

Simulation with $sdu=.01$ and $c=0.01$

Modules:

MAIN	BAYESREGRESSIONUPDATE
MVNRNDT	BAYESVARIANCEUPDATE
QDRAW	RANDSTDNORMT
QDRAWLOW	QDRAWVEC

COLVEC (undefined)

Sweep:	1000
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Sweep:	2000
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Sweep:	3000
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Sweep:	4000
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Sweep:	5000
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Sweep:	6000
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Sweep:	7000
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Sweep:	8000
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Sweep:	9000
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Sweep:	10000
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Simulation with $sdu=.01$ and $c=0.01$

The MEANS Procedure

Variable	N	Mean	Std Dev	Minimum	Maximum
SWEEP	8000	6001	2310	2001	10000
SDU	8000	0.0112	0.0027	0.0061	0.0282
C	8000	0.0095	0.0019	452E- 7	0.0173

Simulation with sdu=.01 and c=0.01

The UNIVARIATE Procedure

Variable: C

Moments			
N	8000	Sum Weights	8000
Mean	0.00948366	Sum Observations	75.8692748
Std Deviation	0.00186782	Variance	3.48875E- 6
Skewness	- 1.0167234	Kurtosis	2.86509948
Uncorrected SS	0.74742491	Corrected SS	0.02790655
Coeff Variation	19.6951487	Std Error Mean	0.00002088

Basic Statistical Measures			
Location		Variability	
Mean	0.009484	Std Deviation	0.00187
Median	0.009667	Variance	3.48875E- 6
Mode	.	Range	0.01727
		Interquartile Range	0.00213

Tests for Location: Mu0=0				
Test	Statistic		p Value	
Student's t	t	454.1358	Pr > t	<.0001
Sign	M	4000	Pr >= M	<.0001
Signed Rank	S	16002000	Pr >= S	<.0001

Simulation with $sdu=.01$ and $c=0.01$

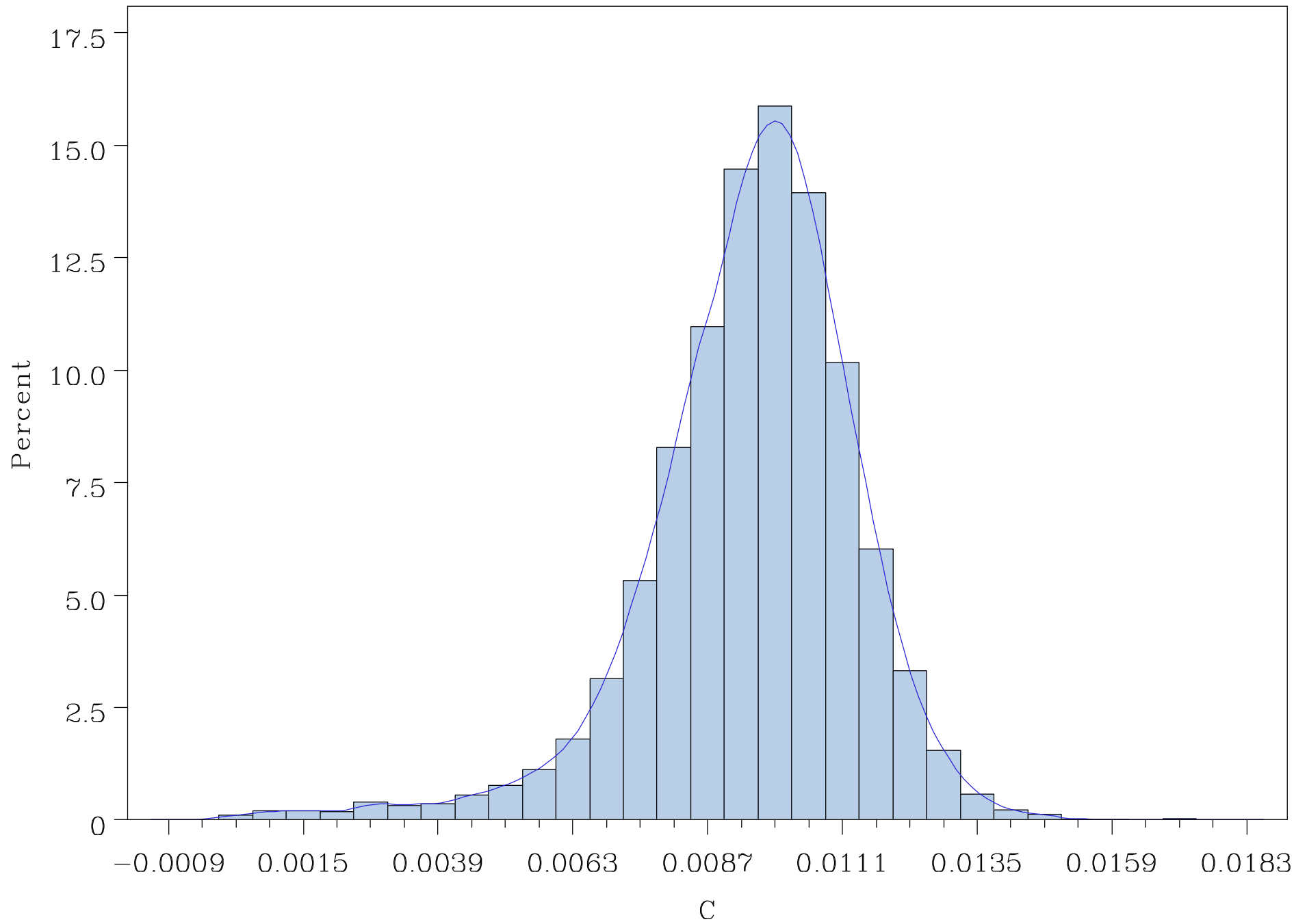
The UNIVARIATE Procedure

Variable: C

Quantiles (Definition 5)	
Quantile	Estimate
100% Max	1.73132E- 02
99%	1.31877E- 02
95%	1.21069E- 02
90%	1.15590E- 02
75% Q3	1.06625E- 02
50% Median	9.66708E- 03
25% Q1	8.53369E- 03
10%	7.32579E- 03
5%	6.31329E- 03
1%	2.89809E- 03
0% Min	4.52375E- 05

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
4.52375E- 05	3069	0.0148708	4285
5.03757E- 05	4904	0.0152607	9394
1.69001E- 04	4392	0.0158018	7528
2.29892E- 04	3734	0.0168451	5856
2.63725E- 04	6522	0.0173132	4750

Simulation with $sdu=.01$ and $c=0.01$



Simulation with sdu=.01 and c=0.01

The UNIVARIATE Procedure

Variable: SDU

Moments			
N	8000	Sum Weights	8000
Mean	0.01123458	Sum Observations	89.8766355
Std Deviation	0.00266648	Variance	7.1101E- 6
Skewness	1.21297206	Kurtosis	2.17811702
Uncorrected SS	1.06659986	Corrected SS	0.05687366
Coeff Variation	23.7345446	Std Error Mean	0.00002981

Basic Statistical Measures			
Location		Variability	
Mean	0.011235	Std Deviation	0.00267
Median	0.010700	Variance	7.1101E- 6
Mode	.	Range	0.02204
		Interquartile Range	0.00326

Tests for Location: Mu0=0				
Test	Statistic		p Value	
Student's t	t	376.8462	Pr > t	<.0001
Sign	M	4000	Pr >= M	<.0001
Signed Rank	S	16002000	Pr >= S	<.0001

Simulation with $sdu=.01$ and $c=0.01$

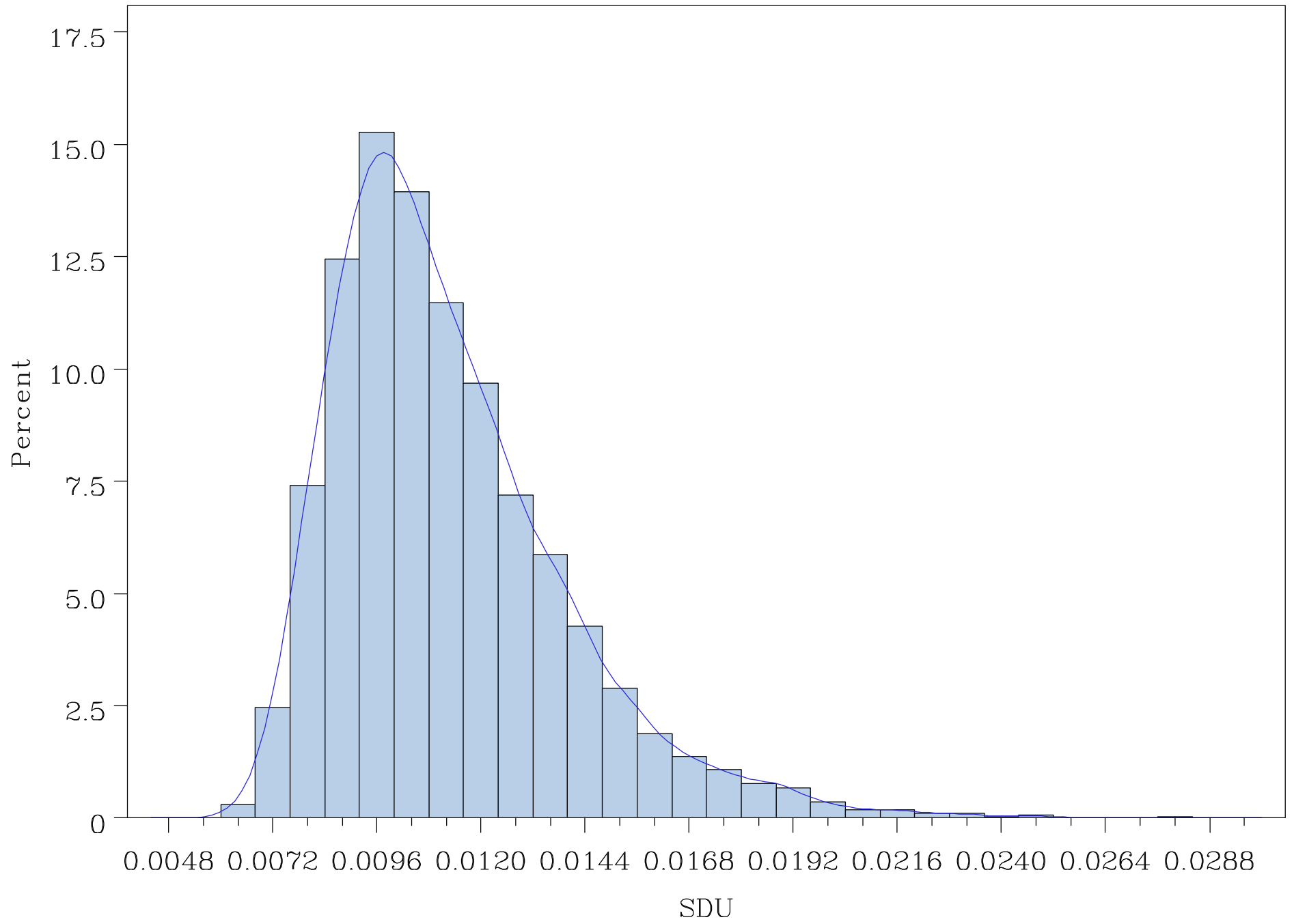
The UNIVARIATE Procedure

Variable: SDU

Quantiles (Definition 5)	
Quantile	Estimate
100% Max	2.8192E- 02
99%	1.9691E- 02
95%	1.6376E- 02
90%	1.4735E- 02
75% Q3	1.2587E- 02
50% Median	1.0700E- 02
25% Q1	9.3319E- 03
10%	8.3852E- 03
5%	7.9049E- 03
1%	7.2045E- 03
0% Min	6.1473E- 03

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
6.1473E- 03	3564	0.0247555	3068
6.2693E- 03	2219	0.0250243	8192
6.4407E- 03	4340	0.0251933	3075
6.4541E- 03	2628	0.0278347	2705
6.5174E- 03	8385	0.0281921	9799

Simulation with $sdu=.01$ and $c=0.01$



Simulation with $sdu=.01$ and $c=0.01$

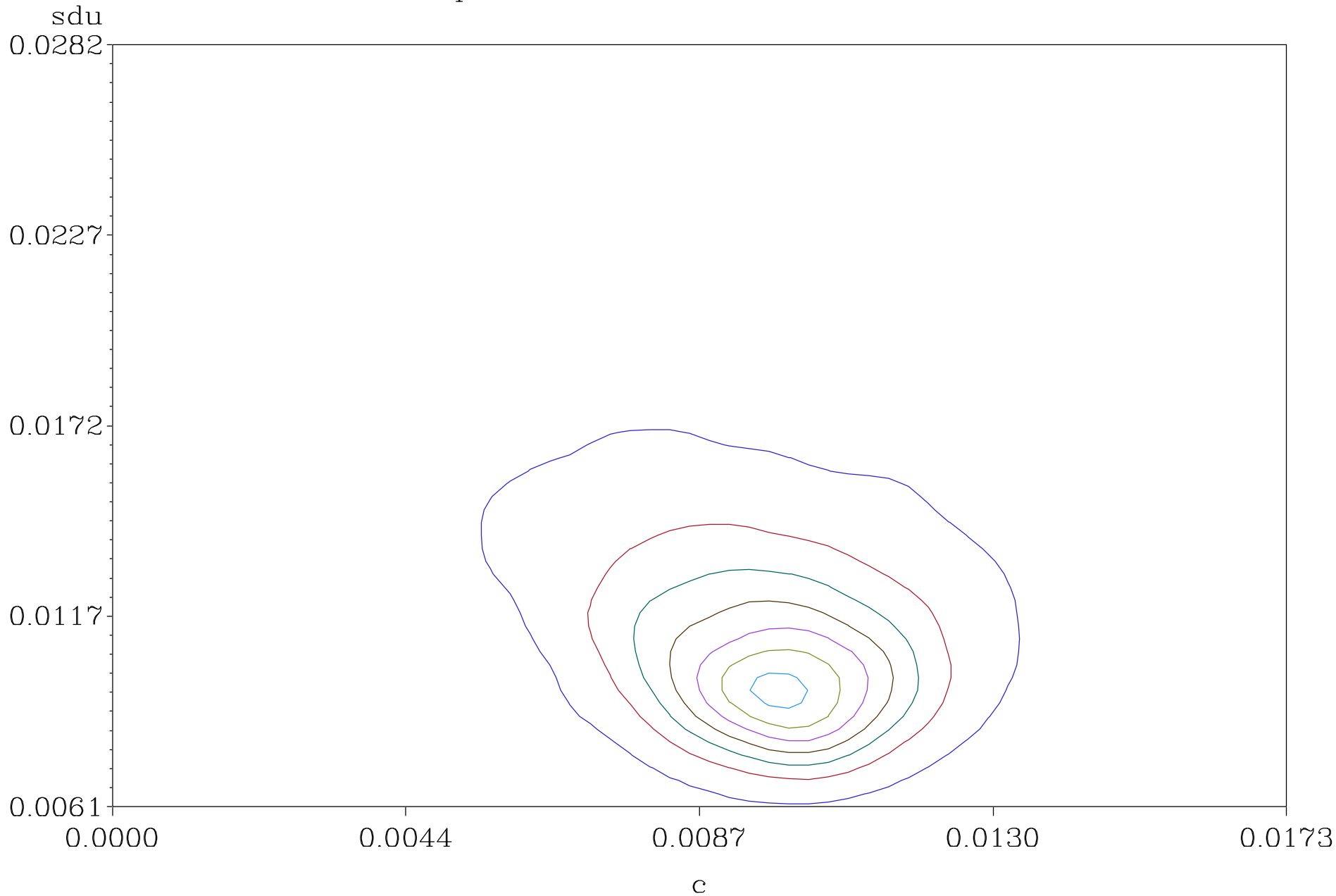
The KDE Procedure

Inputs	
Data Set	WORK.PARMOUT
Number of Observations Used	8000
Variable 1	SDU
Variable 2	C
Bandwidth Method	Simple Normal Reference

Controls		
	SDU	C
Grid Points	60	60
Lower Grid Limit	0.0061	452E- 7
Upper Grid Limit	0.0282	0.0173
Bandwidth Multiplier	1	1

Levels					
Percent	Density	Lower for SDU	Upper for SDU	Lower for C	Upper for C
1	328.09	0.0061	0.022	0.0003	0.015
5	1413.67	0.0061	0.019	0.0044	0.014
10	3554.53	0.0061	0.017	0.0056	0.013
50	22959	0.0073	0.012	0.0079	0.012
90	46030	0.0084	0.011	0.0091	0.011
95	49795	0.0088	0.010	0.0091	0.010
99	52497	0.0091	0.0099	0.0094	0.0100
100	52589	0.0095	0.0095	0.0097	0.0097

Joint posterior with sdu=.01 and c=0.01



Density — 2629 — 10518 — 18406 — 26295
 — 34183 — 42071 — 49960

Simulation with $sdu=.01$ and $c=0.01$ (No non-neg restriction on c)

Modules:

MAIN	BAYESREGRESSIONUPDATE
MVNRNDT	BAYESVARIANCEUPDATE
QDRAW	RANDSTDNORMT
QDRAWLOW	QDRAWVEC

COLVEC (undefined)

Sweep:	1000
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Sweep:	2000
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Sweep:	3000
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Sweep:	4000
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Sweep:	5000
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Sweep:	6000
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Sweep:	7000
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Sweep:	8000
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Sweep:	9000
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Sweep:	10000
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Simulation with $sdu=.01$ and $c=0.01$ (No non-neg restriction on c)

The MEANS Procedure

Variable	N	Mean	Std Dev	Minimum	Maximum
SWEEP	8000	6001	2310	2001	10000
SDU	8000	0.0114	0.0029	0.0062	0.0278
C	8000	-0.004	0.0087	-0.017	0.0159

Simulation with $sdu=.01$ and $c=0.01$ (No non-neg restriction on c)

The UNIVARIATE Procedure

Variable: C

Moments			
N	8000	Sum Weights	8000
Mean	- 0.0041311	Sum Observations	- 33.04846
Std Deviation	0.00867437	Variance	0.00007524
Skewness	0.8826409	Kurtosis	- 1.0213791
Uncorrected SS	0.73840805	Corrected SS	0.60188296
Coeff Variation	- 209.97952	Std Error Mean	0.00009698

Basic Statistical Measures			
Location		Variability	
Mean	- 0.00413	Std Deviation	0.00867
Median	- 0.00887	Variance	0.0000752
Mode	.	Range	0.03276
		Interquartile Range	0.01750

Tests for Location: $\mu_0=0$				
Test	Statistic		p Value	
Student's t	t	- 42.5959	Pr > t	<.0001
Sign	M	- 1696	Pr >= M	<.0001
Signed Rank	S	- 7390188	Pr >= S	<.0001

Simulation with $sdu=.01$ and $c=0.01$ (No non-neg restriction on c)

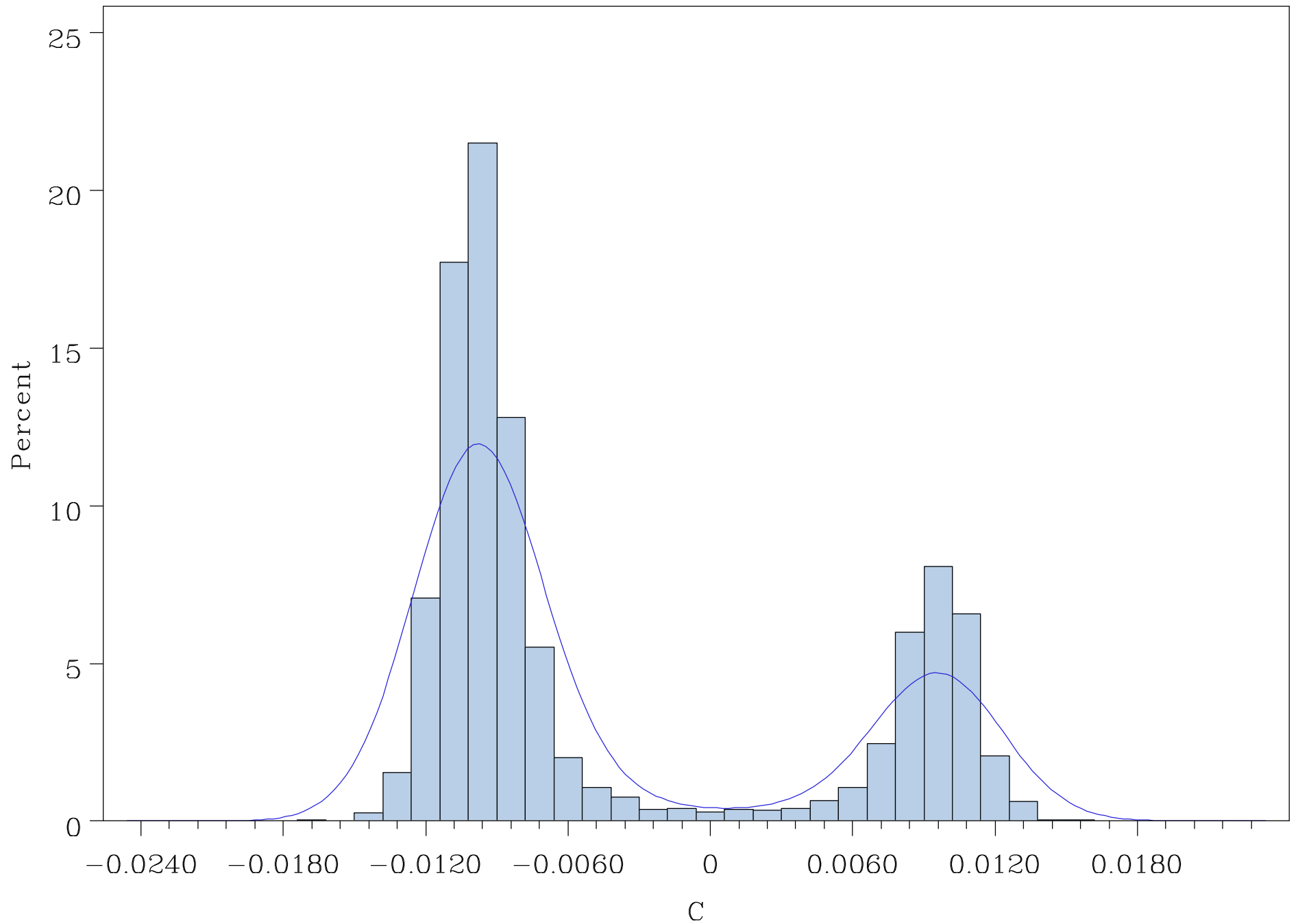
The UNIVARIATE Procedure

Variable: C

Quantiles (Definition 5)	
Quantile	Estimate
100% Max	0.01587484
99%	0.01228354
95%	0.01089045
90%	0.01012353
75% Q3	0.00720709
50% Median	-0.00887438
25% Q1	-0.01029583
10%	-0.01128945
5%	-0.01188294
1%	-0.01304444
0% Min	-0.01688235

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
-0.0168823	4966	0.0138932	7130
-0.0163818	7898	0.0139488	6518
-0.0148865	2095	0.0152530	9310
-0.0147741	3067	0.0154986	8059
-0.0147146	7603	0.0158748	7285

Simulation with $sdu=.01$ and $c=0.01$ (No non-neg restriction on c)



Simulation with $sdu=.01$ and $c=0.01$ (No non-neg restriction on c)

The UNIVARIATE Procedure

Variable: SDU

Moments			
N	8000	Sum Weights	8000
Mean	0.01138279	Sum Observations	91.0623108
Std Deviation	0.00288909	Variance	8.34684E- 6
Skewness	1.2380169	Kurtosis	1.95654916
Uncorrected SS	1.10330941	Corrected SS	0.06676636
Coeff Variation	25.3812096	Std Error Mean	0.0000323

Basic Statistical Measures			
Location		Variability	
Mean	0.011383	Std Deviation	0.00289
Median	0.010736	Variance	8.34684E- 6
Mode	.	Range	0.02167
		Interquartile Range	0.00346

Tests for Location: $\mu_0=0$				
Test	Statistic		p Value	
Student's t	t	352.3974	Pr > t	<.0001
Sign	M	4000	Pr >= M	<.0001
Signed Rank	S	16002000	Pr >= S	<.0001

Simulation with $sdu=0.01$ and $c=0.01$ (No non-neg restriction on c)

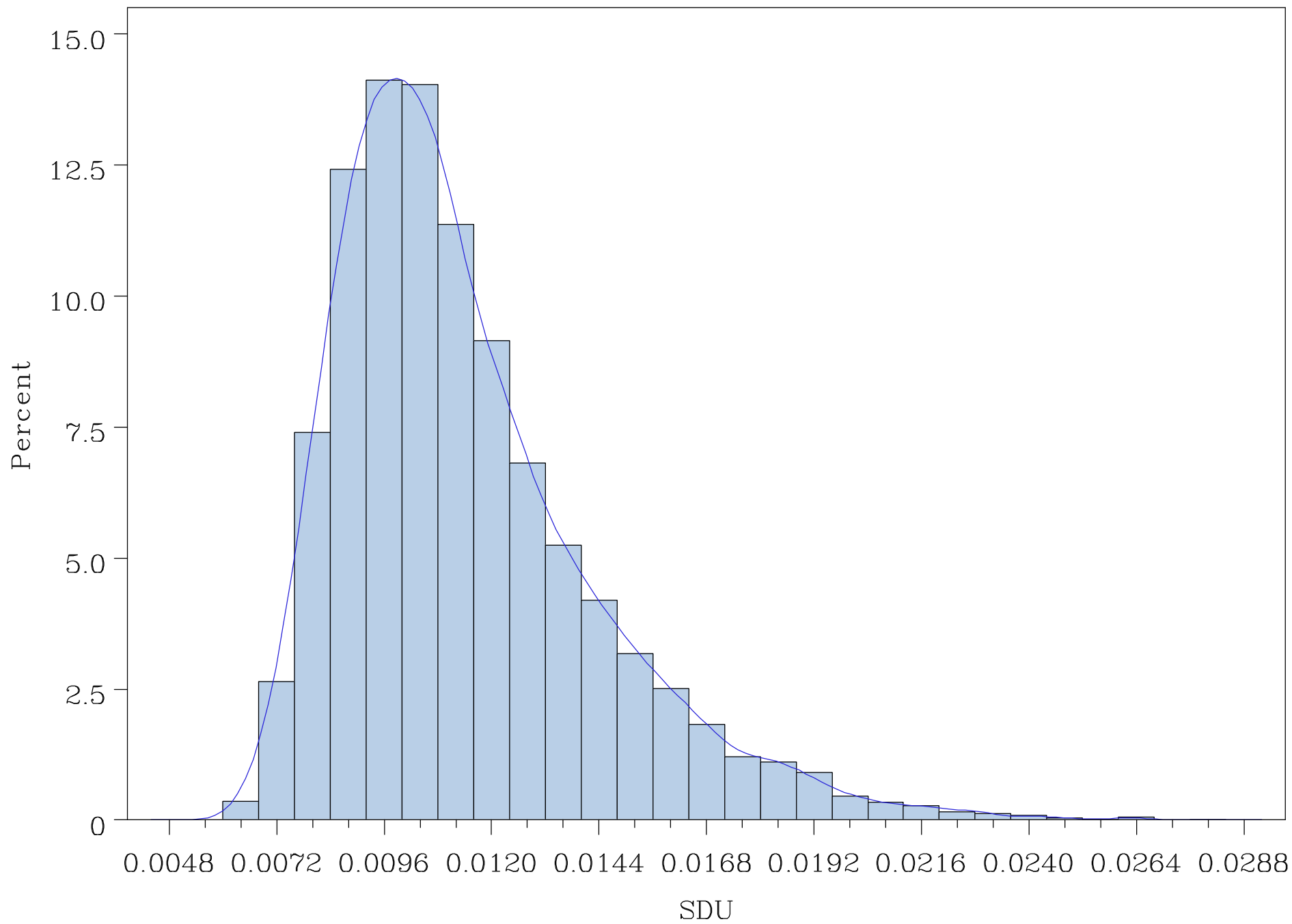
The UNIVARIATE Procedure

Variable: SDU

Quantiles (Definition 5)	
Quantile	Estimate
100% Max	0.02783546
99%	0.02055729
95%	0.01705265
90%	0.01535117
75% Q3	0.01279034
50% Median	0.01073566
25% Q1	0.00932623
10%	0.00836471
5%	0.00787786
1%	0.00713769
0% Min	0.00616457

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
0.00616457	2284	0.0261709	9134
0.00622600	7036	0.0262725	9797
0.00631029	3379	0.0262782	6421
0.00633282	8134	0.0264391	4200
0.00647814	6178	0.0278355	2668

Simulation with $sdu=.01$ and $c=0.01$ (No non-neg restriction on c)



Simulation with $sdu=0.01$ and $c=0.01$ (No non-neg restriction on c)

The KDE Procedure

Inputs	
Data Set	WORK.PARMOUT
Number of Observations Used	8000
Variable 1	SDU
Variable 2	C
Bandwidth Method	Simple Normal Reference

Controls		
	SDU	C
Grid Points	60	60
Lower Grid Limit	0.0062	-0.017
Upper Grid Limit	0.0278	0.0159
Bandwidth Multiplier	1	1

Levels					
Percent	Density	Lower for SDU	Upper for SDU	Lower for C	Upper for C
1	211.50	0.0062	0.022	-0.017	0.016
5	752.23	0.0062	0.019	-0.016	0.015
10	1676.22	0.0062	0.017	-0.016	0.014
50	8040.16	0.0073	0.013	-0.014	-0.006
90	19803	0.0091	0.011	-0.011	-0.009
95	20801	0.0091	0.011	-0.011	-0.009
99	21289	0.0095	0.010	-0.011	-0.010
100	21384	0.0098	0.0098	-0.010	-0.010

Joint posterior with sdu=.01 and c=0.01

