

I have included the instructions below as an aid to the use of the SIDPLOT program which should be used for data entry if possible

Operating Instructions – SIDPLOT Data Entry Program

----- Manual data entry -----

Run DOS program SIDPLOT from Win95 or DOS

After startup:

- Set CAPS ON
- Enter Observer ID
- Enter Station call letters
- Enter Station frequency
- Enter Year - 4 digits
- Enter Month (as a number)
- Enter Day (first day of valid observation)

Press [ENTER] after each entry - Do not hit TAB

At this or any other point in running SIDPLOT you may change any of the above entries by pressing the RED Highlighted letter for that entry. Enter the new information and press [ENTER].

Data Entry:

- Press appropriate RED Highlighted letter for Begin, Peak, End
- Enter relevant UT Time followed by [ENTER] - Do not hit TAB
- These may be entered in any order and reentered as described above if you notice a mistake.
- Press [R] to enter Rating followed by [ENTER]
- The observation is ACCEPTED at this point, and written to the file.

- Reenter another observation for same day OR
- Press [D] to enter a new day number and then enter new observations.

Press [Q] to quit.

File will be in same directory as the SIDPLOT program called by the observer ID and station monitored i.e. { A87NAA.DAT }

----- Using Graph -----

If you have data from the Logger program provided by AAVSO which reads up to 4 channels and stores each channel into a separate file, you can use the graph facility to extract the time of events. After the initialization data has been entered press [F] to enter the name of a data file. It must be in same directory as the SIDPLOT program. After pressing [ENTER], The contents of the data file will be displayed on screen. You may now use the Left and Right arrow keys to scroll through the data. A cursor indicates where you are on the graph and the time and output voltage are displayed above the graph.

Position the cursor over an event, the press [B], [P], or [E] and enter the time listed. Convert to UT first if your data is in standard time. After you press enter you may then scroll to the next event time and so on.

NOTE: You cannot scroll while the cursor is in one of the time fields. Enter the data and press [ENTER] to start scrolling again.

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817

Reducing Data Gathered By VLF Monitoring Systems

(Extracted from SID Technical Bulletin Vol. 3, Number 4, Oct. 1992)

The reduction process is quite simple, and consists of the steps which follow. First, the universal time for each of three event-phases must be measured for each SID. Examples are indicated on the recording at the end of this report.

Event Start: The moment when an event begins. Be aware that the amplitude of different events varies considerably, and some may appear in inverted form. If it is obvious that an event began before the first definable start time, an 'E' (before) is appended to the recorded time.

Event End: Of the three times, the end time is the most difficult to determine. It is defined as the moment when the trace returns to the diurnal trend line, or is interrupted by the onset of a new event. In the latter situation, the letter 'D' (after) is appended to that time, which in turn becomes the start time for the following event.

Event Maximum: The moment when the ascending (descending in the case of inverted events) branch slows its sharp rise. Note that this generally does not coincide with the event's peak amplitude.

If the trace goes off-scale as maximum is approached, or is interfered with in some other manner such as the onset of sunset, device failure, etc., we append a 'U' (uncertain) to the last identifiable time. For example, if the SID maximum occurs somewhere off-scale and the last determinable time is fourteen hours, ten minutes (1410), the time is recorded as 1410U.

After each of these times have been recorded, the event's 'Importance' and 'Definiteness' ratings can be determined. **Importance** generally refers to the length of an event, found by subtracting the start time from the end time. The table at right associates the Importance rating with event duration.

Duration	Importance
< 19 minutes	1-
19 - 25	1
26 - 32	1+
33 - 45	2
46 - 85	2+
86 - 125	3
> 125	3+

With respect to the observer's typical daily trace, a class 1 SID is an event with small intensity change and a relatively short duration. Class 2 is a moderate intensity event with a fairly long duration, and a class 3 describes a SID with a 'great' change in intensity and long duration.

Definition is a subjective estimate of an observer's confidence in the event. Normally, the events which are included in our reports have Definitions equal to 3 or greater. Use the righthand scale as a guide to Definition. Careful study and experience teaches observers how to recognize false SID events caused by man-made interference. Beginners should not hesitate to assign high Definition values to those events which are not correlated with known noise sources. Other observers' results will be compared to eliminate suspect events before a final report is submitted to the NGDC.

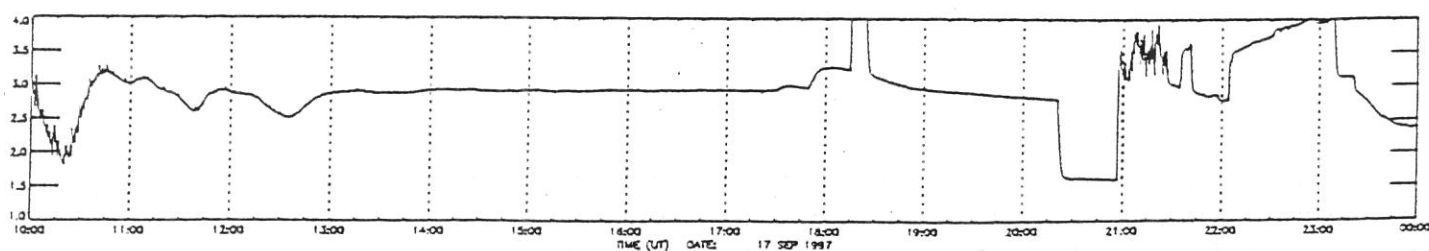
Confidence	Definition
Questionable	0
Possible	1
Fair	2
Reasonable	3
Reasonably	4
Definite	
Definite	5

E-Mail Format For SID Event Reports

The format prescribed by the NGDC always begins with the '40' NOAA SID identifier code. The AAVSO SID Coordinator assigns observer codes after the station is operating correctly and data is received regularly from that observer.

Column	Description
1-2	Data code; always 40
3-5	Blank
6-7	Year
8-9	Month
10-11	Day
12-13	Blank
14-17	Start time; UT hours and minutes event began
18	Start time qualifier; D = after, E = before, U = uncertain
19-22	End time; UT hours and minutes event ended
23	End time qualifier; D, E, U
24-27	Maximum time; UT hours and minutes of event maximum
28	Maximum time qualifier; D, E, U
29-44	Blank
45-46	SID Importance; sign in column 46
47-50	Blank
51	Definiteness
52-55	Code for monitored transmitter. The field consists of the final two station call letters and the two numbers which represent the frequency (kHz). The latter is rounded to the nearest integer. Example; the code for NSS at 21.4 kHz is recorded as SS21.
56-69	Blank
70-72	Observer code; Example A82

SID Sample Trace and Analysis



40	970917	1727	1752D1732	1	SAA24	A82
40	970917	1752	1915 1756	2+	SAA24	A82