



Some Time Plots

PRACTICAL TIME SERIES ANALYSIS

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Objectives

- ▶ See some examples of time series.
- ▶ Produce meaningful time plots.

Some time series from 'astsa'

- ▶ `jj`
- ▶ `flu`
- ▶ `globtemp`
- ▶ `globtempl`
- ▶ `star`

Johnson and Johnson Quarterly Earnings (jj)

- ▶ US company Johnson and Johnson
- ▶ Quarterly earnings
- ▶ 84 quarters
- ▶ 1st quarter of 1960 to 4th quarter of 1980

Pneumonia and influenza deaths in the U.S. (flu)

- ▶ Monthly pneumonia and influenza deaths per 10,000 people
- ▶ 11 years
- ▶ From 1968 to 1978

Land-ocean temperature deviations (globtemp)

- ▶ Global mean land-ocean temperature deviations
- ▶ Deviations from base period 1951-1980 average
- ▶ Measured in degrees centigrade
- ▶ For the years 1880-2015.
- ▶ <http://data.giss.nasa.gov/gistemp/graphs/>

Land (only) temperature deviations (globtemp1)

- ▶ Global mean [land only] temperature deviations
- ▶ Deviations from base period 1951-1980 average
- ▶ Measured in degrees centigrade
- ▶ For the years 1880-2015.
- ▶ <http://data.giss.nasa.gov/gistemp/graphs/>

Variable Star (star)

- ▶ The magnitude of a star taken at midnight
- ▶ For 600 consecutive days
- ▶ The data are from “The Calculus of Observations, a Treatise on Numerical Mathematics”, by E.T. Whittaker and G. Robinson

What We've Learned

- ▶ Time series exist in variety of areas
- ▶ How to produce meaningful time plots