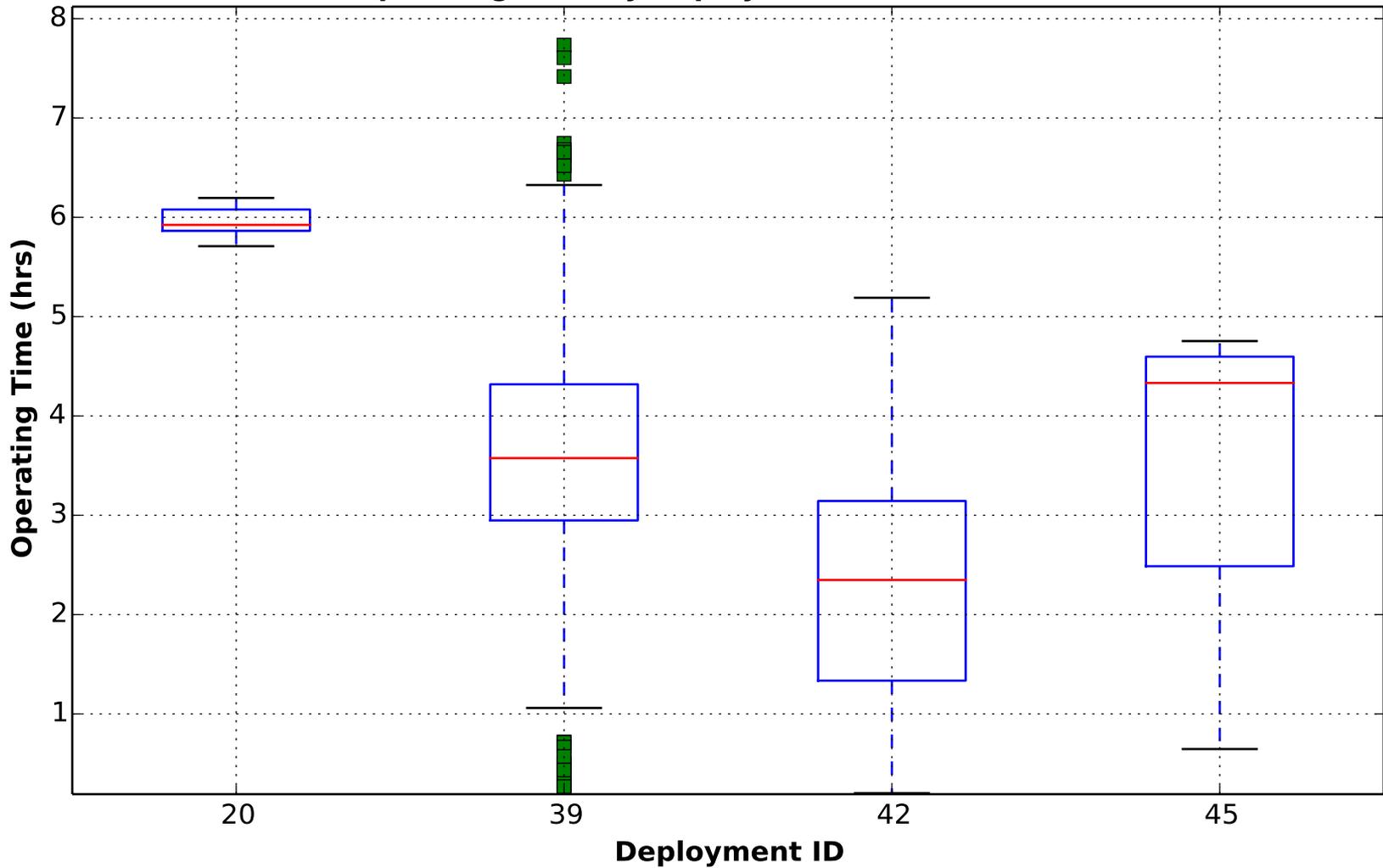


# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857

# Operating Time by Deployment for School Buses



# of Vehicles Reporting: 204

Generated: Thu Aug 07, 2014

# of Days Included: 857

# Interested in Participating?

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The statistical summaries presented in this report were generated with the support of a variety of organizations. It is through the continued support of these partner organizations that Fleet DNA continues to grow.

For more information about the project or to discuss partnership opportunities including contribution of data to the database, please contact:

**Adam Duran**

**303.275.4586**

**[Adam.Duran@nrel.gov](mailto:Adam.Duran@nrel.gov)**

**[www.nrel.gov/fleetdna](http://www.nrel.gov/fleetdna)**