National Optical Astronomy Observatories

MEMORANDUM

TO: Convex/IRAF Users **DATE:** May 5, 1990

FROM: Doug Tody

SUBJECT: BETA Release of Convex/IRAF Version 2.8

Convex/IRAF version 2.8 is now available for distribution as a beta test release. This means that the system has undergone several days of routine testing and appears to work normally, but has not been in use long enough to have fully proven itself. Bugs are certainly possible, although our experience thus far with the quality of the latest Convex Fortran compiler and operating system has been very favorable (there were far fewer problems than we encountered with the alpha port a year or so ago). The beta test system was prepared and tested on a Convex C1 computer running Release 7.0 of the Convex operating system and Version 5.0 of the vectorizing Fortran compiler, at the National Radio Astronomy Observatory in Socorro, NM, in August 1989. We wish to thank the VLA and NRAO for making this system available to us to prepare Convex/IRAF.

From the point of view of installing and maintaining IRAF the Convex system is a fairly conventional Berkeley UNIX system. The documents *BSD-IRAF Installation Guide* and *UNIX/IRAF Site Manager's Guide* may be used to install and configure Convex/IRAF. Some special features of Convex/IRAF are the following:

- The Convex/IRAF distribution tape includes IRAF binaries for two architectures, IEEE and NATIVE, corresponding to the two floating point hardware options available for the Convex. The IEEE option provides a binary image file format compatible with most popular workstations, e.g., Sun workstations, or any other workstations with SPARC or Motorola cpus. A hardware option must be purchased from Convex to be able to use these binaries. The NATIVE binaries are for the default Convex floating point format, which is compatible with VAX computers.
- Convex/IRAF has been modified to be compatible with the Convex tape allocation facilities, TPALLOC and TPDEALLOC, i.e., tapes can be allocated and deallocated either from within IRAF or at the host level with no difference. Remote magtape allocation and access via the network, e.g., between two Convexes or between a Convex and a Sun, is supported.
- The system as distributed was compiled with the vectorizer turned off for the VOS libraries (IRAF system code), and on for the VOPS library (vector operators) and the science applications. Hence, the most computationally intensive parts of the science applications should be vectorized where possible. The distributed system is compiled for only a single cpu.

The distribution tape (as discussed in §2.2.1. of the Installation Guide) contains a TOC (table of contents) file as the first file on the tape. The TOC file for the Convex/IRAF distribution tape is shown below.

```
0   Table of Contents
1   AS.CXOS.GEN     33.6Mb  IRAF, NOAO packages and Convex sources
2   IB.CXOS.FPN     21.9Mb  IRAF system binaries for Convex/NATIVE
3   IB.CXOS.FPI     21.8Mb  IRAF system binaries for Convex/IEEE
4   NB.CXOS.FPN     20.6Mb  NOAO packages binaries for Convex/NATIVE
5   NB.CXOS.FPI     20.6Mb  NOAO packages binaries for Convex/IEEE
```

When reading the distribution tape you should select those sets of binaries that are compatible with your hardware configuration, i.e., either IB.CXOS.FPN and NB.CXOS.FPN (for native floating

point), or IB.CXOS.FPI and NB.CXOS.FPI (for IEEE floating point). If desired a single system can be configured for both architectures, using the environment variable IRAFARCH to select the architecture to be used.

After installing the IRAF system the standard test procedure included in Volume 1A of the *IRAF User Handbook* series should be run to test the system (see §3 of the Installation Guide). This test procedure uses the standard test image distributed with all IRAF systems, referenced as `dev$pix` in the test procedure. Please note that the format of the image provided *is compatible only with the IEEE architecture.* The image is readable by the NATIVE system but the pixel values will be off by a factor of 4. Sites configuring a Convex system for the NATIVE architecture should probably delete the test image distributed with the system, and replace it with the test image from another local version of IRAF, e.g., using a FITS transfer.

Detailed notes on the beta and alpha Convex/IRAF ports are given in the file `notes.convex`, in the `iraf$local` (iraf login) directory.

Good luck on your Convex/IRAF installation! Please be sure to let us know of any problems encountered during the installation or while using the IRAF system itself.