glitch+ Simple program that helps identifying periods of *bad* data and large offsets.

SYNOPSIS

glitch+ -s *strain_data* **-f** *bot, wr, jl* **-o** *offset/spike_threshold*
-l *smallest_believable_datum* **-u** *largest_believable_datum*

All options are required. Outputs are two files:

> *clip.out* list of times of data that are either too large or too small; thresholds set with **-u** and **-l**.

> *spike_off.out* are a list of times of either spikes or offsets which exceed the threshold set by **-o**.

Version 0.1 April, 2007

DESCRIPTION

Before running this script, plot the data so as to set the upper and low bounds to define clipped data and to determine the threshold for large offsets. The script actually using the FORTRAN program called *glitch*. *glitch* make an initial pass through the data and tabulates the times where the data are either above or below specified value supplied by **-u** and **-l**. All of the flagged values are output to a file called *clip.out*

For the second pass, it skips the clipped data. For each valid observation, d_i, it performs two calculations. For a *spike*, it calculates $s_i = d_i - 0.5(d_{i-1} + d_{i+1})$ or compares the current observation its two adjacent observations. For an *offset*, it calculates $o_i = 0.5(d_i + d_{i+1}) - 0.5(d_{i-2} + d_{i-1})$ or compares the observation plus the one following with the two previous observations. If either the absolute value of s_i or o_i exceeds the threshold specified by **-o**, those times are output to *spike_off.out*.

Use the times listed in the output files to help compile the *edit* and *offset* files used with *cleanstrain+*.