

LIB. PCIVE

PROCEDURE FOR USING VVM DATA ACQUISITION PROGRAM VERSION 2-1
venkat 16/9/95

(1) The acquisition hardware (PCL718 add-on card) is located in the PC at Baseband corner of e-lab. Software is in directory C:\LOPHASE. Run the gwbasic program VVM2-1.BAS by typing

GWBASIC VVM2-1<enter>

(2) The typical start-up screen you would see is:

VECTOR VOLTMETER ACQUISITION PROGRAM VER 2-1 16/09/95 venkat
Start at:: 09-16-1995 23:45:00

Note 980 kB Disk space needed/ day of data acquisition
Ensure 8508A VVM is set in B/A MAG, B-A PHASE and DISPLAY dB mode...

```
C:\LOPHASE
.      <DIR>          .. <DIR> JUNK          VVM2-1 .BAS
PCL718 .BIN          LOPHASE .ARC
17575936 Bytes free
```

EXIT IF (a) DATE/ TIME IS WRONG (b) NOT ENOUGH DISK SPACE

IF YOU WANT TO EXIT NOW, PRESS 'E'

Ensure that the VVM setting is as advised above. If date and time are correct and the disk space is adequate, proceed to Step 3 by pressing <enter> for starting the acquisition. If not, exit by pressing "E".

(3) Answer the following query suitably.

Total no. of antennas for data acquisition [Default=4] ::

Note that you have a choice of recording data from EITHER ONE antenna OR FOUR antennas with a FIXED sampling period of 100 mSec and integration period of 3 seconds.

(4a) If your choice was 4, answer the following query suitably.

Antennas used [Format is App,Aqq,Arr,Ass] ::

Specify the 3-letter code for the four antennas, as mapped in the LO Multiplexer PIU, read from LEFT to RIGHT.

(4b-i) If your choice was 1, answer the following query suitably.

BCD code of Antenna Used as per LED ::

The LEDs in the LO Multiplexer PIU have BCD code of 8, 4, 2 and 1, read from LEFT to RIGHT.

(4b-ii) Answer the following query suitably.

Name of Antenna used [Format is App] ::

Specify the 3-letter code of the antenna, as mapped in the LO Multiplexer PIU, for the BCD code chosen.

(5) The program creates a file named "mmdyy-x.LOP", where mm, dd and yy are the month, date and year of data acquisition; x is an alphabet to result in a non-existent output file and acquires data. The data file is periodically closed every minute to take care of power failure. Mid-night is automatically taken care to help in direct plotting as a function of time.

YOU CAN EXIT FROM THE PROGRAM BY PRESSING \$.

(7) The typical screen display while acquisition is in progress:

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-----
VECTOR VOLTMETER ACQUISITION PROGRAM VER 2-1 16/09/95 venkat
Start at::09-16-1995 23:45:00; Output File name:: 091695-a.lop; Saved:
Cal Factor: A/B Power Ratio:: 8.19 counts/ dB; A-B Phase:: 8.19 counts
*****
Single-ended; Bipolar; ± 2.5 V; DRQ = 1; Clock = 1 MHz; Base = H300
Start Ch.:: 5; Stop Ch.:: 6; Pacer :: 100 mSec; Integration :: 3
*****
Cycle :: 106; Iteration :: 37; Digital Output:: 8
Antenna          C01          C02          C03          C04
Time             Working.    02:05:52    02:05:55    02:05
MAX-Mean
Mean
MIN-Mean
RMS

MAX-Data
MIN-Data

```

```

Parameter      Power      Phase      Power      Phase      Power      Phase      Power      P

```

```

MAX-Data and MIN-Data from START OF RECORDING  PRESS $ TO EXIT
*****
-----

```

As the data is getting acquired, you can infer the following from the display: *

- (a) MAX and MIN of the Data (100 mSec values) from the START of recording;
- (b) The computed Mean and RMS for the LAST integration period;
- (c) MIN and MAX of the computed Mean from the START of recording.

(8) After exiting from the program, FTP the data file to chitra to the area corr/abr/lop. For plotting, cd to corr/abr and edit the setup file vvm2-1.in, to update default information like name of file, antenna/s used etc. Plots can be generated by running the executable program plt, with syntax as
plt < vvm2-1.in

A sample plot of live data of C0 is enclosed.

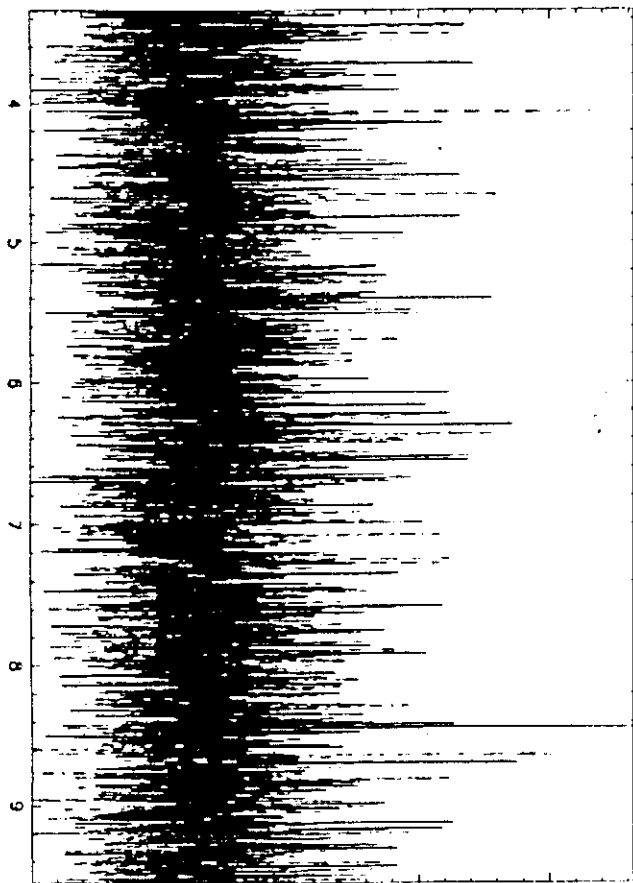
Note that only (b) gets recorded in the output data file.

WM_POWER_RMS (dB)

0.15 0.2 0.25 0.3

TIME (in hrs)

18-Sep-1995 11:00

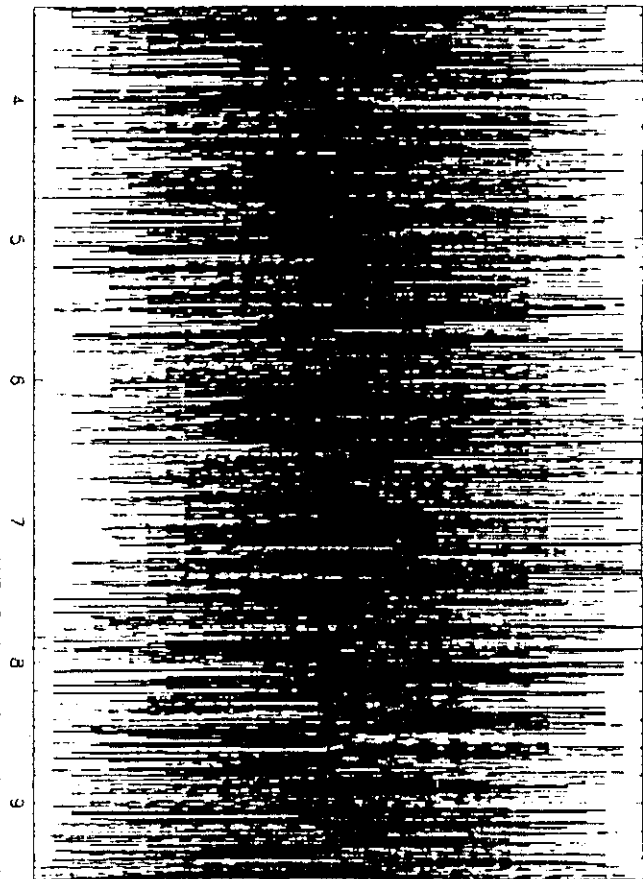


WM_POWER_MEAN (dB)

-36 -35 -34 -33

TIME (in hrs)

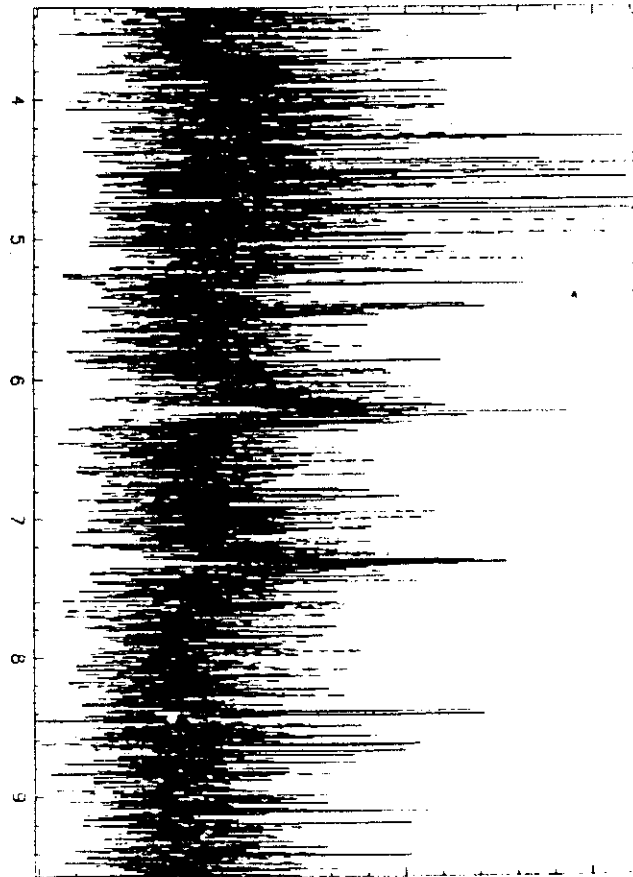
000:091695-2:00



WM_PHASE_RMS (deg)

0.1 0.2 0.3 0.4

TIME (in hrs)



WM_PHASE_MEAN (deg)

-105 -100 -95 -90

TIME (in hrs)

000:091695-2:00

