TO: VLA Scientific and Computer Staff

FROM: Alan Bridle, NRAO-CV

DATE: 21 October 1988

RE: VLAPLAN and VLAUVPL

The current versions (V. 1.2) of the two "VLA Observing Strategy Planner" worksheets that I demonstrated at a lunch talk on October 18 are now available on diskettes at the VLA Science Compaq and on the hard disk at the VLA Science AT. I would like to encourage you to use them, and to send me any suggestions you may have for improving either the calculations, the displays, or the built-in documentation. I hope to freeze these worksheets, for initial distribution to non-NRAO users, toward the end of November. Following comments that I have received already, I intend to provide some new read-outs relevant to bandwidth synthesis experiments.

To run the package on the Science Compaq in S.L.O.B. Room 31, turn on the computer with the Lotus V2.0 System diskette in drive A (left) and the VLAPLAN/VLAUVPL diskette in drive B (right). (These are two new diskettes that I have left in the general diskette pack by the Compaq). When the boot is done, Lotus 1-2-3 V2.0 will automatically execute, and a blank Lotus screen will come up. Type /FR (invoke Lotus File Retrieve), and you should see VLAPLAN.WK1 highlighted. Press ‹Return› and VLAPLAN will load from disk B (the Lotus WAIT light will appear at top right). Once the VLAPLAN title screen appears, follow the instructions -- ALT-H gives the on-line help, ALT-M the menu of calculations. To load the u,v plotter, type /FR, use the arrow keypad to select VLAUVPL.WK1 from disk B, and press ‹Return›. To quit Lotus from within either VLAPLAN or VLAUVPL, type /Q followed by Y.

To run the package on the Science AT (S.L.O.B. Room 39), turn on the computer with no diskettes in either of the diskette drives. The AT will boot from its hard disk and deliver a C:\› prompt. Type:

cd \123 and ‹Return›

The prompt will become C:\123›. Type:

123 and ‹Return›

after which a blank Lotus screen will come up. Proceed as above for the Science Compaq. On leaving Lotus, type PARK ‹Return› before powering down the AT.

The VLAPLAN/VLAUVPL diskette at the Compaq and the C:\123 directory at the AT also contain README files that provide some external documentation for the worksheets. Parts of these files repeat the "Using Program" help text from the ALT-H menu. To read them on the Compaq, type B: ‹Return› followed by README ‹Return› at the A:› prompt, e.g. after quitting Lotus; on the AT, type README at the C:\123› prompt.

Alan B.

NATIONAL RADIO ASTRONOMY OBSERVATORY
Edgemont Road, Charlottesville
Virginia

INTERNAL MEMORANDUM

TO: Sandra Montoya, AOC

FROM: Alan Bridle

DATE: December 21, 1988

SUBJECT: VLAPLAN Distribution Diskette and Memo

I enclose the diskette of PC software and memo that I described to you over the phone today. The software will be advertised to VLA users for the first time in the January 1989 NRAO NEWSLETTER, so it should be a little while before you begin to get any requests for it. I am sending a duplicate of the distribution diskette in a separate package to Carl Bignell, to guard against one getting damaged in transit.

The memo is designed to be Xeroxed two-sided, with the back of the cover page left blank. The page numbers will then all face out toward the reader.

Please call me at (804)-296-0375, or E-mail to *abridle*, if any problems or questions come up regarding this package. The software itself tells users to contact me directly if they find any "bugs"!

NATIONAL RADIO ASTRONOMY OBSERVATORY
Edgemont Road, Charlottesville
Virginia

INTERNAL MEMORANDUM

TO: C.Bignell, A.Braun, R.Hjellming

FROM: A.Bridle

DATE: December 21, 1988

SUBJECT: VLAPLAN Version 1.3

I have just sent to Sandra Montoya a master distribution diskette for Version 1.3 of my VLAPLAN and VLAUVPL spreadsheet software for planning VLA observing strategies and proposals. She will soon distribute a paper version of the distribution diskette's README file as VLA Computer Memorandum No. 179. I have also sent a backup copy of this diskette to Carl Bignell.

This version of VLAPLAN contains numerous improvements to Version 1.2, which I demonstrated at the VLA in October, installed on the public AT in the S.L.O.B., and left in the public diskette pack for the Science Compaq. The new README file and memo have an Audit Trail section that itemizes the changes. Version 1.3 will be advertised to users in the next NRAO NEWSLETTER.

The distribution diskette contains Lotus *1-2-3* and Borland *Quattro* versions of the worksheets in an archived format, plus a public domain de-archiver, batch files for de-archiving the worksheets to a user-specified disk and directory, and the README files. You may wish to get copies of the distribution diskette from Sandra Montoya. I would also be grateful if someone would use one of these distribution diskettes to instal Version 1.3 on any public PCs that will be in use at the AOC and which have either *1-2-3* or *Quattro*.

NATIONAL RADIO ASTRONOMY OBSERVATORY
Edgemont Road, Charlottesville
Virginia

TO: Charlottesville Scientific Staff and Visitors

FROM: Alan Bridle

DATE: April 26, 1989

SUBJECT: VLAPLAN/VLAUVPL Worksheets on Public IBM PC/AT

The latest version (V. 1.31) of my VLAPLAN "Observing Strategy Planner" worksheet is now available on the "Public" IBM PC/AT in Room 116. VLAPLAN makes the main calculations that are needed to select

IF bandwidths,
visibility averaging times,
numbers of spectral line channels,
array configurations, and
total integration times

to make images of a prescribed quality (field of view, distortion, largest angular scale, sensitivity) for continuum, spectral line or bandwidth synthesis observing with the VLA. It also makes context-sensitive plots of the primary beam correction, bandwidth smearing, and time-average smearing effects, and of the visibility of specified Gaussian components against baseline length in km at your chosen observing frequency. It will recommend how to adjust your observing parameters to resolve conflicts between them, or between them and the VLA computer restrictions (if using spectral line mode). For L-Band only, it warns of known interfering signals in your chosen band. An ancillary worksheet, VLAUVPL, plots u,v tracks for the inner or outer VLA antennas for any declination, elevation range or configuration, to assist the choice of configuration if baseline foreshortening at large hour angles is important.

To use these worksheets, turn on the PC/AT with no diskettes in either diskette drive. It will boot from the hard disk and deliver a *C:\>* prompt (this boot will avoid "insufficient memory" problems caused by any RAM-resident software left behind by another user). Type **cd \quattro** and hit **<RETURN>**. The prompt will become *C:\QUATTRO>*. Type **VLAPLAN** (for the general observation planner) or **VLAUVPL** (for the u,v plotter) and hit **<RETURN>**. The worksheet will execute under Quattro automatically, and give initial instructions. In VLAPLAN, **ALT-H** gives an on-screen help menu, **ALT-M** a calculation menu. To load the u,v plotter from within VLAPLAN, type **/FR**, hit **<RETURN>**, use the arrow keypad to select *VLAUVPL3.WK1*, and hit **<RETURN>** again. To quit Quattro, type **/Q** followed by **Y**.

The software is self-documenting via its **ALT-H** menus, but a User's Guide (VLA Computer Memo No. 179) is on the cork board in Room 116. Copies of this memo, and diskettes with the worksheets and documentation, are available from me.