The CONTENTS Procedure

Data Set Name	P1FOLDER.P1DATA	**Observations**	41
Member Type	DATA	**Variables**	8
Engine	V9	**Indexes**	0
Created	03/22/2020 18:00:13	**Observation Length**	72
Last Modified	03/22/2020 18:00:13	**Deleted Observations**	0
Protection		**Compressed**	NO
Data Set Type		**Sorted**	NO
Label			
Data Representation	SOLARIS_X86_64, LINUX_X86_64, ALPHA_TRU64, LINUX_IA64		
Encoding	utf-8 Unicode (UTF-8)		

Engine/Host Dependent Information	
Data Set Page Size	65536
Number of Data Set Pages	1
First Data Page	1
Max Obs per Page	908
Obs in First Data Page	41
Number of Data Set Repairs	0
Filename	/folders/myfolders/Linear Models/Project/p1data.sas7bdat
Release Created	9.0401M6
Host Created	Linux
Inode Number	46
Access Permission	rwxrwx---
Owner Name	root
File Size	128KB
File Size (bytes)	131072

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Informat
1	City	Char	13	$13.	$13.
4	Man	Num	8	BEST12.	BEST32.
5	Pop	Num	8	BEST12.	BEST32.
7	Rain	Num	8	BEST12.	BEST32.
8	RainDays	Num	8	BEST12.	BEST32.
2	SO2	Num	8	BEST12.	BEST32.
3	Temp	Num	8	BEST12.	BEST32.
6	Wind	Num	8	BEST12.	BEST32.

Obs	City	SO2	Temp	Man	Pop	Wind	Rain	RainDays
1	Phoenix	10	70.3	213	582	6	7.05	36
2	Little Rock	13	61	91	132	8.2	48.52	100

3	San Francisco	12	56.7	453	716	8.7	20.66	67
4	Denver	17	51.9	454	515	9	12.95	86
5	Hartford	56	49.1	412	158	9	43.37	127
6	Wilmington	36	54	80	80	9	40.25	114
7	Washington	29	57.3	434	757	9.3	38.89	111
8	Jacksonville	14	68.4	136	529	8.8	54.47	116
9	Miami	10	75.5	207	335	9	59.8	128
10	Atlanta	24	61.5	368	497	9.1	48.34	115
11	Chicago	110	50.6	3344	3369	10.4	34.44	122
12	Indianapolis	28	52.3	361	746	9.7	38.74	121
13	Des Moines	17	49	104	201	11.2	30.85	103
14	Wichita	8	56.6	125	277	12.7	30.58	82
15	Louisville	30	55.6	291	593	8.3	43.11	123
16	New Orleans	9	68.3	204	361	8.4	56.77	113
17	Baltimore	47	55	625	905	9.6	41.31	111
18	Detroit	35	49.9	1064	1513	10.1	30.96	129
19	Minn-St. Paul	29	43.5	699	744	10.6	25.94	137
20	Kansas City	14	54.5	381	507	10	37	99
21	St. Louis	56	55.9	775	622	9.5	35.89	105
22	Omaha	14	51.5	181	347	10.9	30.18	98
23	Albuquerque	11	56.8	46	244	8.9	7.77	58
24	Albany	46	47.6	44	116	8.8	33.36	135
25	Buffalo	11	47.1	391	463	12.4	36.11	166
26	Cincinnati	23	54	462	453	7.1	39.04	132
27	Cleveland	65	49.7	1007	751	10.9	34.99	155
28	Columbus	26	51.5	266	540	8.6	37.01	134
29	Philadelphia	69	54.6	1692	1950	9.6	39.93	115
30	Pittsburgh	61	50.4	347	520	9.4	36.22	147
31	Providence	94	50	343	179	10.6	42.75	125
32	Memphis	10	61.6	337	624	9.2	49.1	105
33	Nashville	18	59.4	275	448	7.9	46	119
34	Dallas	9	66.2	641	844	10.9	35.94	78
35	Houston	10	68.9	721	1233	10.8	48.19	103
36	Salt Lake Cit	28	51	137	176	8.7	15.17	89
37	Norfolk	31	59.3	96	308	10.6	44.68	116
38	Richmond	26	57.8	197	299	7.6	42.59	115
39	Seattle	29	51.1	379	531	9.4	38.79	164
40	Charleston	31	55.2	35	71	6.5	40.75	148
41	Milwaukee	16	45.7	569	717	11.8	29.07	123

The MEANS Procedure

Variable	N	Mean	Std Dev	Minimum	Maximum
SO2	41	30.0487805	23.4722722	8.0000000	110.0000000

Temp	41	55.7634146	7.2277160	43.5000000	75.5000000
Man	41	463.0975610	563.4739482	35.0000000	3344.00
Pop	41	608.6097561	579.1130234	71.0000000	3369.00
Wind	41	9.4439024	1.4286442	6.0000000	12.7000000
Rain	41	36.7690244	11.7715498	7.0500000	59.8000000
RainDays	41	113.9024390	26.5064189	36.0000000	166.0000000

The CORR Procedure

7 Variables:	SO2 Temp Man Pop Wind Rain RainDays

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
SO2	41	30.04878	23.47227	1232	8.00000	110.00000
Temp	41	55.76341	7.22772	2286	43.50000	75.50000
Man	41	463.09756	563.47395	18987	35.00000	3344
Pop	41	608.60976	579.11302	24953	71.00000	3369
Wind	41	9.44390	1.42864	387.20000	6.00000	12.70000
Rain	41	36.76902	11.77155	1508	7.05000	59.80000
RainDays	41	113.90244	26.50642	4670	36.00000	166.00000

Pearson Correlation Coefficients, N = 41
Prob > |r| under H0: Rho=0

	SO2	Temp	Man	Pop	Wind	Rain	RainDays
SO2	1.00000	-0.43360 0.0046	0.64477 <.0001	0.49378 0.0010	0.09469 0.5559	0.05429 0.7360	0.36956 0.0174
Temp	-0.43360 0.0046	1.00000	-0.19004 0.2340	-0.06268 0.6970	-0.34974 0.0250	0.38625 0.0126	-0.43024 0.0050
Man	0.64477 <.0001	-0.19004 0.2340	1.00000	0.95527 <.0001	0.23795 0.1341	-0.03242 0.8405	0.13183 0.4113
Pop	0.49378 0.0010	-0.06268 0.6970	0.95527 <.0001	1.00000	0.21264 0.1819	-0.02612 0.8712	0.04208 0.7939
Wind	0.09469 0.5559	-0.34974 0.0250	0.23795 0.1341	0.21264 0.1819	1.00000	-0.01299 0.9357	0.16411 0.3052
Rain	0.05429 0.7360	0.38625 0.0126	-0.03242 0.8405	-0.02612 0.8712	-0.01299 0.9357	1.00000	0.49610 0.0010
RainDays	0.36956 0.0174	-0.43024 0.0050	0.13183 0.4113	0.04208 0.7939	0.16411 0.3052	0.49610 0.0010	1.00000

The UNIVARIATE Procedure
Variable: SO2

Moments

N	41	**Sum Weights**	41
Mean	30.0487805	**Sum Observations**	1232
Std Deviation	23.4722722	**Variance**	550.947561
Skewness	1.70698288	**Kurtosis**	3.02028547
Uncorrected SS	59058	**Corrected SS**	22037.9024

Coeff Variation	78.1138928	Std Error Mean	3.66575305

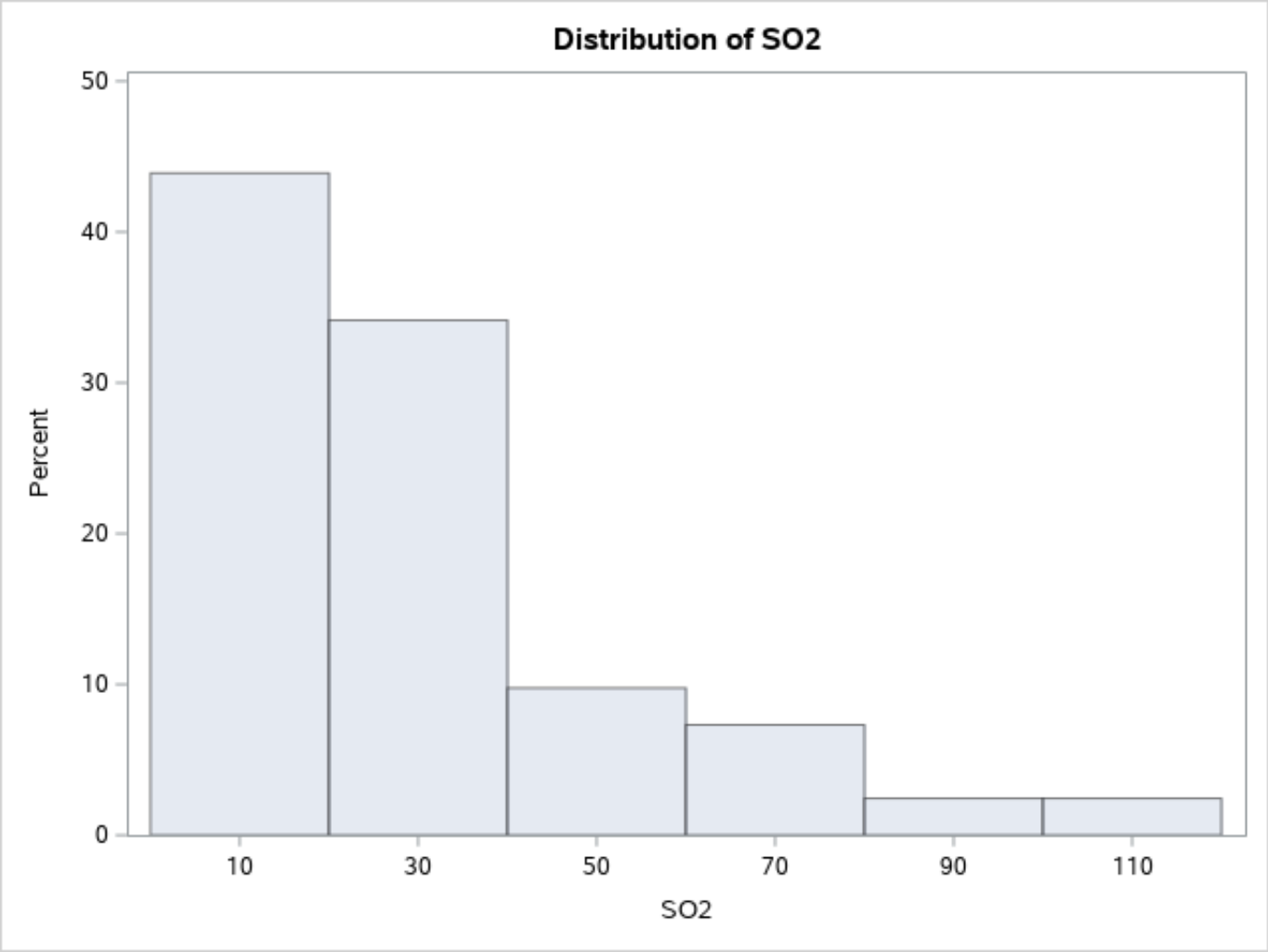
Basic Statistical Measures			
Location		Variability	
Mean	30.04878	Std Deviation	23.47227
Median	26.00000	Variance	550.94756
Mode	10.00000	Range	102.00000
		Interquartile Range	22.00000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
Student's t	t	8.197164	Pr > |t|	<.0001
Sign	M	20.5	Pr >= |M|	<.0001
Signed Rank	S	430.5	Pr >= |S|	<.0001

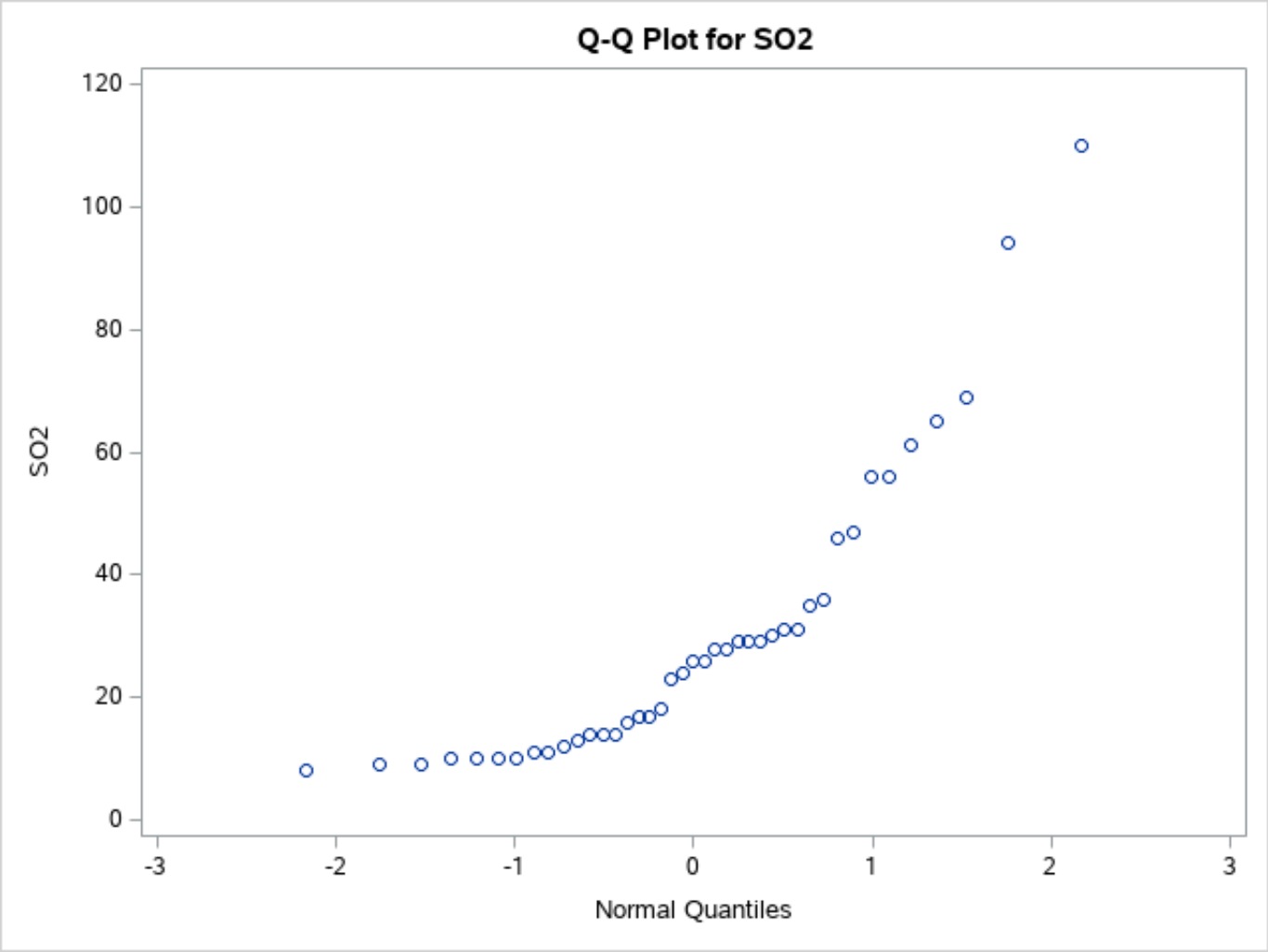
Quantiles (Definition 5)	
Level	Quantile
100% Max	110
99%	110
95%	69
90%	61
75% Q3	35
50% Median	26
25% Q1	13
10%	10
5%	9
1%	8
0% Min	8

Extreme Observations					
Lowest			Highest		
Value	City	Obs	Value	City	Obs
8	Wichita	14	61	Pittsburgh	30
9	Dallas	34	65	Cleveland	27
9	New Orleans	16	69	Philadelphia	29
10	Houston	35	94	Providence	31
10	Memphis	32	110	Chicago	11

The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure
Variable: Temp

Moments			
N	41	Sum Weights	41
Mean	55.7634146	Sum Observations	2286.3
Std Deviation	7.22771596	Variance	52.239878
Skewness	0.88680905	Kurtosis	0.44208501
Uncorrected SS	129581.49	Corrected SS	2089.59512
Coeff Variation	12.9613942	Std Error Mean	1.12877959

Basic Statistical Measures			
Location		Variability	
Mean	55.76341	Std Deviation	7.22772
Median	54.60000	Variance	52.23988
Mode	51.50000	Range	32.00000
		Interquartile Range	8.70000

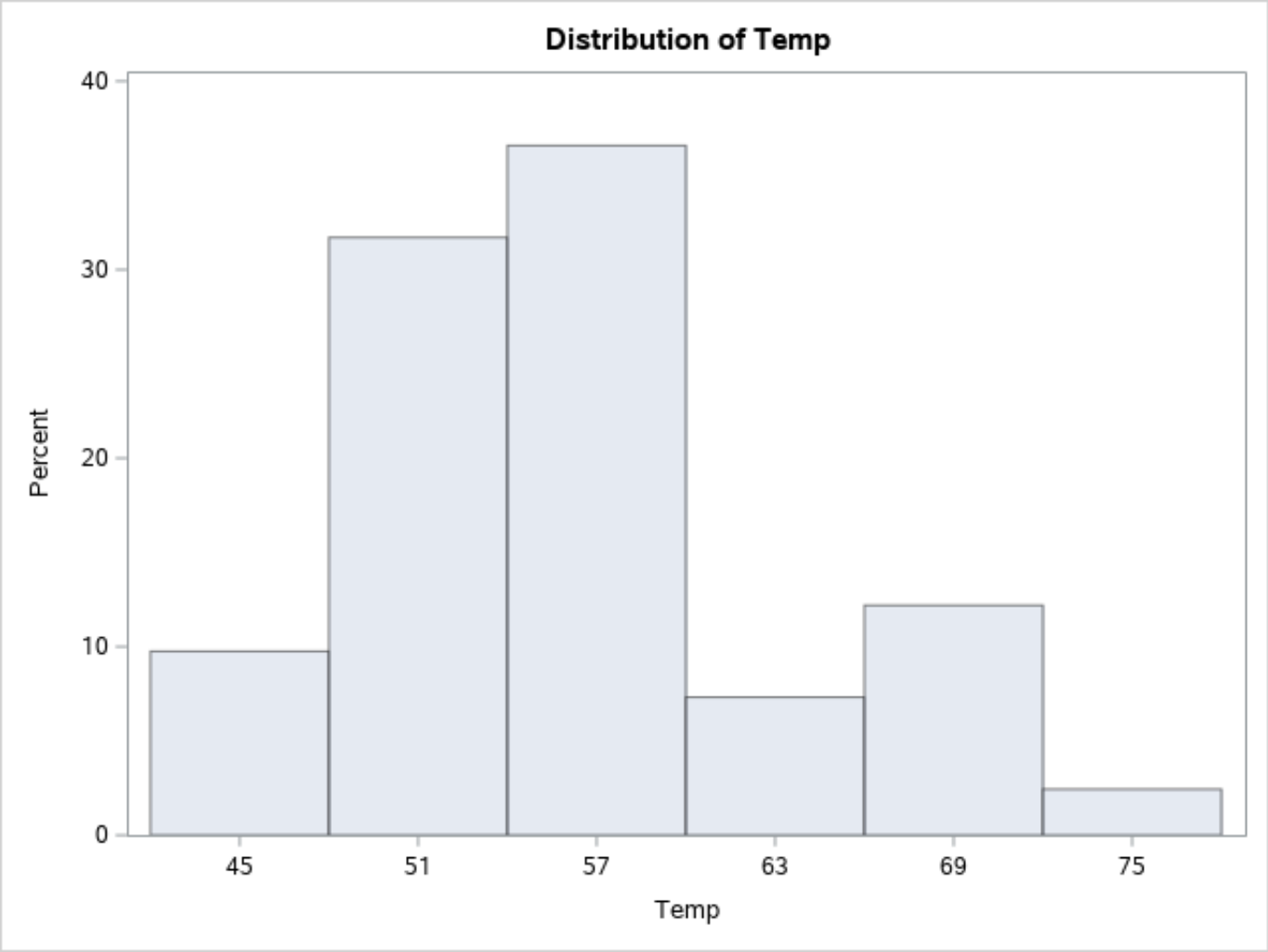
Note: The mode displayed is the smallest of 2 modes with a count of 2.

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	49.40151	**Pr > |t|**	<.0001
Sign	**M**	20.5	**Pr >= |M|**	<.0001
Signed Rank	**S**	430.5	**Pr >= |S|**	<.0001

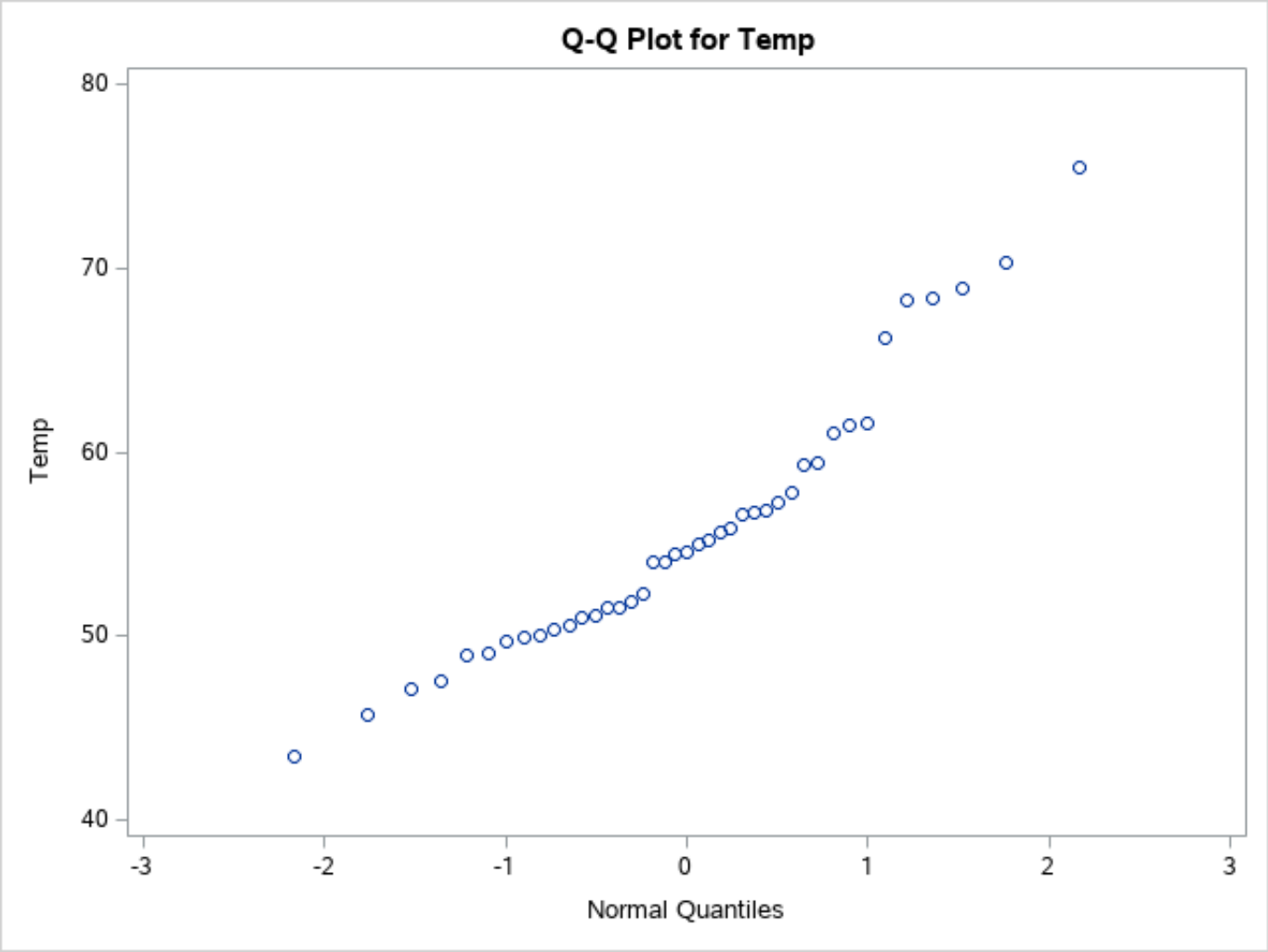
Quantiles (Definition 5)	
Level	**Quantile**
100% Max	75.5
99%	75.5
95%	68.9
90%	68.3
75% Q3	59.3
50% Median	54.6
25% Q1	50.6
10%	49.0
5%	47.1
1%	43.5
0% Min	43.5

Extreme Observations					
Lowest			**Highest**		
Value	**City**	**Obs**	**Value**	**City**	**Obs**
43.5	Minn-St. Paul	19	68.3	New Orleans	16
45.7	Milwaukee	41	68.4	Jacksonville	8
47.1	Buffalo	25	68.9	Houston	35
47.6	Albany	24	70.3	Phoenix	1
49.0	Des Moines	13	75.5	Miami	9

The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure
Variable: Man

Moments			
N	41	**Sum Weights**	41
Mean	463.097561	**Sum Observations**	18987
Std Deviation	563.473948	**Variance**	317502.89
Skewness	3.75488343	**Kurtosis**	17.403406
Uncorrected SS	21492949	**Corrected SS**	12700115.6
Coeff Variation	121.674998	**Std Error Mean**	87.9998462

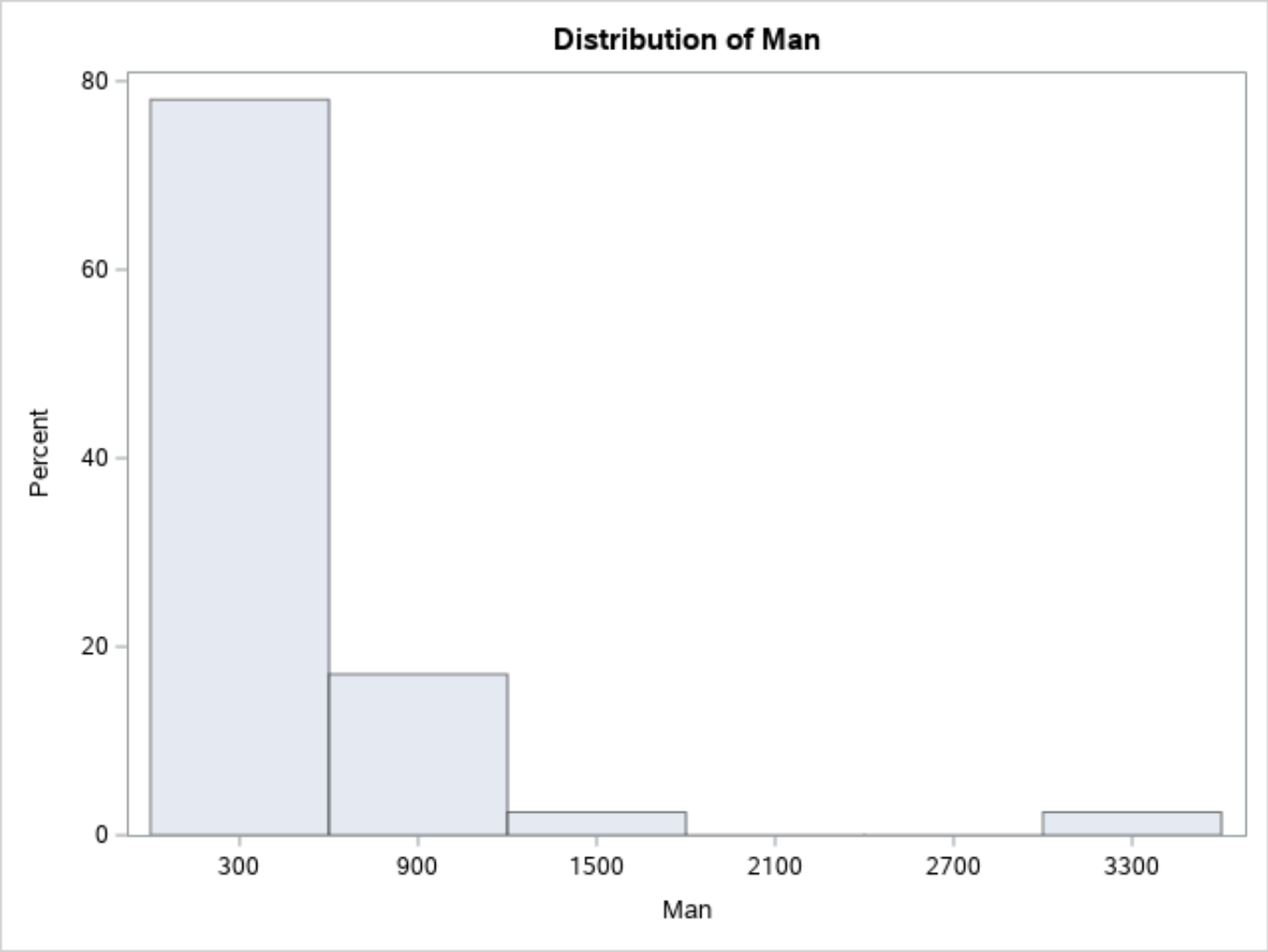
Basic Statistical Measures			
Location		**Variability**	
Mean	463.0976	**Std Deviation**	563.47395
Median	347.0000	**Variance**	317503
Mode	.	**Range**	3309
		Interquartile Range	281.00000

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	5.262481	**Pr > |t|**	<.0001
Sign	**M**	20.5	**Pr >= |M|**	<.0001
Signed Rank	**S**	430.5	**Pr >= |S|**	<.0001

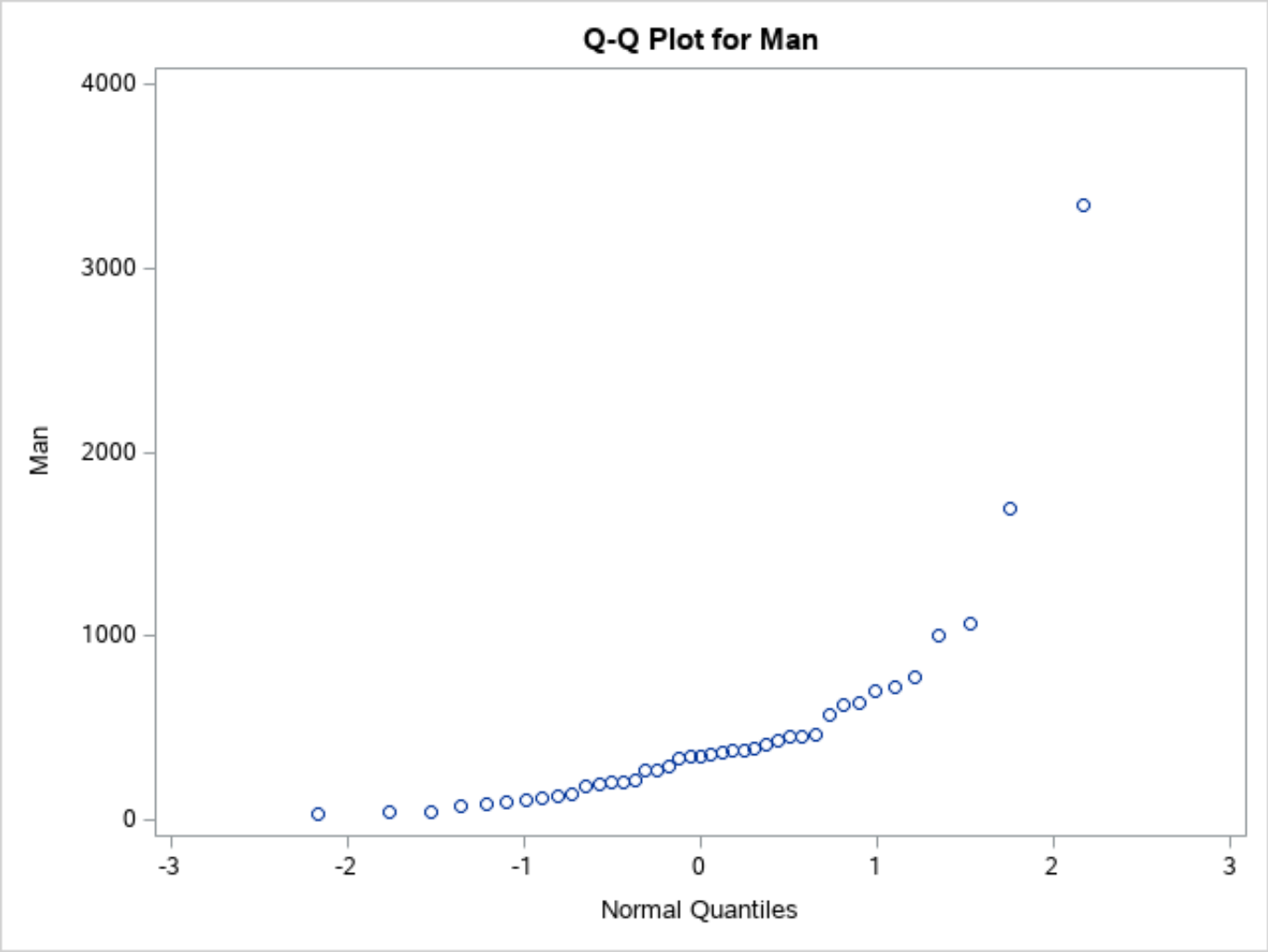
Quantiles (Definition 5)	
Level	**Quantile**
100% Max	3344
99%	3344
95%	1064
90%	775
75% Q3	462
50% Median	347
25% Q1	181
10%	91
5%	46
1%	35
0% Min	35

Extreme Observations					
Lowest			**Highest**		
Value	**City**	**Obs**	**Value**	**City**	**Obs**
35	Charleston	40	775	St. Louis	21
44	Albany	24	1007	Cleveland	27
46	Albuquerque	23	1064	Detroit	18
80	Wilmington	6	1692	Philadelphia	29
91	Little Rock	2	3344	Chicago	11

The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure
Variable: Pop

Moments			
N	41	**Sum Weights**	41
Mean	608.609756	**Sum Observations**	24953
Std Deviation	579.113023	**Variance**	335371.894
Skewness	3.16939401	**Kurtosis**	12.9301083
Uncorrected SS	28601515	**Corrected SS**	13414875.8
Coeff Variation	95.1534243	**Std Error Mean**	90.4422594

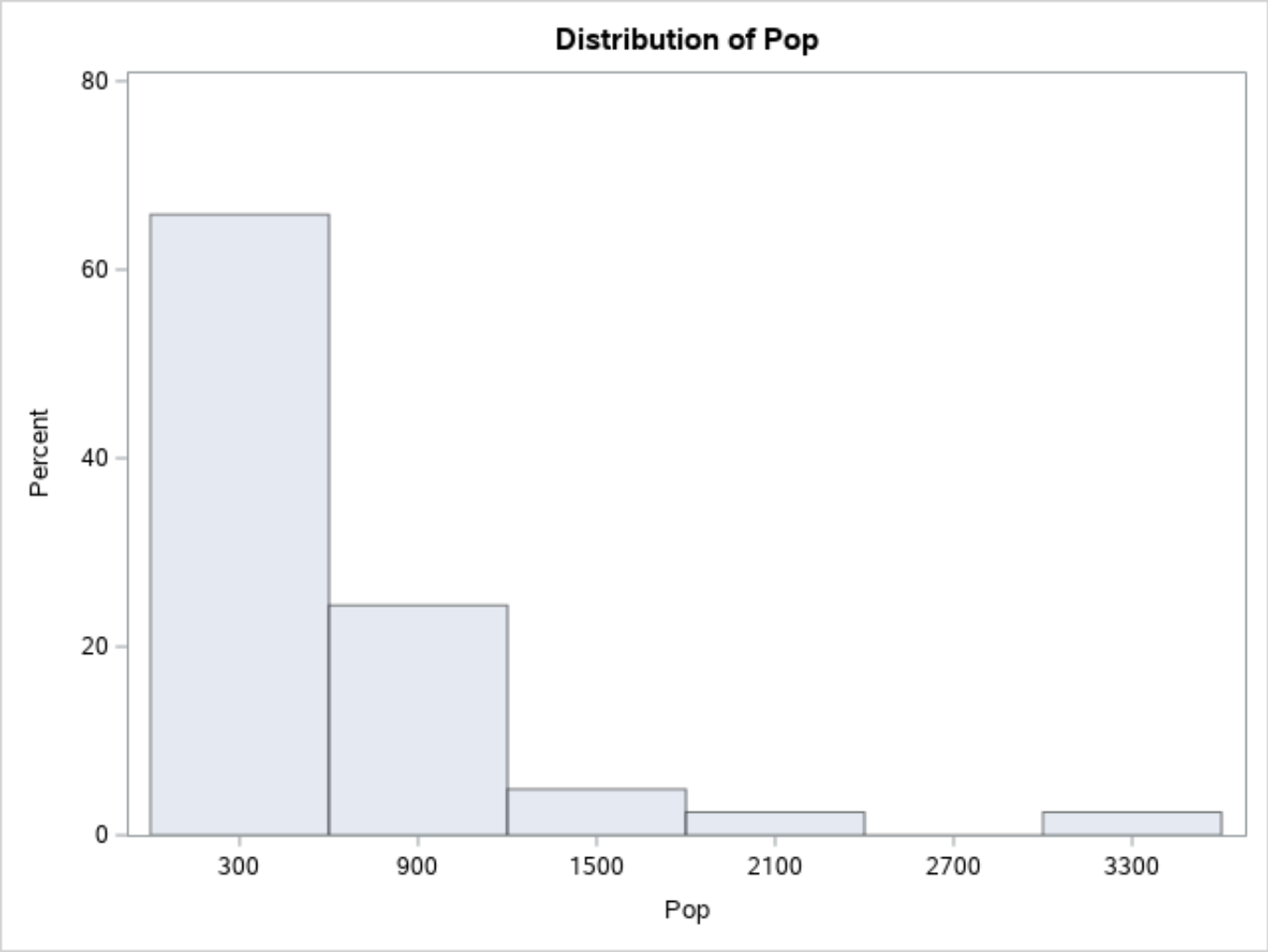
Basic Statistical Measures			
Location		**Variability**	
Mean	608.6098	**Std Deviation**	579.11302
Median	515.0000	**Variance**	335372
Mode	.	**Range**	3298
		Interquartile Range	418.00000

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	6.729263	**Pr > |t|**	<.0001
Sign	**M**	20.5	**Pr >= |M|**	<.0001
Signed Rank	**S**	430.5	**Pr >= |S|**	<.0001

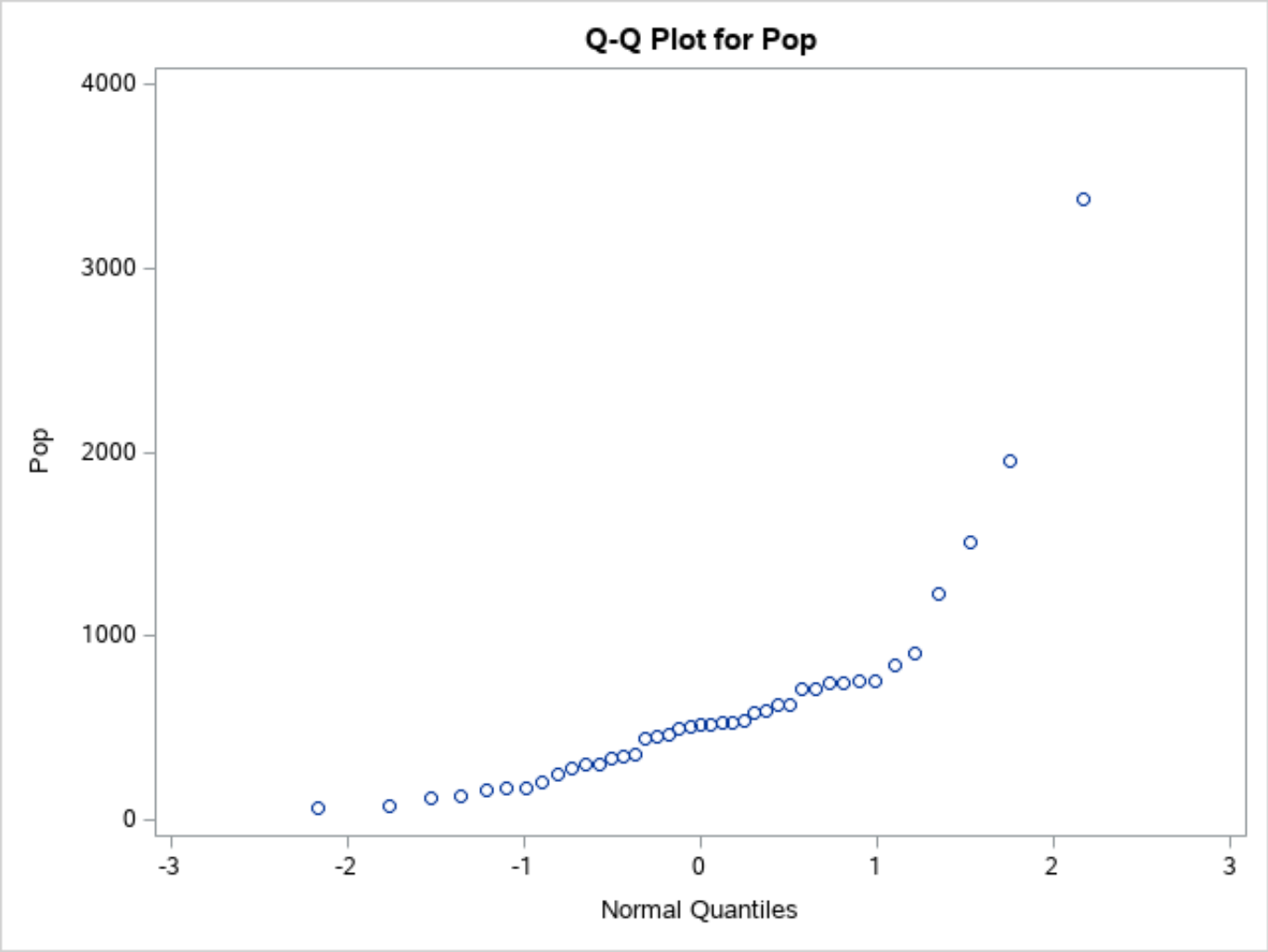
Quantiles (Definition 5)	
Level	**Quantile**
100% Max	3369
99%	3369
95%	1513
90%	905
75% Q3	717
50% Median	515
25% Q1	299
10%	158
5%	116
1%	71
0% Min	71

Extreme Observations					
Lowest			**Highest**		
Value	**City**	**Obs**	**Value**	**City**	**Obs**
71	Charleston	40	905	Baltimore	17
80	Wilmington	6	1233	Houston	35
116	Albany	24	1513	Detroit	18
132	Little Rock	2	1950	Philadelphia	29
158	Hartford	5	3369	Chicago	11

The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure
Variable: Wind

Moments			
N	41	**Sum Weights**	41
Mean	9.44390244	**Sum Observations**	387.2
Std Deviation	1.42864425	**Variance**	2.04102439
Skewness	0.00288263	**Kurtosis**	0.40575232
Uncorrected SS	3738.32	**Corrected SS**	81.6409756
Coeff Variation	15.1276896	**Std Error Mean**	0.22311675

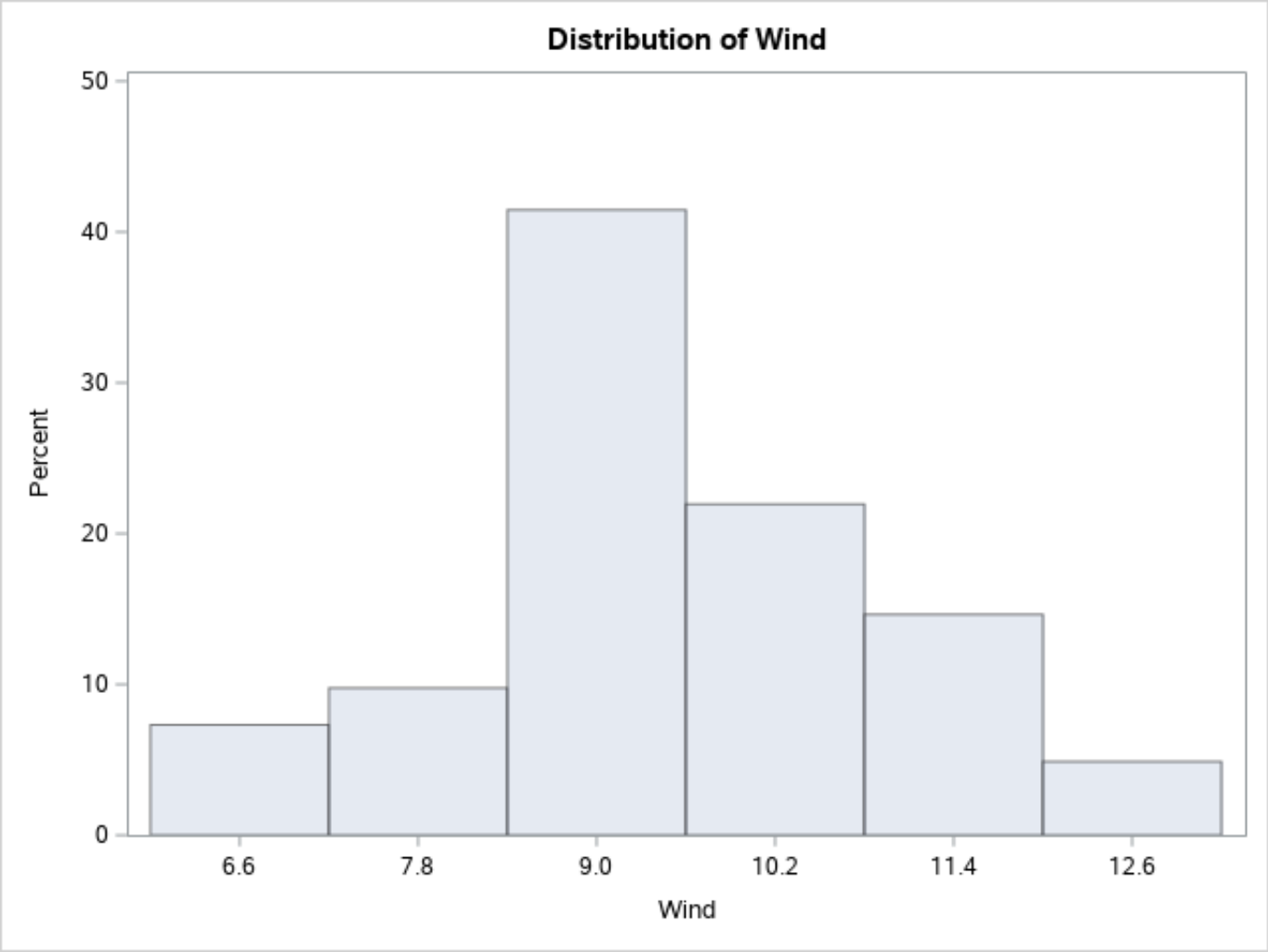
Basic Statistical Measures			
Location		**Variability**	
Mean	9.443902	**Std Deviation**	1.42864
Median	9.300000	**Variance**	2.04102
Mode	9.000000	**Range**	6.70000
		Interquartile Range	1.90000

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	42.32718	**Pr > |t|**	<.0001
Sign	**M**	20.5	**Pr >= |M|**	<.0001
Signed Rank	**S**	430.5	**Pr >= |S|**	<.0001

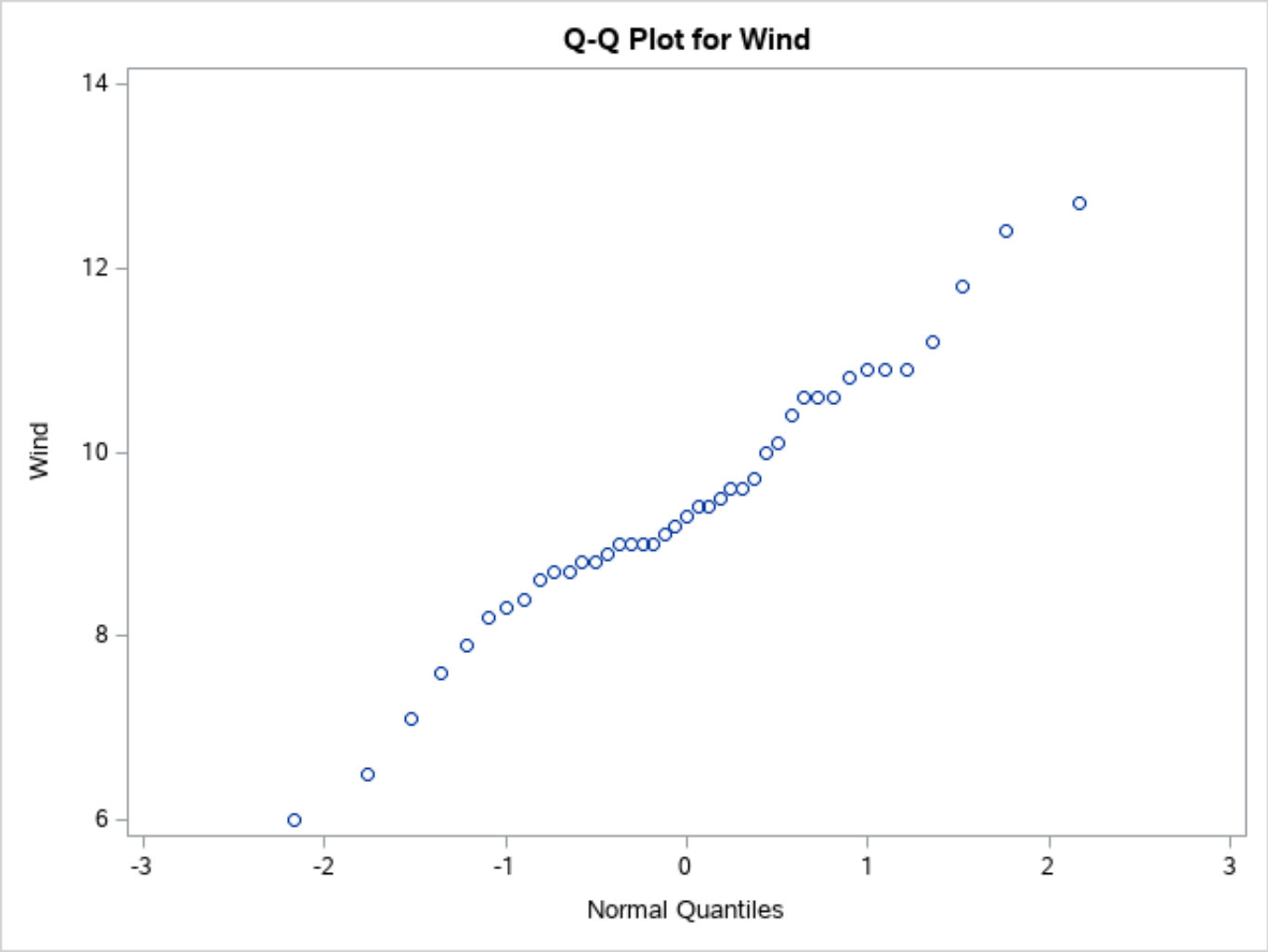
Quantiles (Definition 5)	
Level	**Quantile**
100% Max	12.7
99%	12.7
95%	11.8
90%	10.9
75% Q3	10.6
50% Median	9.3
25% Q1	8.7
10%	7.9
5%	7.1
1%	6.0
0% Min	6.0

Extreme Observations					
Lowest			**Highest**		
Value	**City**	**Obs**	**Value**	**City**	**Obs**
6.0	Phoenix	1	10.9	Dallas	34
6.5	Charleston	40	11.2	Des Moines	13
7.1	Cincinnati	26	11.8	Milwaukee	41
7.6	Richmond	38	12.4	Buffalo	25
7.9	Nashville	33	12.7	Wichita	14

The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure
Variable: Rain

Moments			
N	41	**Sum Weights**	41
Mean	36.7690244	**Sum Observations**	1507.53
Std Deviation	11.7715498	**Variance**	138.569384
Skewness	-0.7462327	**Kurtosis**	0.92457953
Uncorrected SS	60973.1827	**Corrected SS**	5542.77536
Coeff Variation	32.0148548	**Std Error Mean**	1.83840721

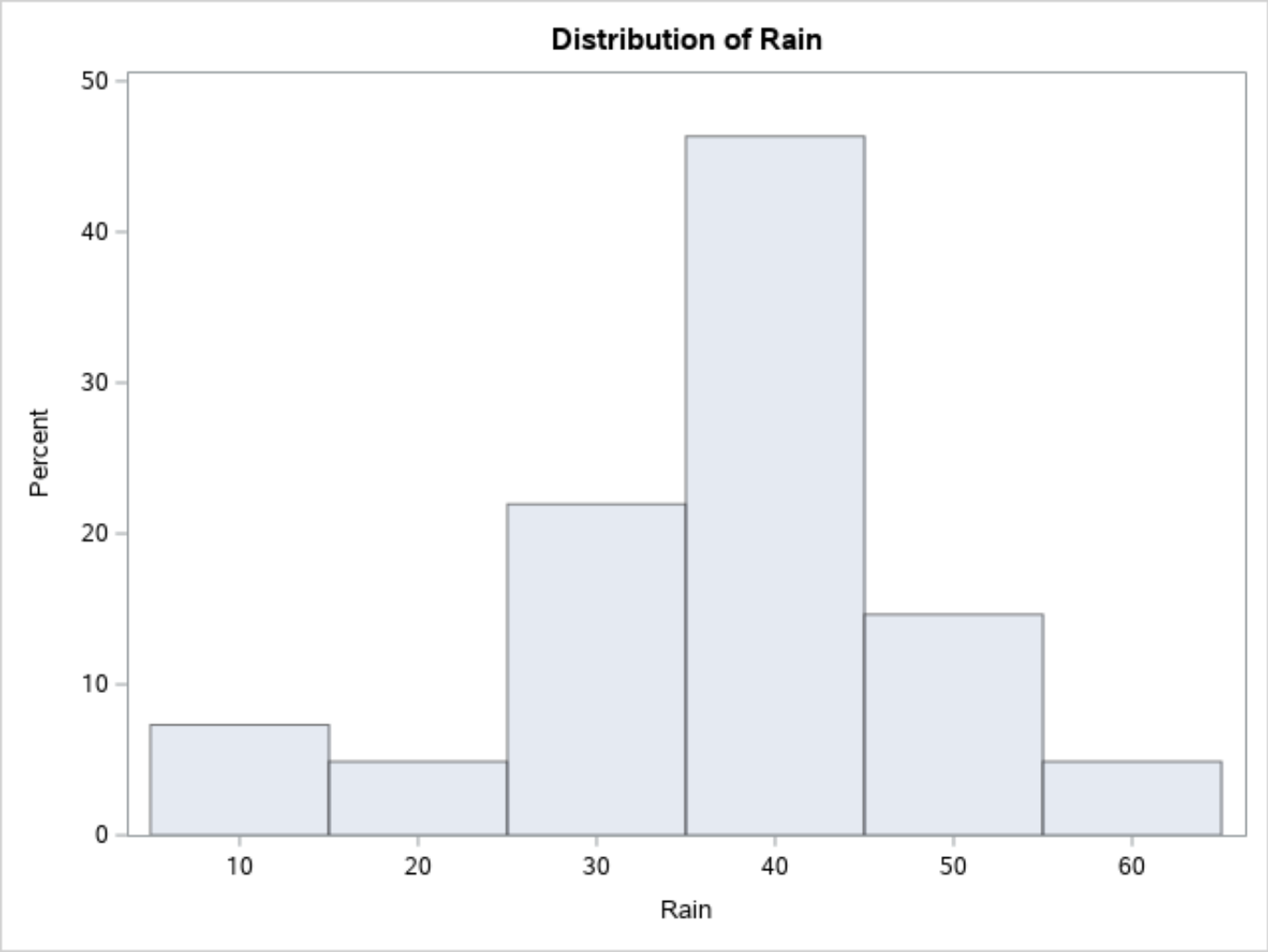
Basic Statistical Measures			
Location		**Variability**	
Mean	36.76902	**Std Deviation**	11.77155
Median	38.74000	**Variance**	138.56938
Mode	.	**Range**	52.75000
		Interquartile Range	12.15000

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	20.00048	**Pr > |t|**	<.0001
Sign	**M**	20.5	**Pr >= |M|**	<.0001
Signed Rank	**S**	430.5	**Pr >= |S|**	<.0001

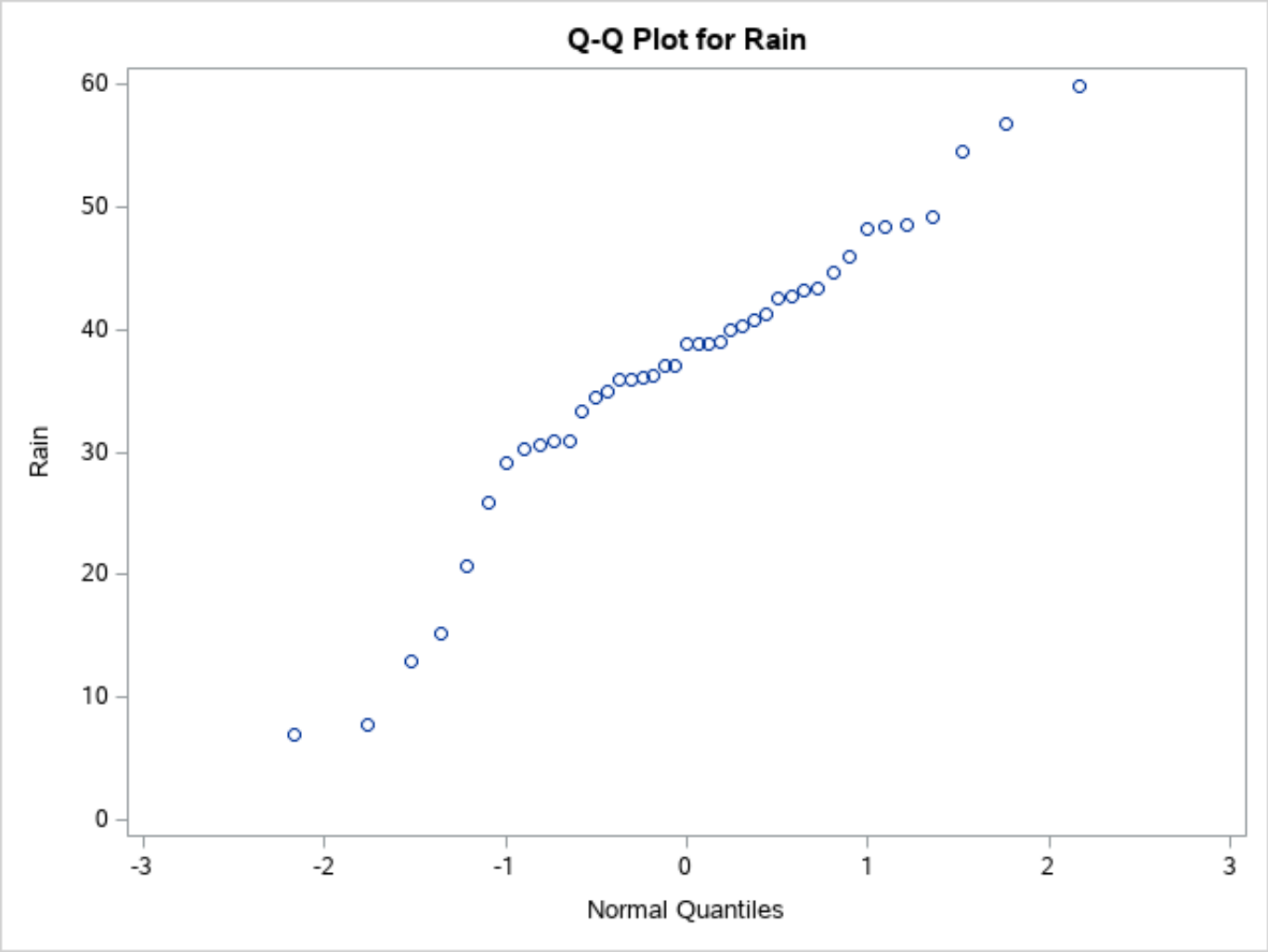
Quantiles (Definition 5)	
Level	**Quantile**
100% Max	59.80
99%	59.80
95%	54.47
90%	48.52
75% Q3	43.11
50% Median	38.74
25% Q1	30.96
10%	20.66
5%	12.95
1%	7.05
0% Min	7.05

Extreme Observations					
Lowest			**Highest**		
Value	**City**	**Obs**	**Value**	**City**	**Obs**
7.05	Phoenix	1	48.52	Little Rock	2
7.77	Albuquerque	23	49.10	Memphis	32
12.95	Denver	4	54.47	Jacksonville	8
15.17	Salt Lake Cit	36	56.77	New Orleans	16
20.66	San Francisco	3	59.80	Miami	9

The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure
Variable: RainDays

Moments			
N	41	Sum Weights	41
Mean	113.902439	Sum Observations	4670
Std Deviation	26.5064189	Variance	702.590244
Skewness	-0.5927597	Kurtosis	1.19202805
Uncorrected SS	560028	Corrected SS	28103.6098
Coeff Variation	23.2711601	Std Error Mean	4.13960716

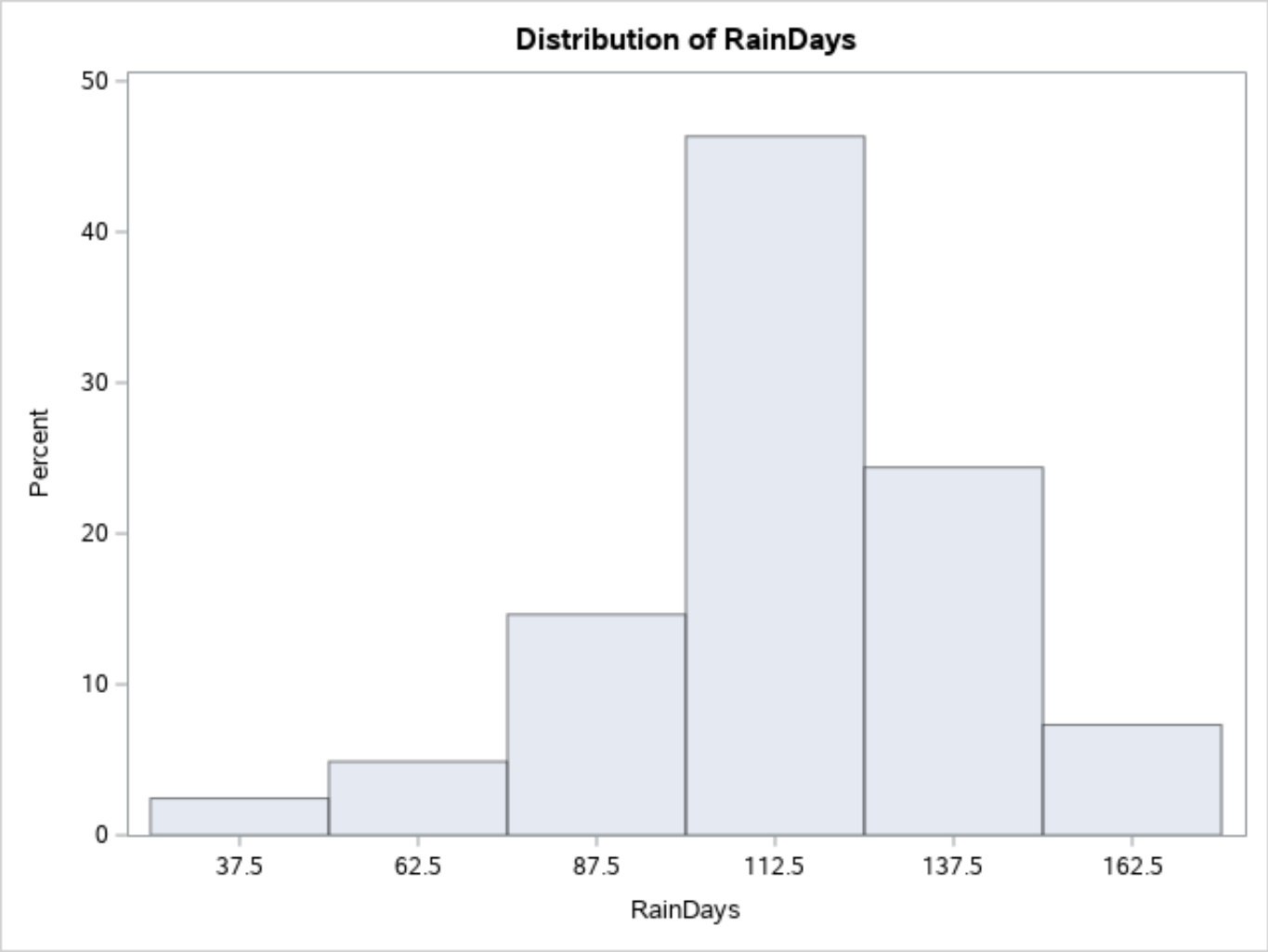
Basic Statistical Measures			
Location		Variability	
Mean	113.9024	Std Deviation	26.50642
Median	115.0000	Variance	702.59024
Mode	115.0000	Range	130.00000
		Interquartile Range	25.00000

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	27.51528	**Pr > |t|**	<.0001
Sign	**M**	20.5	**Pr >= |M|**	<.0001
Signed Rank	**S**	430.5	**Pr >= |S|**	<.0001

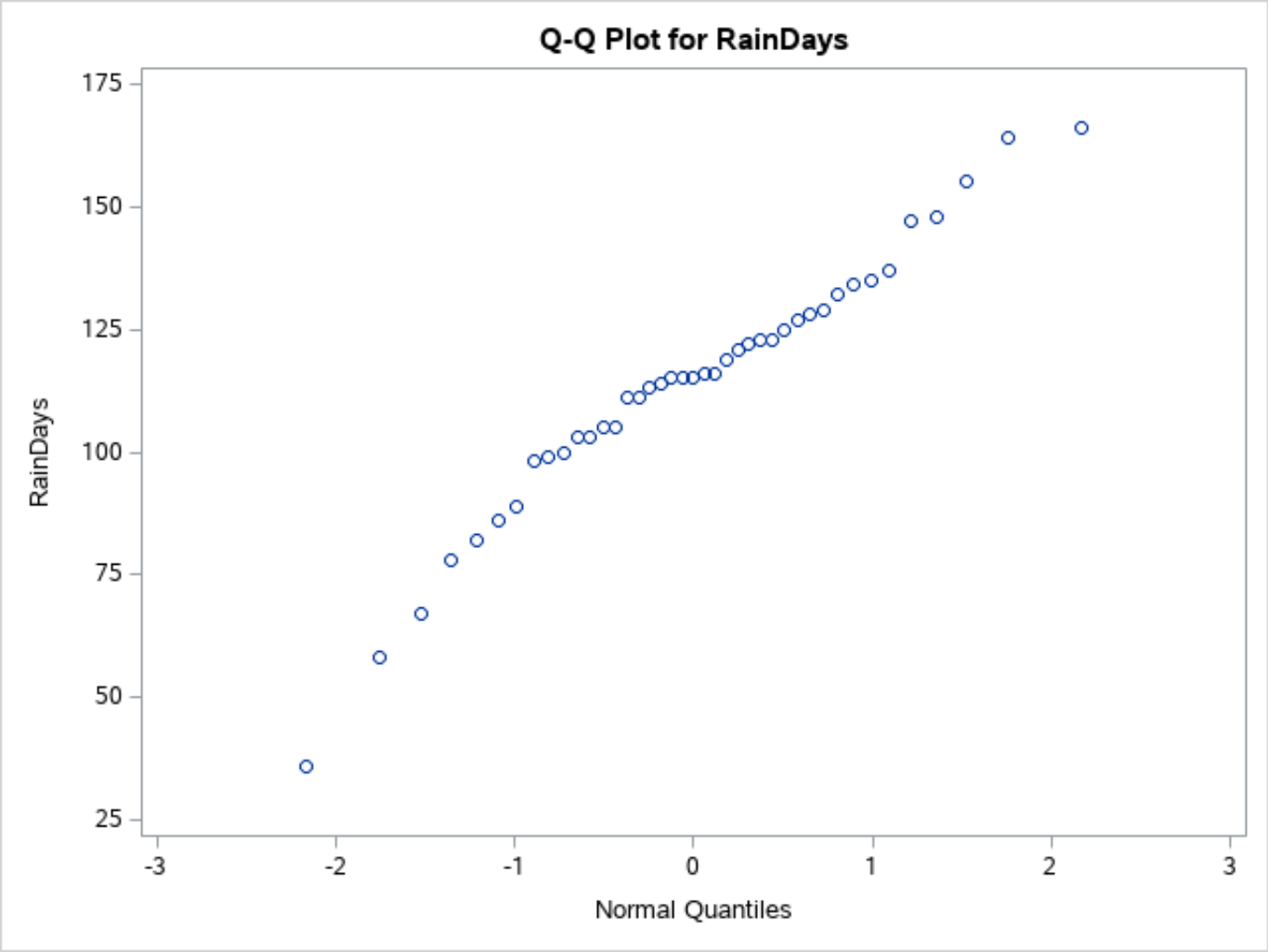
Quantiles (Definition 5)	
Level	**Quantile**
100% Max	166
99%	166
95%	155
90%	147
75% Q3	128
50% Median	115
25% Q1	103
10%	82
5%	67
1%	36
0% Min	36

Extreme Observations					
Lowest			**Highest**		
Value	**City**	**Obs**	**Value**	**City**	**Obs**
36	Phoenix	1	147	Pittsburgh	30
58	Albuquerque	23	148	Charleston	40
67	San Francisco	3	155	Cleveland	27
78	Dallas	34	164	Seattle	39
82	Wichita	14	166	Buffalo	25

The UNIVARIATE Procedure



The UNIVARIATE Procedure



The REG Procedure
Model: MODEL1
Dependent Variable: SO2

Number of Observations Read	41
Number of Observations Used	41

Backward Elimination: Step 0

All Variables Entered: R-Square = 0.6695 and C(p) = 7.0000

Analysis of Variance					
Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Model	6	14755	2459.10601	11.48	<.0001
Error	34	7283.26641	214.21372		
Corrected Total	40	22038			

Variable	**Parameter Estimate**	**Standard Error**	**Type II SS**	**F Value**	**Pr > F**

Intercept	111.72848	47.31810	1194.31931	5.58	0.0241
Temp	-1.26794	0.62118	892.50607	4.17	0.0491
Man	0.06492	0.01575	3640.11390	16.99	0.0002
Pop	-0.03928	0.01513	1443.05609	6.74	0.0138
Wind	-3.18137	1.81502	658.13061	3.07	0.0887
Rain	0.51236	0.36276	427.33549	1.99	0.1669
RainDays	-0.05205	0.16201	22.10994	0.10	0.7500

Bounds on condition number: 14.704, 245.48

Backward Elimination: Step 1

Variable RainDays Removed: R-Square = 0.6685 and C(p) = 5.1032

Analysis of Variance					
Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Model	5	14733	2946.50522	14.12	<.0001
Error	35	7305.37635	208.72504		
Corrected Total	40	22038			

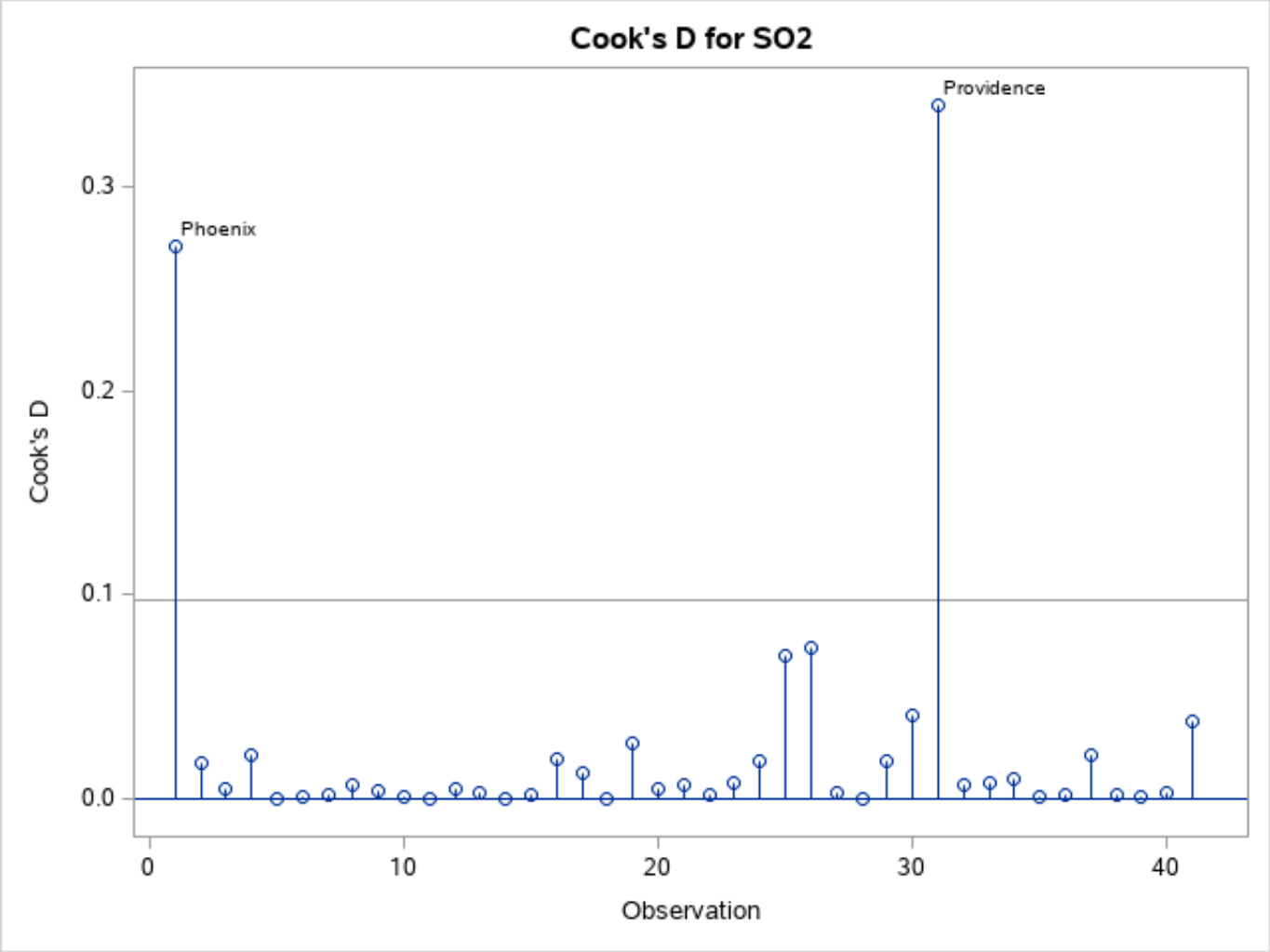
Variable	**Parameter Estimate**	**Standard Error**	**Type II SS**	**F Value**	**Pr > F**
Intercept	100.15245	30.27521	2284.14417	10.94	0.0022
Temp	-1.12129	0.41586	1517.42575	7.27	0.0107
Man	0.06489	0.01554	3636.77072	17.42	0.0002
Pop	-0.03933	0.01494	1447.52063	6.94	0.0125
Wind	-3.08240	1.76562	636.14543	3.05	0.0896
Rain	0.41947	0.21624	785.38334	3.76	0.0605

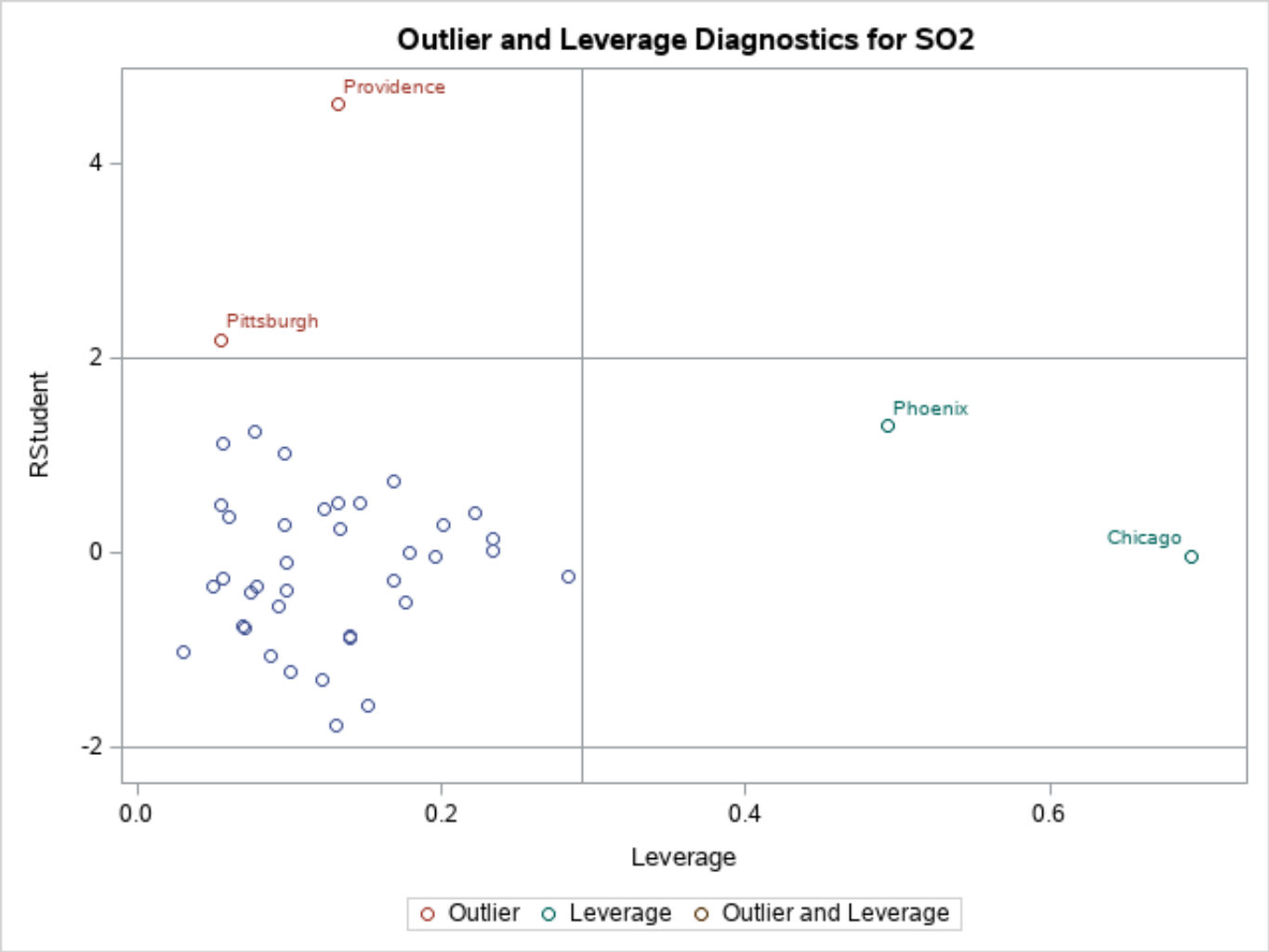
Bounds on condition number: 14.703, 166.17

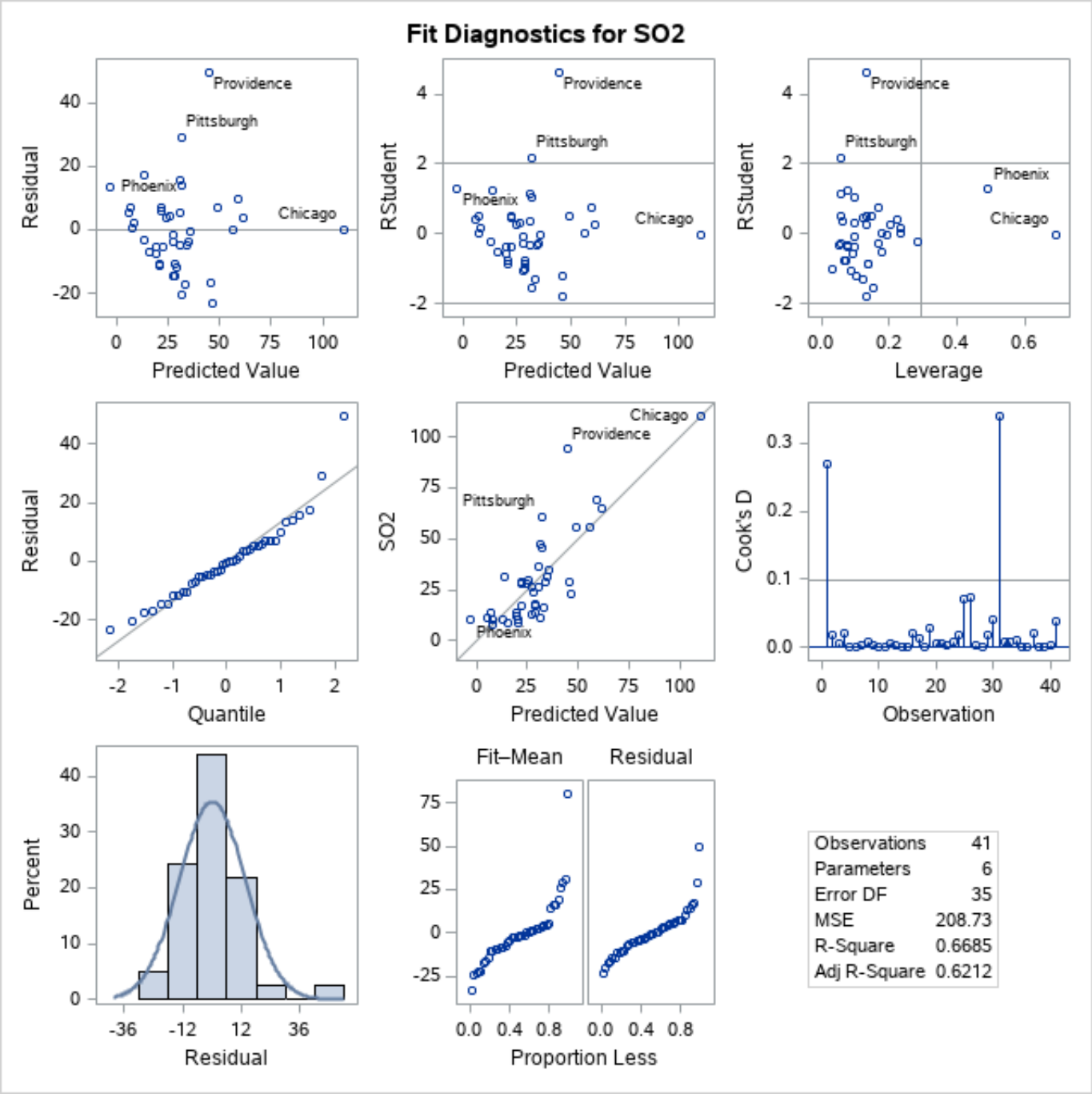
All variables left in the model are significant at the 0.1000 level.

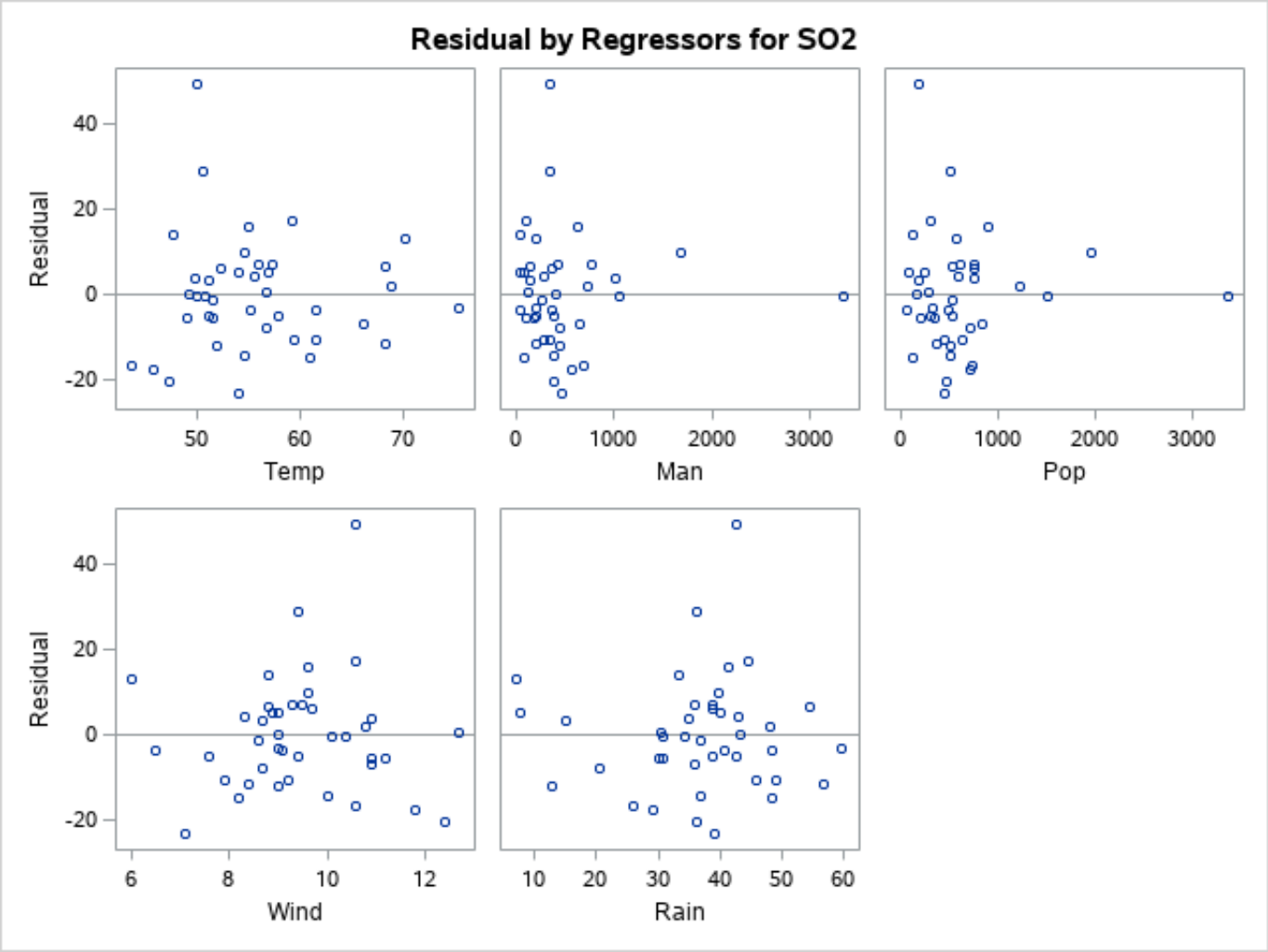
Summary of Backward Elimination							
Step	**Variable Removed**	**Number Vars In**	**Partial R-Square**	**Model R-Square**	**C(p)**	**F Value**	**Pr > F**
1	RainDays	5	0.0010	0.6685	5.1032	0.10	0.7500

The REG Procedure
Model: MODEL1
Dependent Variable: SO2


Cook's D for SO2
Providence
Phoenix
0.3
0.2
0.1
0.0
Cook's D
0
10
20
30
40
Observation


Outlier and Leverage Diagnostics for SO2
Providence
Pittsburgh
Phoenix
Chicago
RStudent
4
2
0
-2
0.0
0.2
0.4
0.6
Leverage
Outlier
Leverage
Outlier and Leverage


Fit Diagnostics for SO2
Residual
Predicted Value
Providence
Pittsburgh
Phoenix
Chicago
RStudent
Predicted Value
Providence
Pittsburgh
Phoenix
Chicago
RStudent
Leverage
Providence
Pittsburgh
Phoenix
Chicago
Residual
Quantile
SO2
Predicted Value
Chicago
Providence
Pittsburgh
Phoenix
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 41
Parameters 6
Error DF 35
MSE 208.73
R-Square 0.6685
Adj R-Square 0.6212



The UNIVARIATE Procedure
Variable: SO2

Moments			
N	41	Sum Weights	41
Mean	30.0487805	Sum Observations	1232
Std Deviation	23.4722722	Variance	550.947561
Skewness	1.70698288	Kurtosis	3.02028547
Uncorrected SS	59058	Corrected SS	22037.9024
Coeff Variation	78.1138928	Std Error Mean	3.66575305

Basic Statistical Measures			
Location		Variability	
Mean	30.04878	Std Deviation	23.47227
Median	26.00000	Variance	550.94756
Mode	10.00000	Range	102.00000
		Interquartile Range	22.00000

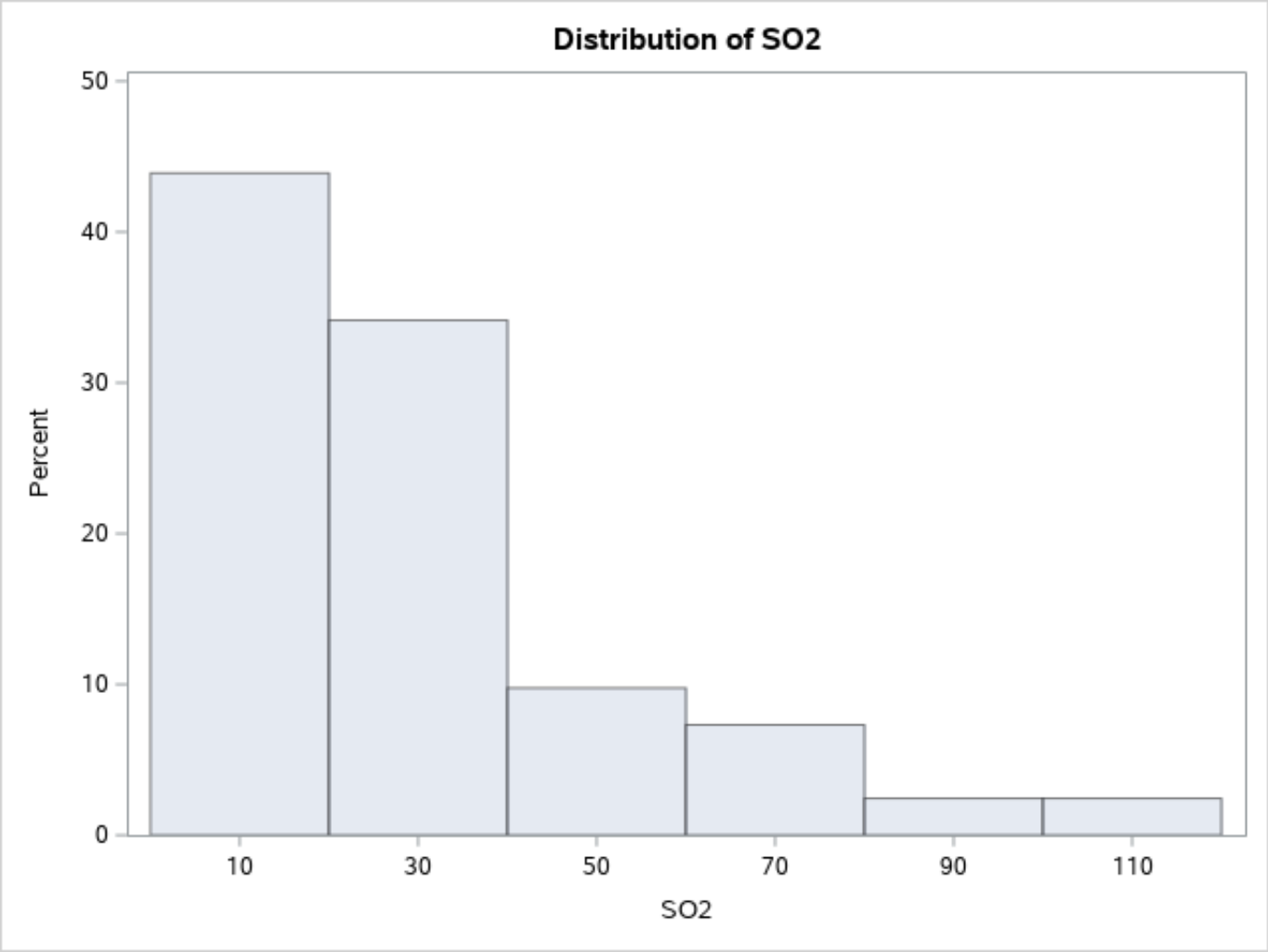
Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	8.197164	**Pr > |t|**	<.0001
Sign	**M**	20.5	**Pr >= |M|**	<.0001
Signed Rank	**S**	430.5	**Pr >= |S|**	<.0001

Tests for Normality				
Test	**Statistic**		**p Value**	
Shapiro-Wilk	**W**	0.811651	**Pr < W**	<0.0001
Kolmogorov-Smirnov	**D**	0.215545	**Pr > D**	<0.0100
Cramer-von Mises	**W-Sq**	0.411586	**Pr > W-Sq**	<0.0050
Anderson-Darling	**A-Sq**	2.384104	**Pr > A-Sq**	<0.0050

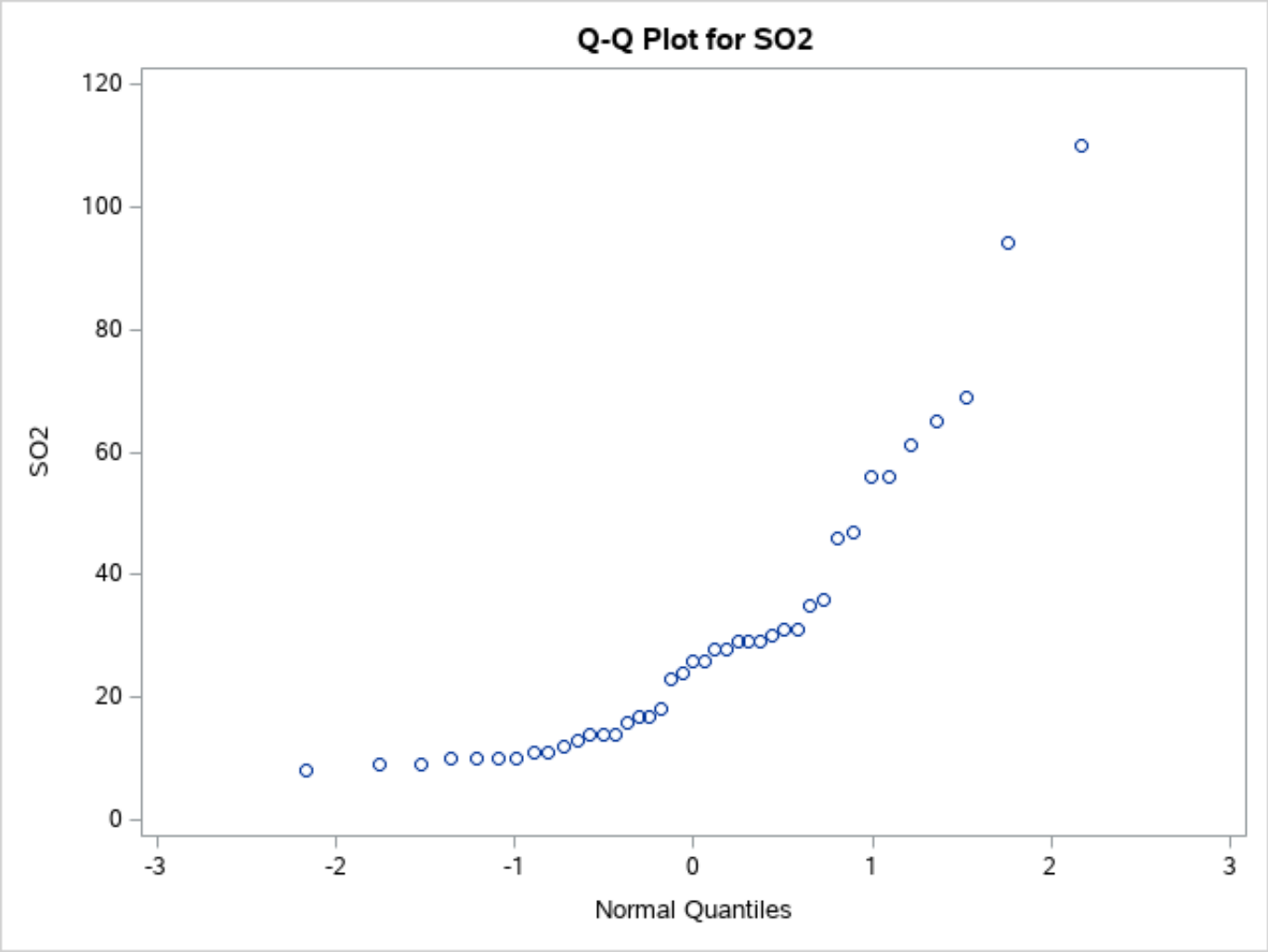
Quantiles (Definition 5)	
Level	**Quantile**
100% Max	110
99%	110
95%	69
90%	61
75% Q3	35
50% Median	26
25% Q1	13
10%	10
5%	9
1%	8
0% Min	8

Extreme Observations					
Lowest			**Highest**		
Value	**City**	**Obs**	**Value**	**City**	**Obs**
8	Wichita	14	61	Pittsburgh	30
9	Dallas	34	65	Cleveland	27
9	New Orleans	16	69	Philadelphia	29
10	Houston	35	94	Providence	31
10	Memphis	32	110	Chicago	11

The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure
Variable: SO2Sq

Moments			
N	41	**Sum Weights**	41
Mean	1440.43902	**Sum Observations**	59058
Std Deviation	2419.23423	**Variance**	5852694.25
Skewness	3.07089326	**Kurtosis**	10.4824724
Uncorrected SS	319177218	**Corrected SS**	234107770
Coeff Variation	167.951172	**Std Error Mean**	377.82091

Basic Statistical Measures			
Location		**Variability**	
Mean	1440.439	**Std Deviation**	2419
Median	676.000	**Variance**	5852694
Mode	100.000	**Range**	12036
		Interquartile Range	1056

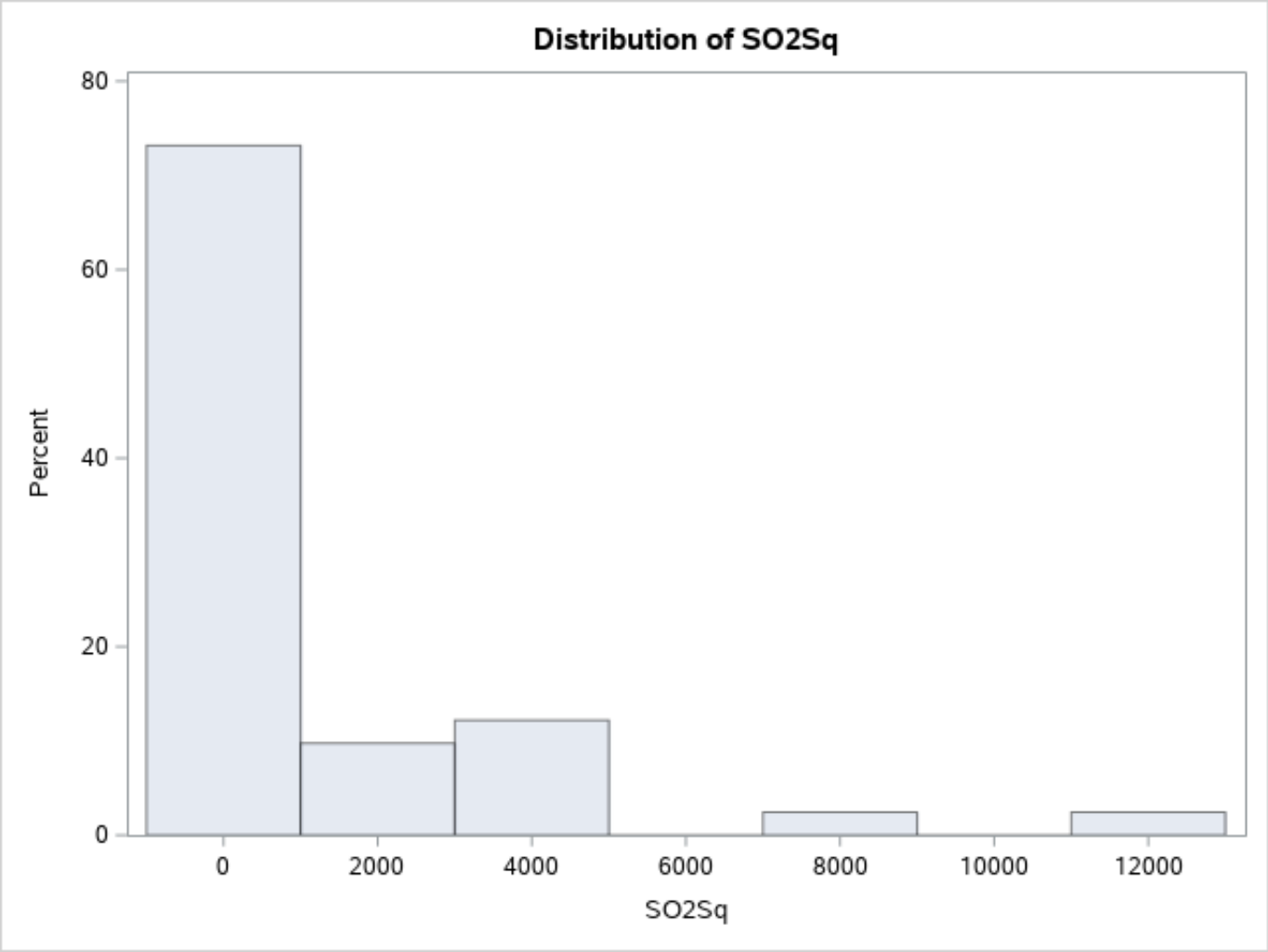
Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	3.812492	**Pr > |t|**	0.0005
Sign	**M**	20.5	**Pr >= |M|**	<.0001
Signed Rank	**S**	430.5	**Pr >= |S|**	<.0001

Tests for Normality				
Test	**Statistic**		**p Value**	
Shapiro-Wilk	**W**	0.587265	**Pr < W**	<0.0001
Kolmogorov-Smirnov	**D**	0.310254	**Pr > D**	<0.0100
Cramer-von Mises	**W-Sq**	1.109788	**Pr > W-Sq**	<0.0050
Anderson-Darling	**A-Sq**	5.801276	**Pr > A-Sq**	<0.0050

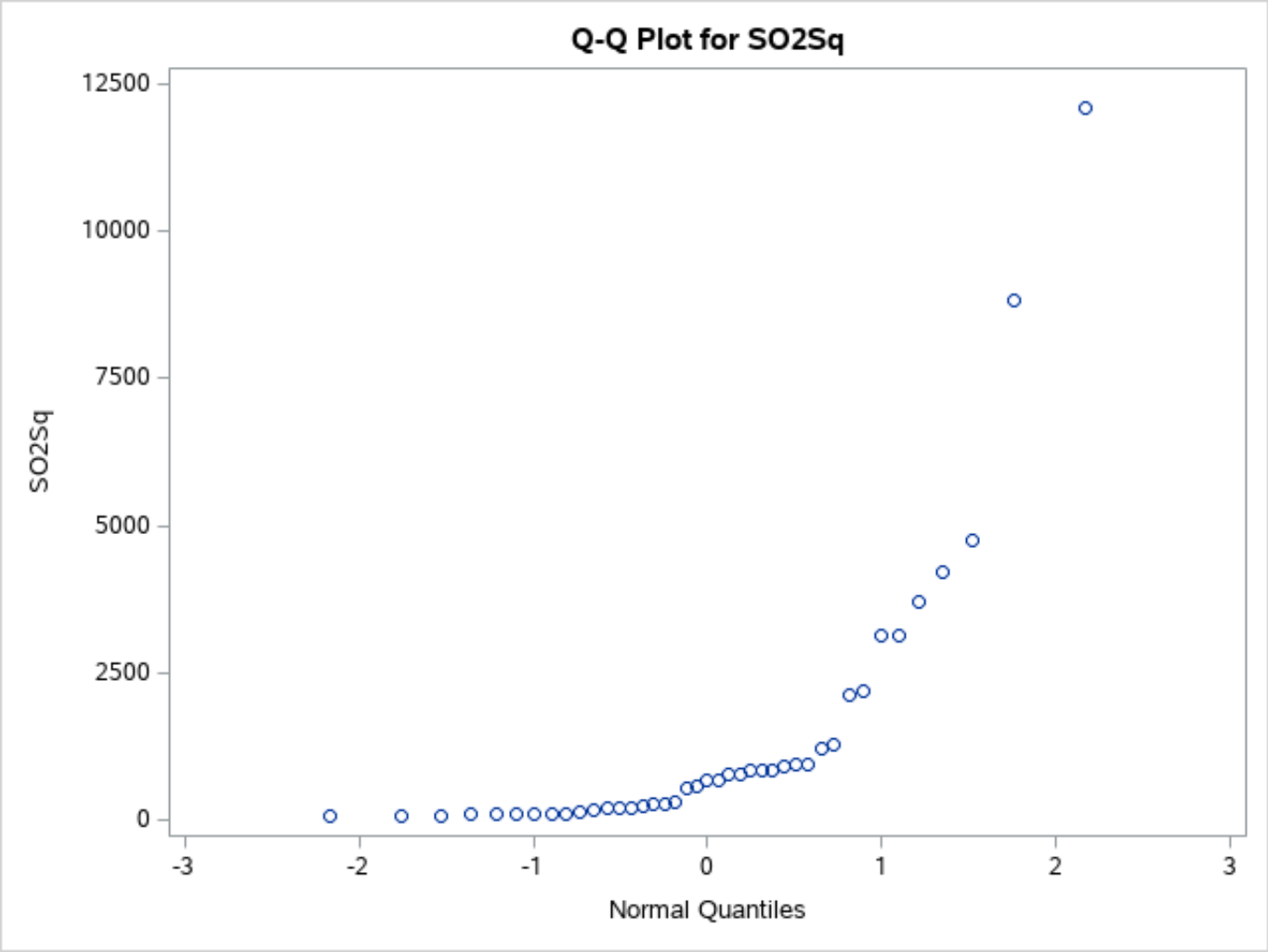
Quantiles (Definition 5)	
Level	**Quantile**
100% Max	12100
99%	12100
95%	4761
90%	3721
75% Q3	1225
50% Median	676
25% Q1	169
10%	100
5%	81
1%	64
0% Min	64

Extreme Observations					
Lowest			**Highest**		
Value	**City**	**Obs**	**Value**	**City**	**Obs**
64	Wichita	14	3721	Pittsburgh	30
81	Dallas	34	4225	Cleveland	27
81	New Orleans	16	4761	Philadelphia	29
100	Houston	35	8836	Providence	31
100	Memphis	32	12100	Chicago	11

The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure
Variable: sqrtSO2

Moments			
N	41	**Sum Weights**	41
Mean	5.14686931	**Sum Observations**	211.021642
Std Deviation	1.90983761	**Variance**	3.64747971
Skewness	0.9843267	**Kurtosis**	0.53025958
Uncorrected SS	1232	**Corrected SS**	145.899188
Coeff Variation	37.1067827	**Std Error Mean**	0.29826652

Basic Statistical Measures			
Location		**Variability**	
Mean	5.146869	**Std Deviation**	1.90984
Median	5.099020	**Variance**	3.64748
Mode	3.162278	**Range**	7.65966
		Interquartile Range	2.31053

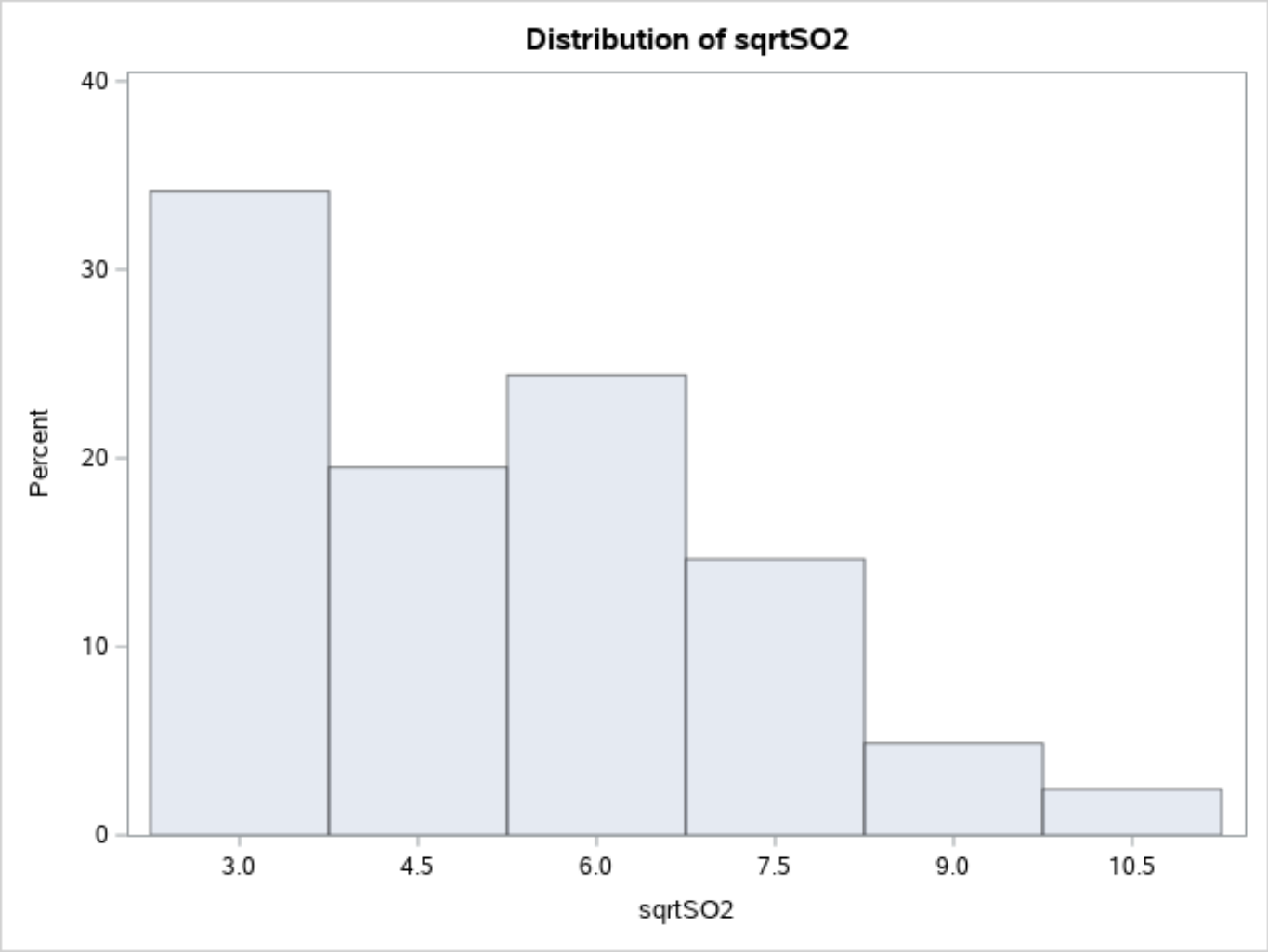
Tests for Location: Mu0=0				
Test	Statistic		p Value	
Student's t	t	17.25594	Pr > |t|	<.0001
Sign	M	20.5	Pr >= |M|	<.0001
Signed Rank	S	430.5	Pr >= |S|	<.0001

Tests for Normality				
Test	Statistic		p Value	
Shapiro-Wilk	W	0.906451	Pr < W	0.0026
Kolmogorov-Smirnov	D	0.144494	Pr > D	0.0300
Cramer-von Mises	W-Sq	0.174534	Pr > W-Sq	0.0107
Anderson-Darling	A-Sq	1.136161	Pr > A-Sq	0.0050

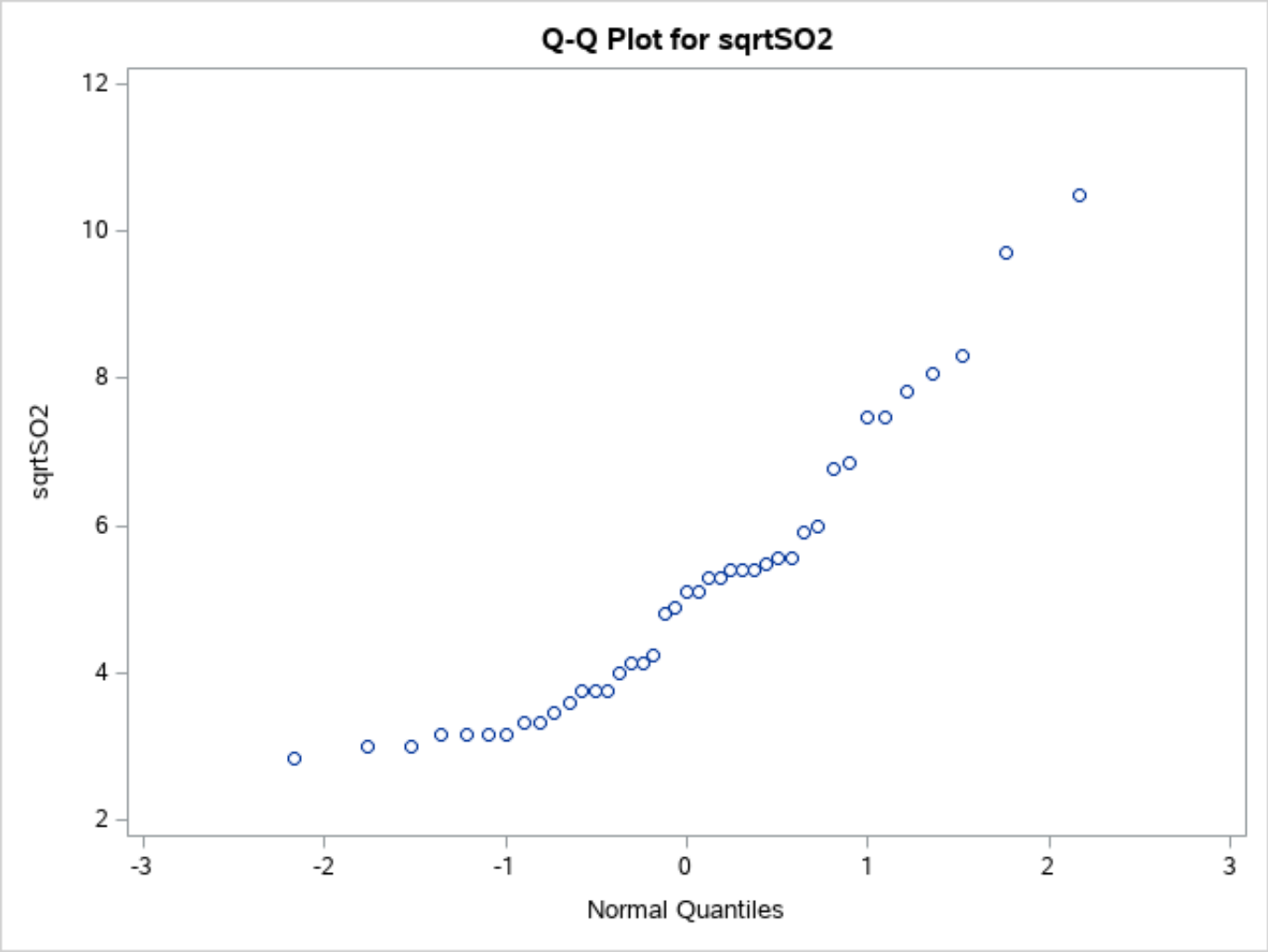
Quantiles (Definition 5)	
Level	Quantile
100% Max	10.48809
99%	10.48809
95%	8.30662
90%	7.81025
75% Q3	5.91608
50% Median	5.09902
25% Q1	3.60555
10%	3.16228
5%	3.00000
1%	2.82843
0% Min	2.82843

Extreme Observations					
Lowest			Highest		
Value	City	Obs	Value	City	Obs
2.82843	Wichita	14	7.81025	Pittsburgh	30
3.00000	Dallas	34	8.06226	Cleveland	27
3.00000	New Orleans	16	8.30662	Philadelphia	29
3.16228	Houston	35	9.69536	Providence	31
3.16228	Memphis	32	10.48809	Chicago	11

The UNIVARIATE Procedure



The UNIVARIATE Procedure



Procedure

Procedure