Harvard Forest Data Archive HF224−01

Data File:

Name = hf224−01−leaf−gas.csv
Description = leaf gas exchange
Rows = 1638  Columns = 32
MD5 checksum = 47a0e024cc72ea0ed61cafcccda5704b

Variables:

datetime = date and time of measurement
year = year sampled
doy = corresponding day of the year (nominalDay)
date = date sampled
photo = net assimilation in micromols CO2 per meter squared per

   second (micromolePerMeterSquaredPerSecond)
cond = conductance to H2O in millimols of H2O per meter squared per

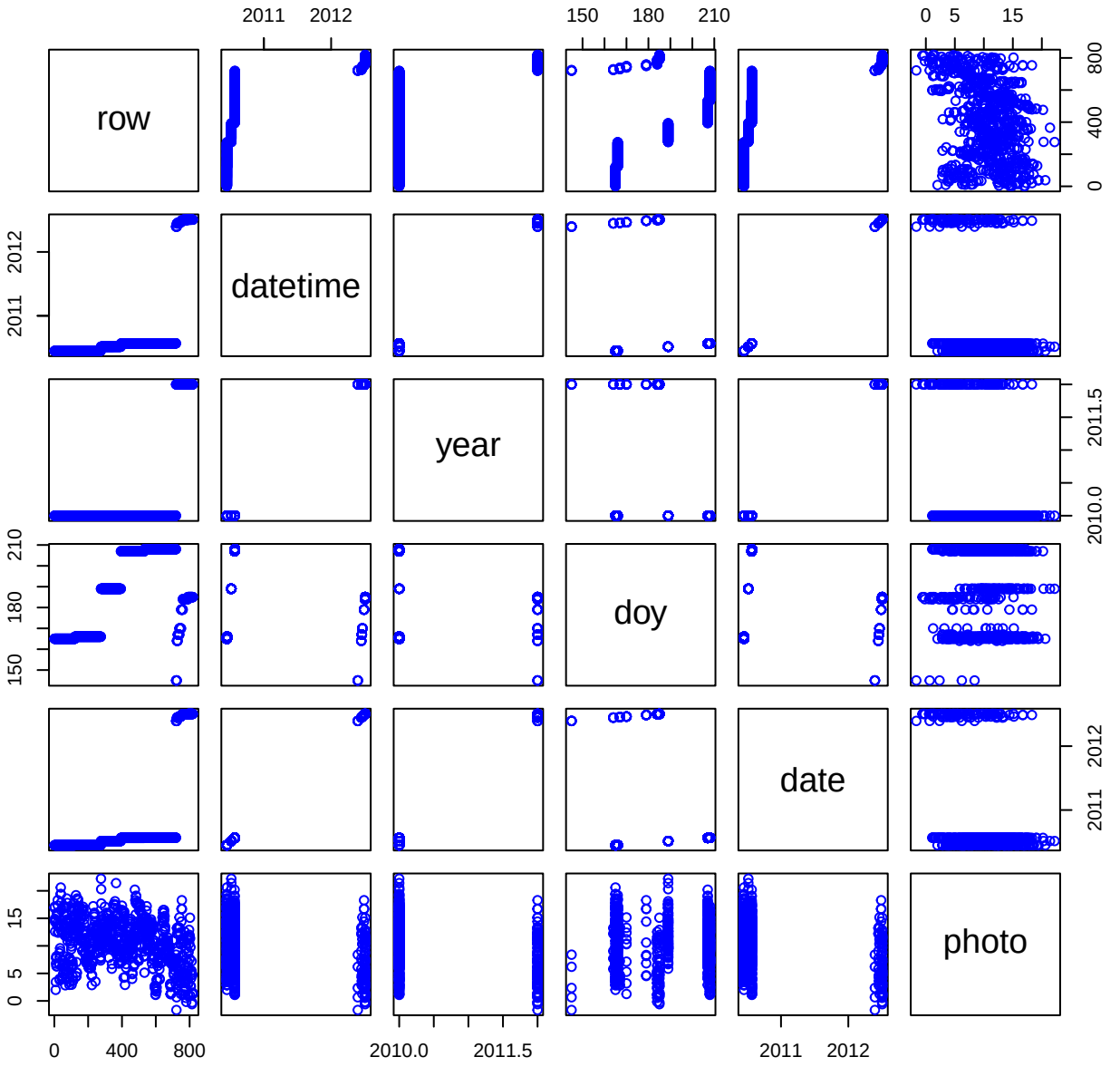
   second (millimolePerMeterSquaredPerSecond)
ci = intercellular CO2 concentration (calculated) in micromols CO2
   per
 mol (dimensionless)
trans = transpiration rate in millimol H2O per meter squared per

   second (millimolePerMeterSquaredPerSecond)
area = total area of leaf enclosed within the chamber
   (squareCentimeters)
stm.ratio = stomatal ratio used in calculations (dimensionless)
tair = temperature in sample cell (celsius)
tleaf = temperature of leaf thermocouple (celsius)
co2.r = reference cell CO2 concentration in micromol CO2 per mol

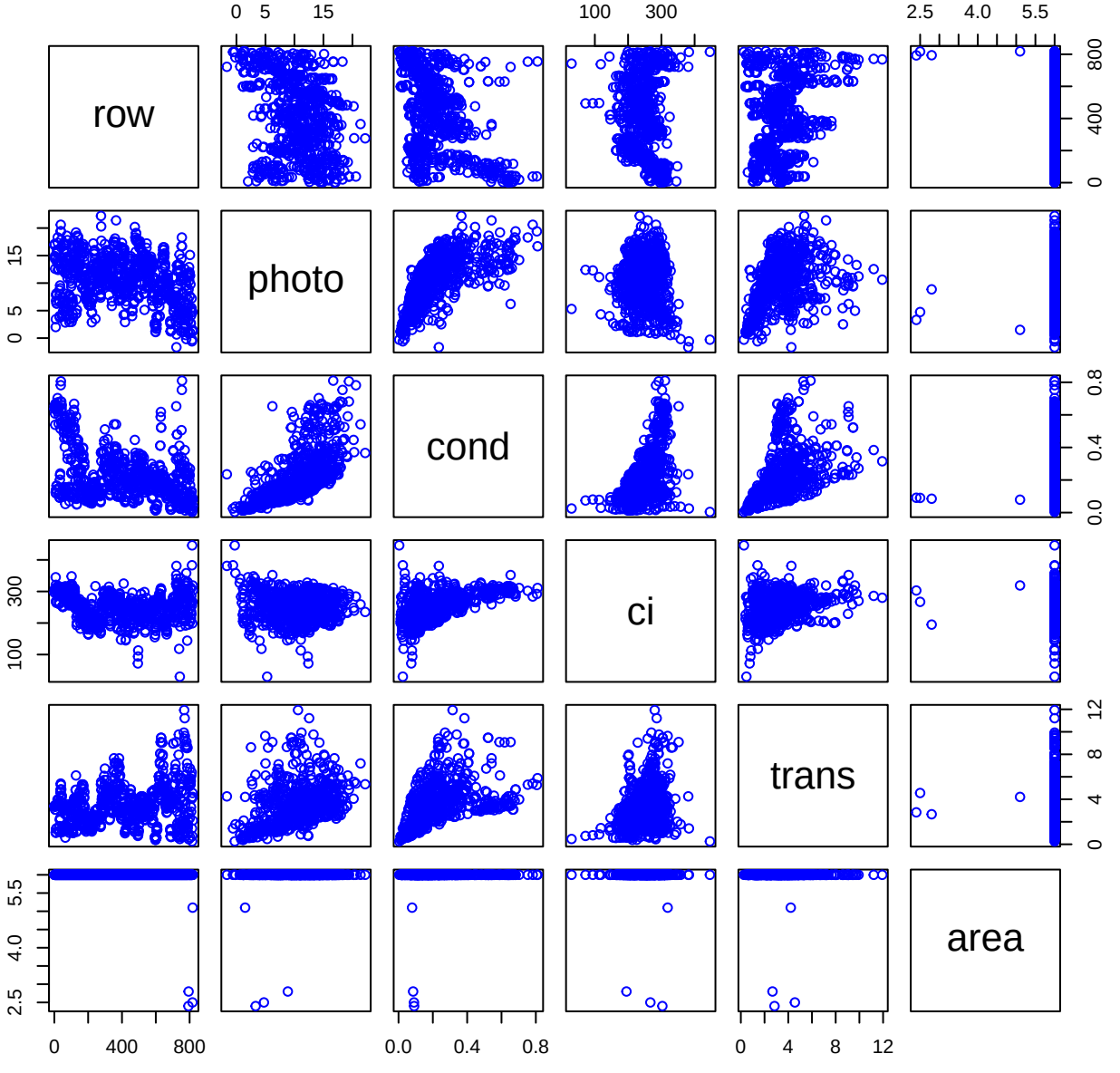
   (ppm) (dimensionless)
co2.s = sample cell CO2 concentration in micromol CO2 per mol
 (ppm)
   (dimensionless)
h2o.r = reference cell H2O concentration in millimol H2O per mol

   (ppm) (dimensionless)
h2o.s = sample cell H2O concentration in millimol H2O per mol
 (ppm)
   (dimensionless)
rh.r = relative humidity in the reference cell (%) (dimensionless)
rh.s = relative humidity in the sample cell (%) (dimensionless)
par.in = quantum sensor inside the chamber
   (micromolePerMeterSquaredPerSecond)
par.out = external quantum sensor
   (micromolePerMeterSquaredPerSecond)
press = atmospheric pressure (kilopascal)

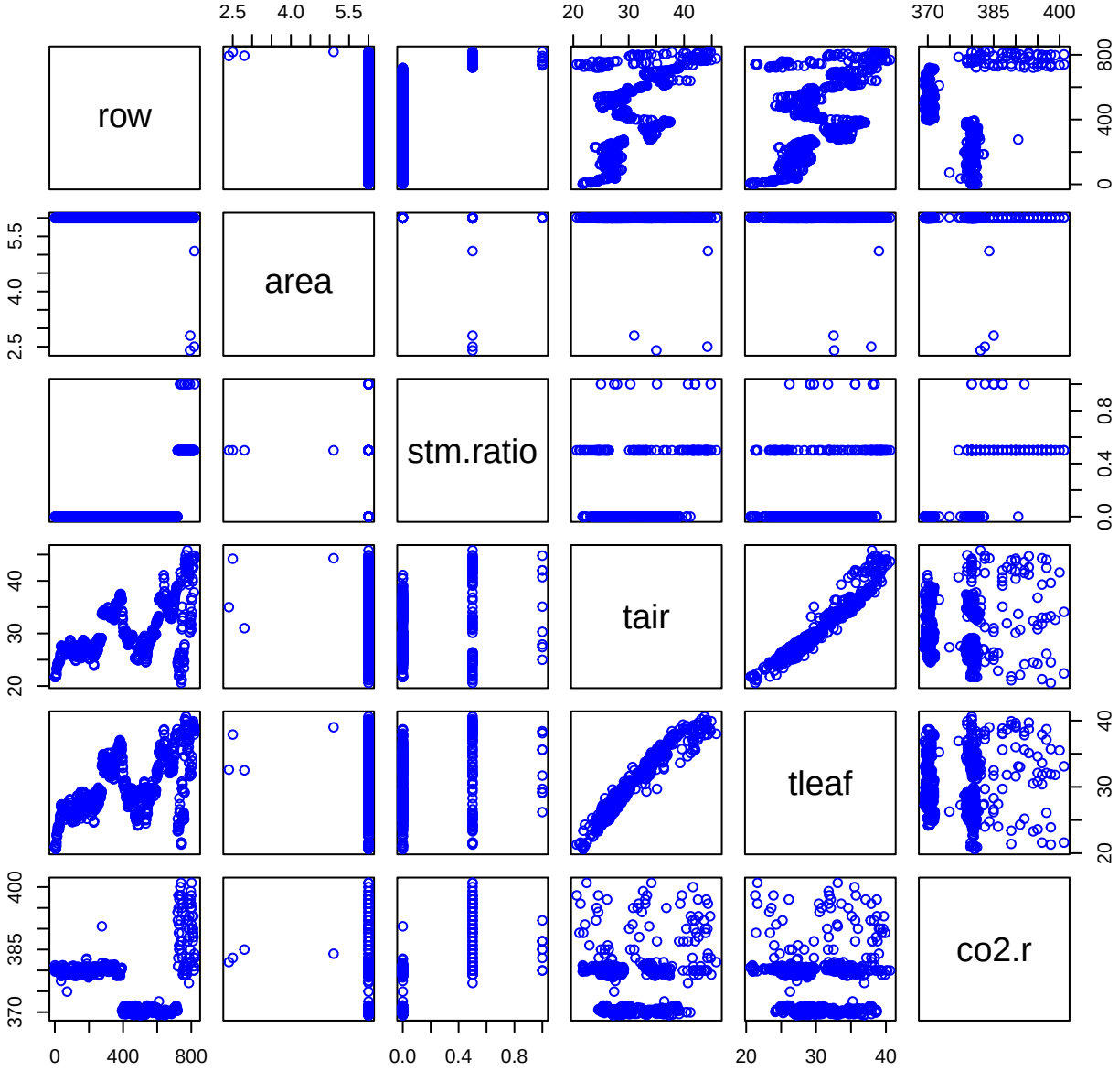
| Variable | Min | Median | Mean | Max | NAs |
|---|---|---|---|---|---|
| datetime | 2010-06-14T08:55:04 | | | 2012-07-03T15:40:34 | 0 |
| year | 2010.000 | 2010.000 | 2010.245 | 2012.000 | 0 |
| doy | 145.000 | 189.000 | 187.142 | 208.000 | 0 |
| date | 2010-06-14 | 2010-07-26 | 2010-10-03 | 2012-07-03 | 0 |
| photo | -1.650 | 10.750 | 10.477 | 22.200 | 0 |
| cond | 0.004 | 0.179 | 0.220 | 0.911 | 0 |
| ci | -184.000 | 252.000 | 248.540 | 446.000 | 0 |
| trans | 0.260 | 3.235 | 3.404 | 12.260 | 0 |
| area | 0.800 | 6.000 | 5.979 | 6.000 | 0 |
| stm.ratio | 0.000 | 0.000 | 0.067 | 1.000 | 0 |
| tair | 19.500 | 28.755 | 30.487 | 45.800 | 0 |
| tleaf | 20.610 | 28.935 | 30.059 | 40.600 | 0 |
| co2.r | 369.170 | 379.400 | 376.974 | 402.000 | 0 |
| co2.s | 344.790 | 362.045 | 362.968 | 389.000 | 0 |
| h2o.r | 2.200 | 19.500 | 20.535 | 31.346 | 0 |
| h2o.s | 4.700 | 23.201 | 24.497 | 38.615 | 0 |
| rh.r | 6.910 | 47.650 | 46.245 | 75.270 | 0 |
| rh.s | 17.050 | 55.650 | 54.757 | 81.380 | 0 |
| par.in | 3.000 | 1409.000 | 1243.476 | 2879.000 | 0 |
| par.out | 7.000 | 1465.000 | 1270.611 | 2772.000 | 0 |
| press | 95.700 | 96.995 | 96.826 | 97.900 | 0 |


HF224−01 Plot 1
row
datetime
year
doy
date
photo
2011
2012
150
180
210
0
5
15
800
400
2011.5
2010.0

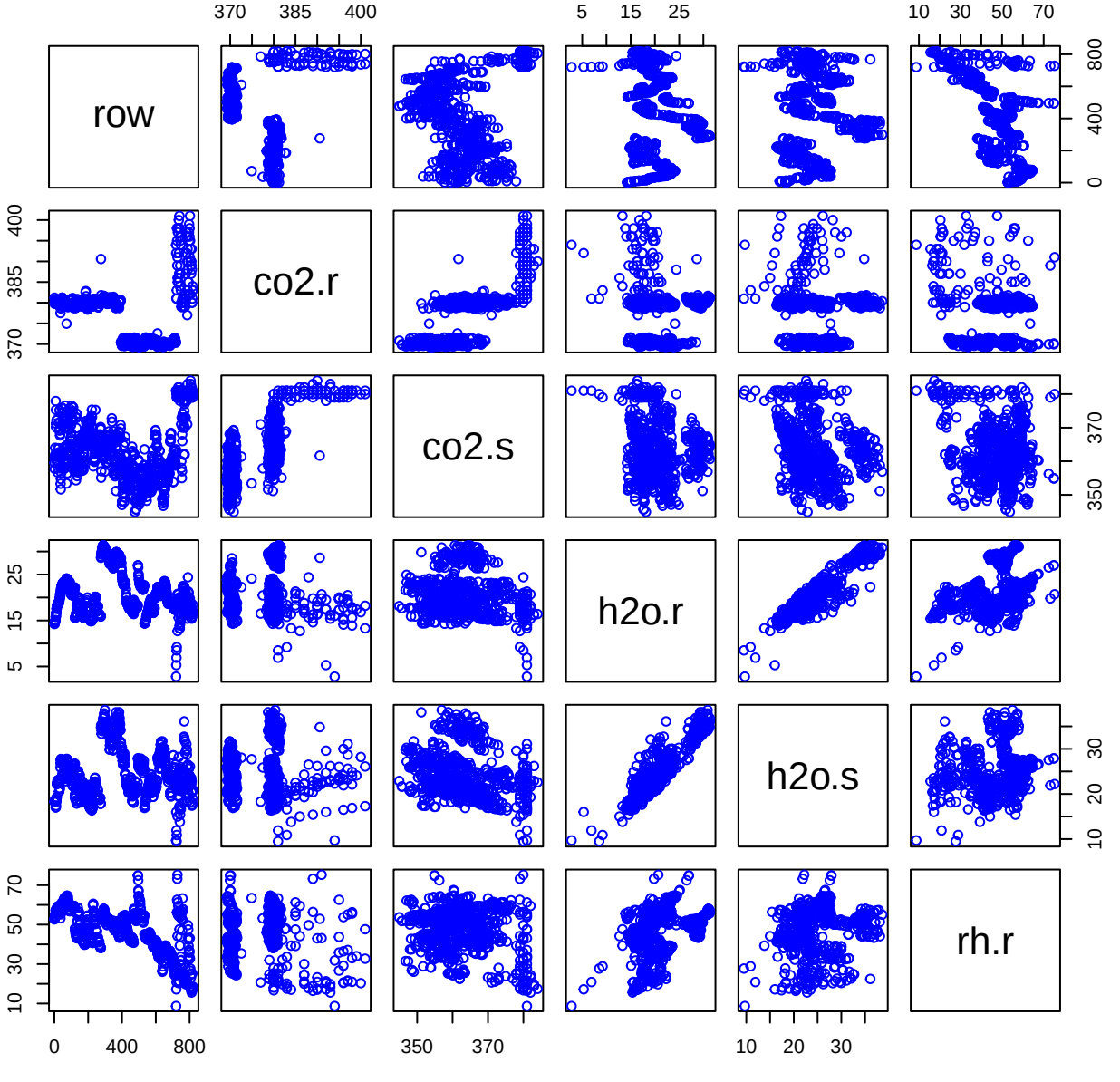
# HF224−01 Plot 2

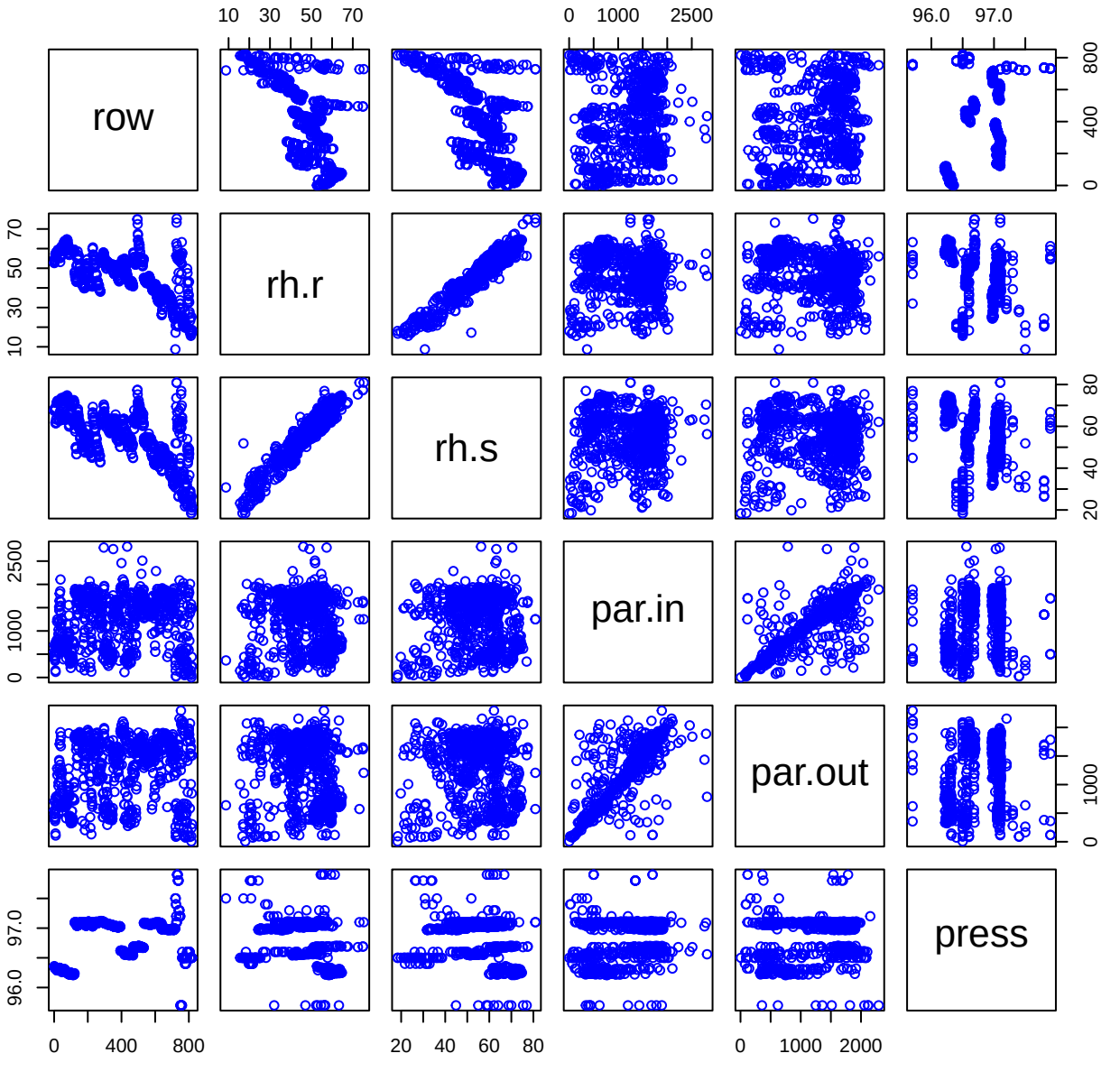


# HF224−01 Plot 3



# HF224−01 Plot 4




HF224−01 Plot 5
row
rh.r
rh.s
par.in
par.out
press
10 30 50 70
0 1000 2500
96.0 97.0
0 400 800
10 30 50 70
20 40 60 80
0 1000 2500
0 1000
96.0 97.0
0 400 800
20 40 60 80
0 1000 2000