

APPENDIX B

Directory Structure

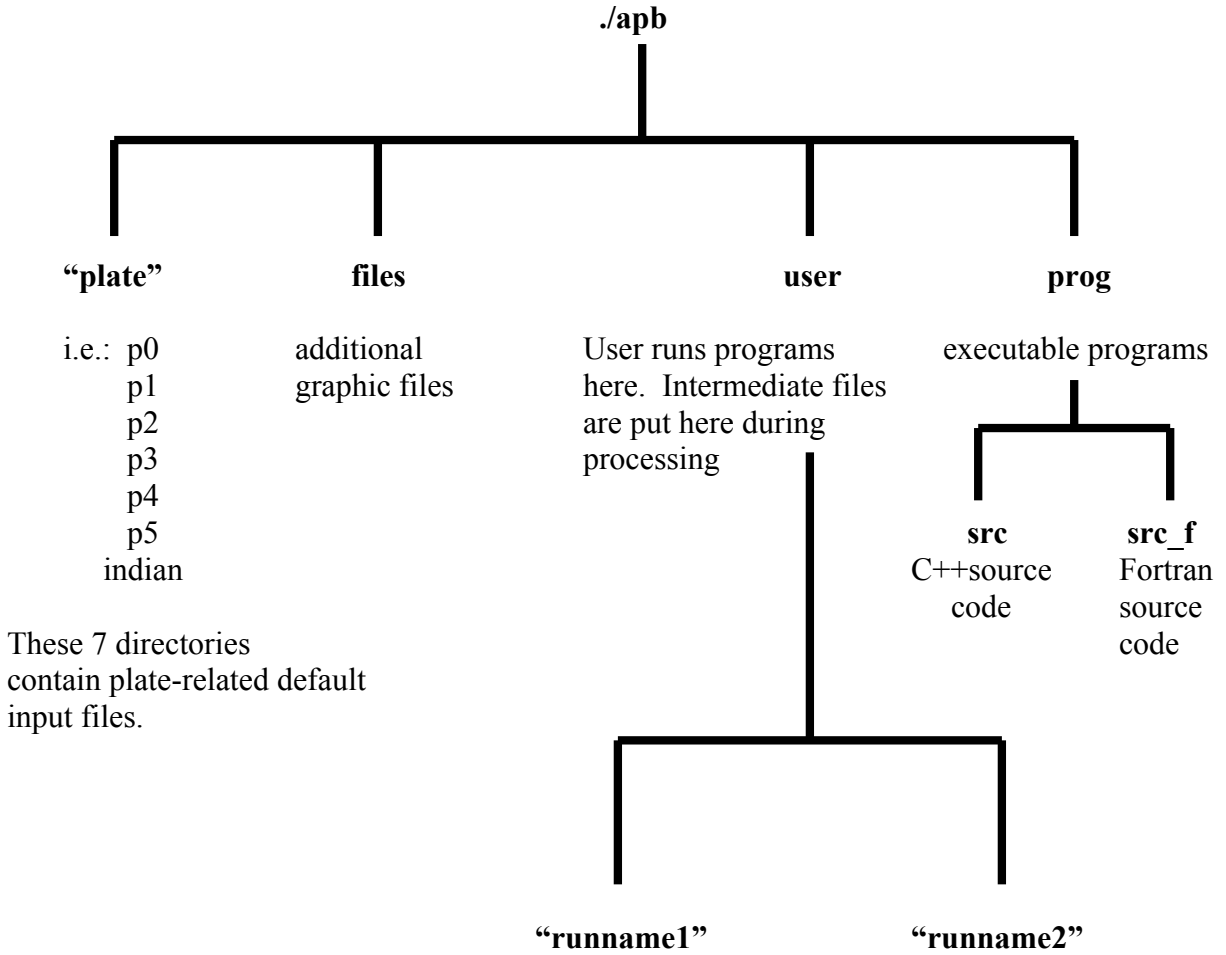
A schematic of the directory structure is shown below. Each major plate (e.g. Antarctic) has a separate directory, and all of the required data files such as stage poles and basefiles reside in that directory. The directories are as follows:

p0	Antarctic plate
p1	Australia plate
p2	Africa plate
p3	South America plate
p4	Nazca plate
p5	Pacific plate
indian	Indian subregions north of 30° S

The executable programs are located in a program directory, prog. The user runs the programs from the /user directory. The user interface creates a runname subdirectory, in the /user directory, to write the log file and output files as well as to access any new, user-specified files.

Figure B-1

Directory Schematic



A new runname is selected by the user for each run. The program creates a subdirectory with that name. The final output is placed there upon successful completion of the program sequence.

Input File Formats

Basefile

The basefiles contain the bathymetry, crustal age and sediment thickness data. The basefile names are "basefileid_0.dg", where "basefileid" is a unique name for each area and the "_0" refers to zero age data. For example:

```
platelo_0.dg equals Australian plate (plate1), oceanic crust (o), at zero age (_0)
plate0c_0.dg equals Antarctic plate (plate0), continental crust (c), at zero age (_0)
```

The basefiles can be either text or binary, and contain seven columns:

<longitude, latitude, bathymetry, thickness, side_id, age, corridor_id>

where, longitude and latitude are in decimal degrees; bathymetry is depth below sealevel in meters (negative values below sealevel); thickness is sediment thickness in meters; side_id is an integer (not currently used), age is crustal age in million years, corridor_id is an integer (not currently used).

A user-supplied file's name must end in "_0.dg". The basefile id is selected by the user. Only the new basefile is entered in the "modify parameters" section of the user interface.

Stage Pole File

All of the stage pole files assume that the Antarctic plate is fixed. The stage pole files contain four columns:

<longitude, latitude, angle, age>

where, longitude, latitude and angle are in decimal degrees; angle is the angle of rotation; age is the maximum age of the stage pole interval in million years.

A user-supplied stage pole file may have any name.

Subsidence Rate File

The subsidence rate filenames are prefixed with "cool" and appended with integer values if more than one region is present. The files consist of two data lines, each containing:

< subsidence rate, max age>

where, subsidence rate is in meters per square root million years; max age is the maximum age to apply a linear subsidence rate function.

The user-interface prompts for new subsidence values directly.

Output File Formats

Three types of files are output. Coastline location files are used to plot the location of continents for each reconstruction. The filename will be "coast_?? dg", where "??" represents the age in my of the reconstruction. The file is an ascii multisegment file of longitude, latitude. For example:

```
>ant_c.dg
170.028      -72.29
169.779      -72.20
etc.
```

A gridded, region-wide file of reconstructed bathymetry will be written for each age. The filename will be "final_?? .grd", where "??" represents the age in my of the reconstruction. The file format is the GMT3 system default, a netCDF gridded data file.

The map output is a color polar stereographic circum-Antarctic projection from 30°S. It is written in Adobe Postscript, which can be viewed using "pageview" or "ghostview." The filename will be "final_?? .ps", where "??" represents the age of the reconstruction.

All final output files are placed in the apb/user/runname subdirectory at the conclusion of program and script execution.