

# Time Series Clustering Data Set from UCI:

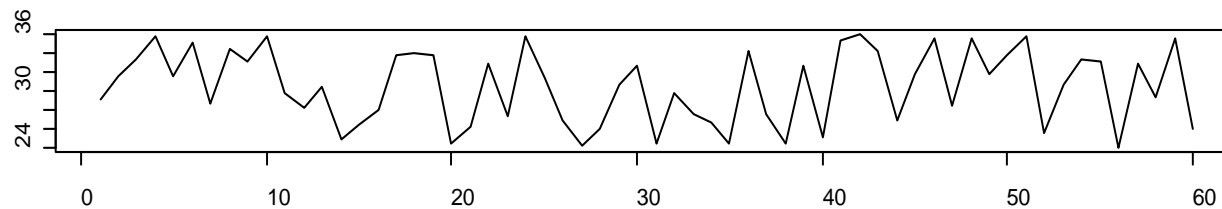
<http://archive.ics.uci.edu/ml/datasets/Synthetic+Control+Chart+Time+Series>

Analysis by Yiou Li

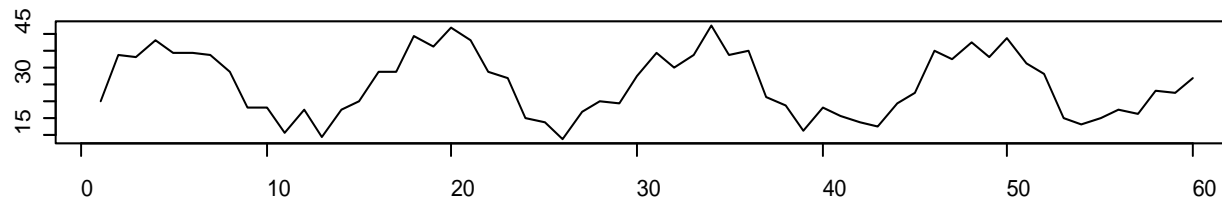
# Data Set Description

- The data is stored in an ASCII file, 600 rows, 60 columns, with a single chart per line. The classes are organized as follows:
  - 1-100 Normal
  - 101-200 Cyclic
  - 201-300 Increasing trend
  - 301-400 Decreasing trend
  - 401-500 Upward shift
  - 501-600 Downward shift

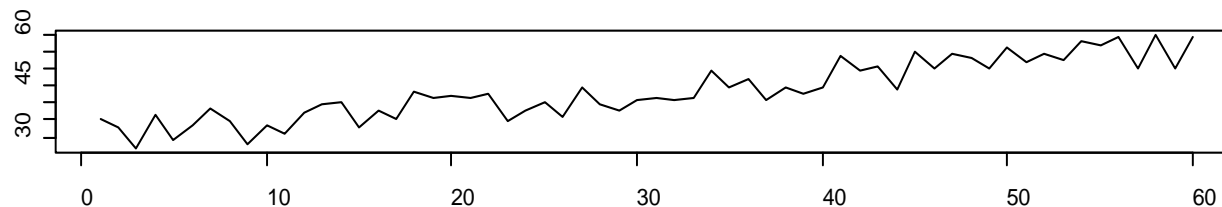
1. "Normal"



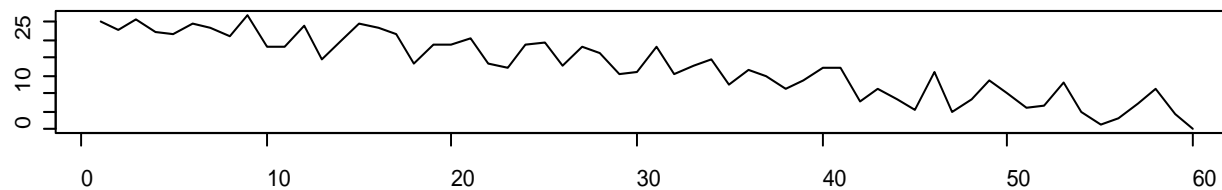
2. "Cyclic"



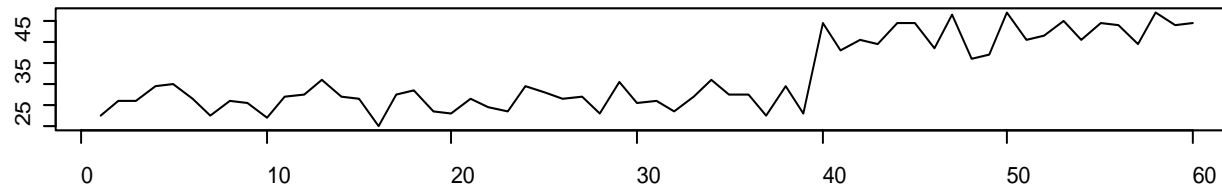
3. "Increasing"



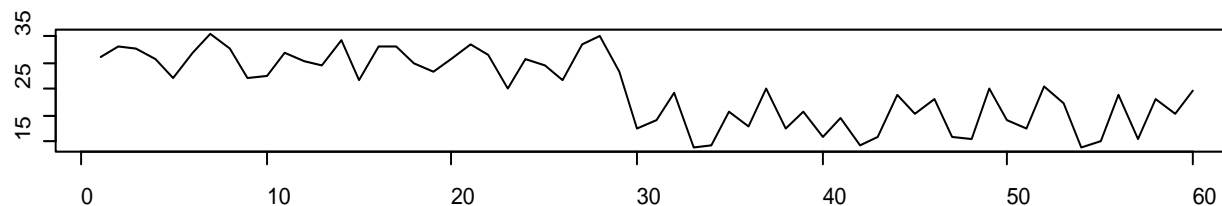
4. "Decreasing"



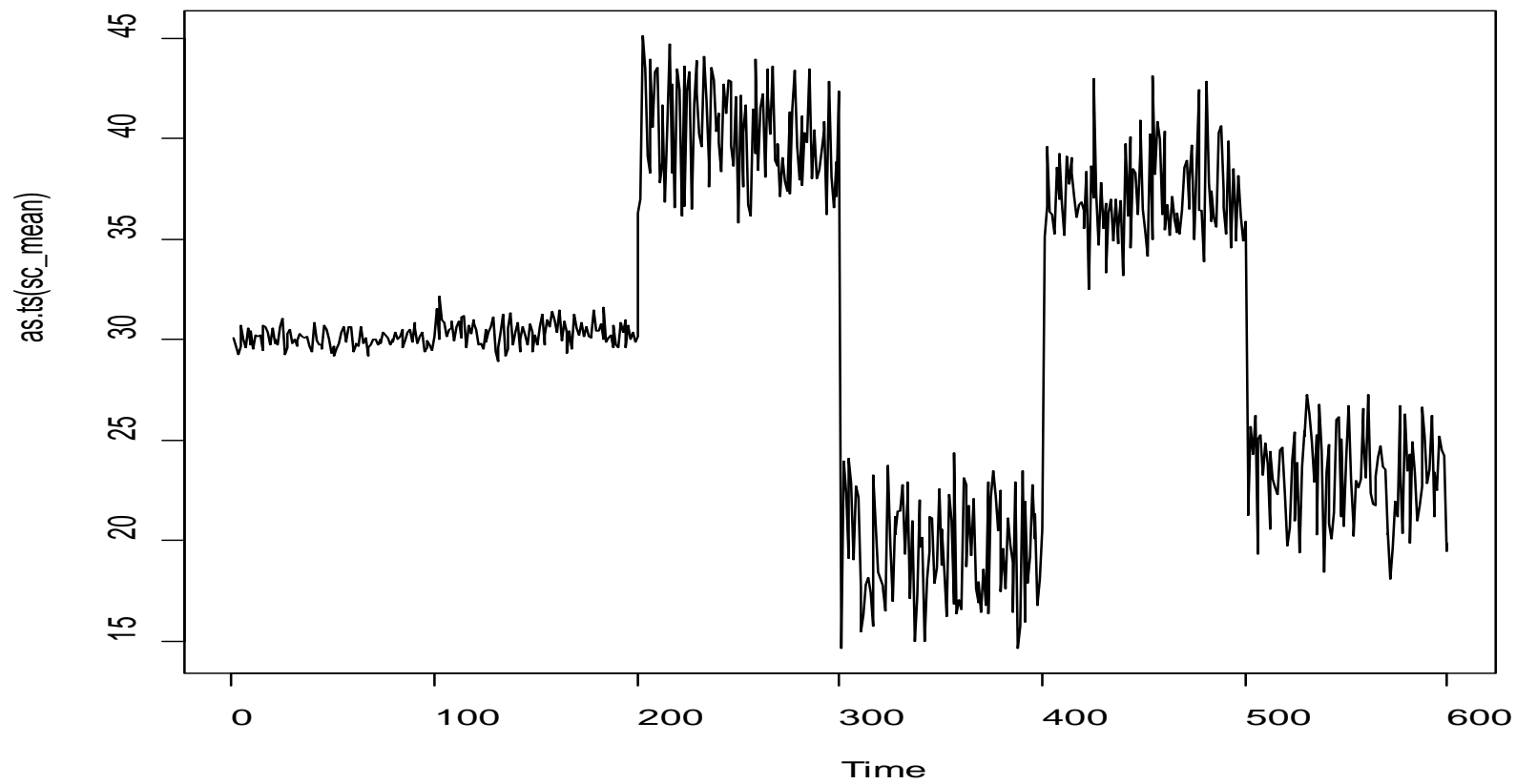
5. "Upward shift"



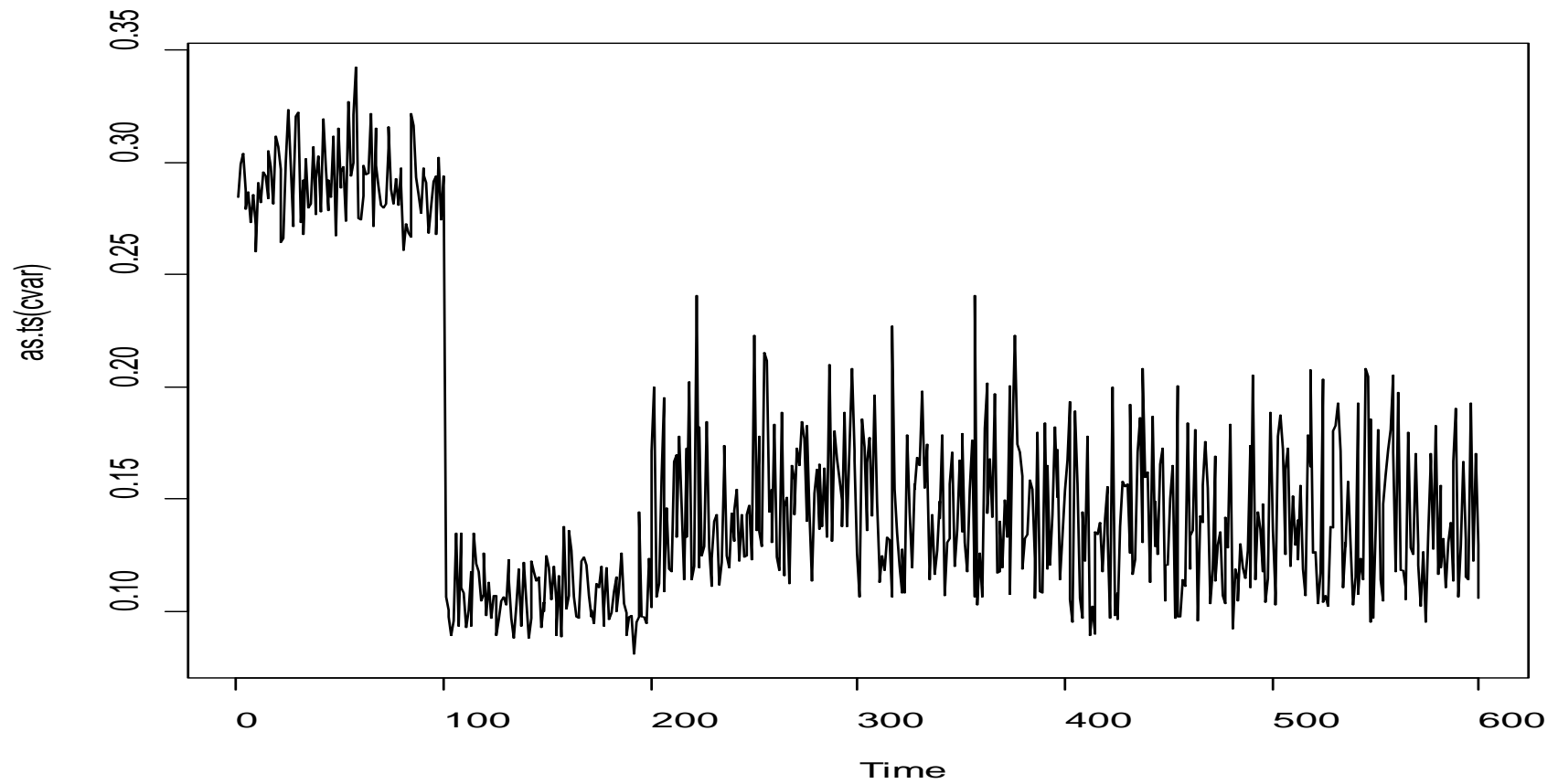
6. "Downward shift"



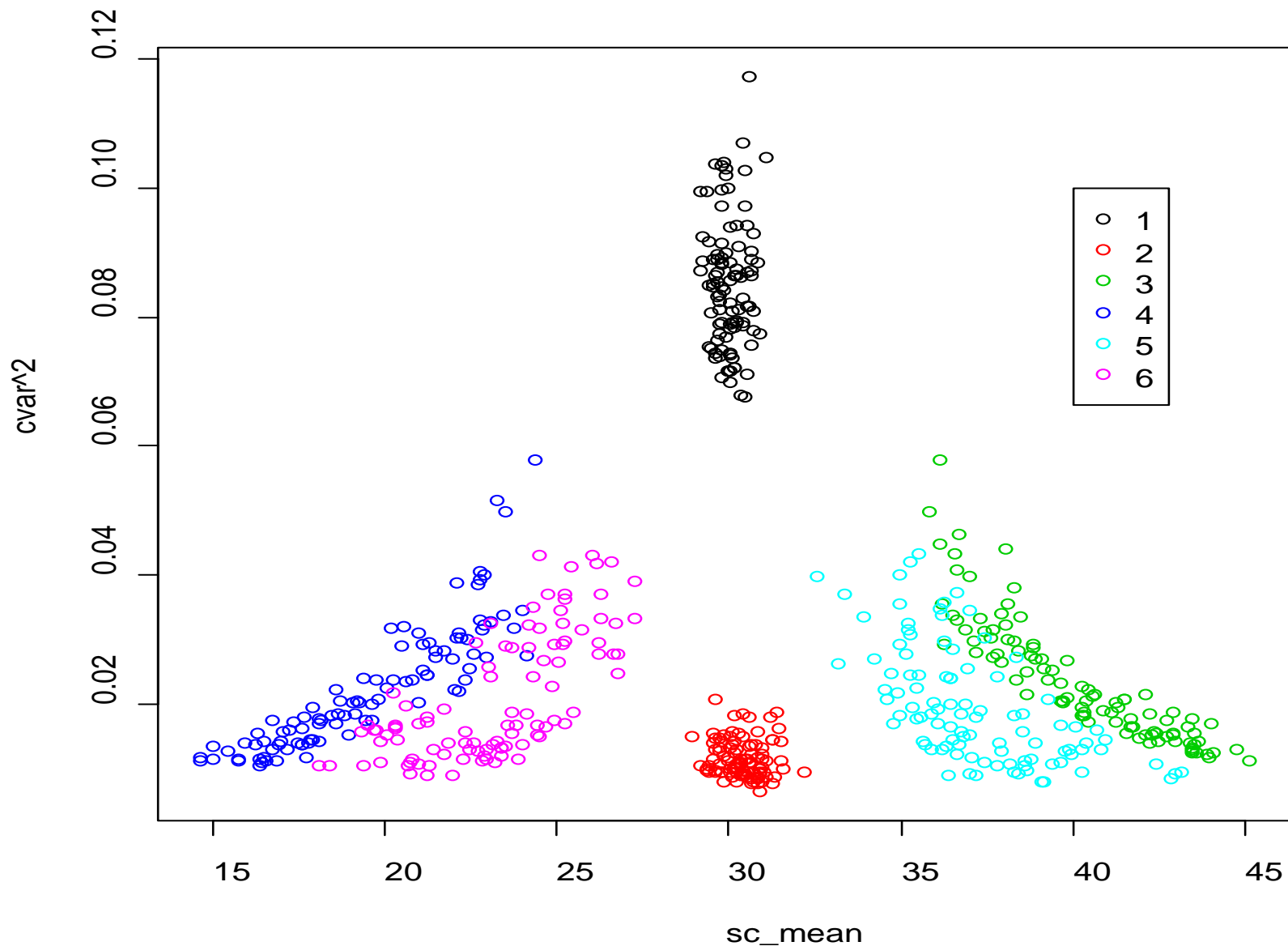
# Mean



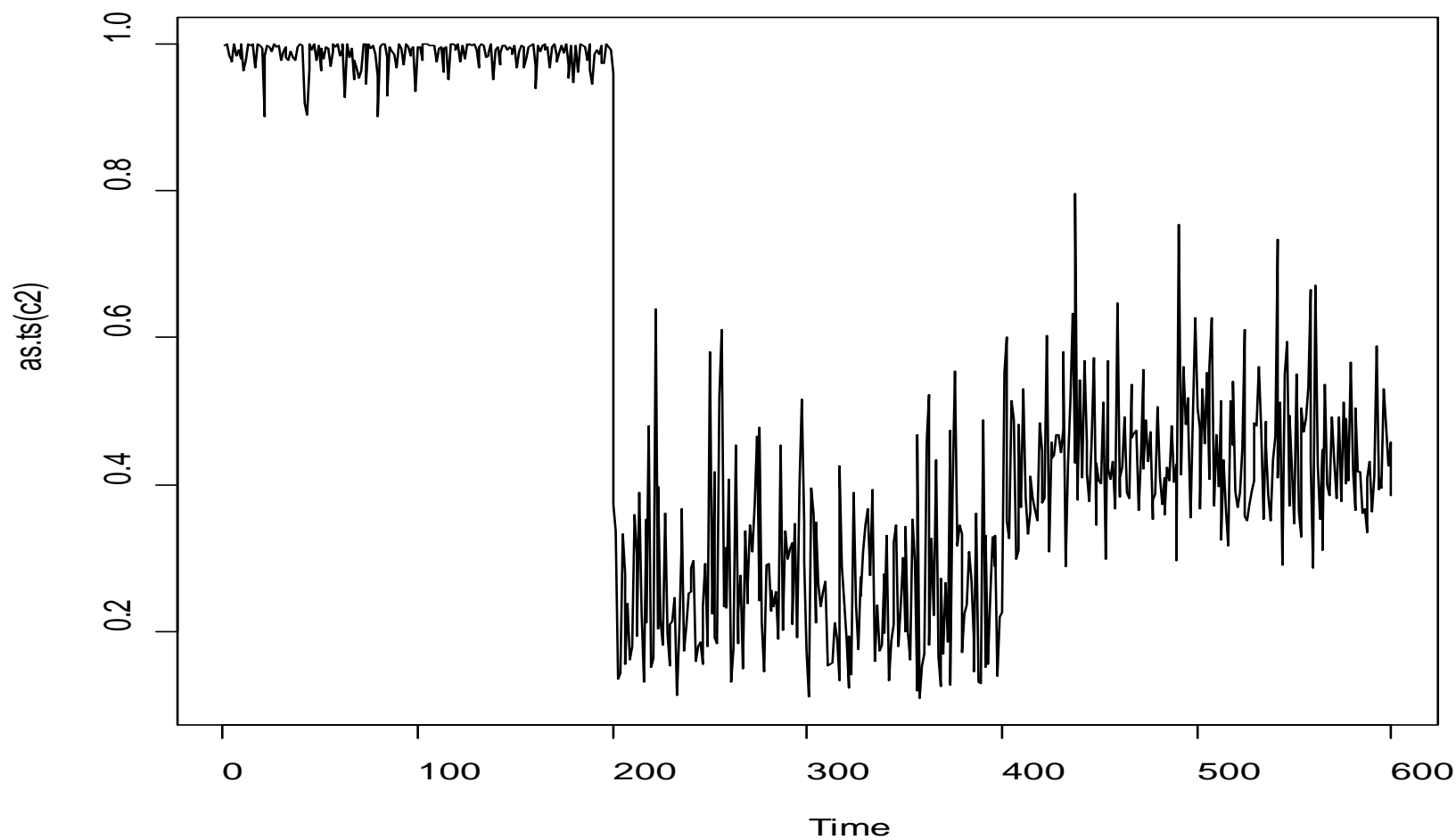
# Variance



# Scatter plot (mean vs. variance)

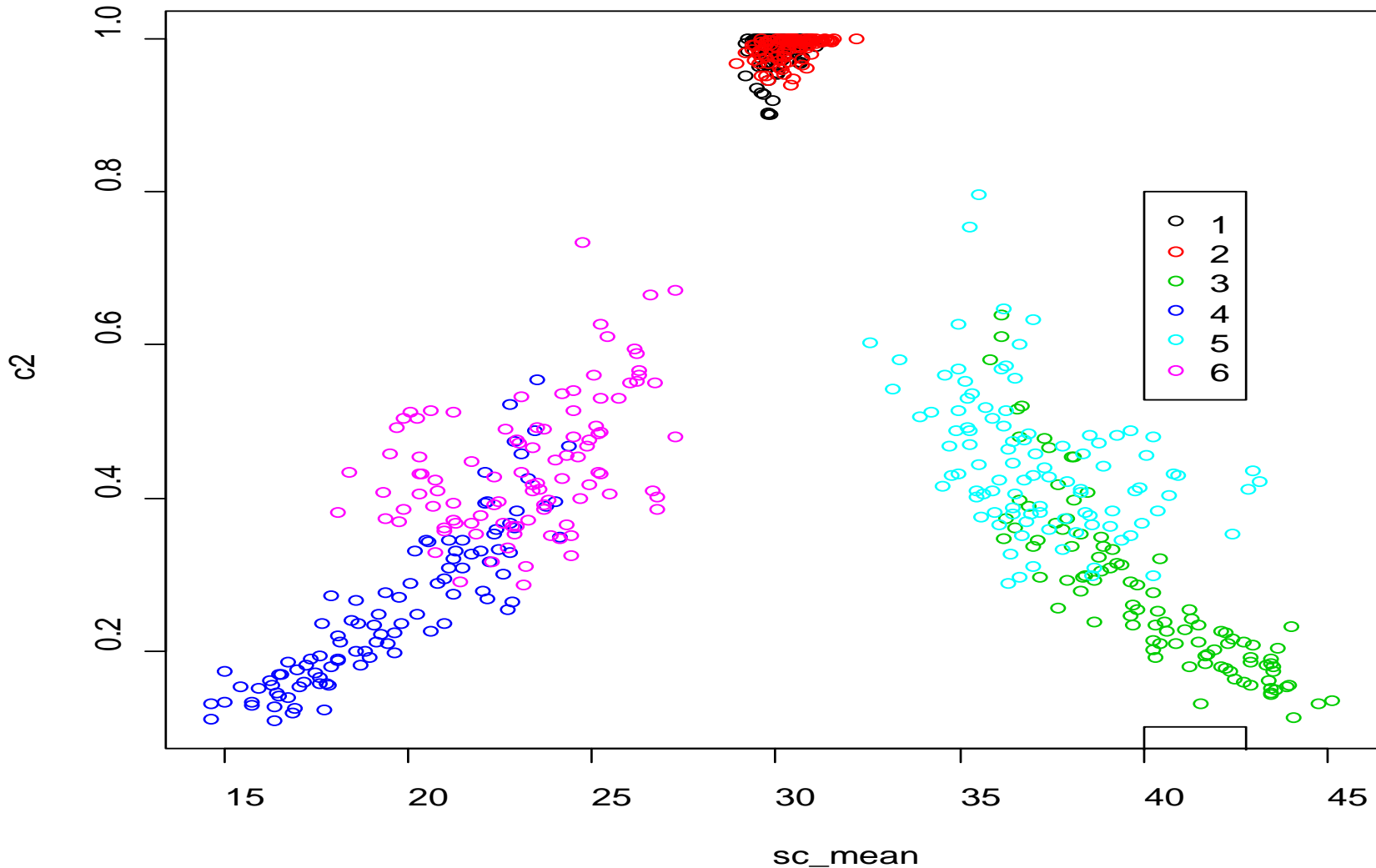


# Linear detrend residual



# Scatter plot

(mean vs. detrend residuals)





# Results using [mean, var, residual]

- Kmeans(..., nstart = 100)

Label:	1	5	4	3	4	3
Count:	100	100	59	63	55	61

- diana( )

Label:	1	2	4	5	4	5
Count:	100	100	59	92	54	90

- hclust( )

Label:	1	2	4	5	4	5
Count:	100	100	57	54	52	62