"SLICING" A VOLUME – PROGRAM slice
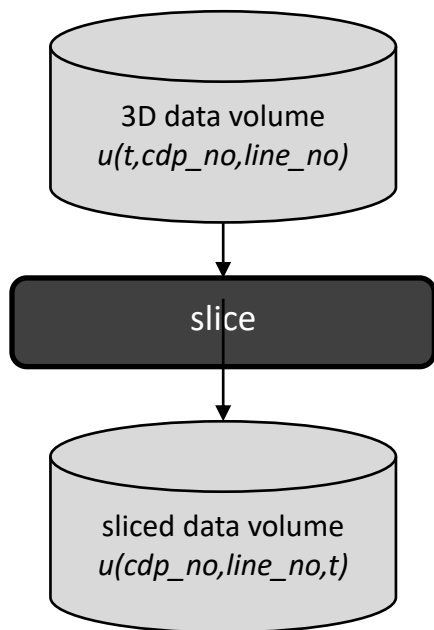
Contents

Overview

In order to efficiently display or process a volume one time- or depth-slice at a time, you need to change the structure of the volume using program **slice**.

Most 3D data volumes are stored with time (or depth), CDP no, and Line no as its 1st, 2nd, and 3rd axes. If you want to efficiently compute the wave-number transformation of a time slice, the order of the axes should be CDP no., Line No, and time, respectively. Program slice is commonly invoked by the **aaspi_util** *AASPI QC Plotting* tab and by the footprint suppression workflows.

Computation flow chart

Program slice has a single input and output file:

Other Utilities: Program **slice**

```
┌─────────────────────────┐
│     3D data volume      │
│   u(t,cdp_no,line_no)   │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐
│          slice          │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐
│    sliced data volume   │
│   u(cdp_no,line_no,t)   │
└─────────────────────────┘
```

Program slice will also slice 4D and 5D gathers.

Output file naming convention

Program **slice** will always generate the following output files:

Output file description	File name syntax
Sliced data volume	sliced_*input_filename+unique_project_name_suffix*.H
Program log information	slice_*unique_project_name_suffix*.log
Program error/completion information	slice_*unique_project_name_suffix*.err

where the *input_filename* is defined by the program GUI and the *unique_project_name* and suffix are read from the *input_filename*. The errors we anticipated will be written to the **.err* file and be displayed in a pop-up window upon program termination. These errors, much of the input information, a description of intermediate variables, and any software trace-back errors will be contained in the **.log* file.
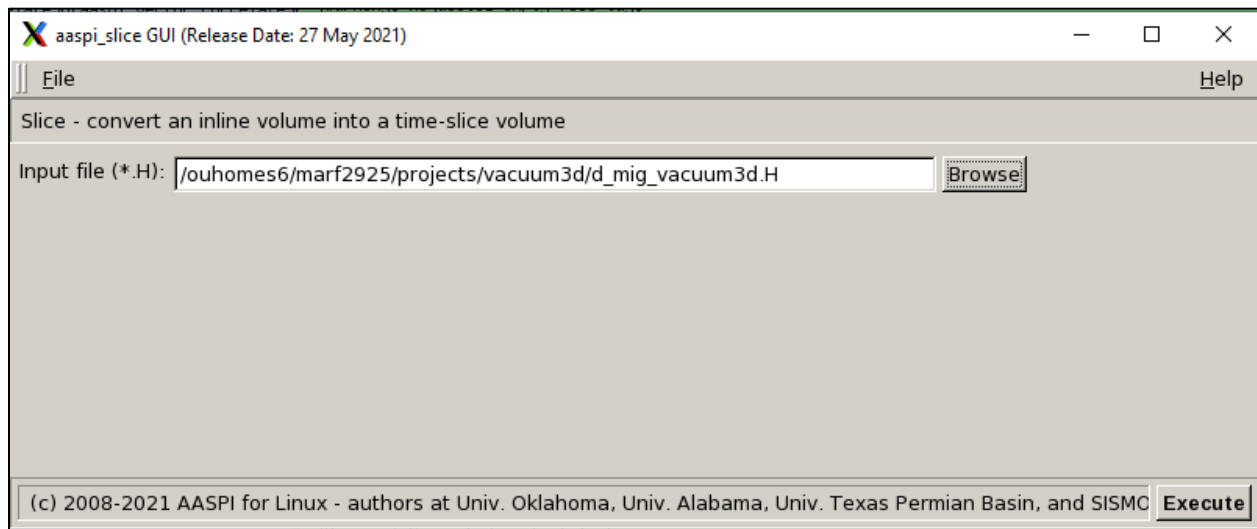
Invoking the slice GUI

Program **slice** is found under the **aaspi_util** GUI O*ther Utilities* tab:

Other Utilities: Program **slice**
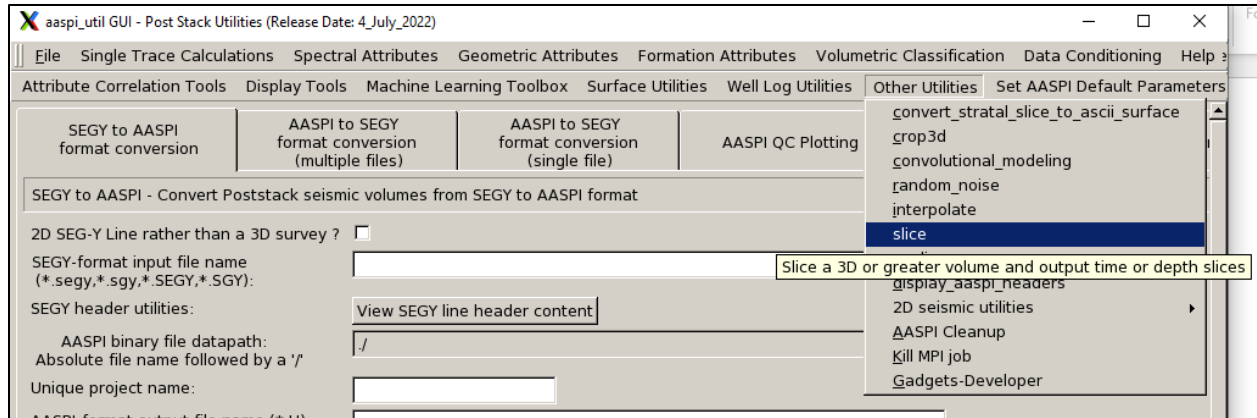
The following GUI appears:

Browse to the *.H file of the volume to be sliced, then hit *Execute*. The output will have the name "sliced"+*input_filename*, which in this case will be *sliced_d_mig_vacuum3d.H* .