

Dips is designed for the interactive analysis of orientation based geological data. The program is capable of many applications and is designed for the novice or occasional user, and for the accomplished user of stereographic projection who wishes to utilize more advanced tools in the analysis of geological data.

Input Data

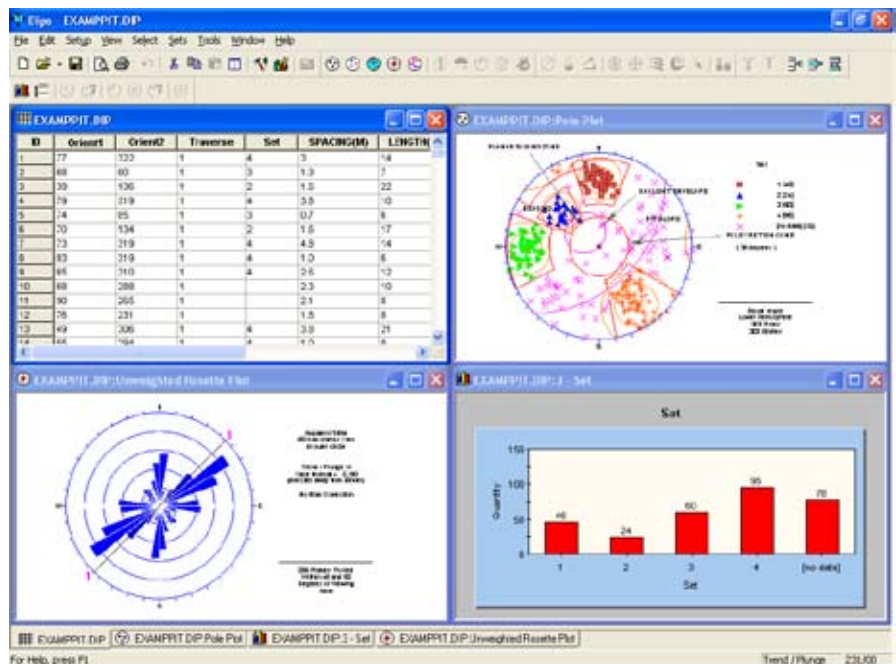
Orientation data can be entered in several common formats – dip/dip direction or strike/dip (planar data), trend/plunge (linear data), or oriented core. Mixed orientation formats can be included within a single *Dips* file. Extra columns allow you to record any additional qualitative or quantitative information, with convenient spreadsheet entry and unlimited file size.

Stereonet Plots

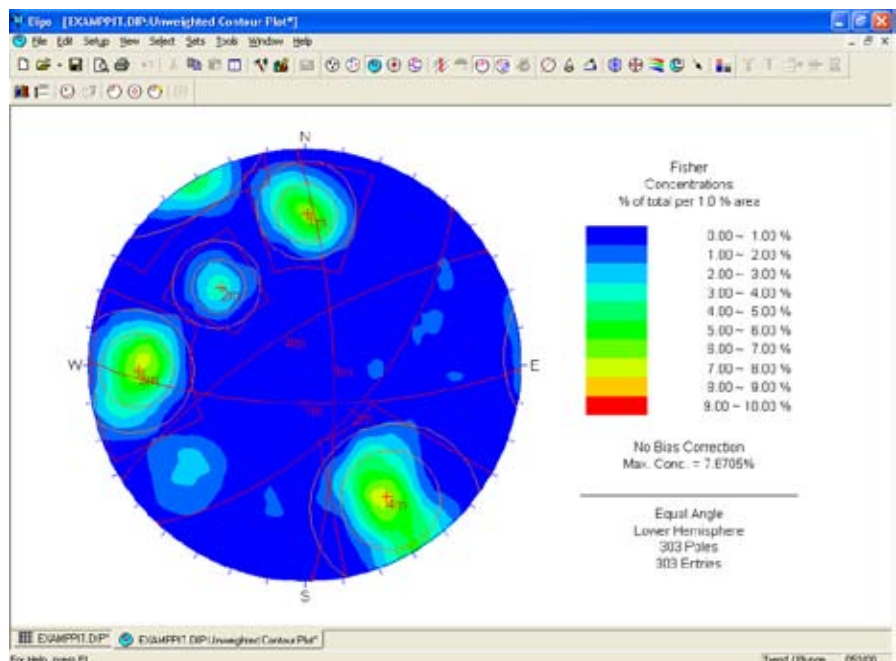
Dips allows you to analyze and visualize structural data (joint sets, bedding planes, faults etc.) using equal angle or equal area projection. Stereonet plots include pole, scatter, contour and planes plots. Contour plots provide statistical contours of orientation clustering. Symbolic pole plots or charts (histogram, line, pie) are used for feature attribute analysis (e.g. joint type, roughness). Rosette plots represent a radial histogram of strike frequency using an arbitrary reference plane.

Statistical Analysis

Dips has powerful statistical analysis features – user defined Set windows allow the selection of orientation clusters on the stereonet. Mean orientations are calculated and set statistics such as confidence and variability cones can be displayed. Kinematic stability analyses (planar sliding, wedge sliding or toppling analysis) can be carried out within *Dips*; or mean joint orientations can be exported to *Swedge* or *Unwedge* for safety factor analysis.



Dips file showing input data spreadsheet, symbolic pole plot, rosette plot and chart.



Contour plot of orientation clustering. Set windows, variability cones and mean planes are displayed.

Input Data

- integrated spreadsheet
- linear/planar orientation data
- quantity column for multiple identical data entries
- declination for magnetic/azimuth correction
- traverse ID column
- unlimited number of columns for additional data

Orientation Formats

- dip/dip direction
- strike/dip (right or left hand rule for strike)
- trend/plunge (linear data)
- oriented core (alpha/beta)
- multiple formats in one file using traverses

Traverses

- linear (e.g. scanline)
- planar (e.g. wall map)
- borehole (oriented core)
- clinorule
- bias correction (Terzaghi weighting)

Stereonet Plots

- pole plot
- symbolic pole plot
- scatter plot
- contour plot
- planes plot
- overlay of contours, poles, planes
- customize plot options
- rosette plot with user-defined reference plane

Projections

- equal angle, equal area
- upper/lower hemisphere

Statistical Analysis

- user-defined set definition for orientation (pole) clusters
- mean vector calculation (weighted/unweighted)
- confidence and variability cones
- set statistics listed in InfoView
- Fisher/Schmidt distributions for contour plots
- global mean vector

Stereonet Toolkit

- polar/equatorial grid overlay
- user defined trend/strike reference line
- add planes (rubber plane for interactive data analysis)
- small circles about any axis (e.g. friction circles, toppling bounds)
- daylight envelopes for sliding analysis in slope design
- onscreen pole identification
- data rotation about arbitrary axis
- onscreen angle measurement
- pitch grid
- add text to plots

Filtering/Attribute Analysis

- powerful database query
 - create data subsets using Boolean queries
- create charts or symbolic pole plots based on any data column in the file
- automatically create corresponding chart from symbolic pole plot
- plot qualitative/quantitative data
- edit symbols, create symbol master list
- histogram, line or pie charts
- filter by set

Output Files

- save processed file (e.g. convert raw data from oriented core, mixed data formats, declination to true orientation with a single format)
- create query and save subset as a new *Dips* file
- rotate data, save as a new *Dips* file
- *Dips* Tools file – all sets, planes, drawing tools added to stereonet automatically saved to a .dwp file
- export planes to *Unwedge* or *Swedge*
- JTDIST utility program – define up to five synthetic joint sets, generate a *Dips* file

Graphical Output

- save plots to .bmp, .jpg, metafile (.emf or .wmf)
- save plots to DXF file
- copy to clipboard
- one-click grayscale for black and white captures

Price & Licensing

Dips 5.0 is sold as single licenses, which are purchased outright, for \$595 US (\$715 CDN).

Network licenses are also available; they are sold as a yearly subscription, with price based on the number of concurrent users. Please contact software@rocscience.com for more information.

www.rocscience.com