Harvard Forest Data Archive HF113-09

Data File:

Name = hf113-09-hf-propane-daily.csv
Description = HF propane usage (daily)
Rows = 2089 Columns = 30
MD5 checksum = 33c1be04d0697943989fde75fd4c844f

Variables:

date = date
year = year
doy = day of year (nominalDay)
hour = hour (number)
seconds = seconds (number)
ants1.high.avg = average water temperature of supply on Ants Block #1 (celsius)
ants1.low.avg = average water temperature of return on Ants Block #1 (celsius)
ants2.high.avg = average water temperature of supply on Ants Block #2 (celsius)
ants2.low.avg = average water temperature of return on Ants Block #2 (celsius)
ants3.high.avg = average water temperature of supply on Ants Block #3 (celsius)
ants3.low.avg = average water temperature of return on Ants Block #3 (celsius)
plants1.high.avg = average water temperature of supply on Plants Block #1 (celsius)
plants1.low.avg = average water temp. of return on Plants Block #1 (celsius)
plants2.high.avg = average water temperature of supply on Plants Block #2 (celsius)
plants2.low.avg = average water temp. of return on Plants Block #2 (celsius)
boiler.supply.avg = average water temperature of supply for the whole system (celsius)
boiler.return.avg = average water temperature of return for the whole system (celsius)
ants.flow.avg = average rate of water flow for all Ant Blocks (gallonPerMinute)
plants.flow.avg = average rate of water flow for all Plant Blocks (gallonPerMinute)
ants.btuh.avg = estimate of heat used per day in the Ants chambers (britishThermalUnit)
ants1.delta.avg = average difference between supply and return temperatures for Ants Block #1 (celsius)
ants2.delta.avg = average difference between supply and return temperatures for Ants Block #2 (celsius)
ants3.delta.avg = average difference between supply and return temperatures for Ants Block #3 (celsius)

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plants.btuh.avg = estimate of heat used per day in the Plants
   chambers (britishThermalUnit)
plants1.delta.avg = average difference between supply and return
   temperatures for Plants Block #1 (celsius)
plants2.delta.avg = average difference between supply and return
   temperatures for Plants Block #2 (celsius)
batt.volt = datalogger battery voltage (volt)
gas.flow.cf.tot = total propane used (footCubed)
gas.flow.gal.tot = total propane used (gallon)
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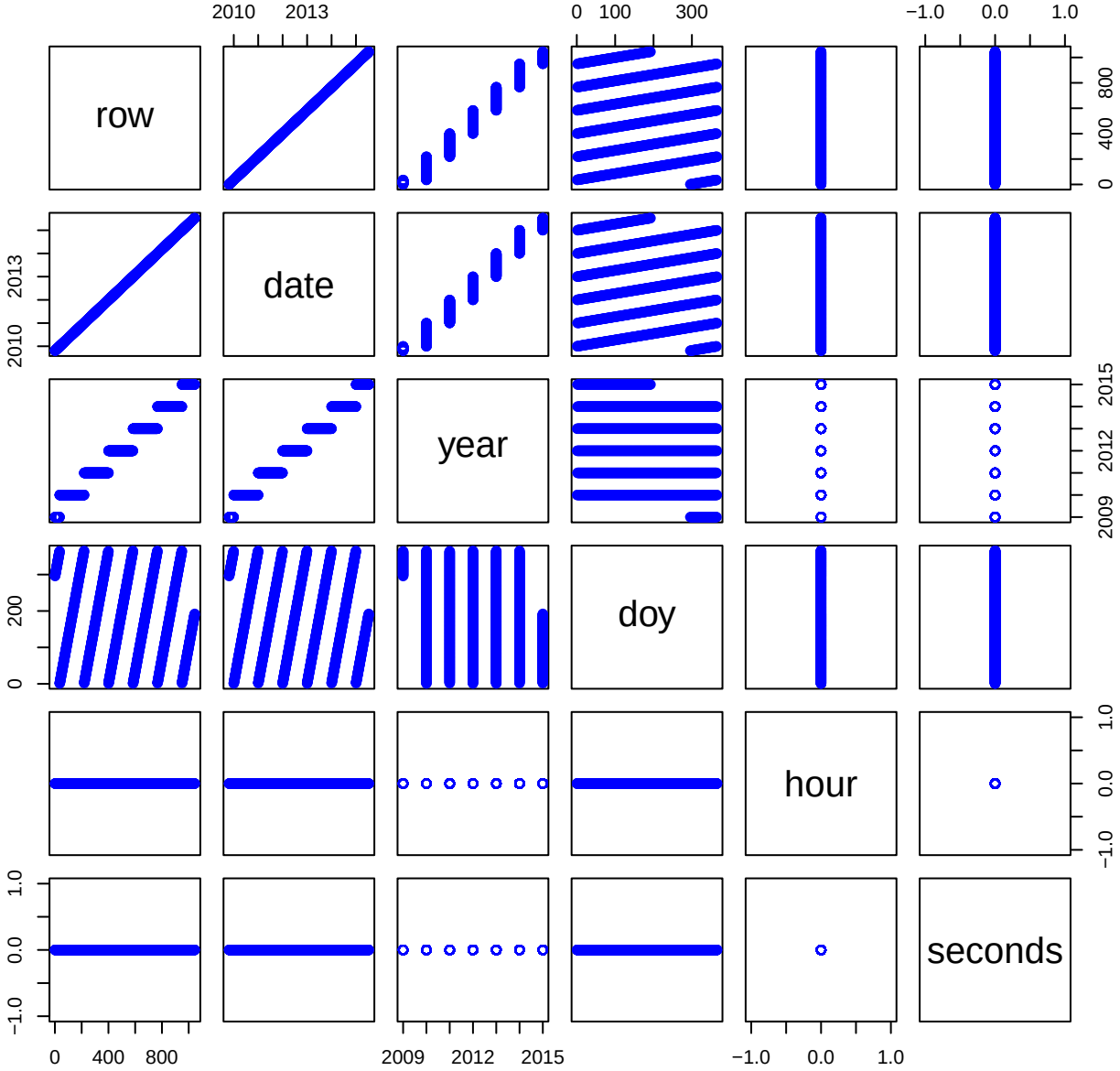
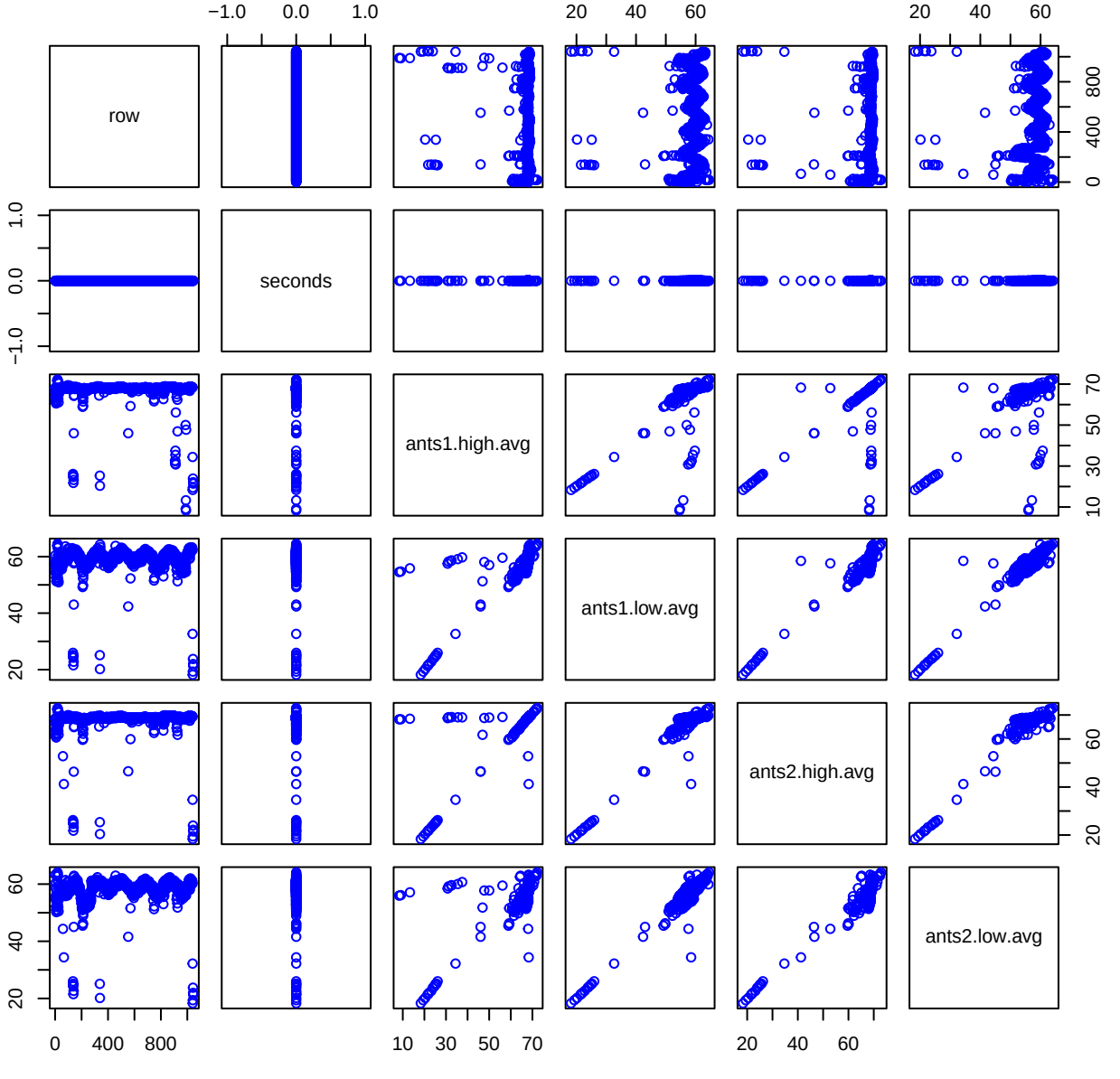
Variable	Min	Median	Mean	Max	NAs
date	2009-10-23	2012-09-01	2012-08-31	2015-07-11	0
year	2009.000	2012.000	2012.176	2015.000	0
doy	1.000	175.000	180.156	366.000	0
hour	0.000	0.000	0.000	0.000	0
seconds	0.000	0.000	0.000	0.000	0
ants1.high.a	8.320	67.980	66.750	72.360	0
ants1.low.av	17.000	59.520	58.798	64.770	0
ants2.high.a	17.160	68.850	67.997	73.040	0
ants2.low.av	17.130	58.850	57.926	64.400	0
ants3.high.a	17.150	67.950	67.160	72.410	0
ants3.low.av	16.940	58.260	57.419	63.030	0
plants1.high	-5.954	29.650	40.693	72.420	0
plants1.low.	-5.830	34.060	38.008	68.210	0
plants2.high	-5.072	29.670	40.239	71.050	0
plants2.low.	-5.717	33.970	36.991	67.790	0
boiler.suppl	17.010	68.950	68.174	73.320	0
boiler.retur	17.030	59.090	58.300	64.430	0
ants.flow.av	0.000	20.650	19.925	30.560	0
plants.flow.	0.000	0.004	4.737	14.310	0
ants.btuh.av	-76601.550	156671.450	156108.233	225244.200	389
ants1.delta.	-46.230	8.250	7.952	13.380	0
ants2.delta.	0.028	9.830	10.071	16.640	0
ants3.delta.	-1.545	9.690	9.741	14.450	0
plants.btuh.	-19878.820	0.000	30627.702	141095.200	389
plants1.delt	-6.836	-0.178	2.684	18.660	0
plants2.delt	-6.612	0.055	3.248	16.630	0
batt.volt	9.590	13.170	13.172	13.390	0
gas.flow.cf.	0.000	2225.000	2344.067	4397.000	0
gas.flow.gal	0.000	62.150	65.477	122.800	0

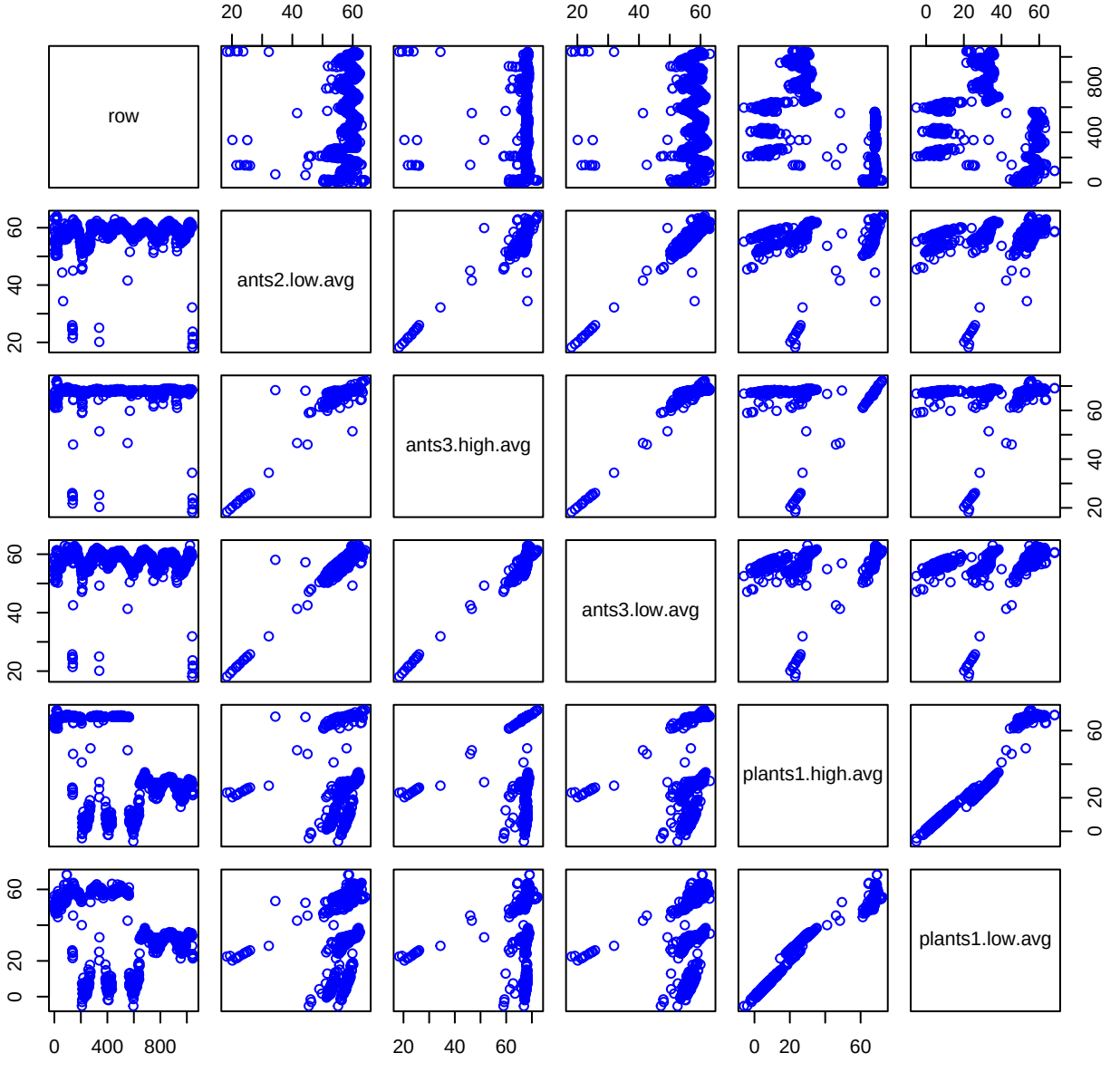
HF113−09 Plot 1



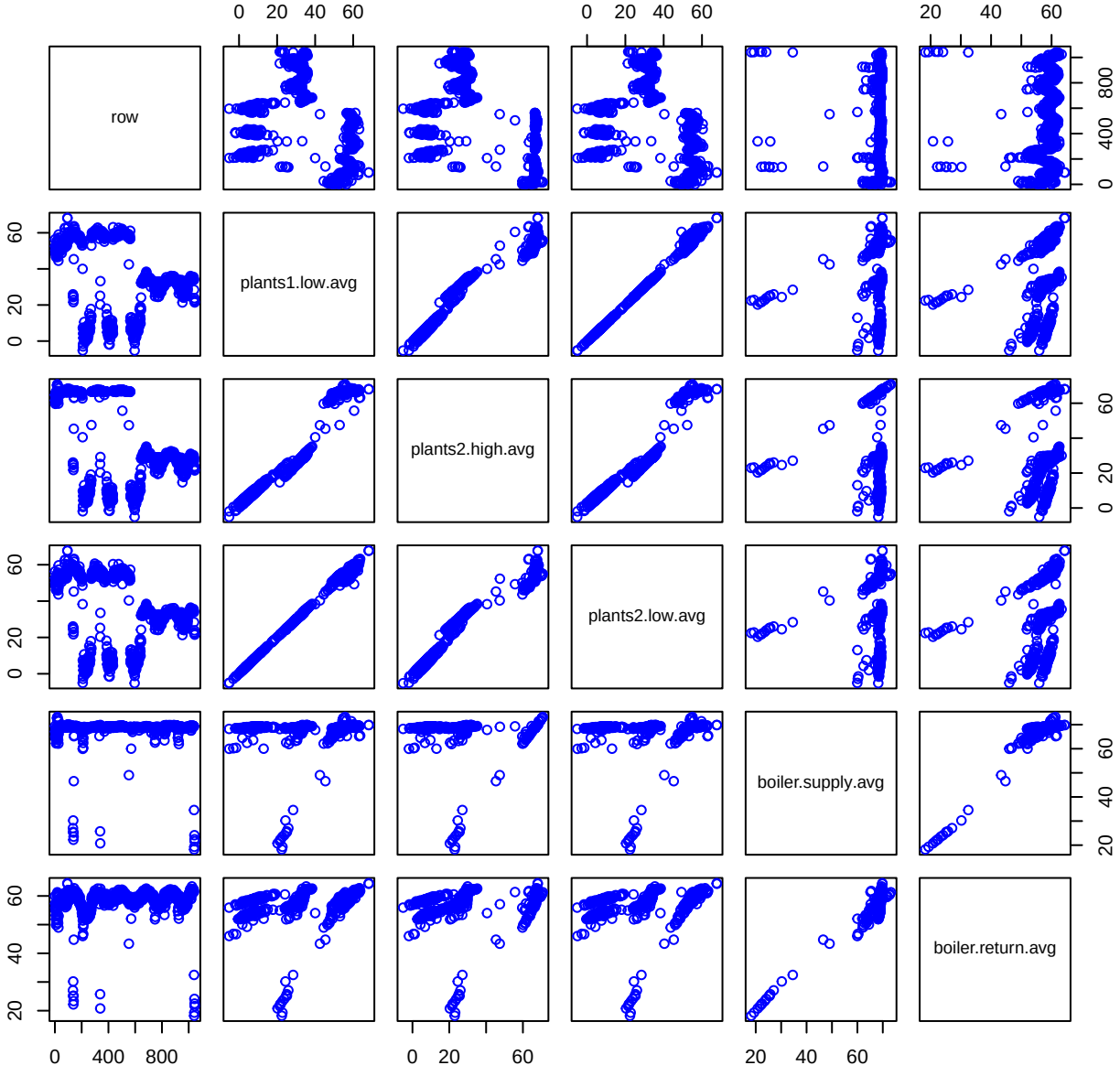
HF113−09 Plot 2



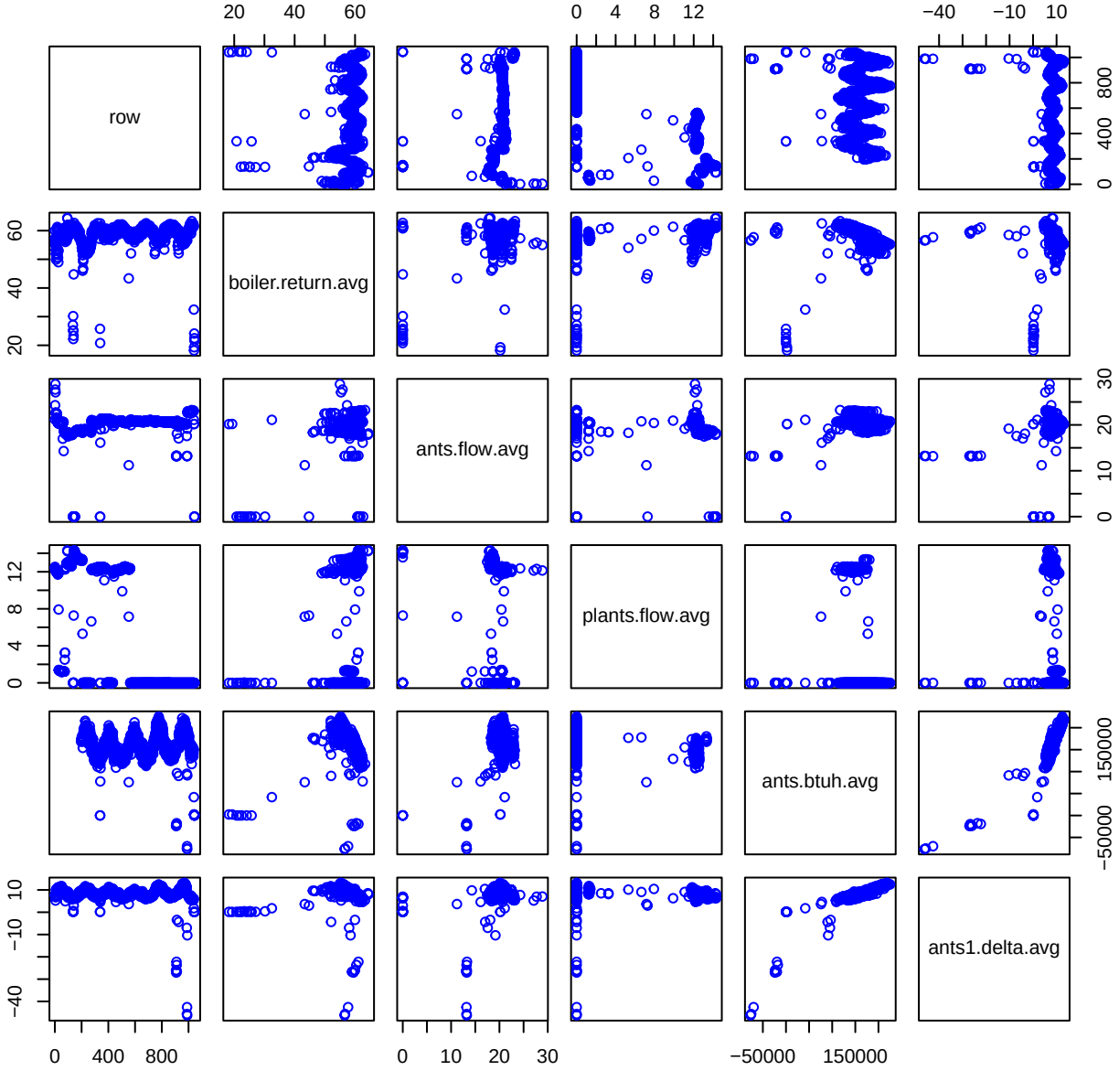
HF113−09 Plot 3



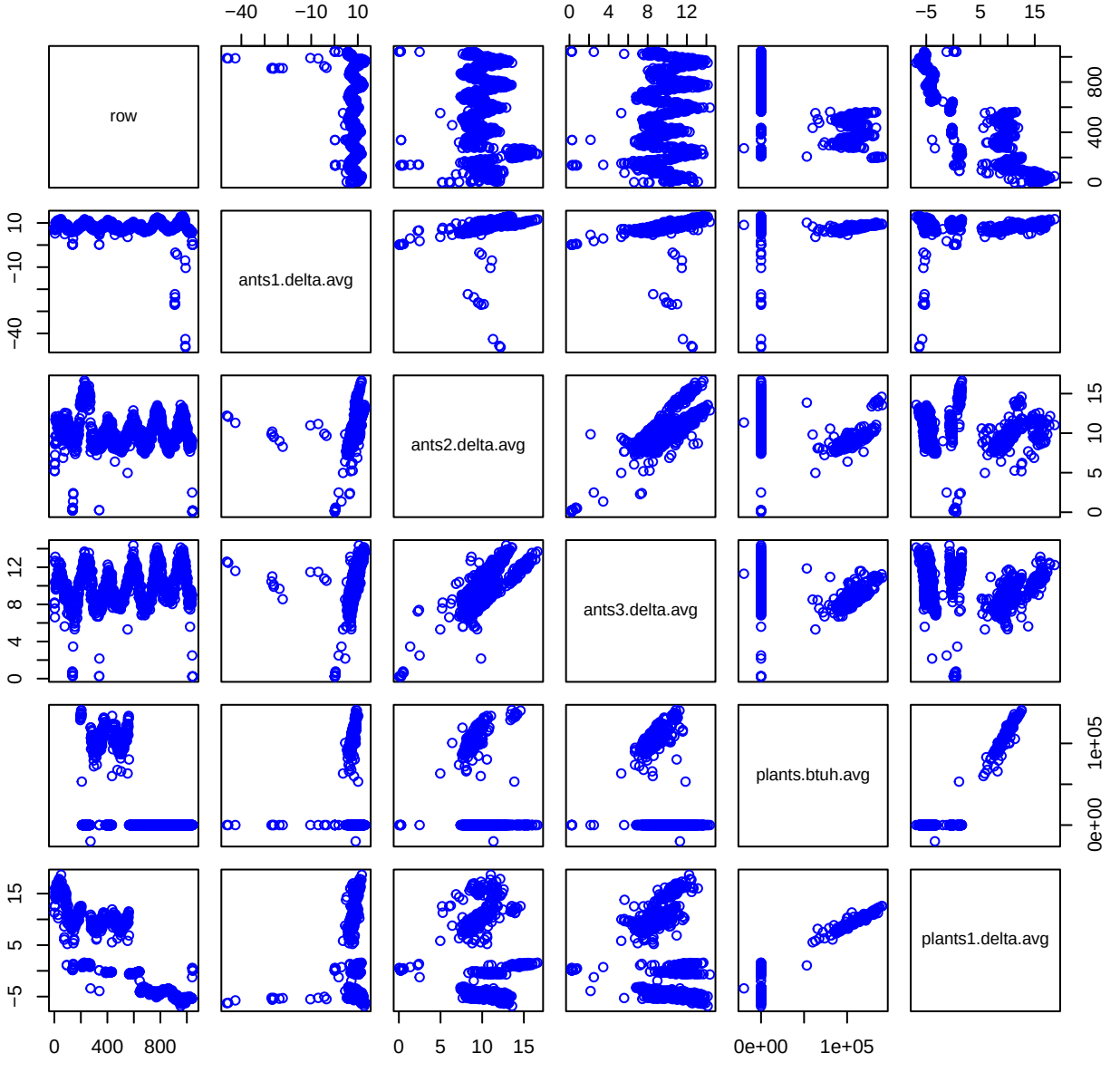
HF113−09 Plot 4



HF113−09 Plot 5



HF113−09 Plot 6



HF113−09 Plot 7