Stat645

Introduction to the tour

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Hints

- Open a new ggobi between each dataset (otherwise ggobi thinks you want to combine them)
- Use Ctrl + a to add an axis to the tour
- Make sure you don't include categorical variables in the tour

Olives

- What 1d combination of variables best separates the classes?
- What 2d combination?
- What 3 variables does the best job of separating the regions?

Olives

- PCP
- Scatterplot matrix
- 1d tour
- 2d tour

GGobi

File Display Interaction Tools Help

Parcoords

Plot arrangement:

Column

Spreading method:

ASH

ASH smoothness:

0.19

X Region
X Subregion
X palmitic
X palmitoleic
X stearic
X oleic
X linoleic
X linolenic
X arachidic
X eicosenoic

olive oil: 572 x 10 (olive.xml)

olive oil: Parallel Coordi...

File Options

✓ Show Points Ctrl+O
Show Lines Ctrl+L

palm

palmitoleic

stearic

oleic

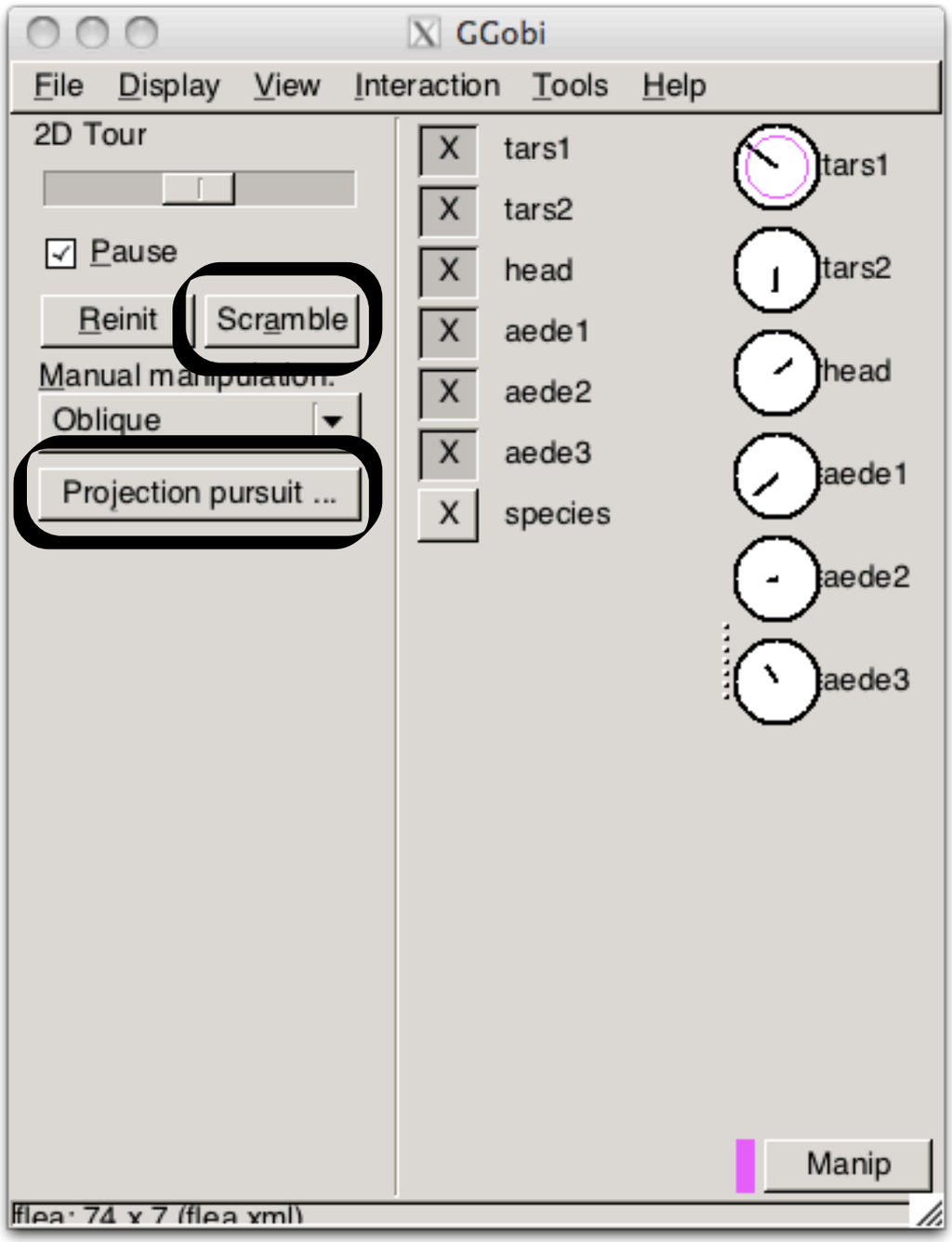
linoleic

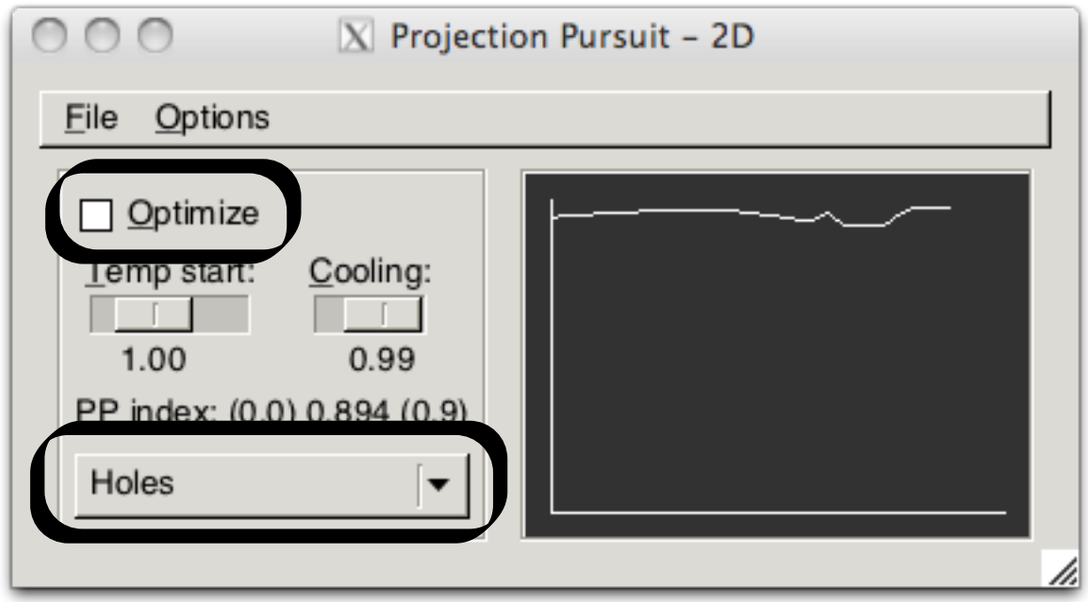
linolenic

arachidic

Flea

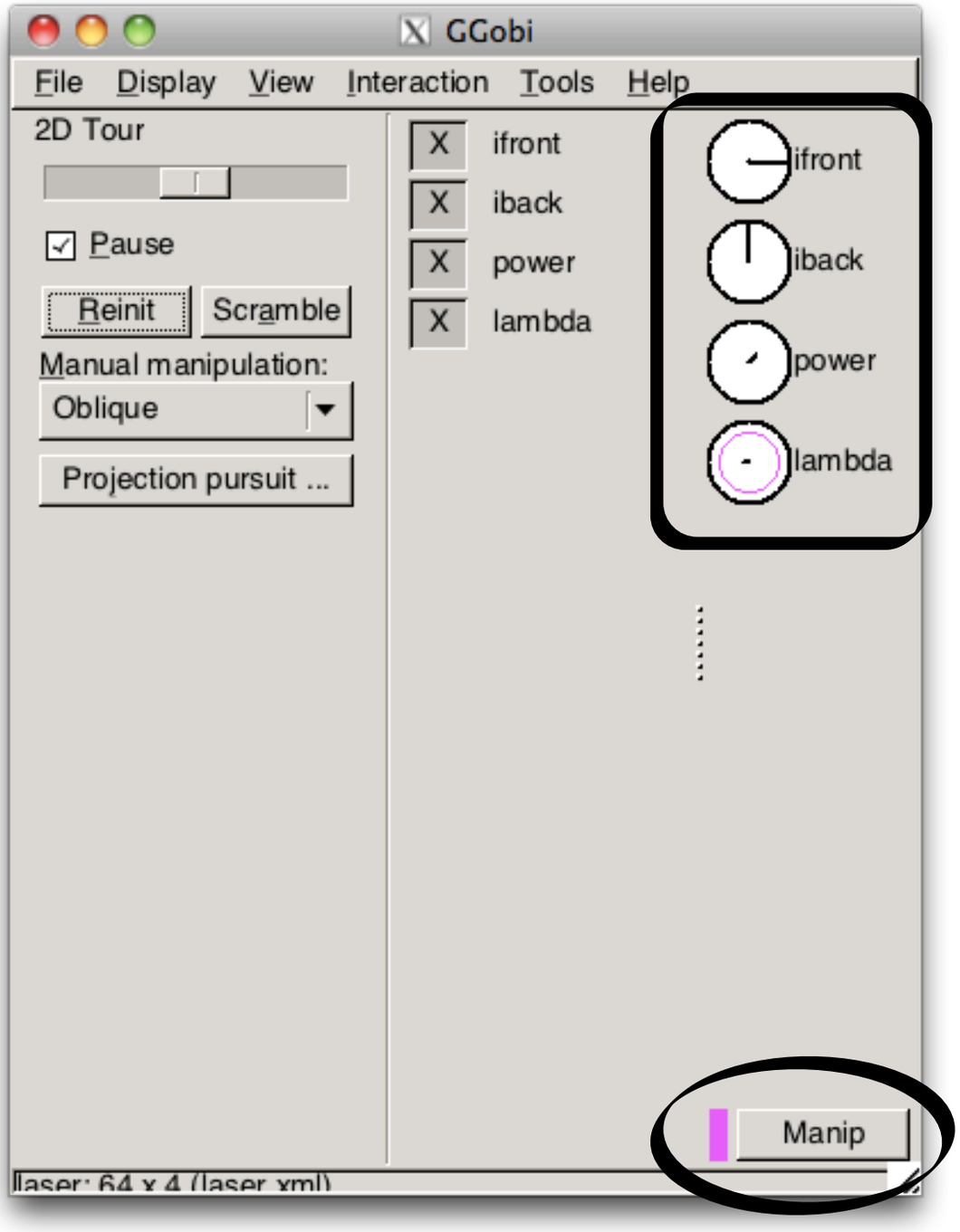
- What combination of variables does a good job of separating the three species?
- Try using the guided tour (project pursuit) with the holes or LDA indices
- If you get stuck in a local optima, use scramble to break out


GGobi
File Display View Interaction Tools Help
2D Tour
Pause
Reinit
Scramble
Manual manipulation:
Oblique
Projection pursuit ...
X tars1
X tars2
X head
X aede1
X aede2
X aede3
X species
tars1
tars2
head
aede1
aede2
aede3
Manip
flea: 74 x 7 (flea.xml)


Projection Pursuit - 2D
File Options
Optimize
Temp start:
Cooling:
1.00
0.99
PP index: (0.0) 0.894 (0.9)
Holes

Laser

- Use manual controls to re-create the displays we saw last week
- The active variable has a purple circle around it
- Metaphor: think that there is big stick poking out of the screen and you are dragging on the end of it
- Wiggling helps to understand the shape

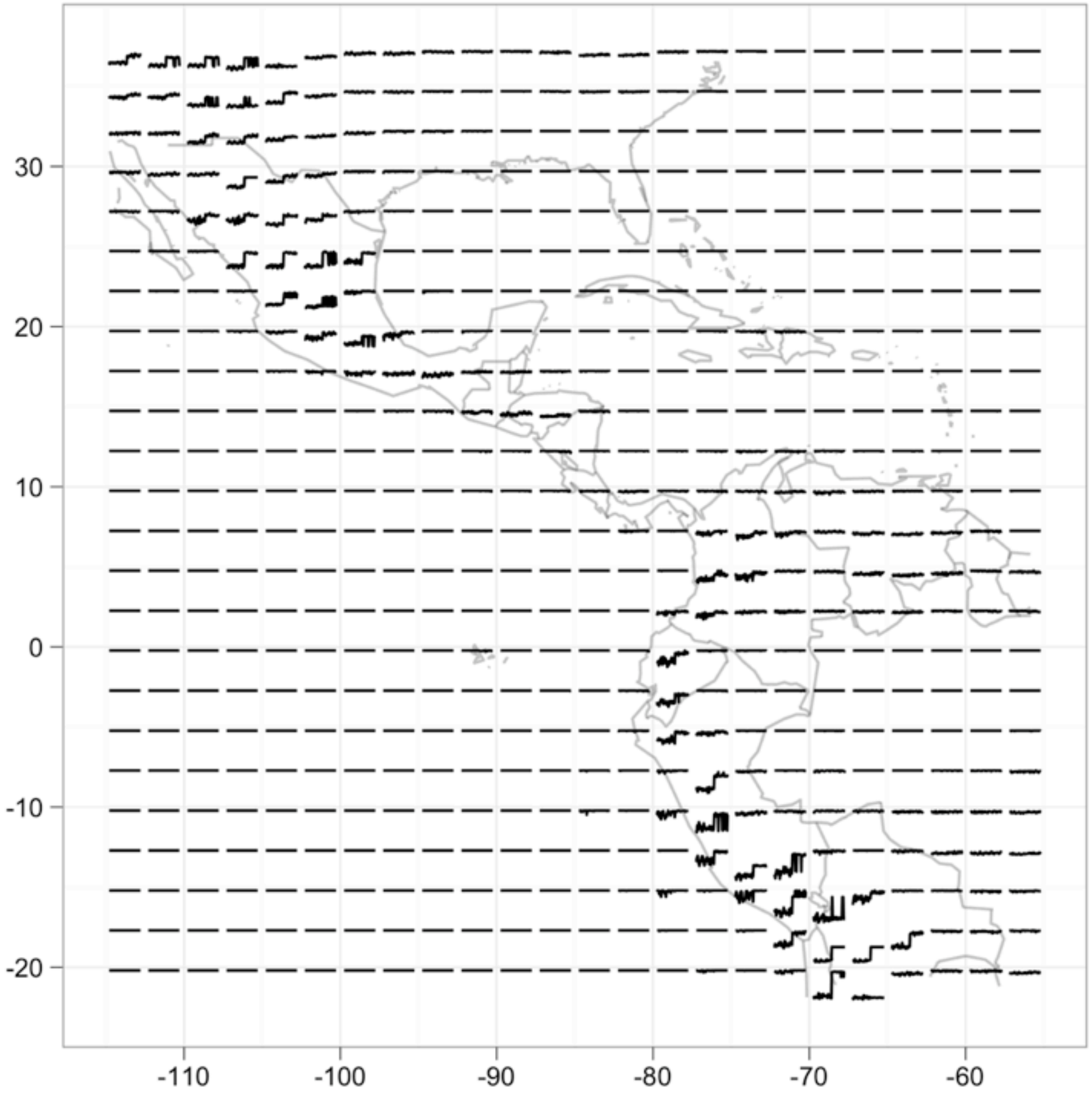

GGobi
File Display View Interaction Tools Help
2D Tour
Pause
Reinit
Scramble
Manual manipulation:
Oblique
Projection pursuit ...
X ifront
X iback
X power
X lambda
ifront
iback
power
lambda
Manip
laser: 64 x 4 (laser.xml)

Prim7

- Start with prim7.csv. This is a 7 d particle physics dataset.
- What shape is it? Using brushing to colour the clusters you identified
- Compare your findings to prim7.xml

Expo

- Create a plot that shows time series of pressure for each location (use the next plot to calibrate)
- Experiment with other variables
- Hint: use persistent brushing to resize all points to the smallest possible.


30
20
10
0
-10
-20
-110
-100
-90
-80
-70
-60