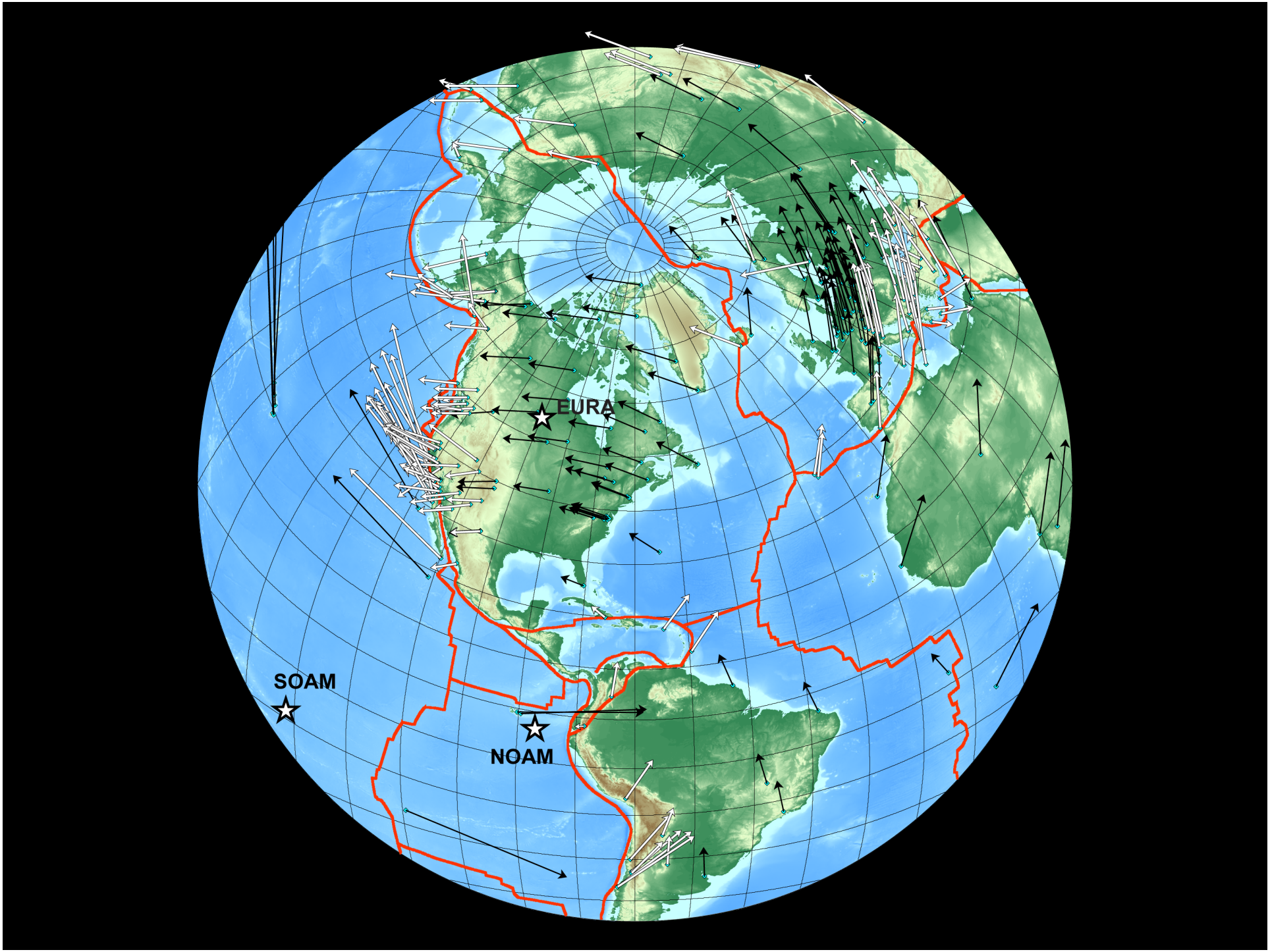
GMT

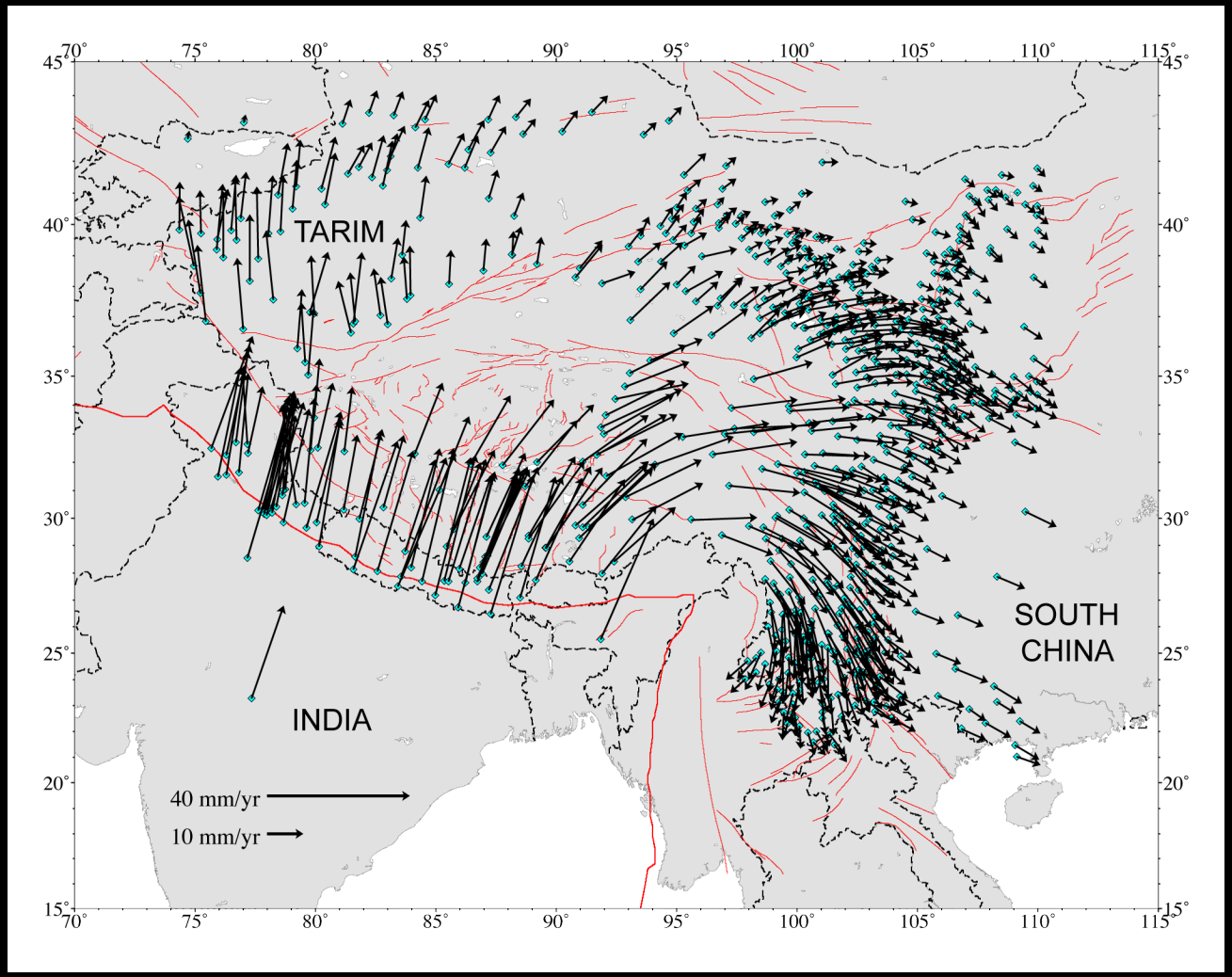
Generic Mapping Tools or
Gravity, Magnetics and Topography

Lecture #1

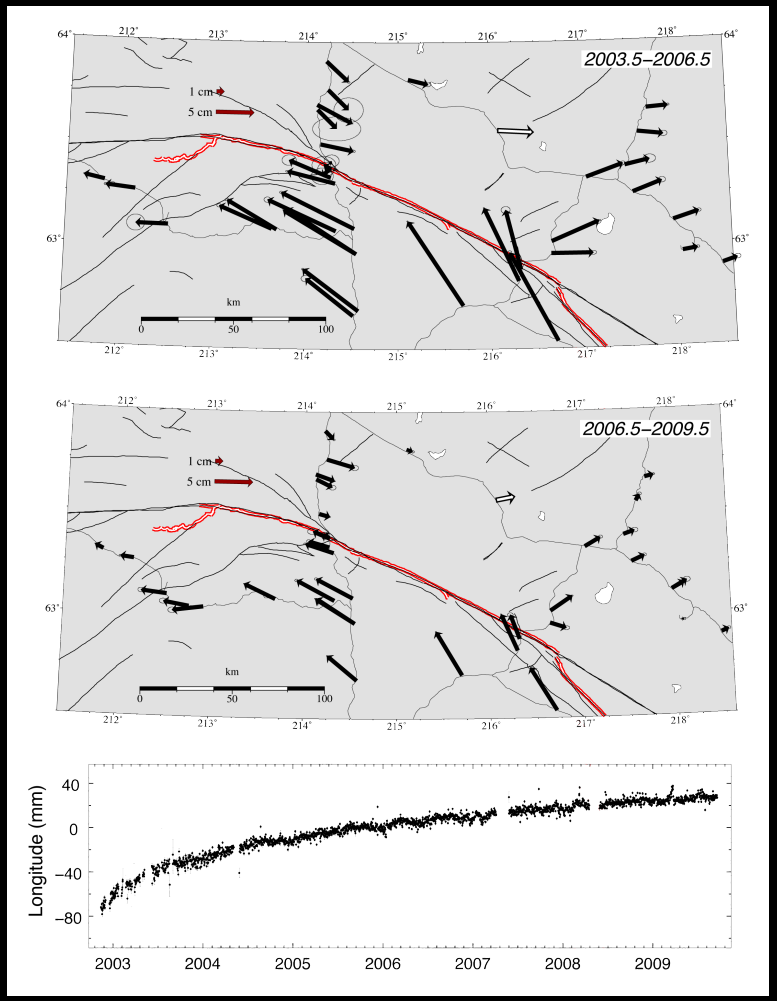
Mapping and Plotting with GMT


EURA
SOAM
NOAM

I added the text labels by hand

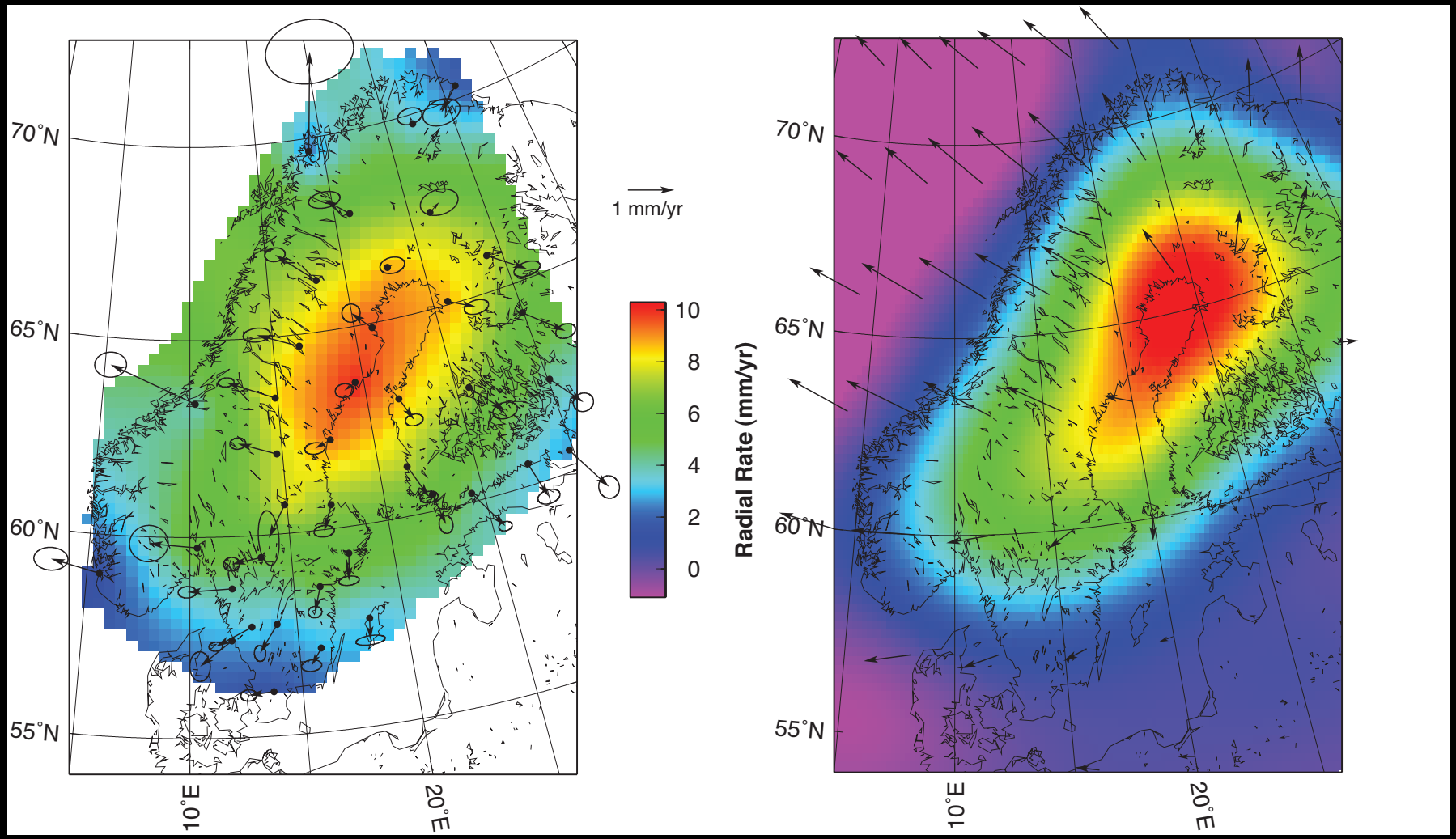


Maps and Time Series



- Plotting data vectors with faults
- Plotting time series as an x-y plot

Fancy colorized maps



GMT 4.5.1

- Began as a set of subroutines to write Postscript commands
- Grew with Paul's and Walter's Ph.D. Theses
- Encompassed map projections (30!)
- Data Analysis
- Cross-Over Errors

Paul Wessel, our hero

GMT resources

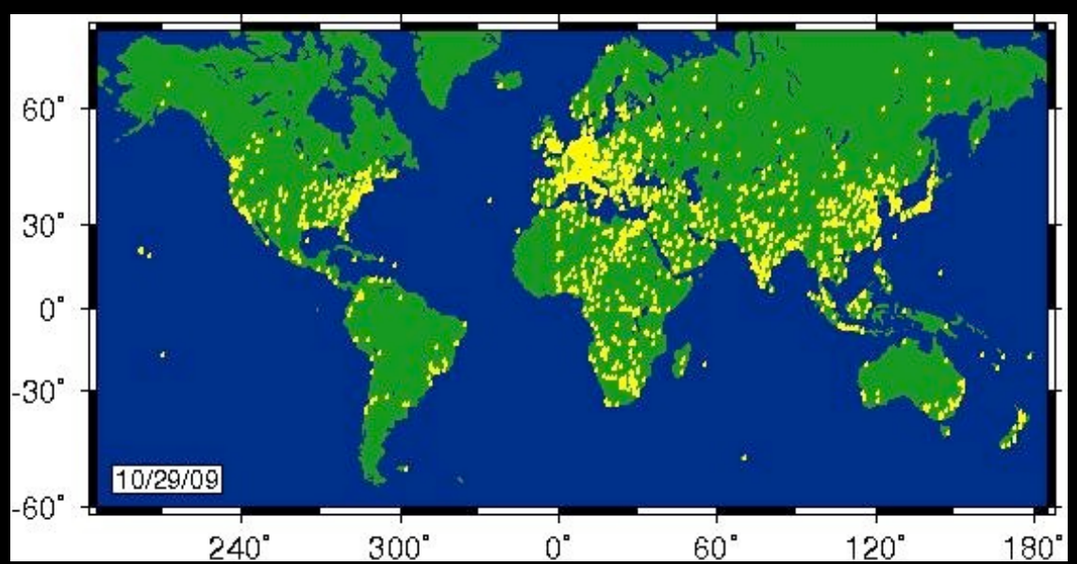
- Web site - gmt.soest.hawaii.edu
- User Group
- Open source project
- Windows, OS X, Unix and OS/2
- Extensive documentation (html and pdf)
- Examples and "cookbook"
- Ancillary data sets included (eg. coastlines)

Postscript

- Vector graphic language
- Rasterizes for output to various devices
- Scale set by dots-per-inch (dpi)
- Typically 300-1200

How does GMT work?

- Scripted language for vector graphics
- Facilitates automated plotting
- Relates graphic space to the data space
- Sequential commands create a plot or map



Create a simple plot.

```
pwd |
awk '{for (i = -60; i < 61; ++i) {printf"%d %.2f\n",i,32+9/5*i}}' |
psxy -R-60/60/-80/150 -JX6.0 -Sc0.05 -Ba20g10/a30g15 > test.ps
```