# Kaggle Rain Training Set - Variable Summary

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October 7, 2015

```
##
## Attaching package: 'dplyr'
## The following objects are masked from 'package:data.table':
##
##
       between, last
##
## The following objects are masked from 'package:stats':
##
##
       filter, lag
## The following objects are masked from 'package:base':
##
##
       intersect, setdiff, setequal, union
## loading train from Rdata fileloading test from Rdata file
```

Summary of the Kaggle Rain training data set, which has 8476966 rows and 24 columns.

There are 5707878 rows with at least one NA, which is 67.333973% of the data set.

There are 828265 unique Ids in the data set, representing an hourly rain gauge measurement.

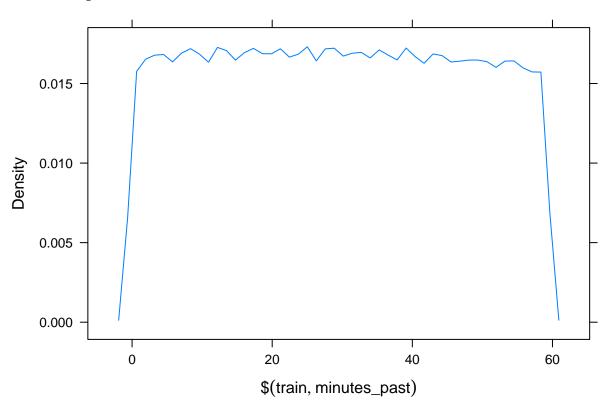
#### Variable Summary

##		nmiss	min	mean	max	P01
##	Id	0	2.00	591071.44	1180945.00	12689.000
##	minutes_past	0	0.00	29.34	59.00	0.000
##	radardist_km	0	0.00	9.63	21.00	1.000
##	Ref	2127591	-31.00	22.93	71.00	-2.500
##	Ref_5x5_10th	3192978	-32.00	19.95	62.50	-4.500
##	Ref_5x5_50th	2120484	-32.00	22.61	69.00	-2.500
##	Ref 5x5 90th	925685	-28.50	25.90	72.50	0.500

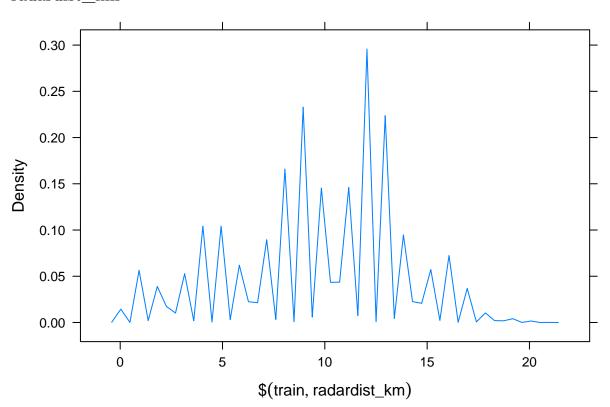
		1760623	-32.	00		24.71	9	92.50	-0.	500
##	RefComposite Sx5_10th		-31.			22.16		66.00		500
	RefComposite_5x5_50th		-27.	50	:	24.42	7	71.00	-0.	500
	RefComposite_5x5_90th	647763	-25.		:	27.37	ç	93.50	1.	500
	RhoHV	3542050	0.	21		0.97		1.05		512
##	RhoHV_5x5_10th	4343812	0.	21		0.92		1.05	0.	302
	RhoHV_5x5_50th	3540398	0.	21		0.97		1.05	0.	598
	RhoHV_5x5_90th	2571382	0.	21		1.02		1.05		828
	Zdr	3542050	-7.	88		0.54		7.94	-2.	938
##	Zdr_5x5_10th	4343812	-7.	88	,	-0.72		7.94	-4.	250
##	Zdr_5x5_50th	3540398	-7.	88		0.34		7.94	-2.	188
##	Zdr_5x5_90th	2571382	-7.	88		2.07		7.94	-0.	875
##	Kdp	4294331	-96.	04		0.04	17	79.75	-10.	900
##	Kdp_5x5_10th	5048184	-80.	79	,	-3.48		3.52	-13.	260
##	Kdp_5x5_50th	4289685	-78.	77		-0.47	-	12.80	-9.	470
##	Kdp_5x5_90th	3424190	-100.	20		4.08	14	14.60	-6.	310
##	Expected	0	0.	01	:	24.32	330	17.73	0.	010
##		PC	)5		P25		P50		P75	
##	Id	64610.00	0 294	470	.000	59148	5.000	889741	.750	
##	minutes_past	3.00	00	14	.000	2	9.000	44	.000	
##	radardist_km	2.00	00	7	.000	1	0.000	12	.000	
##	Ref	6.50	00	16	.000	2	2.500	29	.500	
##	Ref_5x5_10th	5.00	00	14	.000	2	0.000	26	.000	
##	Ref_5x5_50th	6.50	00	16	.000	2	2.500	29	.000	
##	Ref_5x5_90th	8.50	00	18	.000	2	5.500	33	.500	
##	RefComposite	8.00	00	17	.500	2	4.000	31	.500	
##	${\tt RefComposite\_5x5\_10th}$	6.50	00	16	.000	2	2.000	28	.500	
##	${\tt RefComposite\_5x5\_50th}$	8.00	00	17	.500	2	4.000	31	.500	
##	${\tt RefComposite\_5x5\_90th}$	9.50	00	19	.500	2	7.000	35	.000	
##	RhoHV	0.83	35	0	.972		0.992	1	.002	
##	RhoHV_5x5_10th	0.66	32	0	.915		0.958	0	.982	
##	RhoHV_5x5_50th	0.85	8	0	.975		0.992	0	.998	
##	RhoHV_5x5_90th	0.97	'8	0	.998		1.012	1	.052	
##	Zdr	-1.37	'5	-0	. 188		0.375	1	.062	
	Zdr_5x5_10th	-2.31		-1	. 125	-	0.625	-0	. 188	
	Zdr_5x5_50th	-0.75	50	-0	.062		0.250		.688	
##	Zdr_5x5_90th	0.37	'5		.062		1.688		.625	
##	Kdp	-5.63	30	-1	.410		0.000		.750	
	Kdp_5x5_10th	-8.43	30	-4	.580	_	2.820	-1	.760	

##	Kdp_5x5_50th	-3.530	-0.710	0.000	0.350
##	Kdp_5x5_90th	0.000	2.070	3.520	5.640
##	Expected	0.254	0.350	1.270	3.556
##		P95	P99	variance	stdev
##	Id	1120198.000	1168568.000	1.160216e+11	340619.39
##	minutes_past	56.000	59.000	2.963600e+02	17.22
##	radardist_km	16.000	18.000	1.597000e+01	4.00
##	Ref	40.500	49.000	1.072300e+02	10.36
##	Ref_5x5_10th	35.000	42.000	8.479000e+01	9.21
##	Ref_5x5_50th	39.000	47.000	1.010600e+02	10.05
##	Ref_5x5_90th	44.500	53.000	1.234200e+02	11.11
##	RefComposite	43.000	51.000	1.142700e+02	10.69
##	${\tt RefComposite\_5x5\_10th}$	38.000	45.500	9.414000e+01	9.70
##	${\tt RefComposite\_5x5\_50th}$	42.000	50.000	1.086700e+02	10.42
##	${\tt RefComposite\_5x5\_90th}$	47.000	55.000	1.320800e+02	11.49
##	RhoHV	1.052	1.052	1.000000e-02	0.09
##	RhoHV_5x5_10th	0.995	1.002	2.000000e-02	0.13
##	RhoHV_5x5_50th	1.025	1.052	1.000000e-02	0.08
##	RhoHV_5x5_90th	1.052	1.052	0.000000e+00	0.05
##	Zdr	3.000	6.562	2.280000e+00	1.51
##	Zdr_5x5_10th	0.562	1.312	1.010000e+00	1.01
##	Zdr_5x5_50th	1.562	3.750	8.800000e-01	0.94
##	Zdr_5x5_90th	5.625	7.938	2.790000e+00	1.67
##	Kdp	5.630	10.860	1.497000e+01	3.87
##	Kdp_5x5_10th	-0.710	0.000	7.800000e+00	2.79
##	Kdp_5x5_50th	1.760	2.820	5.120000e+00	2.26
##	Kdp_5x5_90th	10.730	16.680	1.720000e+01	4.15
##	Expected	20.574	370.840	6.065078e+04	246.27

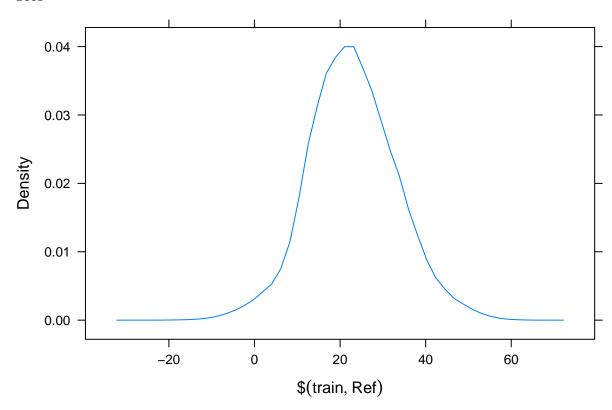
## $minutes\_past$



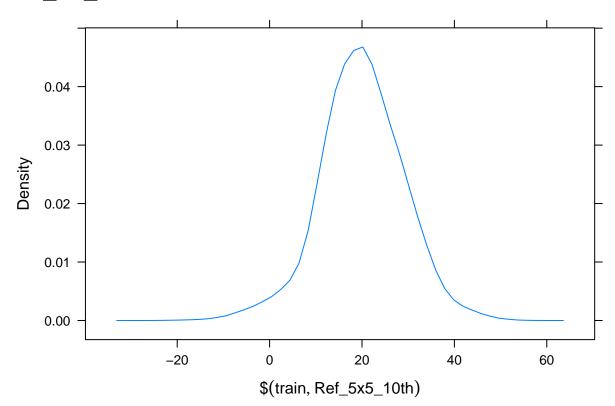
# ${\bf radardist\_km}$



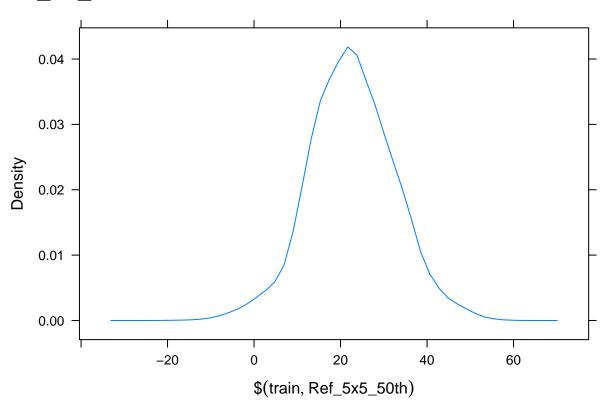




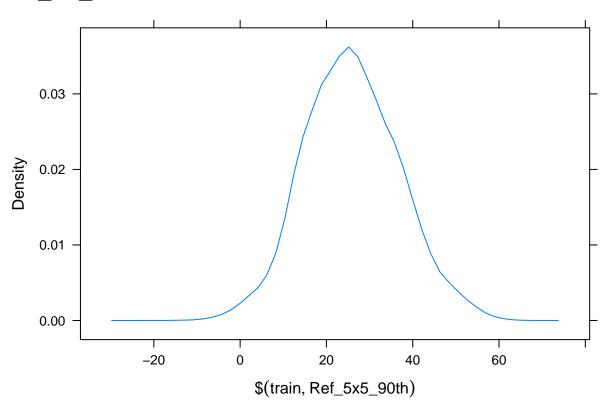
# $Ref\_5x5\_10th$



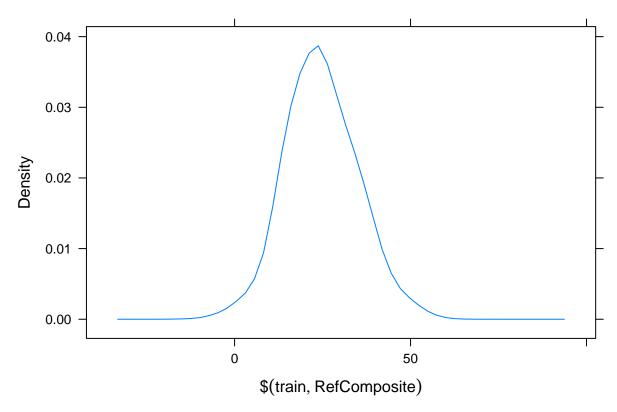
## $Ref\_5x5\_50th$



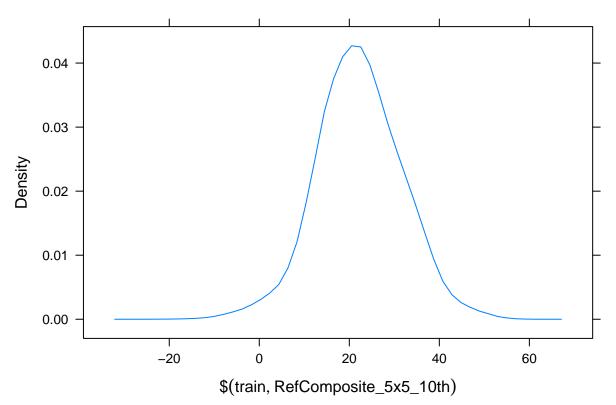
## $Ref\_5x5\_90th$



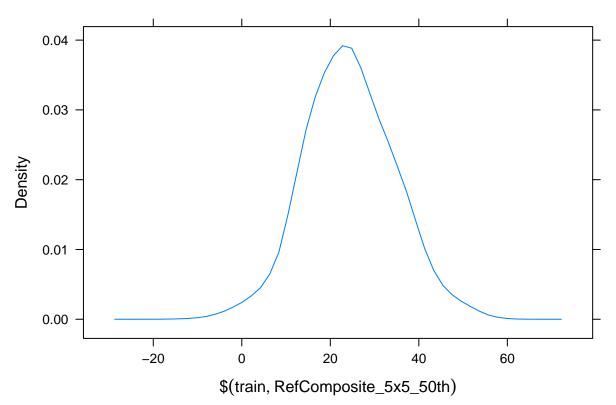
# RefComposite



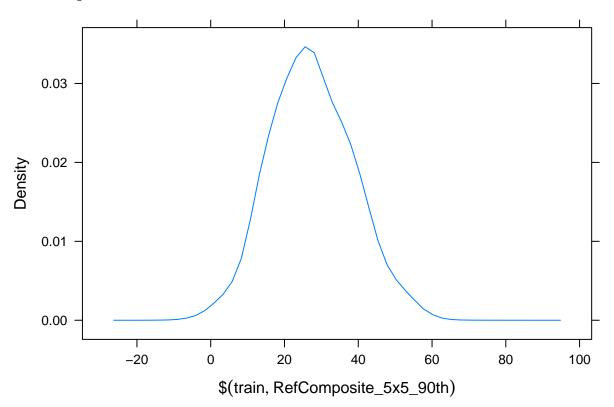
## $RefComposite\_5x5\_10th$



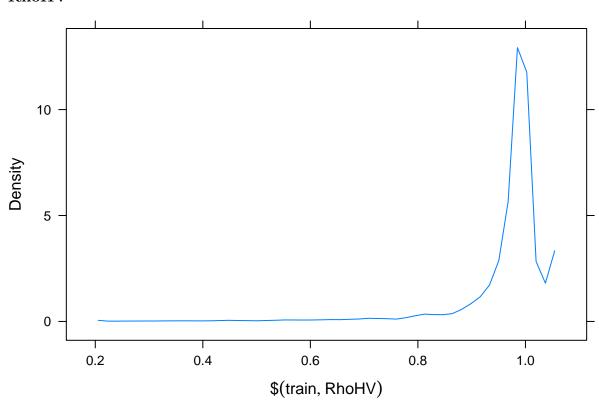
## $RefComposite\_5x5\_50th$



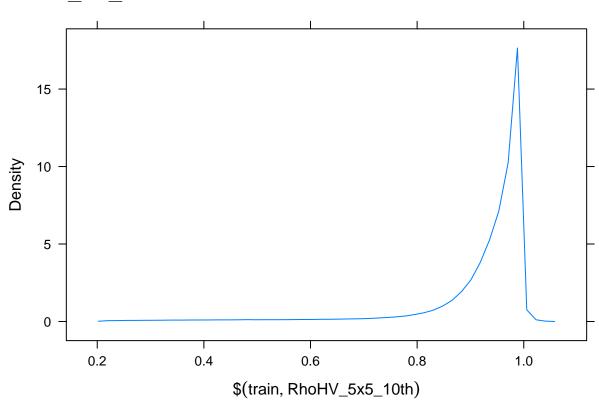
## $RefComposite\_5x5\_90th$



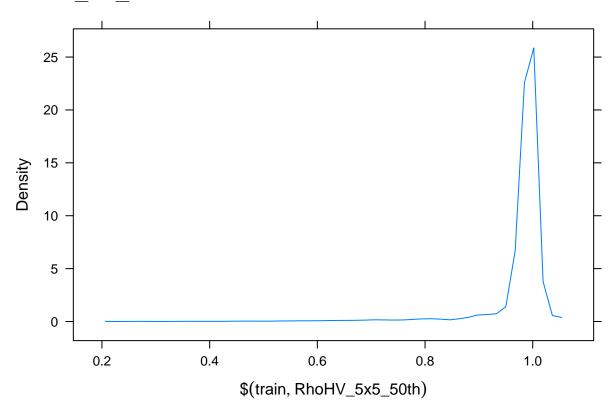
# RhoHV



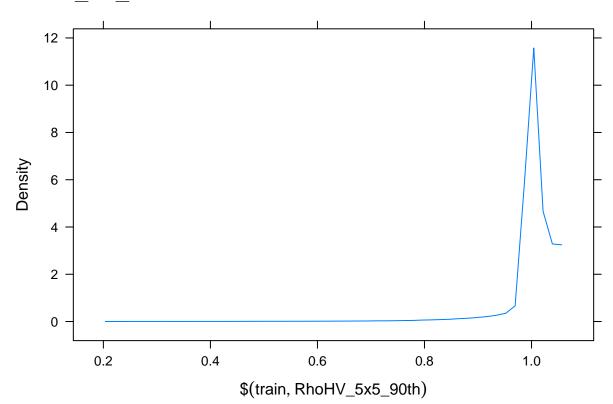
## $RhoHV\_5x5\_10th$



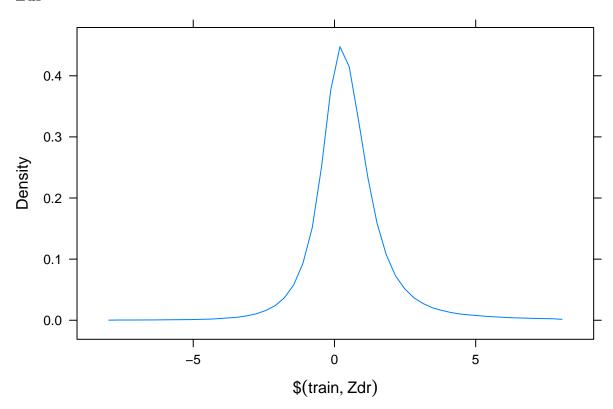
## $RhoHV\_5x5\_50th$



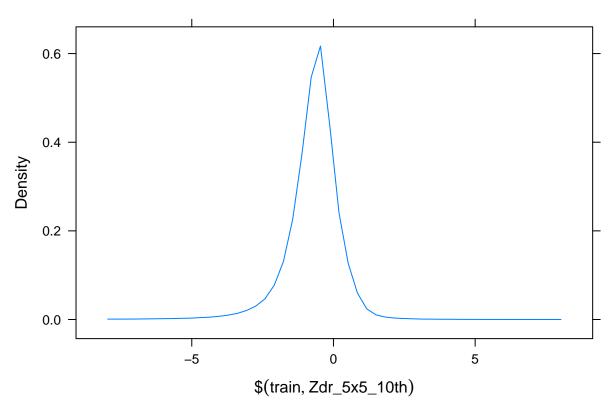
## $RhoHV\_5x5\_90th$



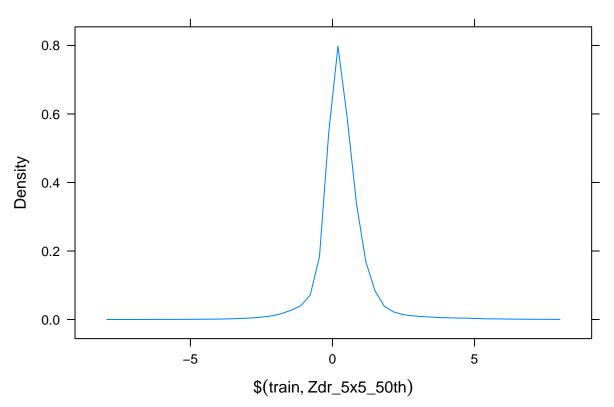




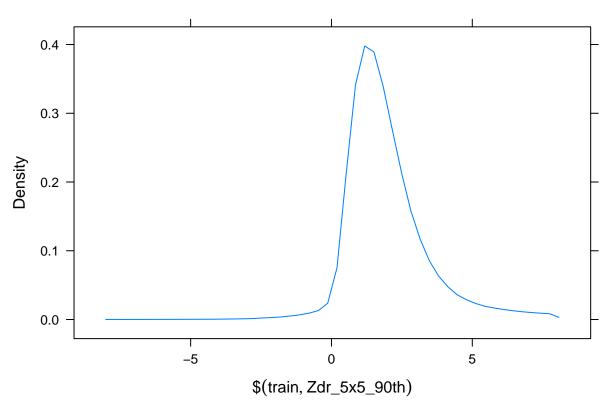
# $Zdr\_5x5\_10th$



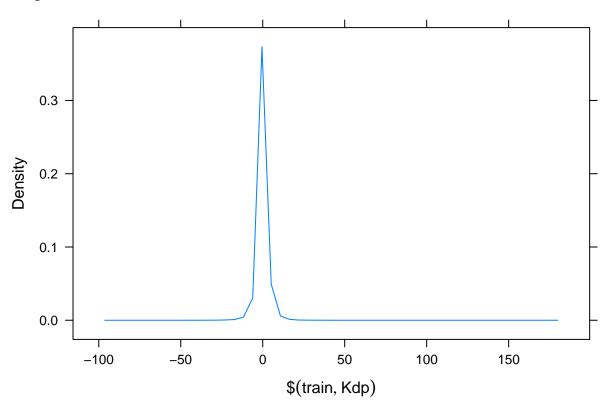
## $Zdr\_5x5\_50th$



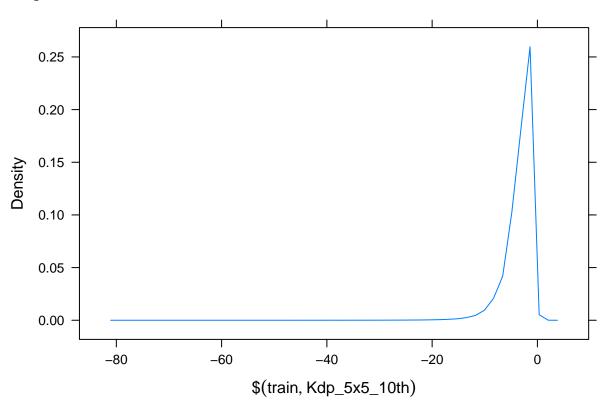
## $Zdr\_5x5\_90th$



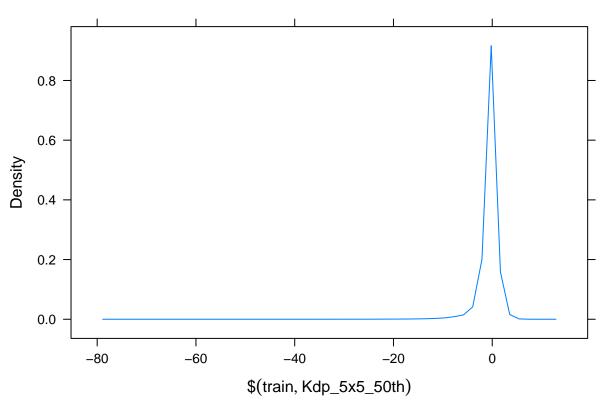




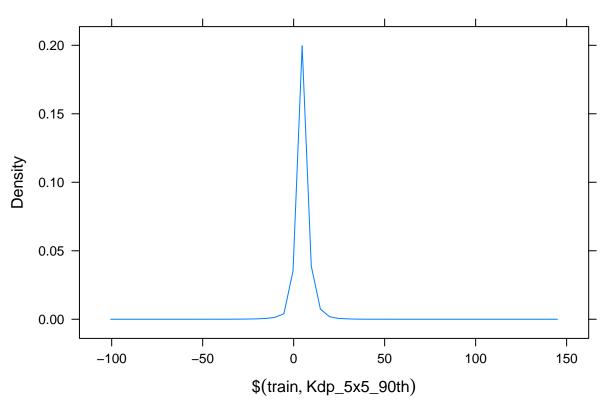
## Kdp\_5x5\_10th



## $Kdp\_5x5\_50th$



## Kdp\_5x5\_90th



## Expected

