AIPS DDT History

Glen Langston and Kerry Hilldrup

This document is intended for AIPS system managers who are installing a new version of AIPS. After installation, the accuracy and speed of the primary AIPS tasks can be measured with a set of AIPS DDTs. The results of the DDTs should be compared with results tabulated in this document.

1 Summary of AIPS DDTs

The AIPS DDTs are a selection of tasks designed to find *bugs* which are to be *exterminated* before software is released to the public. To ensure the quality of basic image processing software, these DDT tasks measure quantitatively the reliability of a few key tasks. This document records the results of AIPS tasks and compares them with those of earlier versions. The tasks tested with the DDTs are UVSRT, UVMAP, APCLN, ASCAL, MX and VTESS. Additional AIPS tasks run are UVDIF, COMB, and SUBIM. These tasks start with a standard set of UV data and manipulate it to produce images which are compared with reference images.

Three types of tests are run; SMALL, MEDIUM and LARGE, producing 256, 512 and 1024 square pixel images from UV data sets with 8000, 13000 and 60000 visibilities, respectively. The quality of these tests is determined by subtraction of the resulting images from previously determined standard images.

Appendix A of this document is a listing of an execution of the AIPS RUNFIL DDTLOAD, which produces procedures necessary for executing the DDT. Appendix B is a listing of an execution of the AIPS RUNFILE DDTEXEC which tests the AIPS task MX.

2 DDT History

The UV data and resulting images have changed periodically, the latest change occurred in January 1989 and the previous change occurred in October 1987. The changes in January 1989 have been termed the 15APR89 copy of the DDT.

The dates of major events in AIPS coding which effect the DDT's are described below.

84 Dec First DDT set of routines defined by Don Wells and Bill Cotton

85 Nov DDT modified to allow one of three sizes of DDT, Small, Medium, and Large.

87 Oct A new DDT tape created with high dynamic range LARGE DDT from Alan Bridle's data. Tape created by Eric Greisen and Kerry Hilldrup.

89 Jan Code overhaul begins, numerous (All) routines are modified.

89 Mar Clean components are merged before ASCAL to speed execution. New maps created for MEDIUM and LARGE tests of MX tasks. Modification by Chris Flatters.

89 Sep Overhaul bug found in AP routines used by UVMAP.

89 Oct MX bug found by Patrick Leahy which caused strips to be inserted into *some* images at the 0.1 % level. Bug traced to ALGSUB, which had incorrectly performed complex conjugations. This bug was released in several versions of AIPS.

90 Jan Anomalously small number of bits found on CONVEX and SUN for UVMAP and UVBEAM tests. Fixed by replacing single precision with double precision arithmatic.

90 Jan Minor bugs fixed in DDT procedure and printout shortened by Glen Langston.

90 Apr DDTs detect error in MX task just before distribution, showing DDTs are still required.

90 May DDTs show MEDIUM and LARGE reference images for MX contain ALGSUB errors which produce stripes at 1000 to 1 dynamic range. Current MX results are believed correct and a new DDT tape release is planned.

3 How to Run the DDT

Running the DDT consists of three major steps; *a)* creating the DDT procedures, *b)* loading the DDT master images, and *c)* running the DDT procedures which start tasks and compares output. A sample aips session is listed below for reading the master images from tape and running only the MX DDTs. The AIPS RUNFILE DDTLOAD is used to create the required AIPS procedures. The AIPS RUNFILE DDTEXEC runs the aips tasks and produces the test results. Note that DDTEXEC must be run twice, once to read the master images and once to test the AIPS tasks.

```
>inp mount
AIPS 1: MOUNT:    Verb to software mount a tape
AIPS 1: Adverbs         Values            Comments
AIPS 1: ------------------------------------------------------------
AIPS 1: INTAPE        1                    Tape unit # (0=> 1)
AIPS 1: DENSITY    6250                    Density to set on mount.
>mount                              $ mount the master tape
>run ddtload                        $ create the DDT procedures
   ...  much printout ...
>input ddt
```

```
AIPS 1: DDT  :  Verification/timing test; see DDTLOAD.001, DDTEXEC.001
AIPS 1: Adverbs         Values              Comments
AIPS 1: ------------------------------------------------------------
AIPS 1: TCODE       '    '                   INIT,TEST,READ, or WRIT
AIPS 1: TMODE       'M'                      T or M; Test or Master input
AIPS 1: TMASK        0                       test selection bit mask
AIPS 1: DDTSIZE     'SMALL   '               'SMALL','MEDIUM','LARGE' test
AIPS 1: DDISK          2                     Disk drive #: master UVDATA
AIPS 1: MDISK          2                     Disk drive #: other masters
AIPS 1: TDISK          2                     Disk drive #: test images
AIPS 1: IOTAPE         1                     Input/Output tape drive #.
AIPS 1: EDGSKP         4                     Pixels to skip at edges
AIPS 1: BADDISK        2           3         Disks to avoid
AIPS 1:                4           5         *rest 0
AIPS 1: VERSION     'NEWPSAP'
>tcode 'read'                      $ prepare to read master files
>tmask 127                         $ read in all ddt master files
>tput ddt                          $ save ddt adverbs for DDTEXEC
>run ddtexec                       $ load the master files
  ... much printout and many executions of imlod and uvlod ...
>tget ddt                          $ get ddt adverbs
>tmask 16+32                       $ run only mx map and mx clean
>tcode 'test'                      $ indicate test should be run
>tput ddt                          $ save ddt adverbs for DDTEXEC
>run ddtexec                       $ actually run the DDTs
  ... much more printout and several tasks run ...
 All mapping tasks should have at least 10 BITS of accuracy
 A section of the output is listed below
        task             Peak Bits   RMS Bits
AIPS 1: UVMAP            13.6687     19.2743
AIPS 1: UVBEAM           11.2537     17.1445
AIPS 1: APCLN            14.1282     20.5394
AIPS 1: APRES            12.4492     18.3482
AIPS 1: MXMAP            13.6988     19.1252
AIPS 1: MXBEAM           14.2282     19.5557
AIPS 1: MXCLN            13.8017     17.5341
AIPS 1: VTESS            18.9342     25.7553
```

4 Record of the BITS

The DDT results are presented in 4 groups, *a)* Sorting and Mapping, *b)* AP clean and Self calibration, *c)* MX map and cleaning, and finally *d)* Maximum Entropy and DDT Notes. The

results of the tests are dependent on the software version, CPU, and the level of debugging of the code. The level of debugging is specified by whether the version is OLD, NEW or TST. The TST version of code is compiled with the DEBUG option and is generally slower than code in the OLD or the NEW versions. Systems with Array Processors also have the option of running with Pseudo-Array Processors by appending PSAP to the version name. (i.e. to run TST with the pseudo array processor code set VERSION='TSTPSAP')

The results of the tests are quantified by the number of BITS of accuracy. The number of BITS are determined by subtracting the *reference* image from *test result* image. The BITS of accuracy are defined in two ways; *1)* by the MAX difference of the Master image and the Test image and *2)* by the RMS differences between the images. The BITS calculated from the base 2 logarithm of the ratio of PEAK of the reference image and DIFFERENCE of the images.

The maximum and the RMS differences as described by equation (1) below.

$$BITS = \log_2 \frac{DIFF}{PEAK} = \frac{1}{log_{10}2} \log_{10} \frac{DIFF}{PEAK} = -3.3219 \times \log_{10} \frac{DIFF}{PEAK} \qquad (1)$$

(log_{10} is the Base 10 Logarithm) The reference images are stored on tape in a 32 BIT floating point format, but eight of the BITs are used for the sign and exponent of the number. The maximum accuracy possible is roughly 24 bits. (When the two images are produced by the same machine, the BITS result can be higher. In this case there are few, if any differences between the images, giving a deceptively large number of bits of accuracy.)

The mapping routines perform many multiplications and round off errors accumulate, generally giving images with 14 to 16 bits of accuracy ($2^{14} = 16384, 2^{16} = 65336$). A dynamic range of 100,000 to 1 is marginally repeatable for the different CPUs listed here. ($100,000 = 2^{16.6}$) The RMS BITS of accuracy is always greater than the PEAK BITS of accuracy. The expected BITS of accuracy for the tasks is in the range of 10 to 20 BITS.

Note that slight changes in algorithm change the *measured* accuracy of the task significantly. For instance, changing the gridded weighting of UV data in a mapping task produces a slightly different type of map. The comparison of apples and oranges results in a small number of BITS of accuracy. A final BITS note; the eye can not see differences between two images if there is less than 7 BITS difference. Only if two images are subtracted do the small differences become visible. (i.e. view the difference map to determine the type of problems occurring in the test image)

Several different types of CPUs are listed in the tables. Below the CPUs are described.

CVAX-PS A Vax 780 computer using pseudo array processor code.
CVAX A Vax 780 computer with FPS 120B array processor.
OUTBAX A Vax computer with FPS array processor.
Nrao1 A Convex C1 computer.
Gorilla A sun 3/60 workstation with MC68881 co-processor.
Kong A Sun 3/60 workstation with MC68881 co-processor.

SAIPS A Sun 3/110 workstation with MC68881 co-processor.
Trace A Multi-Flow Trace model 1400/300 mini-super computer.

5 UV Sorting and Mapping

The first group of DDTs tests is Sorting and Mapping of UV data. The Small, Medium and Large test results are presented in tables 1, 2, and 3. Note that all the mapping DDT results are sensitive to the number of pixels around the edge of the maps excluded from image comparison. For SMALL DDTs 4 pixels should be excluded, for MEDIUM 8 pixels, and for LARGE exclude 16 pixels. The number of pixels to exclude is set by the EDGSKP adverb. The sensitivity of edge pixels is due to the gridding correction for the Fourier Transform. Near the edge of the maps, very small numbers are divided and round off error become important.

6 APCLN and ASCAL

The second group of tests check APCLN and the Self Calibration routine ASCAL. Very few changes have been made to these tasks in recent years. New features for self calibration have been put in the task CALIB. The Small, Medium and Large test results are presented in tables 4, 5, and 6. The ASCAL success is determined by the number of difference between the reference data set and the test data set. There difference listed are frequently due to small differences in U, V and W values resulting in the UV data being sorted differently in the two data sets. If there were more than 99 differences in the UV data, the number of differences was listed as "!". The AIPS task UVDIF lists three types of differences, *a)* flux, *b)* UVW, and *c)* other differences.

7 Image Deconvolution, MX

The third group of tables display the results of the task MX. This task performs three functions; *a)* producing a Fourier transform of the UV data, *b)* creating the BEAM or point

response function, and *c)* deconvolving the UV data to produce a cleaned image. The task MX requires a considerable fraction of the total time spent on image analysis and the REAL time used in the MX Clean step is also listed.

8 Maximum entropy and DDT notes

The task VTESS is presented in the fourth group of tables. The total CPU (not Real) time required to execute the DDT is given with notes concerning the DDTs. The most common note is the number of pixels around the edge of a map which are ignored during comparisons. Typically a band 4 pixels wide around the edge are ignored for the Small DDTs. For Medium DDTs, eight pixel wide strips are ignored and for Large, sixteen pixels. This band is set with the DDT adverb EDGSKP.

9 Future Developments

Further DDT tasks are needed to test the AIPS calibration package and VLBI fring-fitting routines. Also the task ASCAL is being phased out, to replaced by the task CALIB. These functions did not exist in AIPS when the first DDTs were developed.

Currently spectral line processing in AIPS is not tested by the DDTs, but a new DDT test set is planned for early 1991.

Test Date	AIPS Version	CPU	Old New Tst	UVSRT CPU Time	UVSRT U-V Diffs	UVMAP CPU Time	UVMAP MAP Peak	UVMAP MAP RMS	UVMAP BEAM Peak	UVMAP BEAM RMS
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
86-Apr-15	?	Nrao1	?				9.4		9.2	
86-Jul-24	?	CVAX	?			42.7	16.8	17.6	16.8	17.6
86-Jul-24	?	CVAX-PS	N			108.9	13.2	17.5	9.7	16.1
86-Aug-08	?	CVAX	?	24.5	0,0,0	35.3	15.8	22.4	15.8	20.6
86-Jun-18	Jul86	Nrao1	?	11.2	0,0,4	18.5	9.5	14.6	6.5	13.0
86-Aug-14	?	Nrao1	?	11.3	0,0,4	18.5	9.5	14.6	6.5	13.0
87-Mar-01	Jul87	Nrao1	?	10.5	0,0,4	18.4	12.5	17.4	10.5	16.2
88-Mar-06	?	Nrao1	?	5.8	0,0,6	8.5	16.1	21.8	12.7	18.5
88-Aug-29	Jul88	Gorilla	O	14.4		105.6				
89-Jun-17	Apr89	CVAX	O	22.9	0,0,0	32.1	21.2	26.6	17.6	23.2
89-Jul-23	Apr89	Nrao1	O	6.5	0,0,4	12.2	9.6	14.8	7.6	13.9
89-Jul-23	Oct89	Nrao1	T	8.6	0,0,6	12.6	9.6	14.8	7.6	13.9
89-Jul-23	Oct89	Gorilla	T	17.4	0,0,0	209.3	13.3	19.2	10.7	16.8
89-Jul-23	Jul89	Gorilla	N	15.9	2,0,0	182.8	13.3	19.2	10.7	16.8
89-Jul-23	Oct89	CVAX	T	22.1	0,0,0	34.2	21.2	26.6	17.6	23.2
89-Jul-23	Oct89	CVAX-PS	T	21.9	0,0,0	72.5	2.5	7.7	-3.9	2.3
89-Sep-18	Apr89	Kong	O	14.1	0,0,2	102.8	13.7	19.3	11.2	17.2
89-Sep-19	Oct89	Kong	N	15.5	0,0,4	101.8	14.3	19.3	10.8	16.9
89-Oct-01	Oct88	Trace	T	3.7		7.4				
90-Feb-01	Oct89	Nrao1	O	8.6	0,0,6	7.4	9.6	14.8	7.6	13.9
90-Feb-02	Jul90	Nrao1	T	8.7	0,0,6	16.0	13.1	19.0	9.9	16.5
90-Feb-02	Jul90	SAIPS	T			139.4	13.7	19.2	11.2	17.2
90-Feb-05	Jul90	SAIPS	T	25.0	0,0,4	146.1	14.1	19.5	10.8	16.9
90-Apr-06	Apr90	Nrao1	O	9.2	0,0,6	13.5	13.7	19.2	10.3	16.5
90-Apr-06	Apr90	SAIPS	O	21.7	0,0,4	143.7	14.1	19.4	10.8	16.9
90-Apr-09	Apr90	CVAX-PS	O	18.1	0,0,0	99.6	13.7	19.3	11.3	17.1
90-Apr-10	Apr90	OUTBAX	O				21.2	26.6	17.6	23.2
90-May-31	Jul90	CVAX-PS	N	18.4	0,0,0	97.7	13.7	19.3	11.3	17.1
90-Jun-05	Apr90	Nrao1	O	7.9	0,0,6	12.5	13.6	19.2	10.3	16.5
90-Jun-05	Jul90	Nrao1	N	8.0	0,0,6	11.5	13.6	19.2	10.3	16.5
90-Jun-05	Oct90	CVAX-PS	T	23.4	0,0,0	100.1	13.7	19.3	11.3	17.1

Table 1: Small DDT results for UVSRT and UVMAP

Test Date	AIPS Version	CPU	Old New Tst	UVSRT CPU Time	UVSRT U-V Diffs	UVMAP CPU Time	UVMAP MAP Peak	UVMAP MAP RMS	UVMAP BEAM Peak	UVMAP BEAM RMS
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
89-Jul-23	Apr89	Nrao1	O	10.9	0,0,2	31.1	7.4	13.4	8.2	13.7
89-Jul-23	Jul89	Nrao1	N	11.6	0,0,2	26.8	8.7	14.8	9.6	15.2
89-Jul-23	Oct89	Nrao1	T	12.3	0,0,2	28.5	7.4	13.4	8.2	13.7
89-Jul-24	Jul89	Gorilla	N	23.9	0,0,2	586.0	13.3	18.2	13.8	18.6
89-Jul-24	Apr89	CVAX	O	38.2	0,0,0	57.9	19.5	25.9	20.1	25.7
89-Jul-24	Oct89	CVAX	T	34.0	0,0,0	55.4	19.5	25.9	20.1	25.7
89-Sep-19	Apr89	Kong	O	23.7	0,0,2	314.0	14.6	18.2	15.0	18.7
89-Sep-20	Oct89	Kong	N	23.5	0,0,2	312.0	14.6	18.2	15.0	18.7
90-May-29	Jul90	Nrao1	N	11.5	0,0,2	24.0	13.5	17.8	13.4	17.8
90-Jun-01	Oct90	Nrao1	T	13.3	0,0,2	39.9	14.6	17.9	14.6	17.9
90-Jun-01	Jul90	SAIPS	N	35.0	0,0,2	561.0	14.4	18.2	14.6	18.7
90-Jun-04	Apr90	SAIPS	O	34.9	0,0,2	429.6	14.8	18.2	15.0	18.7

Table 2: Medium DDT results for UVSRT and UVMAP

Test Date	AIPS Version	CPU	Old New Tst	UVSRT CPU Time	UVSRT U-V Diffs	UVMAP CPU Time	UVMAP MAP Peak	UVMAP MAP RMS	UVMAP BEAM Peak	UVMAP BEAM RMS
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
89-Jul-23	Apr89	Nrao1	O	66.8	52,148	126.6	8.2	13.6	7.9	14.8
89-Jul-23	Oct89	Nrao1	T	71.9		126.1	8.6	13.8	9.5	15.2
89-Jul-23	Oct89	CVAX	T	197.2	0,0,0	160.5	16.3	26.2	25.8	32.0
89-Sep-21	Apr89	Kong	O	152.8	18,!,74	1317.9	12.9	17.3	15.0	17.7

Table 3: Large DDT results for UVSRT and UVMAP

Test Date	AIPS Version	CPU	Old New Tst	APCLN CPU Time	APCLN MAP Peak	APCLN MAP RMS	APCLN CPU Time	APCLN RES Peak	APCLN RES RMS	ASCAL CPU Time	ASCAL U-V Diffs
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
86-Aug-08	?	CVAX	?	52.0	14.9	18.9	30.4	11.5	16.8	49.4	0,0,0
86-Jun-18	Jul86	Nrao1	?	43.4	13.8	16.6	11.3	15.8	17.2	93.0	0,0,4
86-Aug-14	?	Nrao1	?	46.1	13.6	16.2	13.3	15.9	17.2	97.0	0,0,4
87-Mar-01	Jul87	Nrao1	?	42.6	13.6	16.2	11.3	15.9	17.2	85.4	0,0,4
88-Mar-06	?	Nrao1	?	31.1	12.3	15.8	7.3	8.9	12.4	74.8	0,0,6
88-Aug-29	Jul88	Gorilla	O	890.0			85.8			2624.4	
89-Jun-17	Apr89	CVAX	O	46.4	26.6	30.1	26.3	22.2	26.8	51.4	0,0,0
89-Jul-23	Apr89	Nrao1	O	36.6	18.8	24.1	7.9	16.9	22.2	83.2	0,0,6
89-Jul-23	Oct89	Nrao1	T	37.5	18.8	24.1	8.7	16.9	22.2	83.7	0,0,6
89-Jul-23	Oct89	Gorilla	T	1573.5	14.1	20.7	165.8	17.0	22.4		
89-Jul-23	Jul89	Gorilla	N	1424.7	14.1	20.7	139.2	17.0	22.4	5766.9	0,0,4
89-Jul-23	Oct89	CVAX	T	46.1	26.6	30.1	25.5	22.2	26.8	52.6	0,0,4
89-Jul-23	Oct89	CVAX-PS	T	925.8	14.1	20.7	52.1	15.9	21.3	1252.3	0,0,0
89-Sep-18	Apr89	Kong	O	904.2	18.0	23.8	84.0	17.0	22.4	2558.1	0,0,2
89-Sep-19	Oct89	Kong	N	900.4	18.0	23.8	80.6	17.0	22.4	2540.9	0,0,4
89-Oct-01	Oct88	Trace	T	18.3			4.4			34.8	
90-Feb-01	Oct89	Nrao1	O	37.3	18.8	24.1	7.6	16.7	22.2	86.3	0,0,6
90-Feb-02	Jul90	Nrao1	T	40.6	18.8	24.1	8.5	16.7	22.2	24.8	0,0,6
90-Feb-05	Jul90	SAIPS	T	1203.4	18.0	23.8	107.3	17.0	22.4	785.5	0,0,4
90-Apr-06	Apr90	Nrao1	O	37.5	18.8	24.1	6.7	16.7	22.2	21.7	0,0,6
90-Apr-06	Apr90	SAIPS	O	1257.0	18.0	23.8	103.0	17.0	22.4	472.0	0,0,4
90-Apr-09	Apr90	CVAX-PS	O	1005.1	14.1	20.5	55.3	12.5	18.4	288.8	0,0,0
90-Apr-10	Apr90	OUTBAX	O		26.6	30.1		22.2	26.8		
90-May-31	Jul90	CVAX-PS	N	996.9	14.1	20.5	57.3	12.5	18.4	540.2	0,0,0
90-Jun-05	Apr90	Nrao1	O	38.2	18.8	24.1	6.9	16.9	22.2	32.9	0,0,6
90-Jun-05	Jul90	Nrao1	N	36.3	18.8	24.1	7.1	16.9	22.2	29.9	0,0,6
90-Jun-05	Oct90	CVAX-PS	T	993.5	14.1	20.5	56.8	12.5	18.4	544.5	0,0,0

Table 4: Small DDT results for APCLN and ASCAL

Test Date	AIPS Version	CPU	Old New Tst	APCLN CPU Time	APCLN MAP Peak	APCLN MAP RMS	APCLN CPU Time	APCLN RES Peak	APCLN RES RMS	ASCAL CPU Time	ASCAL U-V Diffs
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
89-Jul-23	Apr89	Nrao1	O	201.6	11.9	14.6	25.3	15.4	21.2	353.1	0,0,2
89-Jul-23	Jul89	Nrao1	N	201.4	11.9	14.6	25.8	15.4	21.2	380.7	0,0,2
89-Jul-23	Oct89	Nrao1	T	206.2	11.9	14.6	27.0	15.4	21.2	373.0	0,0,2
89-Jul-24	Jul89	Gorilla	N	12476.7	11.4	14.2	631.3	15.4	21.3	24036.3	0,0,2
89-Jul-24	Apr89	CVAX	O	194.6	26.3	29.7	58.1	21.2	25.9	88.5	0,0,0
89-Jul-24	Oct89	CVAX	T	189.0	26.3	29.7	52.4	21.2	25.7	90.3	0,0,0
89-Sep-19	Apr89	Kong	O	7735.6	11.8	14.7	361.1	15.4	21.3	10457.7	0,0,2
89-Sep-20	Oct89	Kong	N	7805.7	11.8	14.7	356.9	15.4	21.3	10405.7	0,0,2
90-May-29	Jul90	Nrao1	N	188.9	11.9	14.6	21.3	15.4	21.2	49.6	!,0,2
90-Jun-01	Oct90	Nrao1	T	247.3	11.9	14.6	39.6	15.4	21.2	52.4	45,!,2
90-Jun-01	Jul90	SAIPS	N	13173.7	11.9	14.8	601.8	15.4	21.3	2127.2	45,!,2
90-Jun-04	Apr90	SAIPS	O	11102.0	11.8	14.7	477.4	15.4	21.3	1398.0	45,!,2

Table 5: Medium DDT results for APCLN and ASCAL

Test Date	AIPS Version	CPU	Old New Tst	APCLN CPU Time	APCLN MAP Peak	APCLN MAP RMS	APCLN CPU Time	APCLN RES Peak	APCLN RES RMS	ASCAL CPU Time	ASCAL U-V Diffs
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
89-Jul-23	Apr89	Nrao1	O	683.0	13.0	17.3	116.5	14.2	20.7	449.2	52,148
89-Jul-23	Oct89	Nrao1	T	675.1	13.0	17.3	110.2	14.2	20.7	414.8	
89-Jul-23	Oct89	CVAX	T	519.9	13.7	17.4	137.5	8.5	12.3	395.0	0,0,0
89-Sep-21	Apr89	Kong	O	25896.9	13.0	17.0	1915.7	14.1	20.6	15763.5	18,!,74

Table 6: Large DDT results for APCLN and ASCAL

Test Date	AIPS Version	CPU	Old New Tst	CPU Time	MAP Peak	MAP RMS	BEAM Peak	MX BEAM RMS	CPU Time	Real Time	CLN Peak	CLN RMS
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
86-Apr-15	?	Nrao1	?		12.1		12.3				14.0	
86-Jul-24	?	CVAX	?	57.8	16.8	17.6	16.8	17.6				
86-Jul-24	?	CVAX-PS	N	141.5	12.7	17.4	13.6	17.5				
86-Aug-08	?	CVAX	?	48.2	15.8	19.7	99.0	99.0	163.8	1044.0	14.4	17.0
86-Jun-18	Jul86	Nrao1	?	21.2	11.8	17.4	14.4	17.5	100.0	159.0	16.7	17.8
86-Aug-14	?	Nrao1	?	25.6	11.9	17.4	14.4	17.5	111.5	604.0	16.7	17.8
87-Mar-01	Jul87	Nrao1	?	22.2	12.9	17.4	14.3	17.5	99.6	127.0	15.0	17.3
88-Mar-06	?	Nrao1	?	10.0	15.4	21.2	15.8	21.7	58.7	837.0	17.9	24.4
88-Aug-29	Jul88	Gorilla	O	131.7					1767.9	1845.0		
89-Jun-17	Apr89	CVAX	O	44.6	19.5	25.3	32.0	34.4	150.3	424.0	23.7	28.7
89-Jul-23	Apr89	Nrao1	O	14.8	12.8	18.8	14.5	19.5	79.9	94.0	14.3	17.3
89-Jul-23	Oct89	Nrao1	T	14.8	12.8	18.8	14.5	19.5	79.9	100.0	14.3	17.3
89-Jul-23	Oct89	Gorilla	T	267.8	13.4	19.0	14.5	19.6	3680.0	3780.0	14.1	17.4
89-Jul-23	Jul89	Gorilla	N	239.9	13.4	19.0	14.5	19.6	3370.5	3473.0	14.1	17.4
89-Jul-23	Oct89	CVAX	T	46.9	19.5	25.3	32.0	34.4	148.3	417.0	14.6	17.5
89-Jul-23	Oct89	CVAX-PS	T	92.9	13.6	19.3	14.3	19.6	1293.8	1379.0	14.1	17.4
89-Sep-18	Apr89	Kong	O	127.3	13.6	19.4	14.8	19.7	1732.8	1791.0	18.1	23.9
89-Sep-19	Oct89	Kong	N	126.0	13.6	19.4	14.8	19.7	1727.6	1796.0	14.6	17.5
89-Oct-01	Oct88	Trace	T	7.7					58.7	61.0		
90-Feb-01	Oct89	Nrao1	O	13.8	12.6	18.8	14.5	19.5	78.6	90.0	14.8	17.6
90-Feb-02	Jul90	Nrao1	T	18.8	13.4	18.9	14.6	19.6	103.3	901.0	14.8	17.6
90-Feb-02	Jul90	SAIPS	T						2287.3		14.9	17.6
90-Feb-05	Jul90	SAIPS	T	163.6	12.6	19.0	15.1	19.8	1888.5		14.9	17.6
90-Apr-06	Apr90	Nrao1	O	13.4	12.8	19.1	14.6	19.6	77.1	700.0	14.8	17.6
90-Apr-06	Apr90	SAIPS	O	168.0	12.6	19.0	15.1	19.8	1996.0	2451.0	14.9	17.6
90-Apr-09	Apr90	CVAX-PS	O	107.9	13.5	19.1	14.3	19.5	1395.0	1938.0	14.0	17.4
90-Apr-10	Apr90	OUTBAX	O		19.5	25.3	32.0	34.4			14.4	17.5
90-May-31	Jul90	CVAX-PS	N	108.1	13.7	19.1	14.2	19.6	1595.0	2470.0	13.8	17.5
90-Jun-05	Apr90	Nrao1	O	13.5	13.2	19.0	14.6	19.6	77.4	197.0	14.5	17.6
90-Jun-05	Jul90	Nrao1	N	13.6	12.6	19.0	14.1	19.5	76.8	220.0	14.5	17.5
90-Jun-05	Oct90	CVAX-PS	T	149.0	13.7	19.1	14.2	19.6	1587.0	2387.0	13.8	17.5

Table 7: Small DDT results for MX

Test Date	AIPS Version	CPU	Old New Tst	MX CPU Time	MAP Peak	MAP RMS	BEAM Peak	BEAM RMS	CPU Time	Real Time	CLN Peak	CLN RMS
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
89-Jul-23	Apr89	Nrao1	O	34.9	13.6	17.8	14.1	17.8	301.5	346.0	11.5	14.6
89-Jul-23	Jul89	Nrao1	N	32.6	15.2	18.0	15.4	18.0	284.5	346.0	10.3	14.1
89-Jul-23	Oct89	Nrao1	T	34.3	13.6	17.8	14.1	17.8	300.8	361.0	10.3	14.1
89-Jul-24	Jul89	Gorilla	N	780.8	13.6	18.1	14.5	18.6	16555.9	16839.0	10.3	14.2
89-Jul-24	Apr89	CVAX	O	94.4	18.2	24.8	32.0	34.4	304.1	994.0	20.4	26.3
89-Jul-24	Oct89	CVAX	T	92.8	18.2	24.8	32.0	34.4	283.6	974.0	10.2	14.2
89-Sep-19	Apr89	Kong	O	410.6	14.6	18.2	15.1	18.7	9742.9	9947.0	11.6	14.4
89-Sep-20	Oct89	Kong	N	408.2	14.6	18.2	15.1	18.7	9759.9	9979.0	10.3	14.2
90-May-29	Jul90	Nrao1	N	29.7	13.7	17.8	13.7	17.8	269.9	809.0	10.3	14.2
90-Jun-01	Oct90	Nrao1	T	59.8	14.8	17.9	14.7	17.9	385.3	1143.0	10.3	14.2
90-Jun-01	Jul90	SAIPS	N	702.4	14.6	18.2	14.7	18.7	15955.3	18475.0	10.0	14.2
90-Jun-04	Apr90	SAIPS	O	548.0	14.3	18.2	15.0	18.7	13373.3	14785.0	10.0	14.2

Table 8: Medium DDT results for MX

Test Date	AIPS Version	CPU	Old New Tst	MX CPU Time	MAP Peak	MAP RMS	BEAM Peak	BEAM RMS	CPU Time	Real Time	CLN Peak	CLN RMS
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
89-Jul-23	Apr89	Nrao1	O	134.3	13.8	18.1	14.9	19.5	1193.8	1551.0	11.2	17.0
89-Jul-23	Oct89	Nrao1	T	122.9	13.9	18.1	15.1	19.5	1137.2	1451.0	11.2	16.9
89-Jul-23	Oct89	CVAX	T	212.8	16.6	22.7	32.0	34.1	794.5	2957.0	21.7	27.8
89-Sep-21	Apr89	Kong	O	1477.3	14.2	19.0	15.4	19.6	32700.0	33414.0	10.7	16.8

Table 9: Large DDT results for MX

Test Date (1)	AIPS Version (2)	CPU (3)	Old New Tst (4)	VTESS CPU Time (5)	VTESS CLN Peak (6)	VTESS CLN RMS (7)	Total CPU Time (8)	Notes (9)
86-Apr-15	?	Nrao1	?		99.0		0.0	Edgeskip= 0
86-Jul-24	?	CVAX-PS	N				250.4	Edgeskip= 4
86-Aug-08	?	CVAX	?	283.1	1.9	9.1	656.2	Edgeskip= 0
86-Jun-18	Jul86	Nrao1	?	138.4	17.0	19.3	425.6	Edgeskip= 3
86-Aug-14	?	Nrao1	?	138.4	17.0	19.3	448.4	Edgeskip= 3
87-Mar-01	Jul87	Nrao1	?	100.3	3.7	10.9	378.9	Edgeskip= 3
88-Mar-06	?	Nrao1	?				189.0	Edgeskip= 3
88-Aug-29	Jul88	Gorilla	O	735.0			6269.0	Edgeskip= 3
89-Jun-17	Apr89	CVAX	O	137.2	21.0	27.7	485.0	Edgeskip= 4
89-Jul-23	Apr89	Nrao1	O	42.9	19.2	26.5	276.2	Edgeskip= 4
89-Jul-23	Oct89	Nrao1	T	42.9	19.2	26.5	280.0	Edgeskip= 4
89-Jul-23	Oct89	Gorilla	T	871.2	22.3	29.7	6619.2	Edgeskip= 4
89-Jul-23	Jul89	Gorilla	N	737.6	22.3	29.7	11738.2	Edgeskip= 4
89-Jul-23	Oct89	CVAX	T	153.0	21.0	27.7	503.2	
89-Jul-23	Oct89	CVAX-PS	T	293.7	18.9	25.8	3953.0	Edgeskip= 4
89-Sep-18	Apr89	Kong	O	496.9	3.7	10.2	5936.1	Edgeskip= 4
89-Sep-19	Oct89	Kong	N	433.5	19.4	26.7	5845.7	Edgeskip= 4
89-Oct-01	Oct88	Trace	T	33.6			164.2	Edgeskip= 4
90-Feb-01	Oct89	Nrao1	O	38.7	16.8	21.9	270.7	Edgeskip= 4
90-Feb-02	Jul90	Nrao1	T	45.5	16.8	21.9	257.6	Edgeskip= 4
90-Feb-02	Jul90	SAIPS	T				2426.7	Edgeskip= 4
90-Feb-05	Jul90	SAIPS	T	575.8	16.8	21.9	4787.8	Edgeskip= 4
90-Apr-06	Apr90	Nrao1	O	35.4	16.8	21.9	207.7	Edgeskip= 4
90-Apr-06	Apr90	SAIPS	O	550.4	17.3	21.9	4608.7	Edgeskip= 4
90-Apr-09	Apr90	CVAX-PS	O	297.5	18.9	25.8	3212.1	Edgeskip= 4
90-Apr-10	Apr90	OUTBAX	O		18.9	25.8	0.0	Edgeskip= 4
90-May-31	Jul90	CVAX-PS	N	308.2	18.9	25.8	3664.5	Edgeskip= 4
90-Jun-05	Apr90	Nrao1	O	35.9	18.7	26.0	218.2	Edgeskip= 4
90-Jun-05	Jul90	Nrao1	N	37.6	18.7	26.0	213.6	Edgeskip= 4
90-Jun-05	Oct90	CVAX-PS	T	327.9	18.9	25.8	3725.4	Edgeskip= 4

Table 10: Small DDT results for VTESS and Total DDT CPU time

Test Date	AIPS Version	CPU	Old New Tst	VTESS CPU Time	VTESS CLN Peak	VTESS CLN RMS	Total CPU Time	Notes
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
89-Jul-23	Apr89	Nrao1	O				933.1	Edgeskip=16
89-Jul-23	Jul89	Nrao1	N	92.7	21.5	29.3	1030.3	Edgeskip=16
89-Jul-23	Oct89	Nrao1	T	98.4	23.1	30.9	1053.5	Edgeskip= 4
89-Jul-24	Jul89	Gorilla	N	2241.8	14.5	18.6	56701.4	
89-Jul-24	Apr89	CVAX	O				777.5	Edgeskip= 4
89-Jul-24	Oct89	CVAX	T	295.0	25.1	33.0	1040.0	Edgeskip= 4
89-Sep-19	Apr89	Kong	O	1673.3	3.1	9.9	30357.7	Edgeskip= 8
89-Sep-20	Oct89	Kong	N	1321.8	21.8	29.7	30036.8	Edgeskip= 8
90-May-29	Jul90	Nrao1	N	77.7	21.5	29.4	651.3	Edgeskip= 4
90-Jun-01	Oct90	Nrao1	T	153.0	21.5	29.4	951.0	Edgeskip= 8
90-Jun-01	Jul90	SAIPS	N	2272.2	22.5	30.2	34826.8	Edgeskip= 8
90-Jun-04	Apr90	SAIPS	O	1776.0	21.8	29.9	28661.8	Edgeskip= 8

Table 11: Medium DDT results for VTESS and Total DDT CPU time

Test Date	AIPS Version	CPU	Old New Tst	VTESS CPU Time	VTESS CLN Peak	VTESS CLN RMS	Total CPU Time	Notes
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
89-Jul-23	Apr89	Nrao1	O				2653.5	
89-Jul-23	Oct89	Nrao1	T	440.7	20.9	29.0	2988.7	
89-Jul-23	Oct89	CVAX	T	1072.9	22.8	31.1	3352.7	Edgeskip= 12
89-Sep-21	Apr89	Kong	O	7944.8	5.5	11.2	85253.2	Edgeskip= 16

Table 12: Large DDT results for VTESS and Total DDT CPU time

Pops	Prior	Date	Time	Task	Messages for user 126
1	0	29-MAY-1990	16:47:39	AIPS	run ddtload
1	2	29-MAY-1990	16:47:39	AIPS	$--
1	2	29-MAY-1990	16:47:39	AIPS	$! RUN file to prepare to test performance of AIPS tasks on data
1	2	29-MAY-1990	16:47:39	AIPS	$# Run POPS
1	2	29-MAY-1990	16:47:39	AIPS	$ This software is the subject of a User agreement and is
1	2	29-MAY-1990	16:47:39	AIPS	$ confidential in nature. It shall not be sold or otherwise
1	2	29-MAY-1990	16:47:39	AIPS	$ made available or disclosed to third parties.
1	2	29-MAY-1990	16:47:39	AIPS	$--
1	2	29-MAY-1990	16:47:40	AIPS	*
1	2	29-MAY-1990	16:47:40	AIPS	* DDTLOAD.001 by Don Wells & Bill Cotton, NRAO-CV, Dec84-Feb85.
1	2	29-MAY-1990	16:47:40	AIPS	* Modified by Eric Greisen Nov85 to offer 3 sizes of problem.
1	2	29-MAY-1990	16:47:40	AIPS	* This is the "load file" for Liszt/Greisen "small" and "medium"
1	2	29-MAY-1990	16:47:40	AIPS	* data sets.
1	2	29-MAY-1990	16:47:41	AIPS	* Modified by Eric Greisen & Kerry Hilldrup Oct87 to use the
1	2	29-MAY-1990	16:47:41	AIPS	* Bridle high dynamic range "large" data sets.
1	2	29-MAY-1990	16:47:41	AIPS	* Modified by Chris Flatters Mar89 to merge clean components
1	2	29-MAY-1990	16:47:41	AIPS	* before self-cal of "large" problem and to remove run files
1	2	29-MAY-1990	16:47:42	AIPS	* from distribution tape.
1	2	29-MAY-1990	16:47:42	AIPS	* Modified by Glen langston Jan90 to remove NPOINTS and
1	2	29-MAY-1990	16:47:42	AIPS	* shorten standard print out
1	2	29-MAY-1990	16:47:42	AIPS	* It compiles the POPS code and leaves it in SAVE/GET files.
1	2	29-MAY-1990	16:47:42	AIPS	* The file DDTEXEC.001 executes the files.
1	2	29-MAY-1990	16:47:42	AIPS	* See DDT.HLP for documentation (HELP DDT, EXPLAIN DDT).
1	2	29-MAY-1990	16:47:42	AIPS	*
1	2	29-MAY-1990	16:47:42	AIPS	* Version for the 15JUL89 release of AIPS
1	2	29-MAY-1990	16:47:42	AIPS	* ==
1	2	29-MAY-1990	16:47:43	AIPS	* Remember prior state to permit restoration at end:
1	2	29-MAY-1990	16:47:43	AIPS	STORE 1
1	2	29-MAY-1990	16:47:44	AIPS	RESTORE 0
1	2	29-MAY-1990	16:47:44	AIPS	CORE
1	4	29-MAY-1990	16:47:44	AIPS	Space used / total for
1	4	29-MAY-1990	16:47:44	AIPS	Program Variables Source
1	4	29-MAY-1990	16:47:44	AIPS	4438 / 14760 1490 / 4173 329 / 4096
1	2	29-MAY-1990	16:47:44	AIPS	* ==
1	2	29-MAY-1990	16:47:44	AIPS	* Declare variables for the procedures:
1	2	29-MAY-1990	16:47:44	AIPS	PROCEDURE DCLRVR
1	2	29-MAY-1990	16:47:45	AIPS	STRING*50 BMBTXT, SPACER
1	2	29-MAY-1990	16:47:45	AIPS	STRING*12 PRCSV1, ZAPSV2, NCLSV2, PHDSV1, PHDSV3, CHKSV2
1	2	29-MAY-1990	16:47:46	AIPS	STRING*8 TNAME, TNAMF, DDTSIZE
1	2	29-MAY-1990	16:47:47	AIPS	STRING*6 ZAPSV1, ZAPSV3, ZIGSV1, NCLSV1, NCLSV3, CHKSV1
1	2	29-MAY-1990	16:47:47	AIPS	STRING*6 ZIGSV2, ZIGSV3, PHDSV2, PHDSV4, TPLCLS
1	2	29-MAY-1990	16:47:47	AIPS	STRING*5 ZIGTSK, TPLTSK
1	2	29-MAY-1990	16:47:47	AIPS	STRING*4 TCODE
1	2	29-MAY-1990	16:47:48	AIPS	STRING*1 TMODE, SMODE
1	2	29-MAY-1990	16:47:48	AIPS	SCALAR TMASK, ERATIO, IGWSV1, IOTAPE, EDGSKP, TERSE
1	2	29-MAY-1990	16:47:48	AIPS	SCALAR UCHSV1, PRCSV2, PHDSV5, PHDSV6, ZAPSV4
1	2	29-MAY-1990	16:47:49	AIPS	SCALAR CHKSV3, TINY99, NCLSV4, DDISK, MDISK, TDISK
1	2	29-MAY-1990	16:47:49	AIPS	SCALAR XTRSV1, XTRSV2, JJCNT, NITSAVE, FLUSAVE
1	2	29-MAY-1990	16:47:49	AIPS	ARRAY MAXDIF(3), MAPDIF(5,8)
1	2	29-MAY-1990	16:47:49	AIPS	RETURN
1	2	29-MAY-1990	16:47:49	AIPS	FINISH
1	2	29-MAY-1990	16:47:50	AIPS	SPACER='##'
1	2	29-MAY-1990	16:47:50	AIPS	* ==
1	2	29-MAY-1990	16:47:50	AIPS	* Procedure to print fatal error message:
1	2	29-MAY-1990	16:47:50	AIPS	PROCEDURE DDTBOMB(BMBTXT)
1	2	29-MAY-1990	16:47:50	AIPS	TYPE 'FATAL ERROR:', BMBTXT

APPENDIX #A

```
Pops Prior    Date        Time     Task      Messages for user 126

  1    2  29-MAY-1990  16:47:50  AIPS         I = 1; I = I / 0; RETURN
  1    2  29-MAY-1990  16:47:50  AIPS      FINISH
  1    2  29-MAY-1990  16:47:51  AIPS      * ==============================================================
  1    2  29-MAY-1990  16:47:51  AIPS      * Procedure to list current catalog:
  1    2  29-MAY-1990  16:47:51  AIPS      PROCEDURE PRTCAT
  1    2  29-MAY-1990  16:47:51  AIPS         PRCSV1 = INNAME; INNAME = '*' !! TNAMF; INCLASS = ' '
  1    2  29-MAY-1990  16:47:52  AIPS         INSEQ = 0; CATALOG
  1    2  29-MAY-1990  16:47:52  AIPS         IF INDISK <> OUTDISK THEN PRCSV2 = INDISK; INDISK = OUTDISK
  1    2  29-MAY-1990  16:47:52  AIPS             INSEQ = 0; CATALOG; INDISK = PRCSV2; END
  1    2  29-MAY-1990  16:47:52  AIPS         INNAME = PRCSV1; RETURN
  1    2  29-MAY-1990  16:47:52  AIPS      FINISH
  1    2  29-MAY-1990  16:47:52  AIPS      * ==============================================================
  1    2  29-MAY-1990  16:47:52  AIPS      * Procedure to print header of a file:
  1    2  29-MAY-1990  16:47:53  AIPS      *               (inname, inclass)
  1    2  29-MAY-1990  16:47:53  AIPS      PROCEDURE PRTHED (PHDSV1, PHDSV2, PHDSV6); PHDSV3 = INNAME
  1    2  29-MAY-1990  16:47:54  AIPS         INNAME = PHDSV1; PHDSV4 = INCLASS; INCLASS = PHDSV2
  1    2  29-MAY-1990  16:47:54  AIPS         PHDSV5 = INDISK; INDISK = PHDSV6; IMHEADER
  1    2  29-MAY-1990  16:47:54  AIPS         INNAME = PHDSV3; INCLASS = PHDSV4; INDISK = PHDSV5; RETURN
  1    2  29-MAY-1990  16:47:54  AIPS      FINISH
  1    2  29-MAY-1990  16:47:55  AIPS      * ==============================================================
  1    2  29-MAY-1990  16:47:55  AIPS      * Procedure to execute a task:
  1    2  29-MAY-1990  16:47:55  AIPS      PROCEDURE IGW (INCLASS, TASK)
  1    2  29-MAY-1990  16:47:55  AIPS         IF (TERSE<=0) THEN INPUTS; END
  1    2  29-MAY-1990  16:47:56  AIPS         IGWSV1 = DOWAIT; DOWAIT = TRUE
  1    2  29-MAY-1990  16:47:56  AIPS         GO; DOWAIT = IGWSV1; RETURN
  1    2  29-MAY-1990  16:47:56  AIPS      FINISH
  1    2  29-MAY-1990  16:47:56  AIPS      * ==============================================================
  1    2  29-MAY-1990  16:47:56  AIPS      * Procedure to "ZAP" output files of specified class:
  1    2  29-MAY-1990  16:47:56  AIPS      *                 (class), assumes OUTNAME
  1    2  29-MAY-1990  16:47:56  AIPS      PROCEDURE OUTZAP (ZAPSV1); ZAPSV2 = INNAME; INNAME = OUTNAME
  1    2  29-MAY-1990  16:47:57  AIPS         ZAPSV3 = INCLASS; INCLASS = ZAPSV1; ZAPSV4 = INDISK
  1    2  29-MAY-1990  16:47:57  AIPS         INDISK = OUTDISK; ALLDEST; INDISK = ZAPSV4
  1    2  29-MAY-1990  16:47:57  AIPS         INNAME = ZAPSV2; INCLASS = ZAPSV3; RETURN
  1    2  29-MAY-1990  16:47:58  AIPS      FINISH
  1    2  29-MAY-1990  16:47:58  AIPS      * ==============================================================
  1    2  29-MAY-1990  16:47:58  AIPS      * Procedure to "ZAP" prior output files, then execute:
  1    2  29-MAY-1990  16:47:58  AIPS      *               (inclass, task, outclass)
  1    2  29-MAY-1990  16:47:58  AIPS      PROCEDURE ZIGW (ZIGSV1, ZIGTSK, ZIGSV2)
  1    2  29-MAY-1990  16:47:58  AIPS         OUTZAP(ZIGSV2); ZIGSV3 = OUTCLASS; OUTCLASS = ZIGSV2
  1    2  29-MAY-1990  16:47:58  AIPS         IGW(ZIGSV1, ZIGTSK); OUTCLASS = ZIGSV3; RETURN
  1    2  29-MAY-1990  16:47:59  AIPS      FINISH
  1    2  29-MAY-1990  16:47:59  AIPS      * ==============================================================
  1    2  29-MAY-1990  16:47:59  AIPS      * Procedure to list header of tape file and read it:
  1    2  29-MAY-1990  16:47:59  AIPS      PROCEDURE TPLOD(TPLTSK); TPHEAD; IGW(' ', TPLTSK); RETURN
  1    2  29-MAY-1990  16:47:59  AIPS      FINISH
  1    2  29-MAY-1990  16:47:59  AIPS      * ==============================================================
  1    2  29-MAY-1990  16:47:59  AIPS      * Procedure to compare test image against master:
  1    2  29-MAY-1990  16:48:00  AIPS      *                (inclass), assumes OUTNAME
  1    2  29-MAY-1990  16:48:00  AIPS      PROCEDURE CHECK (JJCNT, CHKSV1); CHKSV2 = INNAME;
  1    2  29-MAY-1990  16:48:00  AIPS         IN2DISK = MDISK; APARM = 1,-1;
  1    2  29-MAY-1990  16:48:00  AIPS         INNAME = OUTNAME; IN2NAME = 'M' !! TNAMF
  1    2  29-MAY-1990  16:48:01  AIPS         IN2CLASS = CHKSV1; PRTHED(IN2NAME, IN2CLASS, IN2DISK)
  1    2  29-MAY-1990  16:48:01  AIPS         CHKSV3 = INDISK; INDISK = OUTDISK
  1    2  29-MAY-1990  16:48:01  AIPS         OPCODE = 'SUM'; ZIGW (CHKSV1, 'COMB', 'DIFF')
  1    2  29-MAY-1990  16:48:01  AIPS         TYPE SPACER
  1    2  29-MAY-1990  16:48:01  AIPS         TYPE '###########-------' !! CHKSV1 !! '-------######################'
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1	2	29-MAY-1990	16:48:02	AIPS	TYPE SPACER; INCLASS='DIFF'; ; BLC=EDGSKP+1,EDGSKP+1,0
1	2	29-MAY-1990	16:48:02	AIPS	KEYWORD='NAXIS1'; GETHEAD; TINY99=KEYV(1); KEYWORD='NAXIS2'
1	2	29-MAY-1990	16:48:02	AIPS	GETHEAD; TRC = TINY99-EDGSKP,KEYVAL(1)-EDGSKP,0; IMSTAT
1	2	29-MAY-1990	16:48:03	AIPS	ERATIO = MAX(ABS(PIXVAL),ABS(PIX2VAL)); INCLASS = IN2CLASS
1	2	29-MAY-1990	16:48:03	AIPS	INDISK = IN2DISK; INNAME = IN2NAME
1	2	29-MAY-1990	16:48:03	AIPS	KEYWORD = 'DATAMAX'; GETHEAD; ERATIO = ERATIO / KEYVALUE(1)
1	2	29-MAY-1990	16:48:04	AIPS	TYPE 'RELATIVE TO ABS(MAXIMUM):', ERATIO
1	2	29-MAY-1990	16:48:04	AIPS	TINY99 = 1.5768E-20 * 1E-10
1	2	29-MAY-1990	16:48:04	AIPS	IF ERATIO<TINY99 THEN ERATIO = TINY99 END
1	2	29-MAY-1990	16:48:05	AIPS	MAPDIF(1,JJCNT) = -3.3219 * LOG (ERATIO)
1	2	29-MAY-1990	16:48:05	AIPS	TYPE 'NUMBER CORRECT BITS MAX:', MAPDIF(1,JJCNT)
1	2	29-MAY-1990	16:48:05	AIPS	ERATIO = PIXSTD / KEYVALUE(1);
1	2	29-MAY-1990	16:48:06	AIPS	IF ERATIO<TINY99 THEN ERATIO = TINY99 END
1	2	29-MAY-1990	16:48:06	AIPS	MAPDIF(2,JJCNT) = -3.3219 * LOG (ERATIO)
1	2	29-MAY-1990	16:48:06	AIPS	TYPE 'NUMBER CORRECT BITS RMS:', MAPDIF(2,JJCNT)
1	2	29-MAY-1990	16:48:06	AIPS	TYPE SPACER, INNAME !! ' IMSTAT'; IMSTAT
1	2	29-MAY-1990	16:48:07	AIPS	TYPE SPACER, INNAME !! ' MAXFIT'; MAXFIT
1	2	29-MAY-1990	16:48:07	AIPS	MAXDIF = PIXXY(1), PIXXY(2), PIXVAL;
1	2	29-MAY-1990	16:48:07	AIPS	INNAME = OUTNAME; INDISK = OUTDISK
1	2	29-MAY-1990	16:48:08	AIPS	TYPE SPACER, INNAME !! ' MAXFIT'; MAXFIT; BLC = 0; TRC = 0
1	2	29-MAY-1990	16:48:08	AIPS	MAXDIF=MAXDIF(1)-PIXXY(1),MAXDIF(2)-PIXXY(2),MAXDIF(3)-PIXVAL
1	2	29-MAY-1990	16:48:08	AIPS	TYPE SPACER, '**** DIFFERENCE IN X, Y, VAL: ****', MAXDIF
1	2	29-MAY-1990	16:48:08	AIPS	MAPDIF(3,JJCNT)=MAXDIF(1); MAPDIF(4,JJCNT)=MAXDIF(2);
1	2	29-MAY-1990	16:48:09	AIPS	MAPDIF(5,JJCNT)=MAXDIF(3);
1	2	29-MAY-1990	16:48:09	AIPS	TYPE SPACER, SPACER; INNAME = CHKSV2; INDISK = CHKSV3; RETURN
1	2	29-MAY-1990	16:48:10	AIPS	FINISH
1	2	29-MAY-1990	16:48:10	AIPS	* ==
1	2	29-MAY-1990	16:48:10	AIPS	* Procedure to compare test uv file against master:
1	2	29-MAY-1990	16:48:10	AIPS	* (inclass), assumes OUTNAME
1	2	29-MAY-1990	16:48:10	AIPS	PROCEDURE UCHECK (CHKSV1); CHKSV2 = INNAME
1	2	29-MAY-1990	16:48:10	AIPS	APARM = .015, 1000, .1; INNAME = OUTNAME; CHKSV3 = INDISK
1	2	29-MAY-1990	16:48:10	AIPS	INDISK = OUTDISK; IN2NAME = 'M' !! TNAMF; IN2DISK = MDISK
1	2	29-MAY-1990	16:48:11	AIPS	IN2CLASS = CHKSV1; PRTHED(IN2NAME, IN2CLASS, IN2DISK)
1	2	29-MAY-1990	16:48:11	AIPS	TYPE SPACER; UCHSV1 = NITER; NITER = 45
1	2	29-MAY-1990	16:48:12	AIPS	TYPE '##########------' !! CHKSV1 !! '------##########'
1	2	29-MAY-1990	16:48:12	AIPS	TYPE SPACER; OPCODE = ' '; IGW (CHKSV1, 'UVDIF')
1	2	29-MAY-1990	16:48:12	AIPS	INNAME = CHKSV2; NITER = UCHSV1; INDISK = CHKSV3
1	2	29-MAY-1990	16:48:13	AIPS	TYPE SPACER; RETURN
1	2	29-MAY-1990	16:48:13	AIPS	FINISH
1	2	29-MAY-1990	16:48:13	AIPS	* ==
1	2	29-MAY-1990	16:48:13	AIPS	* Procedure to rename a file:
1	2	29-MAY-1990	16:48:13	AIPS	* (inclass, outclass), assumes OUTNAME
1	2	29-MAY-1990	16:48:13	AIPS	PROCEDURE NEWCLASS (NCLSV1, OUTCLASS); NCLSV2 = INNAME
1	2	29-MAY-1990	16:48:13	AIPS	INNAME = OUTNAME; NCLSV3 = INCLASS; INCLASS = NCLSV1
1	2	29-MAY-1990	16:48:14	AIPS	NCLSV4 = INDISK; INDISK = OUTDISK; RENAME
1	2	29-MAY-1990	16:48:14	AIPS	INNAME = NCLSV2; INCLASS = NCLSV3; INDISK = NCLSV4; RETURN
1	2	29-MAY-1990	16:48:14	AIPS	FINISH
1	2	29-MAY-1990	16:48:15	AIPS	* ==
1	2	29-MAY-1990	16:48:15	AIPS	* Dummy procedure in case ALLDEST not executed:
1	2	29-MAY-1990	16:48:15	AIPS	PROCEDURE YES; RETURN
1	2	29-MAY-1990	16:48:15	AIPS	FINISH
1	2	29-MAY-1990	16:48:15	AIPS	* ==
1	2	29-MAY-1990	16:48:15	AIPS	* Set default variable values:
1	2	29-MAY-1990	16:48:15	AIPS	TNAME = 'DDT'; TASK = TNAME; TMASK = 127; TMODE = 'T'
1	2	29-MAY-1990	16:48:15	AIPS	DDTSIZE = 'SMALL' ; TNAMF = TNAME !! SUBSTR (DDTSIZE,1,1)
1	2	29-MAY-1990	16:48:16	AIPS	INNAME = TMODE !! TNAMF; INCLASS = ' '; INSEQ = 0

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   1     2   29-MAY-1990  16:48:16     AIPS      OUTNAME = 'T' || TNAMF; OUTCLASS = ' '; OUTSEQ = 0;
   1     2   29-MAY-1990  16:48:16     AIPS      CLR2NAME; CLR3NAME; DOTWO = FALSE; FORMAT = 2; BLOCKING = 10
   1     2   29-MAY-1990  16:48:16     AIPS      PRIORITY=5; TERSE=0
   1     2   29-MAY-1990  16:48:16     AIPS      * Save current POPS image to allow restore after each step:
   1     2   29-MAY-1990  16:48:16     AIPS      CORE
   1     4   29-MAY-1990  16:48:16     AIPS                    Space used / total for
   1     4   29-MAY-1990  16:48:16     AIPS            Program          Variables          Source
   1     4   29-MAY-1990  16:48:17     AIPS          6456 / 14760     1594 /  4173     1457 /  4096
   1     2   29-MAY-1990  16:48:17     AIPS      SAVE DDT000
   1     2   29-MAY-1990  16:48:19     AIPS      * ================================================================
   1     2   29-MAY-1990  16:48:19     AIPS      * Check variables:
   1     2   29-MAY-1990  16:48:19     AIPS      GET DDT000
   1     2   29-MAY-1990  16:48:20     AIPS      PROCEDURE DDTPROC; TASK=TNAME; TGET; SMODE = SUBSTR(DDTSIZE,1,1)
   1     2   29-MAY-1990  16:48:20     AIPS         I = (SMODE='S')|(SMODE='M')|(SMODE='L')
   1     2   29-MAY-1990  16:48:20     AIPS         IF (I) THEN TNAMF = TNAME || SMODE
   1     2   29-MAY-1990  16:48:20     AIPS            ELSE DDTBOMB('DDTSIZE MUST BE SMALL, MEDIUM, OR LARGE')
   1     2   29-MAY-1990  16:48:20     AIPS            END
   1     2   29-MAY-1990  16:48:20     AIPS         IN2DISK = MDISK; INDISK = MDISK
   1     2   29-MAY-1990  16:48:21     AIPS         IF (TCODE='INIT') THEN INNAME='M'||TNAMF; OUTNAME='M'||TNAMF
   1     2   29-MAY-1990  16:48:21     AIPS            OUTDISK = MDISK
   1     2   29-MAY-1990  16:48:21     AIPS         ELSE IF ((TCODE = 'TEST')|(TCODE='WRIT')) THEN
   1     2   29-MAY-1990  16:48:21     AIPS            INNAME = TMODE || TNAMF; OUTNAME = 'T' || TNAMF
   1     2   29-MAY-1990  16:48:22     AIPS            OUTDISK = TDISK
   1     2   29-MAY-1990  16:48:22     AIPS            IF TMODE='T' THEN INDISK=TDISK; END
   1     2   29-MAY-1990  16:48:22     AIPS         ELSE IF (TCODE = 'READ') THEN OUTNAME = 'M' || TNAMF
   1     2   29-MAY-1990  16:48:23     AIPS            OUTDISK = MDISK;       END END END
   1     2   29-MAY-1990  16:48:23     AIPS         I=(TCODE='INIT')|(TCODE='TEST')|(TCODE='WRIT')|(TCODE='READ')
   1     2   29-MAY-1990  16:48:24     AIPS         IF (I) THEN ;
   1     2   29-MAY-1990  16:48:24     AIPS            ELSE DDTBOMB('TCODE MUST BE INIT,TEST,WRIT, OR READ!')
   1     2   29-MAY-1990  16:48:24     AIPS            END
   1     2   29-MAY-1990  16:48:24     AIPS         IF ((TMASK<1)|(TMASK>127)) THEN
   1     2   29-MAY-1990  16:48:24     AIPS            DDTBOMB('MUST HAVE 0<TMASK<128 !'); END
   1     2   29-MAY-1990  16:48:25     AIPS         IF ((TCODE='TEST')|(TCODE='WRIT')) THEN
   1     2   29-MAY-1990  16:48:25     AIPS            IF ((TMODE='T')|(TMODE='M')) THEN ;
   1     2   29-MAY-1990  16:48:25     AIPS              ELSE DDTBOMB('TMODE MUST BE T OR M IF TCODE=TEST/WRIT!')
   1     2   29-MAY-1990  16:48:26     AIPS               END END
   1     2   29-MAY-1990  16:48:26     AIPS         I = (IOTAPE<1)|(DDISK<1)|(MDISK<1)|(TDISK<1)
   1     2   29-MAY-1990  16:48:26     AIPS         IF (I) THEN
   1     2   29-MAY-1990  16:48:27     AIPS            DDTBOMB('NEED IOTAPE, DDISK, MDISK & TDISK >0 !')
   1     2   29-MAY-1990  16:48:27     AIPS            END
   1     2   29-MAY-1990  16:48:27     AIPS         UVTAP = 0; INTAPE = IOTAPE; OUTTAPE = IOTAPE
   1     2   29-MAY-1990  16:48:27     AIPS         IF EDGSKP < 0 THEN EDGSKP=0; END; SCALR2=-10
   1     2   29-MAY-1990  16:48:28     AIPS      * set mapping parameters for problems
   1     2   29-MAY-1990  16:48:28     AIPS         IF SMODE = 'S' THEN   ROTAT=56; SHIFT=-5.2
   1     2   29-MAY-1990  16:48:28     AIPS            CELLSIZE=1.3; IMSIZE=256; NITER=2000; FLUX=14.7
   1     2   29-MAY-1990  16:48:28     AIPS            BOX=102,108,194,155; SCALR1 = 13.0; NCOMP=400,0;
   1     2   29-MAY-1990  16:48:29     AIPS            NOISE=0.1,0; END
   1     2   29-MAY-1990  16:48:29     AIPS         IF SMODE = 'M' THEN   ROTAT=-5; SHIFT=6,-6; NCOMP=800,0
   1     2   29-MAY-1990  16:48:29     AIPS            CELLSIZE=1.3; IMSIZE=512; NITER=5000; FLUX=5.5
   1     2   29-MAY-1990  16:48:29     AIPS            BOX=152,187,342,341; SCALR1 = 8.4; NOISE=0.01,0; END
   1     2   29-MAY-1990  16:48:30     AIPS         IF SMODE = 'L' THEN   ROTAT=30; SHIFT=-0.049,+0.026
   1     2   29-MAY-1990  16:48:30     AIPS            CELLSIZE=0.1; IMSIZE=1024; NITER=15000
   1     2   29-MAY-1990  16:48:30     AIPS            BOX=350,400,600,620; SCALR1 = 13.1;FLUX=0.83;NCOMP=1600,0
   1     2   29-MAY-1990  16:48:31     AIPS            ZEROSP(1)=0.83; ZEROSP(5)=15.0; NOISE=0.0001,0; END
   1     2   29-MAY-1990  16:48:31     AIPS         MAPDIF = -100;
   1     2   29-MAY-1990  16:48:31     AIPS         TASK = TNAME || 'SAVE'; INPUTS; TPUT; RETURN
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   1     2   29-MAY-1990  16:48:31     AIPS      FINISH
   1     2   29-MAY-1990  16:48:32     AIPS      CORE
   1     4   29-MAY-1990  16:48:32     AIPS                  Space used / total for
   1     4   29-MAY-1990  16:48:32     AIPS            Program          Variables          Source
   1     4   29-MAY-1990  16:48:32     AIPS         7501 / 14760      1595 /  4173      1978 /  4096
   1     2   29-MAY-1990  16:48:32     AIPS      SAVE DDTINIT
   1     6   29-MAY-1990  16:48:36     AIPS      OVERWRITING EXISTING FILE
   1     2   29-MAY-1990  16:48:32     AIPS      * ================================================================
   1     2   29-MAY-1990  16:48:32     AIPS      * Read/Write the input visibility dataset:
   1     2   29-MAY-1990  16:48:32     AIPS      GET DDT000
   1     2   29-MAY-1990  16:48:33     AIPS      PROCEDURE DDTPROC; TASK = TNAME !! 'SAVE'; TGET
   1     2   29-MAY-1990  16:48:33     AIPS          SMODE = SUBSTR (TNAMF, 4, 4) ; NFILES=0
   1     2   29-MAY-1990  16:48:33     AIPS          IF SMODE='M' THEN NFILES=11
   1     2   29-MAY-1990  16:48:33     AIPS              ELSE IF SMODE = 'L' THEN NFILES=22; END ; END
   1     2   29-MAY-1990  16:48:33     AIPS         IF (TCODE = 'WRIT') THEN
   1     2   29-MAY-1990  16:48:34     AIPS            PRTCAT; REWIND; AVFILE; NFILES = 0; INNAME = 'D' !! TNAMF
   1     2   29-MAY-1990  16:48:34     AIPS            DOEOT = FALSE; DONEWTAB = TRUE; IGW('UVDATA', 'FITTP')
   1     2   29-MAY-1990  16:48:34     AIPS         ELSE IF (TCODE = 'READ') THEN
   1     2   29-MAY-1990  16:48:34     AIPS            REWIND; AVFILE; INCLASS = 'UVDATA';  SOURCE = ' '
   1     2   29-MAY-1990  16:48:35     AIPS            INNAME = 'D' !! TNAMF; INDISK = DDISK; ALLDEST
   1     2   29-MAY-1990  16:48:35     AIPS            OUTNAME = 'D' !! TNAMF; FREESPAC; OUTDISK = DDISK
   1     2   29-MAY-1990  16:48:35     AIPS            NFILES = 0; TPLOD('UVLOD'); PRTCAT
   1     2   29-MAY-1990  16:48:35     AIPS         END; END
   1     2   29-MAY-1990  16:48:36     AIPS         RETURN
   1     2   29-MAY-1990  16:48:36     AIPS      FINISH
   1     2   29-MAY-1990  16:48:36     AIPS      CORE
   1     4   29-MAY-1990  16:48:37     AIPS                  Space used / total for
   1     4   29-MAY-1990  16:48:37     AIPS            Program          Variables          Source
   1     4   29-MAY-1990  16:48:37     AIPS         6753 / 14760      1595 /  4173      1622 /  4096
   1     2   29-MAY-1990  16:48:37     AIPS      SAVE DDT000RW
   1     6   29-MAY-1990  16:48:41     AIPS      OVERWRITING EXISTING FILE
   1     2   29-MAY-1990  16:48:41     AIPS      * ================================================================
   1     2   29-MAY-1990  16:48:42     AIPS      * Sort the visibility data:
   1     2   29-MAY-1990  16:48:42     AIPS      GET DDT000
   1     2   29-MAY-1990  16:48:42     AIPS      PROCEDURE DDTPROC; TASK = TNAME !! 'SAVE'; TGET; J = 1
   1     2   29-MAY-1990  16:48:42     AIPS         IF(((TCODE='INIT')|(TCODE='TEST'))&(MOD(TMASK,2*J)>=J))THEN
   1     2   29-MAY-1990  16:48:42     AIPS            INNAME = 'D' !! TNAMF; XTRSV1 = INDISK; INDISK = DDISK
   1     2   29-MAY-1990  16:48:42     AIPS            PRTHED(INNAME, 'UVDATA',INDISK)
   1     2   29-MAY-1990  16:48:42     AIPS            SORT = 'XY'; ZIGW ('UVDATA','UVSRT','UVSRT')
   1     2   29-MAY-1990  16:48:43     AIPS            PRTHED (OUTNAME,'UVSRT',OUTDISK)
   1     2   29-MAY-1990  16:48:43     AIPS            IF TCODE='TEST' THEN UCHECK('UVSRT'); END; PRTCAT
   1     2   29-MAY-1990  16:48:43     AIPS         ELSE IF (TCODE = 'WRIT') THEN
   1     2   29-MAY-1990  16:48:43     AIPS            IGW('UVSRT', 'FITTP')
   1     2   29-MAY-1990  16:48:43     AIPS         ELSE IF (TCODE = 'READ') THEN
   1     2   29-MAY-1990  16:48:43     AIPS            IF (MOD(TMASK,2*J)>=J) THEN INCLAS='UVSRT'
   1     2   29-MAY-1990  16:48:44     AIPS               INNAME = 'M' !! TNAMF; INDISK = MDISK; ALLDEST
   1     2   29-MAY-1990  16:48:44     AIPS               TPLOD('UVLOD');
   1     2   29-MAY-1990  16:48:44     AIPS            ELSE NFILE=1; AVFIL; NFILE=0; END; PRTCAT
   1     2   29-MAY-1990  16:48:45     AIPS         END END END
   1     2   29-MAY-1990  16:48:45     AIPS      FINISH
   1     2   29-MAY-1990  16:48:45     AIPS      CORE
   1     4   29-MAY-1990  16:48:45     AIPS                  Space used / total for
   1     4   29-MAY-1990  16:48:45     AIPS            Program          Variables          Source
   1     4   29-MAY-1990  16:48:45     AIPS         6813 / 14760      1595 /  4173      1638 /  4096
   1     2   29-MAY-1990  16:48:45     AIPS      SAVE DDT001
   1     6   29-MAY-1990  16:48:52     AIPS      OVERWRITING EXISTING FILE
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  1   2  29-MAY-1990  16:48:52  AIPS   * ===============================================================
  1   2  29-MAY-1990  16:48:52  AIPS   * Compute the dirty map:
  1   2  29-MAY-1990  16:48:52  AIPS   GET DDT000
  1   2  29-MAY-1990  16:48:53  AIPS   PROCEDURE DDTPROC; STRING*6 BEAMCL; TASK = TNAME !! 'SAVE'; TGET
  1   2  29-MAY-1990  16:48:53  AIPS   *     Use IBEM for older versions of UVMAP, IBEAM for newer:
  1   2  29-MAY-1990  16:48:53  AIPS      J = 2; BEAMCL = 'IBEAM'
  1   2  29-MAY-1990  16:48:53  AIPS      IF(((TCODE='INIT')!(TCODE='TEST'))&(MOD(TMASK,2*J)>=J))THEN
  1   2  29-MAY-1990  16:48:53  AIPS         OUTZAP('IMAP'); OUTZAP(BEAMCL)
  1   2  29-MAY-1990  16:48:53  AIPS         OUTZAP('UVBEAM'); ZIGW('UVSRT', 'UVMAP', 'UVMAP')
  1   2  29-MAY-1990  16:48:53  AIPS         NEWCLASS('IMAP', 'UVMAP'); NEWCLASS(BEAMCL, 'UVBEAM')
  1   2  29-MAY-1990  16:48:54  AIPS         PRTHED(OUTNAME, 'UVMAP', OUTDISK)
  1   2  29-MAY-1990  16:48:54  AIPS         PRTHED(OUTNAME, 'UVBEAM', OUTDISK)
  1   2  29-MAY-1990  16:48:54  AIPS         IF (TCODE='TEST') THEN CHECK(1,'UVMAP');
  1   2  29-MAY-1990  16:48:54  AIPS            CHECK(2,'UVBEAM'); END
  1   2  29-MAY-1990  16:48:54  AIPS         PRTCAT
  1   2  29-MAY-1990  16:48:54  AIPS      ELSE IF (TCODE = 'WRIT') THEN
  1   2  29-MAY-1990  16:48:55  AIPS         IGW('UVMAP', 'FITTP'); IGW('UVBEAM', 'FITTP')
  1   2  29-MAY-1990  16:48:55  AIPS      ELSE IF (TCODE = 'READ') THEN
  1   2  29-MAY-1990  16:48:55  AIPS         IF (MOD(TMASK,2*J)>=J) THEN INCLAS='UVMAP'
  1   2  29-MAY-1990  16:48:55  AIPS            INNAME = 'M' !! TNAMF; INDISK = MDISK; ALLDEST
  1   2  29-MAY-1990  16:48:56  AIPS            INCLAS='UVBEAM'; ALLDEST
  1   2  29-MAY-1990  16:48:56  AIPS            TPLOD('IMLOD'); TPLOD('IMLOD');
  1   2  29-MAY-1990  16:48:56  AIPS         ELSE NFILE=2; AVFIL; NFILE=0; END; PRTCAT
  1   2  29-MAY-1990  16:48:57  AIPS      END END END;  TASK = TNAME !! 'SAVE'; TPUT; RETURN
  1   2  29-MAY-1990  16:48:57  AIPS   FINISH
  1   2  29-MAY-1990  16:48:57  AIPS   CORE
  1   4  29-MAY-1990  16:48:57  AIPS                   Space used / total for
  1   4  29-MAY-1990  16:48:57  AIPS          Program        Variables        Source
  1   4  29-MAY-1990  16:48:57  AIPS        6945 / 14760     1597 /  4173     1700 /  4096
  1   2  29-MAY-1990  16:48:57  AIPS   SAVE DDT002
  1   6  29-MAY-1990  16:49:02  AIPS   OVERWRITING EXISTING FILE
  1   2  29-MAY-1990  16:49:02  AIPS   * ===============================================================
  1   2  29-MAY-1990  16:49:02  AIPS   * Clean the dirty map:
  1   2  29-MAY-1990  16:49:02  AIPS   GET DDT000
  1   2  29-MAY-1990  16:49:02  AIPS   PROCEDURE DDTPROC; TASK = TNAME !! 'SAVE'; TGET; J = 4
  1   2  29-MAY-1990  16:49:02  AIPS      IF(((TCODE='INIT')!(TCODE='TEST'))&(MOD(TMASK,2*J)>=J))THEN
  1   2  29-MAY-1990  16:49:03  AIPS         IN2NAME = INNAME; IN2CLASS = 'UVBEAM';
  1   2  29-MAY-1990  16:49:03  AIPS         FLUSAVE = FLUX; FLUX = 0
  1   2  29-MAY-1990  16:49:03  AIPS         XTRSV1 = IN2DISK; IN2DISK = INDISK; NBOXES = 1
  1   2  29-MAY-1990  16:49:03  AIPS         ZIGW('UVMAP', 'APCLN', 'APCLN'); IN2DISK = XTRSV1
  1   2  29-MAY-1990  16:49:03  AIPS         PRTHED(OUTNAME, 'APCLN', OUTDISK)
  1   2  29-MAY-1990  16:49:03  AIPS         IF (TCODE = 'TEST') THEN CHECK(3,'APCLN') END
  1   2  29-MAY-1990  16:49:03  AIPS         ZIGW('APCLN', 'SUBIM', 'APRES')
  1   2  29-MAY-1990  16:49:03  AIPS         BMAJ = -1; BITER = NITER; OUTCLASS = 'APRES'; OUTSEQ = 1
  1   2  29-MAY-1990  16:49:04  AIPS         IN2NAME = INNAME; IN2CLASS = 'UVBEAM'; IN2DISK = INDISK
  1   2  29-MAY-1990  16:49:04  AIPS         IGW('UVMAP', 'APCLN'); PRTHED(OUTNAME, 'APRES',OUTDISK)
  1   2  29-MAY-1990  16:49:04  AIPS         IN2DISK = XTRSV1
  1   2  29-MAY-1990  16:49:04  AIPS         IF (TCODE = 'TEST') THEN CHECK(4,'APRES') END; PRTCAT
  1   2  29-MAY-1990  16:49:05  AIPS         FLUX = FLUSAVE;
  1   2  29-MAY-1990  16:49:05  AIPS      ELSE IF (TCODE = 'WRIT') THEN
  1   2  29-MAY-1990  16:49:05  AIPS         IGW('APCLN', 'FITTP'); IGW('APRES', 'FITTP')
  1   2  29-MAY-1990  16:49:05  AIPS      ELSE IF (TCODE = 'READ') THEN
  1   2  29-MAY-1990  16:49:06  AIPS         IF (MOD(TMASK,2*J)>=J) THEN INCLAS='APCLN'
  1   2  29-MAY-1990  16:49:07  AIPS            INNAME = 'M' !! TNAMF; INDISK = MDISK; ALLDEST
  1   2  29-MAY-1990  16:49:09  AIPS            INCLAS='APRES'; ALLDEST
  1   2  29-MAY-1990  16:49:09  AIPS            TPLOD('IMLOD'); TPLOD('IMLOD');
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Pops Prior  Date         Time      Task      Messages for user  126
 1    2   29-MAY-1990  16:49:10   AIPS          ELSE NFILE=2; AVFIL; NFILE=0; END; PRTCAT
 1    2   29-MAY-1990  16:49:10   AIPS       END END END;  TASK = TNAME !! 'SAVE'; TPUT; RETURN
 1    2   29-MAY-1990  16:49:11   AIPS    FINISH
 1    2   29-MAY-1990  16:49:11   AIPS    CORE
 1    4   29-MAY-1990  16:49:11   AIPS                     Space used / total for
 1    4   29-MAY-1990  16:49:11   AIPS           Program          Variables          Source
 1    4   29-MAY-1990  16:49:11   AIPS         7035 / 14760     1595 /  4173     1767 /  4096
 1    2   29-MAY-1990  16:49:11   AIPS    SAVE DDT004
 1    6   29-MAY-1990  16:49:16   AIPS    OVERWRITING EXISTING FILE
 1    2   29-MAY-1990  16:49:16   AIPS    * ============================================================
 1    2   29-MAY-1990  16:49:16   AIPS    * Compute revised gain & phase solution by self-calibration:
 1    2   29-MAY-1990  16:49:16   AIPS    GET DDT000
 1    2   29-MAY-1990  16:49:16   AIPS    PROCEDURE DDTPROC; TASK = TNAME !! 'SAVE'; TGET; J = 8
 1    2   29-MAY-1990  16:49:16   AIPS       SMODE = SUBSTR (TNAMF, 4, 4)
 1    2   29-MAY-1990  16:49:17   AIPS       IF(((TCODE='INIT')!(TCODE='TEST'))&(MOD(TMASK,2*J)>=J)) THEN
 1    2   29-MAY-1990  16:49:17   AIPS          XTRSV1 = INDISK; XTRSV2 = IN2DISK; IN2DISK = INDISK
 1    2   29-MAY-1990  16:49:17   AIPS          IN2NAME = INNAME; IN2CLASS = 'APCLN'
 1    2   29-MAY-1990  16:49:17   AIPS    *     Merge deltas to avoid ASCAL times dominating the result
 1    2   29-MAY-1990  16:49:17   AIPS          OUTVERS = 2; IGW('APCLN', 'CCMRG')
 1    2   29-MAY-1990  16:49:17   AIPS          INDISK = DDISK; INNAME = 'D' !! TNAMF; OUTCLASS='ASTEMP'
 1    2   29-MAY-1990  16:49:17   AIPS          APARM = 0; BPARM = 0; DOCAT = TRUE;
 1    2   29-MAY-1990  16:49:18   AIPS          ZIGW('UVDATA', 'ASCAL', 'ASTEMP')
 1    2   29-MAY-1990  16:49:18   AIPS    *     Destroy merged CC file
 1    2   29-MAY-1990  16:49:18   AIPS             INDISK = XTRSV1; INVERS = 2; INNAME = IN2NAME;
 1    2   29-MAY-1990  16:49:18   AIPS             INCLASS = IN2CLASS; INEXT = 'CC'; EXTDEST; INVERS = 0
 1    2   29-MAY-1990  16:49:18   AIPS          PRTHED(OUTNAME, 'ASTEMP',OUTDISK); INNAME = OUTNAME
 1    2   29-MAY-1990  16:49:20   AIPS          INDISK = OUTDISK; ZIGW('ASTEMP', 'UVSRT', 'ASCAL')
 1    2   29-MAY-1990  16:49:21   AIPS          PRTHED(OUTNAME, 'ASCAL', OUTDISK); OUTZAP('ASTEMP')
 1    2   29-MAY-1990  16:49:21   AIPS          IN2DISK = XTRSV2
 1    2   29-MAY-1990  16:49:23   AIPS          IF TCODE='TEST' THEN UCHECK('ASCAL'); END; PRTCAT
 1    2   29-MAY-1990  16:49:23   AIPS       ELSE IF (TCODE = 'WRIT') THEN
 1    2   29-MAY-1990  16:49:24   AIPS          IGW('ASCAL', 'FITTP')
 1    2   29-MAY-1990  16:49:24   AIPS       ELSE IF (TCODE = 'READ') THEN
 1    2   29-MAY-1990  16:49:25   AIPS          IF (MOD(TMASK,2*J)>=J) THEN INCLAS='ASCAL'
 1    2   29-MAY-1990  16:49:25   AIPS             INNAME = 'M' !! TNAMF; INDISK = MDISK; ALLDEST
 1    2   29-MAY-1990  16:49:26   AIPS             TPLOD('UVLOD');
 1    2   29-MAY-1990  16:49:26   AIPS          ELSE NFILE=1; AVFIL; NFILE=0; END; PRTCAT
 1    2   29-MAY-1990  16:49:27   AIPS       END END END; RETURN
 1    2   29-MAY-1990  16:49:28   AIPS    FINISH
 1    2   29-MAY-1990  16:49:28   AIPS    CORE
 1    4   29-MAY-1990  16:49:28   AIPS                     Space used / total for
 1    4   29-MAY-1990  16:49:28   AIPS           Program          Variables          Source
 1    4   29-MAY-1990  16:49:28   AIPS         7006 / 14760     1595 /  4173     1762 /  4096
 1    2   29-MAY-1990  16:49:28   AIPS    SAVE DDT008
 1    6   29-MAY-1990  16:49:33   AIPS    OVERWRITING EXISTING FILE
 1    2   29-MAY-1990  16:49:34   AIPS    * ============================================================
 1    2   29-MAY-1990  16:49:34   AIPS    * Make a new map with MX
 1    2   29-MAY-1990  16:49:34   AIPS    GET DDT000
 1    2   29-MAY-1990  16:49:34   AIPS    PROCEDURE DDTPROC; TASK = TNAME !! 'SAVE'; TGET; J = 16
 1    2   29-MAY-1990  16:49:34   AIPS       IF(((TCODE='INIT')!(TCODE='TEST'))&(MOD(TMASK,2*J)>=J))THEN
 1    2   29-MAY-1990  16:49:35   AIPS          FLUSAVE = FLUX; FLUX = 0; NBOXES = 1; STOKES = 'I';
 1    2   29-MAY-1990  16:49:35   AIPS          NFIELD = 1 ; RASHIFT = SHIFT(1),0; DECSHIFT = SHIFT(2),0;
 1    2   29-MAY-1990  16:49:35   AIPS          NITSAVE = NITER ; NITER = 0
 1    2   29-MAY-1990  16:49:36   AIPS          IN2DISK = OUTDISK; IN2NAME = ' '; IN2CL = ' '
 1    2   29-MAY-1990  16:49:36   AIPS          OUTZAP('MXBEAM'); ZIGW('ASCAL', 'MX', 'MXMAP')
 1    2   29-MAY-1990  16:49:36   AIPS          NEWCLASS('IMAP', 'MXMAP'); NEWCLASS('IBEAM', 'MXBEAM')
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Pops  Prior    Date        Time        Task          Messages for user  126

   1     2   29-MAY-1990  16:49:37     AIPS            OUTZAP('UVWORK'); PRTHED(OUTNAME, 'MXMAP', OUTDISK)
   1     2   29-MAY-1990  16:49:37     AIPS            PRTHED(OUTNAME, 'MXBEAM', OUTDISK)
   1     2   29-MAY-1990  16:49:37     AIPS            IF (TCODE = 'TEST') THEN CHECK (5,'MXMAP')
   1     2   29-MAY-1990  16:49:38     AIPS               CHECK (6,'MXBEAM') END
   1     2   29-MAY-1990  16:49:38     AIPS            PRTCAT; NITER = NITSAVE; FLUX = FLUSAVE;
   1     2   29-MAY-1990  16:49:38     AIPS         ELSE IF (TCODE = 'WRIT') THEN
   1     2   29-MAY-1990  16:49:39     AIPS            IGW('MXMAP', 'FITTP'); IGW('MXBEAM', 'FITTP')
   1     2   29-MAY-1990  16:49:39     AIPS         ELSE IF (TCODE = 'READ') THEN
   1     2   29-MAY-1990  16:49:39     AIPS            IF (MOD(TMASK,2*J)>=J) THEN INCLAS='MXMAP'
   1     2   29-MAY-1990  16:49:39     AIPS               INNAME = 'M' || TNAMF; INDISK = MDISK; ALLDEST
   1     2   29-MAY-1990  16:49:40     AIPS               INCLAS='MXBEAM'; ALLDEST
   1     2   29-MAY-1990  16:49:40     AIPS               TPLOD('IMLOD'); TPLOD('IMLOD');
   1     2   29-MAY-1990  16:49:40     AIPS            ELSE NFILE=2; AVFIL; NFILE=0; END; PRTCAT
   1     2   29-MAY-1990  16:49:41     AIPS         END END END;  TASK = TNAME || 'SAVE'; TPUT; RETURN
   1     2   29-MAY-1990  16:49:41     AIPS      FINISH
   1     2   29-MAY-1990  16:49:41     AIPS      CORE
   1     4   29-MAY-1990  16:49:41     AIPS                          Space used / total for
   1     4   29-MAY-1990  16:49:41     AIPS               Program          Variables          Source
   1     4   29-MAY-1990  16:49:41     AIPS            7010 / 14760     1595 /  4173     1750 /  4096
   1     2   29-MAY-1990  16:49:42     AIPS      SAVE DDT016
   1     6   29-MAY-1990  16:49:46     AIPS      OVERWRITING EXISTING FILE
   1     2   29-MAY-1990  16:49:46     AIPS      * ================================================================
   1     2   29-MAY-1990  16:49:46     AIPS      * Make a new clean map with MX:
   1     2   29-MAY-1990  16:49:46     AIPS      GET DDT000
   1     2   29-MAY-1990  16:49:46     AIPS      PROCEDURE DDTPROC; TASK = TNAME || 'SAVE'; TGET; J = 32
   1     2   29-MAY-1990  16:49:47     AIPS         IF(((TCODE='INIT')|(TCODE='TEST'))&(MOD(TMASK,2*J)>=J))THEN
   1     2   29-MAY-1990  16:49:47     AIPS            OUTZAP('IBEAM'); OUTZAP('MXCLN'); OUTZAP('MXBEM')
   1     2   29-MAY-1990  16:49:47     AIPS            IN2NAME = ' '; IN2CLASS = ' '; IN2DISK = OUTDISK
   1     2   29-MAY-1990  16:49:47     AIPS            STOKES= 'I'; NFIELD = 1; FLUSAVE = FLUX; FLUX = 0;
   1     2   29-MAY-1990  16:49:47     AIPS            NBOXES = 1; RASHIFT=SHIFT(1),0; DECSHIFT=SHIFT(2),0
   1     2   29-MAY-1990  16:49:48     AIPS            ZIGW('ASCAL', 'MX', 'ICLN')
   1     2   29-MAY-1990  16:49:48     AIPS            NEWCLASS('IBEAM', 'MXBEM'); NEWCLASS('ICLN', 'MXCLN')
   1     2   29-MAY-1990  16:49:48     AIPS            OUTZAP('UVWORK'); PRTHED(OUTNAME, 'MXCLN', OUTDISK)
   1     2   29-MAY-1990  16:49:48     AIPS            IF (TCODE='TEST') THEN CHECK(7,'MXCLN') END; PRTCAT
   1     2   29-MAY-1990  16:49:48     AIPS            FLUX = FLUSAVE;
   1     2   29-MAY-1990  16:49:49     AIPS         ELSE IF (TCODE = 'WRIT') THEN
   1     2   29-MAY-1990  16:49:49     AIPS            IGW('MXCLN', 'FITTP')
   1     2   29-MAY-1990  16:49:49     AIPS         ELSE IF (TCODE = 'READ') THEN
   1     2   29-MAY-1990  16:49:49     AIPS            IF (MOD(TMASK,2*J)>=J) THEN INCLAS='MXCLN'
   1     2   29-MAY-1990  16:49:50     AIPS               INNAME = 'M' || TNAMF; INDISK = MDISK; ALLDEST
   1     2   29-MAY-1990  16:49:50     AIPS               TPLOD('IMLOD');
   1     2   29-MAY-1990  16:49:51     AIPS            ELSE NFILE=1; AVFIL; NFILE=0; END; PRTCAT
   1     2   29-MAY-1990  16:49:51     AIPS         END END END;   TASK = TNAME || 'SAVE'; TPUT; RETURN
   1     2   29-MAY-1990  16:49:51     AIPS      FINISH
   1     2   29-MAY-1990  16:49:51     AIPS      OUTSEQ=1
   1     2   29-MAY-1990  16:49:52     AIPS      CORE
   1     4   29-MAY-1990  16:49:52     AIPS                          Space used / total for
   1     4   29-MAY-1990  16:49:52     AIPS               Program          Variables          Source
   1     4   29-MAY-1990  16:49:52     AIPS            6951 / 14760     1595 /  4173     1707 /  4096
   1     2   29-MAY-1990  16:49:52     AIPS      SAVE DDT032
   1     6   29-MAY-1990  16:49:57     AIPS      OVERWRITING EXISTING FILE
   1     2   29-MAY-1990  16:49:57     AIPS      * ================================================================
   1     2   29-MAY-1990  16:49:57     AIPS      * Deconvolve the map using Maximum Entropy:
   1     2   29-MAY-1990  16:49:57     AIPS      GET DDT000
   1     2   29-MAY-1990  16:49:57     AIPS      PROCEDURE DDTPROC; TASK = TNAME || 'SAVE'; TGET; J = 64
   1     2   29-MAY-1990  16:49:57     AIPS         IF (((TCODE='INIT')|(TCODE='TEST'))&(MOD(TMASK,2*J)>=J)) THEN
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Pops  Prior    Date        Time       Task          Messages for user  126

   1     2   29-MAY-1990  16:49:58     AIPS            IN2NAME = INNAME; IN2CLASS = 'MXBEAM'; IN2DISK = INDISK
   1     2   29-MAY-1990  16:49:58     AIPS            ZIGW('MXCLN','SUBIM','MXINVT'); IN3CLAS = 'MXINVT'
   1     2   29-MAY-1990  16:49:58     AIPS            IN3NAME = OUTNAME; IN3DISK = OUTDISK; IN3SEQ = -1
   1     2   29-MAY-1990  16:49:58     AIPS            INCLAS = IN3CL; INNAME = IN3NA; INDISK = IN3DISK
   1     2   29-MAY-1990  16:49:58     AIPS            OFFSET = 0; FACTOR = 1/SCALR1; RESCALE; BMAJ=-1
   1     2   29-MAY-1990  16:49:58     AIPS            NITSAVE = NITER; NITER = SCALR2; NMAPS = 1;
   1     2   29-MAY-1990  16:49:58     AIPS            INNAME = IN2NAM; INDISK = IN2DISK
   1     2   29-MAY-1990  16:49:59     AIPS            ZIGW('MXMAP', 'VTESS', 'VTESS')
   1     2   29-MAY-1990  16:49:59     AIPS            PRTHED(OUTNAME, 'VTESS', OUTDISK)
   1     2   29-MAY-1990  16:49:59     AIPS            IF (TCODE = 'TEST') THEN CHECK(8,'VTESS') END
   1     2   29-MAY-1990  16:49:59     AIPS            OUTZAP ('MXINVT'); PRTCAT; NITER = NITSAVE
   1     2   29-MAY-1990  16:50:00     AIPS          ELSE IF (TCODE = 'WRIT') THEN
   1     2   29-MAY-1990  16:50:00     AIPS             IGW('VTESS', 'FITTP')
   1     2   29-MAY-1990  16:50:00     AIPS          ELSE IF (TCODE = 'READ') THEN
   1     2   29-MAY-1990  16:50:01     AIPS             IF (MOD(TMASK,2*J)>=J) THEN INCLAS='VTESS'
   1     2   29-MAY-1990  16:50:01     AIPS                INNAME = 'M' || TNAMF; INDISK = MDISK; ALLDEST
   1     2   29-MAY-1990  16:50:01     AIPS                TPLOD('IMLOD');
   1     2   29-MAY-1990  16:50:01     AIPS             ELSE NFILE=1; AVFIL; NFILE=0; END; PRTCAT
   1     2   29-MAY-1990  16:50:02     AIPS          END END END;  TASK = TNAME || 'SAVE'; TPUT; RETURN
   1     2   29-MAY-1990  16:50:02     AIPS        FINISH
   1     2   29-MAY-1990  16:50:02     AIPS        CORE
   1     4   29-MAY-1990  16:50:02     AIPS                          Space used / total for
   1     4   29-MAY-1990  16:50:02     AIPS                Program          Variables          Source
   1     4   29-MAY-1990  16:50:02     AIPS              6959 / 14760     1595 /  4173     1732 /  4096
   1     2   29-MAY-1990  16:50:03     AIPS        SAVE DDT064
   1     6   29-MAY-1990  16:50:07     AIPS        OVERWRITING EXISTING FILE
   1     2   29-MAY-1990  16:50:07     AIPS        * ================================================================
   1     2   29-MAY-1990  16:50:07     AIPS        * Thats all, folks!
   1     2   29-MAY-1990  16:50:07     AIPS        GET DDT000
   1     2   29-MAY-1990  16:50:08     AIPS        PROCEDURE DDTPROC; TASK = TNAME || 'SAVE'; TGET
   1     2   29-MAY-1990  16:50:08     AIPS        STRING*6 DIFNAM(8)
   1     2   29-MAY-1990  16:50:08     AIPS        DIFNAM = 'UVMAP','UVBEAM','APCLN','APRES','MXMAP','MXBEAM'
   1     2   29-MAY-1990  16:50:08     AIPS        DIFNAM(7) = 'MXCLN'; DIFNAM(8) = 'VTESS'
   1     2   29-MAY-1990  16:50:08     AIPS           IF (TCODE = 'TEST') THEN PRTCAT;
   1     2   29-MAY-1990  16:50:08     AIPS              FOR I = 1:8; ERATIO = MAPDIF(1,I); JJCNT=MAPDIF(2,I);
   1     2   29-MAY-1990  16:50:09     AIPS                 IF (ERATIO > -90) THEN
   1     2   29-MAY-1990  16:50:09     AIPS                    PRINT DIFNAM(I), ERATIO, JJCNT;
   1     2   29-MAY-1990  16:50:09     AIPS              END; END
   1     2   29-MAY-1990  16:50:09     AIPS              FOR I = 1:8; ERATIO = MAPDIF(1,I)
   1     2   29-MAY-1990  16:50:09     AIPS                 IF (ERATIO > -90) THEN
   1     2   29-MAY-1990  16:50:09     AIPS                    PRINT DIFNAM(I), MAPDIF(3,I),MAPDIF(4,I),MAPDIF(5,I)
   1     2   29-MAY-1990  16:50:10     AIPS              END; END
   1     2   29-MAY-1990  16:50:10     AIPS              PRINT SPACER
   1     2   29-MAY-1990  16:50:11     AIPS              PRINT 'PRINTING MESSAGES SUGGESTIVE OF ERROR: PRIO > 5'
   1     2   29-MAY-1990  16:50:11     AIPS              PRINT SPACER
   1     2   29-MAY-1990  16:50:11     AIPS              PRIORITY=6; PRNUM=0; PRTASK=''; DOCRT = 1; PRTMSG
   1     2   29-MAY-1990  16:50:11     AIPS              PRINT SPACER
   1     2   29-MAY-1990  16:50:12     AIPS              PRINT 'PRINTING ANSWERS, ERRORS, OTHER IMPORTANT MESSAGES'
   1     2   29-MAY-1990  16:50:12     AIPS              PRINT SPACER
   1     2   29-MAY-1990  16:50:12     AIPS              PRIORITY=5; PRNUM=0; PRTASK=''; DOCRT =-1; PRTMSG
   1     2   29-MAY-1990  16:50:12     AIPS           ELSE IF (TCODE = 'WRIT') THEN
   1     2   29-MAY-1990  16:50:13     AIPS              NFILES = 4; IGW(' ', 'PRTTP'); REWIND
   1     2   29-MAY-1990  16:50:13     AIPS           ELSE IF (TCODE = 'READ') THEN
   1     2   29-MAY-1990  16:50:13     AIPS              REWIND; PRTCAT
   1     2   29-MAY-1990  16:50:13     AIPS           END END END;
   1     2   29-MAY-1990  16:50:14     AIPS           PRIORITY=5; PRTIME=2; DOCRT 1
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Pops  Prior    Date        Time        Task        Messages for user  126

   1     2   29-MAY-1990  16:50:14     AIPS        TPUT PRTAC
   1     2   29-MAY-1990  16:50:14     AIPS        TYPE 'IF YOU WANT ACCOUNTING INFO TYPE: '
   1     2   29-MAY-1990  16:50:14     AIPS        TYPE '            TGET PRTAC; GO PRTAC'
   1     2   29-MAY-1990  16:50:14     AIPS        TYPE 'IF YOU WANT EVEN MORE MESSAGES, SET PRIORITY=0'
   1     2   29-MAY-1990  16:50:15     AIPS        TYPE ' AND TYPE: PRTMSG     (NOT RECOMMENDED USUALLY)'
   1     2   29-MAY-1990  16:50:15     AIPS        TYPE '      ...      '
   1     2   29-MAY-1990  16:50:15     AIPS        TYPE 'THAT"S ALL, FOLKS!'
   1     2   29-MAY-1990  16:50:15     AIPS        RETURN
   1     2   29-MAY-1990  16:50:15     AIPS     FINISH
   1     2   29-MAY-1990  16:50:16     AIPS     CORE
   1     4   29-MAY-1990  16:50:16     AIPS                    Space used / total for
   1     4   29-MAY-1990  16:50:16     AIPS          Program         Variables         Source
   1     4   29-MAY-1990  16:50:16     AIPS        7082 / 14760     1611 /  4173     1818 /  4096
   1     2   29-MAY-1990  16:50:16     AIPS     SAVE DDT9999
   1     6   29-MAY-1990  16:50:21     AIPS     OVERWRITING EXISTING FILE
   1     2   29-MAY-1990  16:50:21     AIPS     * ================================================================
   1     2   29-MAY-1990  16:50:21     AIPS     * Restore to prior status:
   1     2   29-MAY-1990  16:50:21     AIPS     RESTORE 1
   1     2   29-MAY-1990  16:50:22     AIPS     CORE
   1     4   29-MAY-1990  16:50:22     AIPS                    Space used / total for
   1     4   29-MAY-1990  16:50:22     AIPS          Program         Variables         Source
   1     4   29-MAY-1990  16:50:22     AIPS        4438 / 14760     1490 /  4173      329 /  4096
   1     2   29-MAY-1990  16:50:22     AIPS     SGDESTR DDT000
   1     2   29-MAY-1990  16:50:24     AIPS     SGINDEX
   1     3   29-MAY-1990  16:50:24     AIPS        SAVE name              Last SAVE time          version
   1     3   29-MAY-1990  16:50:24     AIPS       'LASTEXIT        '   16-MAY-1990  09:41:08     TOO NEW
   1     3   29-MAY-1990  16:50:24     AIPS       'DDT016OLD       '   14-MAY-1990  10:48:28     TOO NEW
   1     3   29-MAY-1990  16:50:24     AIPS       'DDTINIT         '   29-MAY-1990  16:48:32     CURRENT
   1     3   29-MAY-1990  16:50:24     AIPS       'DDT000RW        '   29-MAY-1990  16:48:37     CURRENT
   1     3   29-MAY-1990  16:50:24     AIPS       'DDT001          '   29-MAY-1990  16:48:46     CURRENT
   1     3   29-MAY-1990  16:50:25     AIPS       'DDT002          '   29-MAY-1990  16:48:57     CURRENT
   1     3   29-MAY-1990  16:50:25     AIPS       'DDT004          '   29-MAY-1990  16:49:11     CURRENT
   1     3   29-MAY-1990  16:50:25     AIPS       'DDT008          '   29-MAY-1990  16:49:28     CURRENT
   1     3   29-MAY-1990  16:50:25     AIPS       'DDT016          '   29-MAY-1990  16:49:42     CURRENT
   1     3   29-MAY-1990  16:50:25     AIPS       'DDT032          '   29-MAY-1990  16:49:52     CURRENT
   1     3   29-MAY-1990  16:50:25     AIPS       'DDT064          '   29-MAY-1990  16:50:03     CURRENT
   1     3   29-MAY-1990  16:50:25     AIPS       'DDT9999         '   29-MAY-1990  16:50:16     CURRENT
   1     0   29-MAY-1990  16:50:25     AIPS     docrt -1
   1     0   29-MAY-1990  16:50:34     AIPS     prtmsg
```

DDTEXEC

ALL MESSAGES FOR SAIPS EXECUTION

Pops	Prior	Date	Time	Task	Messages for user 126
1	0	15-MAY-1990	15:51:10	AIPS	tget ddt
1	0	15-MAY-1990	15:51:12	AIPS	inp
1	0	15-MAY-1990	15:51:17	AIPS	run ddtexec
1	2	15-MAY-1990	15:51:18	AIPS	$--
1	2	15-MAY-1990	15:51:18	AIPS	$! RUN file to test performance of AIPS tasks on data
1	2	15-MAY-1990	15:51:18	AIPS	$# Run POPS
1	2	15-MAY-1990	15:51:18	AIPS	$ This software is the subject of a User agreement and is
1	2	15-MAY-1990	15:51:18	AIPS	$ confidential in nature. It shall not be sold or otherwise
1	2	15-MAY-1990	15:51:18	AIPS	$ made available or disclosed to third parties.
1	2	15-MAY-1990	15:51:18	AIPS	$--
1	2	15-MAY-1990	15:51:18	AIPS	*!
1	2	15-MAY-1990	15:51:18	AIPS	* DDTEXEC.RUN by Don Wells & Bill Cotton, NRAO-CV, Dec84-Feb85.
1	2	15-MAY-1990	15:51:19	AIPS	* Modified by Eric Greisen Nov85 to offer 3 sizes of problem.
1	2	15-MAY-1990	15:51:19	AIPS	* This is the "run" file to execute the DDT test problem.
1	2	15-MAY-1990	15:51:19	AIPS	* It executes the saved environments which were compiled by
1	2	15-MAY-1990	15:51:19	AIPS	* RUNning the DDTLOAD.001 file.
1	2	15-MAY-1990	15:51:19	AIPS	* See DDT.HLP for documentation (HELP DDT, EXPLAIN DDT).
1	2	15-MAY-1990	15:51:19	AIPS	* Version for the 15OCT87 release of AIPS
1	2	15-MAY-1990	15:51:19	AIPS	* ==
1	2	15-MAY-1990	15:51:19	AIPS	* first save the environment:
1	2	15-MAY-1990	15:51:19	AIPS	SAVE ENVIRONMENT
1	6	15-MAY-1990	15:51:20	AIPS	OVERWRITING EXISTING FILE
1	2	15-MAY-1990	15:51:20	AIPS	SGINDEX
1	3	15-MAY-1990	15:51:20	AIPS	SAVE name Last SAVE time version
1	3	15-MAY-1990	15:51:20	AIPS	'LASTEXIT ' 15-MAY-1990 11:08:31 CURRENT
1	3	15-MAY-1990	15:51:20	AIPS	'QDDT ' 13-MAR-1990 13:31:24 OUT DATED
1	3	15-MAY-1990	15:51:20	AIPS	'DDTINIT ' 15-MAY-1990 09:50:41 CURRENT
1	3	15-MAY-1990	15:51:20	AIPS	'DDT000RW ' 15-MAY-1990 09:50:49 CURRENT
1	3	15-MAY-1990	15:51:20	AIPS	'DDT001 ' 15-MAY-1990 09:50:57 CURRENT
1	3	15-MAY-1990	15:51:20	AIPS	'DDT002 ' 15-MAY-1990 09:51:09 CURRENT
1	3	15-MAY-1990	15:51:21	AIPS	'DDT004 ' 15-MAY-1990 09:51:26 CURRENT
1	3	15-MAY-1990	15:51:21	AIPS	'DDT008 ' 15-MAY-1990 09:51:47 CURRENT
1	3	15-MAY-1990	15:51:21	AIPS	'DDT016 ' 15-MAY-1990 09:52:01 CURRENT
1	3	15-MAY-1990	15:51:21	AIPS	'DDT032 ' 15-MAY-1990 09:52:12 CURRENT
1	3	15-MAY-1990	15:51:21	AIPS	'DDT064 ' 15-MAY-1990 09:52:27 CURRENT
1	3	15-MAY-1990	15:51:21	AIPS	'DDT9999 ' 15-MAY-1990 09:52:45 CURRENT
1	3	15-MAY-1990	15:51:21	AIPS	'DDTCLN ' 23-APR-1990 17:40:57 OUT DATED
1	3	15-MAY-1990	15:51:21	AIPS	'ENVIRONMENT ' 15-MAY-1990 15:51:19 CURRENT
1	2	15-MAY-1990	15:51:21	AIPS	* ==
1	2	15-MAY-1990	15:51:21	AIPS	* Check and set variables:
1	2	15-MAY-1990	15:51:21	AIPS	GET DDTINIT
1	2	15-MAY-1990	15:51:22	AIPS	DDTPROC
1	2	15-MAY-1990	15:51:24	AIPS	DDTSAVE : Verification/timing test; see HELP DDT
1	2	15-MAY-1990	15:51:24	AIPS	Adverbs Values Comments
1	2	15-MAY-1990	15:51:24	AIPS	--
1	2	15-MAY-1990	15:51:24	AIPS	Input variables
1	2	15-MAY-1990	15:51:24	AIPS	TCODE 'TEST' INIT,TEST,READ, or WRIT
1	2	15-MAY-1990	15:51:24	AIPS	TMODE 'M' T or M
1	2	15-MAY-1990	15:51:24	AIPS	TMASK 48 test selection bit mask
1	2	15-MAY-1990	15:51:25	AIPS	DDTSIZE 'SMALL 'SMALL','MEDIUM','LARGE' test
1	2	15-MAY-1990	15:51:25	AIPS	DDISK 3 Disk drive #: master UVDATA
1	2	15-MAY-1990	15:51:25	AIPS	MDISK 3 Disk drive #: other masters
1	2	15-MAY-1990	15:51:25	AIPS	TDISK 3 Disk drive #: test files
1	2	15-MAY-1990	15:51:25	AIPS	IOTAPE 1 Input/output tape drive #.
1	2	15-MAY-1990	15:51:25	AIPS	EDGSKP 4 Pixels to skip at edges
1	2	15-MAY-1990	15:51:26	AIPS	BADDISK 2 3 Disks to avoid

APPENDIX B.

Pops	Prior	Date	Time	Task	Messages for user 126				
1	2	15-MAY-1990	15:51:26	AIPS		4	5	6	*rest 0
1	2	15-MAY-1990	15:51:26	AIPS	VERSION				
1	2	15-MAY-1990	15:51:26	AIPS			Variables set and saved by DDT		
1	2	15-MAY-1990	15:51:26	AIPS	INNAME	'MDDTS '			
1	2	15-MAY-1990	15:51:26	AIPS	OUTNAME	'TDDTS '			
1	2	15-MAY-1990	15:51:26	AIPS	INDISK	3		1st input disk #	
1	2	15-MAY-1990	15:51:26	AIPS	IN2DISK	3		2nd input disk #	
1	2	15-MAY-1990	15:51:27	AIPS	OUTDISK	3		Output disk #	
1	2	15-MAY-1990	15:51:27	AIPS	INTAPE	1		Input tape drive #.	
1	2	15-MAY-1990	15:51:27	AIPS	OUTTAPE	1		Output tape drive #.	
1	2	15-MAY-1990	15:51:27	AIPS	TNAMF	'DDTS		Actual name ='DDTS','DDTM',..	
1	2	15-MAY-1990	15:51:27	AIPS	ROTATE	56		Image rotation in degrees	
1	2	15-MAY-1990	15:51:27	AIPS	IMSIZE	256	256	Image size	
1	2	15-MAY-1990	15:51:27	AIPS	CELLSIZE	1.3	1.3	Image cell size (arc sec)	
1	2	15-MAY-1990	15:51:28	AIPS	NITER	2000		Number clean components	
1	2	15-MAY-1990	15:51:28	AIPS	FLUX	14.7		Expected source flux (Jy)	
1	2	15-MAY-1990	15:51:28	AIPS	UVTAPER	0	0	Taper in UV plane	
1	2	15-MAY-1990	15:51:28	AIPS	ZEROSP	*all 0		0-spacing fluxes and weights	
1	2	15-MAY-1990	15:51:28	AIPS	NOISE	0.1	*rest 0	Noise level for VTESS	
1	2	15-MAY-1990	15:51:28	AIPS	SHIFT	-5.2	-5.2	Image shift x,y in arcsec	
1	2	15-MAY-1990	15:51:28	AIPS	SCALR1	13		Pixels/beam for VTESS	
1	2	15-MAY-1990	15:51:29	AIPS	SCALR2	-10		VTESS number iterations	
1	2	15-MAY-1990	15:51:29	AIPS	BOX	102	108	Cleaning area	
1	2	15-MAY-1990	15:51:29	AIPS		194	155	*rest 0	
1	2	15-MAY-1990	15:51:29	AIPS	NCOMP	400	*rest 0	Number merged comps for ASCAL	
1	2	15-MAY-1990	15:51:29	AIPS	MAPDIF	-100	-100	Comparison differences	
1	2	15-MAY-1990	15:51:29	AIPS		-100	-100	-100	-100
1	2	15-MAY-1990	15:51:29	AIPS		-100	-100	-100	-100
1	2	15-MAY-1990	15:51:29	AIPS		-100	-100	-100	-100
1	2	15-MAY-1990	15:51:29	AIPS		-100	-100	-100	-100
1	2	15-MAY-1990	15:51:30	AIPS		-100	-100	-100	-100
1	2	15-MAY-1990	15:51:30	AIPS		-100	-100	-100	-100
1	2	15-MAY-1990	15:51:30	AIPS		-100	-100	-100	-100
1	2	15-MAY-1990	15:51:30	AIPS		-100	-100	-100	-100
1	2	15-MAY-1990	15:51:30	AIPS		-100	-100	-100	-100
1	2	15-MAY-1990	15:51:30	AIPS		-100	-100		
1	2	15-MAY-1990	15:51:33	AIPS	* ==				
1	2	15-MAY-1990	15:51:34	AIPS	* Read/Write the input visibility dataset:				
1	2	15-MAY-1990	15:51:34	AIPS	GET DDT000RW				
1	2	15-MAY-1990	15:51:34	AIPS	DDTPROC				
1	2	15-MAY-1990	15:51:36	AIPS	YES				
1	2	15-MAY-1990	15:51:37	AIPS	YES				
1	2	15-MAY-1990	15:51:37	AIPS	* ==				
1	2	15-MAY-1990	15:51:37	AIPS	* Sort the visibility data using UVSRT:				
1	2	15-MAY-1990	15:51:37	AIPS	GET DDT001				
1	2	15-MAY-1990	15:51:37	AIPS	DDTPROC				
1	2	15-MAY-1990	15:51:40	AIPS	YES				
1	2	15-MAY-1990	15:51:40	AIPS	YES				
1	2	15-MAY-1990	15:51:40	AIPS	* ==				
1	2	15-MAY-1990	15:51:40	AIPS	* Compute the dirty map with UVMAP:				
1	2	15-MAY-1990	15:51:40	AIPS	GET DDT002				
1	2	15-MAY-1990	15:51:41	AIPS	DDTPROC				
1	2	15-MAY-1990	15:51:45	AIPS	YES				
1	2	15-MAY-1990	15:51:45	AIPS	YES				
1	2	15-MAY-1990	15:51:45	AIPS	YES				
1	2	15-MAY-1990	15:51:46	AIPS	YES				

Pops	Prior	Date	Time	Task	Messages for user 126
1	2	15-MAY-1990	15:51:46	AIPS	YES
1	2	15-MAY-1990	15:51:46	AIPS	YES
1	2	15-MAY-1990	15:51:46	AIPS	YES
1	2	15-MAY-1990	15:51:46	AIPS	YES
1	2	15-MAY-1990	15:51:46	AIPS	* ═══════════════════════════════════════
1	2	15-MAY-1990	15:51:47	AIPS	* Clean the dirty map with APCLN:
1	2	15-MAY-1990	15:51:47	AIPS	GET DDT004
1	2	15-MAY-1990	15:51:47	AIPS	DDTPROC
1	2	15-MAY-1990	15:51:51	AIPS	YES
1	2	15-MAY-1990	15:51:52	AIPS	YES
1	2	15-MAY-1990	15:51:52	AIPS	YES
1	2	15-MAY-1990	15:51:52	AIPS	YES
1	2	15-MAY-1990	15:51:52	AIPS	YES
1	2	15-MAY-1990	15:51:52	AIPS	YES
1	2	15-MAY-1990	15:51:52	AIPS	* ═══════════════════════════════════════
1	2	15-MAY-1990	15:51:53	AIPS	* Compute self/calibrated gains with ASCAL:
1	2	15-MAY-1990	15:51:53	AIPS	GET DDT008
1	2	15-MAY-1990	15:51:53	AIPS	DDTPROC
1	2	15-MAY-1990	15:51:55	AIPS	YES
1	2	15-MAY-1990	15:51:55	AIPS	YES
1	2	15-MAY-1990	15:51:56	AIPS	YES
1	2	15-MAY-1990	15:51:56	AIPS	YES
1	2	15-MAY-1990	15:51:56	AIPS	* ═══════════════════════════════════════
1	2	15-MAY-1990	15:51:56	AIPS	* Make new map with MX:
1	2	15-MAY-1990	15:51:56	AIPS	GET DDT016
1	2	15-MAY-1990	15:51:57	AIPS	DDTPROC
1	4	15-MAY-1990	15:51:59	AIPS	Limited to files matching name parms TDDTS .MXBEAM. 0
1	4	15-MAY-1990	15:51:59	AIPS	Destroy all files for user 126 disks 3-3? enter YES or NO
1	0	15-MAY-1990	15:51:59	AIPS	YES
1	4	15-MAY-1990	15:51:59	AIPS	Limited to files matching name parms TDDTS .MXMAP . 0
1	4	15-MAY-1990	15:52:00	AIPS	Destroy all files for user 126 disks 3-3? enter YES or NO
1	0	15-MAY-1990	15:52:00	AIPS	YES
1	2	15-MAY-1990	15:52:00	AIPS	MX: Task to map and CLEAN. More general than UVMAP, APCLN
1	2	15-MAY-1990	15:52:00	AIPS	Adverbs Values Comments
1	2	15-MAY-1990	15:52:00	AIPS	──
1	2	15-MAY-1990	15:52:01	AIPS	INNAME 'MDDTS ' Input UV data (name)
1	2	15-MAY-1990	15:52:01	AIPS	INCLASS 'ASCAL ' Input UV data (class)
1	2	15-MAY-1990	15:52:01	AIPS	INSEQ 0 Input UV data (seq. #)
1	2	15-MAY-1990	15:52:01	AIPS	INDISK 3 Input UV data disk drive #
1	2	15-MAY-1990	15:52:01	AIPS	IN2NAME ' ' UV work file name
1	2	15-MAY-1990	15:52:01	AIPS	IN2CLASS ' ' UV work file class
1	2	15-MAY-1990	15:52:01	AIPS	IN2SEQ 0 UV work file seq
1	2	15-MAY-1990	15:52:02	AIPS	IN2DISK 3 UV work file disk
1	2	15-MAY-1990	15:52:02	AIPS	BCHAN 1 Low freq. channel 0 for cont.
1	2	15-MAY-1990	15:52:02	AIPS	ECHAN 0 Highest freq channel
1	2	15-MAY-1990	15:52:02	AIPS	CHANNEL 0 Restart channel number
1	2	15-MAY-1990	15:52:02	AIPS	NPOINTS 1 Number of chan. to average.
1	2	15-MAY-1990	15:52:02	AIPS	CHINC 1 Channel incr. between maps.
1	2	15-MAY-1990	15:52:02	AIPS	STOKES 'I ' Stokes parameters (see HELP)
1	2	15-MAY-1990	15:52:03	AIPS	BIF 0 First IF in average.
1	2	15-MAY-1990	15:52:03	AIPS	EIF 0 Last IF in average.
1	2	15-MAY-1990	15:52:03	AIPS	OUTNAME 'TDDTS ' Output image name (name)
1	2	15-MAY-1990	15:52:03	AIPS	OUTDISK 3 Output image disk drive #
1	2	15-MAY-1990	15:52:04	AIPS	OUTSEQ 0 Output seq. no.
1	2	15-MAY-1990	15:52:04	AIPS	CELLSIZE 1.3 1.3 (X,Y) size of grid in asec
1	2	15-MAY-1990	15:52:04	AIPS	IMSIZE 256 256 Minumum image size

Pops	Prior	Date	Time	Task	Messages for user 126
1	2	15-MAY-1990	15:52:04	AIPS	NFIELD 1 Number of fields (max. 16)
1	2	15-MAY-1990	15:52:05	AIPS	FLDSIZE *all 0 Size of each field.
1	2	15-MAY-1990	15:52:05	AIPS	RASHIFT -5.2 *rest 0 RA shift per field (asec)
1	2	15-MAY-1990	15:52:05	AIPS	DECSHIFT -5.2 *rest 0 DEC shift per field (asec)
1	2	15-MAY-1990	15:52:05	AIPS	NBOXES 1 Number of boxes for CLEAN
1	2	15-MAY-1990	15:52:05	AIPS	NB: field 1 only.
1	2	15-MAY-1990	15:52:05	AIPS	BOX 102 108 Four coordinates for each box
1	2	15-MAY-1990	15:52:05	AIPS	194 155 *rest 0
1	2	15-MAY-1990	15:52:05	AIPS	UVTAPER 0 0 (U,V) gaussian taper
1	2	15-MAY-1990	15:52:06	AIPS	units are kilolambda
1	2	15-MAY-1990	15:52:06	AIPS	UVRANGE 0 0 Min & max baseline (klambda)
1	2	15-MAY-1990	15:52:06	AIPS	UVWTFN ' ' UV dist. weight function
1	2	15-MAY-1990	15:52:06	AIPS	blank => uniform
1	2	15-MAY-1990	15:52:06	AIPS	UVBOX 0 Additional rows and columns
1	2	15-MAY-1990	15:52:06	AIPS	used in weighting.
1	2	15-MAY-1990	15:52:06	AIPS	ZEROSP *all 0 0-spacing fluxes and weights
1	2	15-MAY-1990	15:52:06	AIPS	XTYPE 5 Conv. function type in x
1	2	15-MAY-1990	15:52:07	AIPS	default spheroidal
1	2	15-MAY-1990	15:52:07	AIPS	YTYPE 5 Conv. function type in y
1	2	15-MAY-1990	15:52:07	AIPS	default spheroidal
1	2	15-MAY-1990	15:52:07	AIPS	XPARM *all 0 Conv. function parms for x
1	2	15-MAY-1990	15:52:07	AIPS	YPARM *all 0 Conv. function parms for y
1	2	15-MAY-1990	15:52:07	AIPS	GAIN 0.1 CLEAN loop gain
1	2	15-MAY-1990	15:52:07	AIPS	FLUX 0 Minimum CLEAN component (Jy)
1	2	15-MAY-1990	15:52:07	AIPS	MINPATCH 51 Min. BEAM halfwidth in AP.
1	2	15-MAY-1990	15:52:08	AIPS	NITER 0 Maximum # of CLEAN components
1	2	15-MAY-1990	15:52:08	AIPS	BCOMP *all 0 Begin at BCOMP component
1	2	15-MAY-1990	15:52:08	AIPS	Specify for each field.
1	2	15-MAY-1990	15:52:08	AIPS	BMAJ 0 FWHM(asec) maj. axis CLEAN
1	2	15-MAY-1990	15:52:08	AIPS	restoring beam.
1	2	15-MAY-1990	15:52:08	AIPS	BMIN 0 FWHM(asec) min. axis CLEAN
1	2	15-MAY-1990	15:52:08	AIPS	restoring beam.
1	2	15-MAY-1990	15:52:08	AIPS	BPA 0 CLEAN beam position angle
1	2	15-MAY-1990	15:52:09	AIPS	PHAT 0 Prussian hat height.
1	2	15-MAY-1990	15:52:09	AIPS	FACTOR 0 Speedup factor see HELP
1	2	15-MAY-1990	15:52:09	AIPS	DOTV -1 If >0 display resid. field
1	2	15-MAY-1990	15:52:09	AIPS	number DOTV
1	2	15-MAY-1990	15:52:09	AIPS	CMETHOD ' ' Modeling method:
1	2	15-MAY-1990	15:52:09	AIPS	'DFT','GRID',' '
1	2	15-MAY-1990	15:52:09	AIPS	BADDISK 2 3 Disks to avoid for scratch.
1	2	15-MAY-1990	15:52:09	AIPS	4 5 6 *rest 0
1	5	15-MAY-1990	15:52:14	MX	Task MX (release of 15OCT90) begins
1	2	15-MAY-1990	15:52:22	MX	Create TDDTS .IBEAM . 1 (MA) on disk 3 cno 4
1	2	15-MAY-1990	15:52:27	MX	Create TDDTS .IMAP . 1 (MA) on disk 3 cno 7
1	2	15-MAY-1990	15:52:33	MX	Create TDDTS .UVWORK. 1 (UV) on disk 3 cno 16
1	4	15-MAY-1990	15:52:48	MX	Using all 7956 visibilities
1	2	15-MAY-1990	15:52:48	MX	Got data Time= 15:52:48 CPU time= 10.02
1	4	15-MAY-1990	15:52:49	MX	UVUNIF: Weighting grid = 256 X 256, Box = 0
1	4	15-MAY-1990	15:52:54	MX	UVGRID: 1 Channel Pass(es); 2 Row Pass(es)
1	4	15-MAY-1990	15:52:54	MX	UVGRID: Only 92 Rows in 64k AP
1	4	15-MAY-1990	15:52:54	MX	UVGRID: Max Baseline 52643. lambda (= 86 cells)
1	4	15-MAY-1990	15:53:16	MX	UVGRID: End Pass 1, 1: Rows 86- 1, with 7856 Pts
1	4	15-MAY-1990	15:53:17	MX	UVGRID: End Pass 1, 2: Rows 0- 0, with 100 Pts
1	4	15-MAY-1990	15:53:17	MX	Sum of gridding weights = 1.36202E+05
1	4	15-MAY-1990	15:54:11	MX	Fit Gaussian (FWHM in sec) = 4.73589 4.09602 23.6
1	2	15-MAY-1990	15:54:11	MX	Beam made Time= 15:54:11 CPU time= 85.42

Pops	Prior	Date	Time	Task	Messages for user 126
1	4	15-MAY-1990	15:55:29	MX	Field 1 min = -2.0 Jy, max = 12.0 Jy
1	2	15-MAY-1990	15:55:30	MX	Maps made Time= 15:55:30 CPU time= 157.50
1	4	15-MAY-1990	15:56:47	MX	Field 1 min = -2.0 Jy, max = 12.0 Jy
1	2	15-MAY-1990	15:56:47	MX	Maps made Time= 15:56:47 CPU time= 229.88
1	2	15-MAY-1990	15:56:47	MX	Finished channel 1 at 15:56:47 CPU time= 229.92
1	5	15-MAY-1990	15:56:48	MX	Total CLEANed flux density = 0.00 Jy
1	4	15-MAY-1990	15:56:48	MX	Field 1 min= -1.99 Jy, max= 11.99 Jy
1	3	15-MAY-1990	15:57:00	MX	Appears to have ended successfully
1	5	15-MAY-1990	15:57:00	MX	SAIPS 15OCT90 TST: Cpu= 235.06 Real= 286.0 IO= 815
1	2	15-MAY-1990	15:57:02	AIPS	Resumes
1	2	15-MAY-1990	15:57:03	AIPS	Rename TDDTS .IMAP . 1 (MA) on disk 3 cno 7
1	2	15-MAY-1990	15:57:03	AIPS	To TDDTS .MXMAP . 1 (MA) on disk 3 cno 7
1	2	15-MAY-1990	15:57:05	AIPS	Rename TDDTS .IBEAM . 1 (MA) on disk 3 cno 4
1	2	15-MAY-1990	15:57:05	AIPS	To TDDTS .MXBEAM. 1 (MA) on disk 3 cno 4
1	4	15-MAY-1990	15:57:05	AIPS	Limited to files matching name parms TDDTS .UVWORK. 0
1	4	15-MAY-1990	15:57:05	AIPS	Destroy all files for user 126 disks 3-3? enter YES or NO
1	0	15-MAY-1990	15:57:06	AIPS	YES
1	3	15-MAY-1990	15:57:06	AIPS	Destroying UV file TDDTS .UVWORK. 1 disk 3 user 126
1	2	15-MAY-1990	15:57:07	AIPS	Image=3C161 (MA) Filename=TDDTS .MXMAP . 1
1	2	15-MAY-1990	15:57:08	AIPS	Telescope= Receiver=
1	2	15-MAY-1990	15:57:08	AIPS	Observer=LISZ User #= 126
1	2	15-MAY-1990	15:57:08	AIPS	Observ. date=29-JAN-1984 Map date=15-MAY-1990
1	2	15-MAY-1990	15:57:08	AIPS	Minimum=-1.99006224E+00 Maximum= 1.19915342E+01 JY/BEAM
1	2	15-MAY-1990	15:57:08	AIPS	
1	2	15-MAY-1990	15:57:08	AIPS	Type Pixels Coord value at Pixel Coord incr Rotat
1	2	15-MAY-1990	15:57:08	AIPS	RA---SIN 256 06 24 43.177 124.00 -1.300 0.00
1	2	15-MAY-1990	15:57:09	AIPS	DEC--SIN 256 -05 51 11.600 133.00 1.300 56.00
1	2	15-MAY-1990	15:57:09	AIPS	FREQ 1 1.4200140E+09 1.00 7.9000000E+04 0.00
1	2	15-MAY-1990	15:57:09	AIPS	STOKES 1 1.0000000E+00 1.00 1.0000000E+00 0.00
1	2	15-MAY-1990	15:57:09	AIPS	
1	2	15-MAY-1990	15:57:09	AIPS	Map type=DIRTY Number of iterations= 0
1	2	15-MAY-1990	15:57:09	AIPS	Conv size= 4.74 X 4.10 Position angle= 23.59
1	2	15-MAY-1990	15:57:09	AIPS	Phase shifted in X -7.186 in Y -1.725
1	2	15-MAY-1990	15:57:09	AIPS	Maximum version number of extension files of type HI is 1
1	2	15-MAY-1990	15:57:09	AIPS	Image=3C161 (MA) Filename=TDDTS .MXBEAM. 1
1	2	15-MAY-1990	15:57:09	AIPS	Telescope= Receiver=
1	2	15-MAY-1990	15:57:09	AIPS	Observer=LISZ User #= 126
1	2	15-MAY-1990	15:57:10	AIPS	Observ. date=29-JAN-1984 Map date=15-MAY-1990
1	2	15-MAY-1990	15:57:10	AIPS	Minimum=-1.66780293E-01 Maximum= 1.00000000E+00 JY/BEAM
1	2	15-MAY-1990	15:57:10	AIPS	
1	2	15-MAY-1990	15:57:10	AIPS	Type Pixels Coord value at Pixel Coord incr Rotat
1	2	15-MAY-1990	15:57:10	AIPS	RA---SIN 256 06 24 43.177 128.00 -1.300 0.00
1	2	15-MAY-1990	15:57:10	AIPS	DEC--SIN 256 -05 51 11.600 129.00 1.300 56.00
1	2	15-MAY-1990	15:57:10	AIPS	FREQ 1 1.4200140E+09 1.00 7.9000000E+04 0.00
1	2	15-MAY-1990	15:57:10	AIPS	STOKES 1 0.0000000E+00 1.00 1.0000000E+00 0.00
1	2	15-MAY-1990	15:57:10	AIPS	
1	2	15-MAY-1990	15:57:10	AIPS	Maximum version number of extension files of type HI is 1
1	2	15-MAY-1990	15:57:11	AIPS	Image=3C161 (MA) Filename=MDDTS .MXMAP . 1
1	2	15-MAY-1990	15:57:11	AIPS	Telescope= Receiver=
1	2	15-MAY-1990	15:57:11	AIPS	Observer=LISZ User #= 126
1	2	15-MAY-1990	15:57:11	AIPS	Observ. date=29-JAN-1984 Map date=22-OCT-1987
1	2	15-MAY-1990	15:57:11	AIPS	Minimum=-1.99006212E+00 Maximum= 1.19915333E+01 JY/BEAM
1	2	15-MAY-1990	15:57:11	AIPS	Map scale= 0.0000000E+00 Map offset= 0.0000000E+00 applied
1	2	15-MAY-1990	15:57:12	AIPS	
1	2	15-MAY-1990	15:57:12	AIPS	Type Pixels Coord value at Pixel Coord incr Rotat
1	2	15-MAY-1990	15:57:12	AIPS	RA---SIN 256 06 24 43.177 124.00 -1.300 0.00

```
Pops  Prior    Date        Time       Task        Messages for user  126

   1     2   15-MAY-1990  15:57:12     AIPS      DEC--SIN   256   -05 51 11.600  133.00         1.300   56.00
   1     2   15-MAY-1990  15:57:12     AIPS      FREQ         1   1.4200140E+09    1.00 7.9000000E+04    0.00
   1     2   15-MAY-1990  15:57:12     AIPS      STOKES       1   1.0000000E+00    1.00 1.0000000E+00    0.00
   1     2   15-MAY-1990  15:57:12     AIPS      ------------------------------------------------------------------
   1     2   15-MAY-1990  15:57:12     AIPS      Map type=DIRTY                Number of iterations=       0
   1     2   15-MAY-1990  15:57:12     AIPS      Conv size=   4.74 X   4.10   Position angle=  23.59
   1     2   15-MAY-1990  15:57:12     AIPS      Phase shifted in X   -7.186  in Y   -1.725
   1     2   15-MAY-1990  15:57:12     AIPS      Maximum version number of extension files of type HI is   1
   1     4   15-MAY-1990  15:57:12     AIPS      Limited to    files matching name parms TDDTS       .DIFF  .   0
   1     4   15-MAY-1990  15:57:12     AIPS      Destroy all files for user  126 disks 3-3?   enter YES or NO
   1     0   15-MAY-1990  15:57:12     AIPS      YES
   1     3   15-MAY-1990  15:57:12     AIPS      Destroying MA file TDDTS      .DIFF  .   1 disk 3 user  126
   1     2   15-MAY-1990  15:57:13     AIPS      Destroyed     1 extension files of type HI
   1     2   15-MAY-1990  15:57:15     AIPS      COMB: Task to combine in many ways two overlapping images
   1     2   15-MAY-1990  15:57:15     AIPS      Adverbs         Values             Comments
   1     2   15-MAY-1990  15:57:15     AIPS      ------------------------------------------------------------------
   1     2   15-MAY-1990  15:57:15     AIPS      USERID         0                   User ID. 0 => current user,
   1     2   15-MAY-1990  15:57:15     AIPS                                         32000 => any user.
   1     2   15-MAY-1990  15:57:16     AIPS      INNAME     'TDDTS       '         First image name (name)
   1     2   15-MAY-1990  15:57:16     AIPS      INCLASS    'MXMAP '               First image name (class)
   1     2   15-MAY-1990  15:57:16     AIPS      INSEQ          0                  First image name (seq. #)
   1     2   15-MAY-1990  15:57:16     AIPS      INDISK         3                  First image disk drive #
   1     2   15-MAY-1990  15:57:16     AIPS      IN2NAME    'MDDTS       '         Second image name (name)
   1     2   15-MAY-1990  15:57:16     AIPS      IN2CLASS   'MXMAP '               Second image name (class)
   1     2   15-MAY-1990  15:57:16     AIPS      IN2SEQ         0                  Second image name (seq. #)
   1     2   15-MAY-1990  15:57:16     AIPS      IN2DISK        3                  Second image disk drive #
   1     2   15-MAY-1990  15:57:17     AIPS      DOALIGN        1                  Should images be coincident?
   1     2   15-MAY-1990  15:57:17     AIPS                                         (See HELP.)
   1     2   15-MAY-1990  15:57:17     AIPS      OUTNAME    'TDDTS       '         Output image name (name)
   1     2   15-MAY-1990  15:57:17     AIPS      OUTCLASS   'DIFF  '               Output image name (class)
   1     2   15-MAY-1990  15:57:17     AIPS      OUTSEQ         0                  Output image name (seq. #)
   1     2   15-MAY-1990  15:57:17     AIPS      OUTDISK        3                  Output image disk drive #
   1     2   15-MAY-1990  15:57:17     AIPS      BLC        *all 0                 Bottom left corner
   1     2   15-MAY-1990  15:57:18     AIPS      TRC        *all 0                 Top right corner
   1     2   15-MAY-1990  15:57:18     AIPS      OPCODE     'SUM '                 Algorithm type:
   1     2   15-MAY-1990  15:57:18     AIPS                                         'SUM ','DIV ','SPIX','POLI',
   1     2   15-MAY-1990  15:57:18     AIPS                                         'POLA','MULT','OPTD','CLIP'
   1     2   15-MAY-1990  15:57:18     AIPS                                         'REAL','IMAG','MEAN','RM  '
   1     2   15-MAY-1990  15:57:18     AIPS                                         'POLC'
   1     2   15-MAY-1990  15:57:18     AIPS      APARM          1          -1       Parameters for algorithm:
   1     2   15-MAY-1990  15:57:18     AIPS                 *rest 0                 (1) - (4) scale and offset
   1     2   15-MAY-1990  15:57:18     AIPS                                         (8) > 0 => blank with 0.0
   1     2   15-MAY-1990  15:57:19     AIPS                                         (9)  Map1 clip level
   1     2   15-MAY-1990  15:57:19     AIPS                                         (10) Map2 clip level
   1     2   15-MAY-1990  15:57:19     AIPS                                         see HELP COMB
   1     2   15-MAY-1990  15:57:19     AIPS      BPARM      *all 0                 Noise/control parameters:
   1     2   15-MAY-1990  15:57:19     AIPS                                         (1)  Map1 noise level
   1     2   15-MAY-1990  15:57:19     AIPS                                         (2)  Map2 noise level
   1     2   15-MAY-1990  15:57:19     AIPS                                         (3)  > 0 => output noise
   1     2   15-MAY-1990  15:57:19     AIPS                                         (4)  < 0.5 => clip w inputs
   1     2   15-MAY-1990  15:57:19     AIPS                                              > 1.5 => clip w S/N
   1     2   15-MAY-1990  15:57:19     AIPS                                              else  => clip w noise
   1     2   15-MAY-1990  15:57:19     AIPS                                         (5)  minimum ok S/N   or
   1     2   15-MAY-1990  15:57:19     AIPS                                              maximum ok noise
   1     2   15-MAY-1990  15:57:19     AIPS                                         (6)  max output noise
   1     2   15-MAY-1990  15:57:20     AIPS                                         see HELP COMB
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Pops  Prior    Date        Time       Task        Messages for user  126

   1     5   15-MAY-1990  15:57:24     COMB      Task COMB   (release of 15OCT90) begins
   1     2   15-MAY-1990  15:57:31     COMB      Create TDDTS       .DIFF  .   1 (MA)  on disk 3 cno   12
   1     2   15-MAY-1990  15:57:31     COMB      Sum:  1.000E+00*Map(1) + -1.000E+00*Map(2) +  0.000E+00
   1     2   15-MAY-1990  15:57:31     COMB      Magic blanking used for clipped & illegal values.
   1     2   15-MAY-1990  15:57:45     COMB      History file created and written
   1     3   15-MAY-1990  15:57:46     COMB      Appears to have ended successfully
   1     5   15-MAY-1990  15:57:46     COMB      SAIPS  15OCT90 TST: Cpu=   11.12  Real=    22.0  IO=       139
   1     2   15-MAY-1990  15:57:47     AIPS      Resumes
   1     5   15-MAY-1990  15:57:47     AIPS      ##############################################
   1     5   15-MAY-1990  15:57:47     AIPS      ##########------MXMAP------##################
   1     5   15-MAY-1990  15:57:47     AIPS      ##############################################
   1     5   15-MAY-1990  15:57:57     AIPS      Mean=-1.5623E-07 rms= 2.0454E-05 JY/BEAM   over   61504. pixels
   1     5   15-MAY-1990  15:57:57     AIPS      Maximum= 3.9642E-04 at   14    5    1    1    1    1    1
   1     5   15-MAY-1990  15:57:57     AIPS      Skypos: RA 06 24 57.781  DEC -05 50 46.09
   1     5   15-MAY-1990  15:57:57     AIPS      Skypos: IPOL  1420.014 MHZ
   1     5   15-MAY-1990  15:57:58     AIPS      Minimum=-1.0406E-03 at    6    6    1    1    1    1    1
   1     5   15-MAY-1990  15:57:58     AIPS      Skypos: RA 06 24 58.098  DEC -05 50 36.74
   1     5   15-MAY-1990  15:57:58     AIPS      Skypos: IPOL  1420.014 MHZ
   1     5   15-MAY-1990  15:57:58     AIPS      RELATIVE TO ABS(MAXIMUM):              0.000087
   1     5   15-MAY-1990  15:57:59     AIPS      NUMBER CORRECT BITS MAX:     13.4922
   1     5   15-MAY-1990  15:57:59     AIPS      NUMBER CORRECT BITS RMS:     19.161
   1     5   15-MAY-1990  15:57:59     AIPS      ##############################################
   1     5   15-MAY-1990  15:57:59     AIPS      MDDTS  IMSTAT
   1     5   15-MAY-1990  15:58:07     AIPS      Mean=-7.6451E-04 rms= 2.4283E-01 JY/BEAM   over   61504. pixels
   1     5   15-MAY-1990  15:58:07     AIPS      Maximum= 1.1992E+01 at  124  133    1    1    1    1    1
   1     5   15-MAY-1990  15:58:07     AIPS      Skypos: RA 06 24 43.177  DEC -05 51 11.60
   1     5   15-MAY-1990  15:58:07     AIPS      Skypos: IPOL  1420.014 MHZ
   1     5   15-MAY-1990  15:58:08     AIPS      Minimum=-1.9901E+00 at  119  134    1    1    1    1    1
   1     5   15-MAY-1990  15:58:08     AIPS      Skypos: RA 06 24 43.348  DEC -05 51  5.48
   1     5   15-MAY-1990  15:58:08     AIPS      Skypos: IPOL  1420.014 MHZ
   1     5   15-MAY-1990  15:58:08     AIPS      ##############################################
   1     5   15-MAY-1990  15:58:08     AIPS      MDDTS  MAXFIT
   1     5   15-MAY-1990  15:58:09     AIPS      Map pixel position:   124.08  133.08
   1     5   15-MAY-1990  15:58:09     AIPS      Skypos: RA 06 24 43.167  DEC -05 51 11.62
   1     5   15-MAY-1990  15:58:09     AIPS      Skypos: IPOL  1420.014 MHZ
   1     5   15-MAY-1990  15:58:09     AIPS      PEAK =   11.832       JY/BEAM
   1     5   15-MAY-1990  15:58:09     AIPS      ##############################################
   1     5   15-MAY-1990  15:58:09     AIPS      TDDTS  MAXFIT
   1     5   15-MAY-1990  15:58:10     AIPS      Map pixel position:   124.08  133.08
   1     5   15-MAY-1990  15:58:10     AIPS      Skypos: RA 06 24 43.167  DEC -05 51 11.62
   1     5   15-MAY-1990  15:58:10     AIPS      Skypos: IPOL  1420.014 MHZ
   1     5   15-MAY-1990  15:58:10     AIPS      PEAK =   11.832       JY/BEAM
   1     5   15-MAY-1990  15:58:10     AIPS      ##############################################
   1     5   15-MAY-1990  15:58:10     AIPS      **** DIFFERENCE IN X, Y, VAL: ****
   1     5   15-MAY-1990  15:58:11     AIPS      (  1)        0            0       -0.0000038
   1     5   15-MAY-1990  15:58:11     AIPS      ##############################################
   1     5   15-MAY-1990  15:58:11     AIPS      ##############################################
   1     2   15-MAY-1990  15:58:11     AIPS      Image=3C161      (MA)        Filename=MDDTS       .MXBEAM.    1
   1     2   15-MAY-1990  15:58:11     AIPS      Telescope=                   Receiver=
   1     2   15-MAY-1990  15:58:12     AIPS      Observer=LISZ                User #=  126
   1     2   15-MAY-1990  15:58:12     AIPS      Observ. date=29-JAN-1984     Map date=22-OCT-1987
   1     2   15-MAY-1990  15:58:12     AIPS      Minimum=-1.66780263E-01       Maximum= 1.00000000E+00 JY/BEAM
   1     2   15-MAY-1990  15:58:12     AIPS      Map scale= 0.0000000E+00     Map offset= 0.0000000E+00 applied
   1     2   15-MAY-1990  15:58:12     AIPS      ---------------------------------------------------------------
   1     2   15-MAY-1990  15:58:12     AIPS      Type    Pixels   Coord value  at Pixel    Coord incr    Rotat
   1     2   15-MAY-1990  15:58:12     AIPS      RA----SIN   256    06 24 43.177  128.00        -1.300     0.00
```

Pops	Prior	Date	Time	Task	Messages for user 126
1	2	15-MAY-1990	15:58:12	AIPS	DEC--SIN 256 -05 51 11.600 129.00 1.300 56.00
1	2	15-MAY-1990	15:58:12	AIPS	FREQ 1 1.4200140E+09 1.00 7.9000000E+04 0.00
1	2	15-MAY-1990	15:58:13	AIPS	STOKES 1 0.0000000E+00 1.00 1.0000000E+00 0.00
1	2	15-MAY-1990	15:58:13	AIPS	--
1	2	15-MAY-1990	15:58:13	AIPS	Maximum version number of extension files of type HI is 1
1	4	15-MAY-1990	15:58:13	AIPS	Limited to files matching name parms TDDTS .DIFF . 0
1	4	15-MAY-1990	15:58:13	AIPS	Destroy all files for user 126 disks 3-3? enter YES or NO
1	0	15-MAY-1990	15:58:13	AIPS	YES
1	3	15-MAY-1990	15:58:13	AIPS	Destroying MA file TDDTS .DIFF . 1 disk 3 user 126
1	2	15-MAY-1990	15:58:14	AIPS	Destroyed 1 extension files of type HI
1	2	15-MAY-1990	15:58:16	AIPS	COMB: Task to combine in many ways two overlapping images
1	2	15-MAY-1990	15:58:16	AIPS	Adverbs Values Comments
1	2	15-MAY-1990	15:58:16	AIPS	--
1	2	15-MAY-1990	15:58:16	AIPS	USERID 0 User ID. 0 => current user,
1	2	15-MAY-1990	15:58:16	AIPS	32000 => any user.
1	2	15-MAY-1990	15:58:16	AIPS	INNAME 'TDDTS ' First image name (name)
1	2	15-MAY-1990	15:58:16	AIPS	INCLASS 'MXBEAM' First image name (class)
1	2	15-MAY-1990	15:58:17	AIPS	INSEQ 0 First image name (seq. #)
1	2	15-MAY-1990	15:58:17	AIPS	INDISK 3 First image disk drive #
1	2	15-MAY-1990	15:58:17	AIPS	IN2NAME 'MDDTS ' Second image name (name)
1	2	15-MAY-1990	15:58:17	AIPS	IN2CLASS 'MXBEAM' Second image name (class)
1	2	15-MAY-1990	15:58:17	AIPS	IN2SEQ 0 Second image name (seq. #)
1	2	15-MAY-1990	15:58:17	AIPS	IN2DISK 3 Second image disk drive #
1	2	15-MAY-1990	15:58:17	AIPS	DOALIGN 1 Should images be coincident?
1	2	15-MAY-1990	15:58:17	AIPS	(See HELP.)
1	2	15-MAY-1990	15:58:18	AIPS	OUTNAME 'TDDTS ' Output image name (name)
1	2	15-MAY-1990	15:58:18	AIPS	OUTCLASS 'DIFF ' Output image name (class)
1	2	15-MAY-1990	15:58:18	AIPS	OUTSEQ 0 Output image name (seq. #)
1	2	15-MAY-1990	15:58:18	AIPS	OUTDISK 3 Output image disk drive #
1	2	15-MAY-1990	15:58:18	AIPS	BLC *all 0 Bottom left corner
1	2	15-MAY-1990	15:58:18	AIPS	TRC *all 0 Top right corner
1	2	15-MAY-1990	15:58:18	AIPS	OPCODE 'SUM ' Algorithm type:
1	2	15-MAY-1990	15:58:18	AIPS	'SUM ','DIV ','SPIX','POLI',
1	2	15-MAY-1990	15:58:18	AIPS	'POLA','MULT','OPTD','CLIP'
1	2	15-MAY-1990	15:58:18	AIPS	'REAL','IMAG','MEAN','RM '
1	2	15-MAY-1990	15:58:19	AIPS	'POLC'
1	2	15-MAY-1990	15:58:19	AIPS	APARM 1 -1 Parameters for algorithm:
1	2	15-MAY-1990	15:58:19	AIPS	*rest 0 (1) - (4) scale and offset
1	2	15-MAY-1990	15:58:19	AIPS	(8) > 0 => blank with 0.0
1	2	15-MAY-1990	15:58:19	AIPS	(9) Map1 clip level
1	2	15-MAY-1990	15:58:19	AIPS	(10) Map2 clip level
1	2	15-MAY-1990	15:58:19	AIPS	see HELP COMB
1	2	15-MAY-1990	15:58:19	AIPS	BPARM *all 0 Noise/control parameters:
1	2	15-MAY-1990	15:58:19	AIPS	(1) Map1 noise level
1	2	15-MAY-1990	15:58:20	AIPS	(2) Map2 noise level
1	2	15-MAY-1990	15:58:20	AIPS	(3) > 0 => output noise
1	2	15-MAY-1990	15:58:20	AIPS	(4) < 0.5 => clip w inputs
1	2	15-MAY-1990	15:58:20	AIPS	> 1.5 => clip w S/N
1	2	15-MAY-1990	15:58:20	AIPS	else => clip w noise
1	2	15-MAY-1990	15:58:20	AIPS	(5) minimum ok S/N or
1	2	15-MAY-1990	15:58:20	AIPS	maximum ok noise
1	2	15-MAY-1990	15:58:20	AIPS	(6) max output noise
1	2	15-MAY-1990	15:58:20	AIPS	see HELP COMB
1	5	15-MAY-1990	15:58:23	COMB	Task COMB (release of 15OCT90) begins
1	2	15-MAY-1990	15:58:29	COMB	Create TDDTS .DIFF . 1 (MA) on disk 3 cno 12
1	2	15-MAY-1990	15:58:29	COMB	Sum: 1.000E+00*Map(1) + -1.000E+00*Map(2) + 0.000E+00

```
Pops  Prior    Date        Time        Task        Messages for user  126

   1     2   15-MAY-1990  15:58:29     COMB     Magic blanking used for clipped & illegal values.
   1     2   15-MAY-1990  15:58:44     COMB     History file created and written
   1     3   15-MAY-1990  15:58:45     COMB     Appears to have ended successfully
   1     5   15-MAY-1990  15:58:45     COMB     SAIPS  15OCT90 TST: Cpu=   11.22  Real=    22.0  IO=       152
   1     2   15-MAY-1990  15:58:48     AIPS     Resumes
   1     5   15-MAY-1990  15:58:48     AIPS     ##############################################
   1     5   15-MAY-1990  15:58:48     AIPS     ##########-------MXBEAM-------##################
   1     5   15-MAY-1990  15:58:48     AIPS     ##############################################
   1     5   15-MAY-1990  15:58:58     AIPS     Mean=-2.6728E-09 rms= 1.1167E-06 JY/BEAM   over   61504. pixels
   1     5   15-MAY-1990  15:58:58     AIPS     Maximum= 4.0997E-05 at    5    6    1    1    1    1    1
   1     5   15-MAY-1990  15:58:58     AIPS     Skypos: RA 06 24 58.053  DEC -05 50 28.44
   1     5   15-MAY-1990  15:58:59     AIPS     Skypos: BEAM  1420.014 MHZ
   1     5   15-MAY-1990  15:58:59     AIPS     Minimum=-3.3029E-05 at    5  252    1    1    1    1    1
   1     5   15-MAY-1990  15:58:59     AIPS     Skypos: RA 06 24 40.286  DEC -05 47 29.62
   1     5   15-MAY-1990  15:58:59     AIPS     Skypos: BEAM  1420.014 MHZ
   1     5   15-MAY-1990  15:59:00     AIPS     RELATIVE TO ABS(MAXIMUM):              0.000041
   1     5   15-MAY-1990  15:59:00     AIPS     NUMBER CORRECT BITS MAX:     14.574
   1     5   15-MAY-1990  15:59:00     AIPS     NUMBER CORRECT BITS RMS:     19.7722
   1     5   15-MAY-1990  15:59:00     AIPS     ##############################################
   1     5   15-MAY-1990  15:59:00     AIPS     MDDTS  IMSTAT
   1     5   15-MAY-1990  15:59:08     AIPS     Mean=-6.0177E-05 rms= 2.0088E-02 JY/BEAM   over   61504. pixels
   1     5   15-MAY-1990  15:59:09     AIPS     Maximum= 1.0000E+00 at  128  129    1    1    1    1    1
   1     5   15-MAY-1990  15:59:09     AIPS     Skypos: RA 06 24 43.177  DEC -05 51 11.60
   1     5   15-MAY-1990  15:59:09     AIPS     Skypos: BEAM  1420.014 MHZ
   1     5   15-MAY-1990  15:59:09     AIPS     Minimum=-1.6678E-01 at  123  130    1    1    1    1    1
   1     5   15-MAY-1990  15:59:09     AIPS     Skypos: RA 06 24 43.348  DEC -05 51  5.48
   1     5   15-MAY-1990  15:59:09     AIPS     Skypos: BEAM  1420.014 MHZ
   1     5   15-MAY-1990  15:59:09     AIPS     ##############################################
   1     5   15-MAY-1990  15:59:10     AIPS     MDDTS  MAXFIT
   1     5   15-MAY-1990  15:59:10     AIPS     Map pixel position:   128.00  129.00
   1     5   15-MAY-1990  15:59:10     AIPS     Skypos: RA 06 24 43.177  DEC -05 51 11.60
   1     5   15-MAY-1990  15:59:10     AIPS     Skypos: BEAM  1420.014 MHZ
   1     5   15-MAY-1990  15:59:10     AIPS     PEAK =  983.944 Milli JY/BEAM
   1     5   15-MAY-1990  15:59:11     AIPS     ##############################################
   1     5   15-MAY-1990  15:59:11     AIPS     TDDTS  MAXFIT
   1     5   15-MAY-1990  15:59:11     AIPS     Map pixel position:   128.00  129.00
   1     5   15-MAY-1990  15:59:11     AIPS     Skypos: RA 06 24 43.177  DEC -05 51 11.60
   1     5   15-MAY-1990  15:59:11     AIPS     Skypos: BEAM  1420.014 MHZ
   1     5   15-MAY-1990  15:59:11     AIPS     PEAK =  983.944 Milli JY/BEAM
   1     5   15-MAY-1990  15:59:12     AIPS     ##############################################
   1     5   15-MAY-1990  15:59:12     AIPS     **** DIFFERENCE IN X, Y, VAL: ****
   1     5   15-MAY-1990  15:59:12     AIPS     (  1)        0          0          0
   1     5   15-MAY-1990  15:59:12     AIPS     ##############################################
   1     5   15-MAY-1990  15:59:12     AIPS     ##############################################
   1     3   15-MAY-1990  15:59:12     AIPS     Catalog on disk  3
   1     3   15-MAY-1990  15:59:13     AIPS      Cat Usid Mapname      Class   Seq  Pt     Last access      Stat
   1     3   15-MAY-1990  15:59:13     AIPS        1  126 MDDTS       .ASCAL .     1 UV 15-MAY-1990 15:56:54
   1     3   15-MAY-1990  15:59:13     AIPS        2  126 MDDTS       .ASCALT.     1 UV 14-MAY-1990 11:18:47
   1     3   15-MAY-1990  15:59:13     AIPS        4  126 TDDTS       .MXBEAM.     1 MA 15-MAY-1990 15:59:11
   1     3   15-MAY-1990  15:59:13     AIPS        6  126 MDDTS       .MXCLN .     1 MA 15-MAY-1990 11:58:16
   1     3   15-MAY-1990  15:59:13     AIPS        7  126 TDDTS       .MXMAP .     1 MA 15-MAY-1990 15:58:09
   1     3   15-MAY-1990  15:59:13     AIPS        8  126 MDDTS       .MXBEAM.     1 MA 15-MAY-1990 15:59:10
   1     3   15-MAY-1990  15:59:13     AIPS        9  126 MDDTS       .MXMAP .     1 MA 15-MAY-1990 15:58:08
   1     3   15-MAY-1990  15:59:14     AIPS       12  126 TDDTS       .DIFF  .     1 MA 15-MAY-1990 15:58:49
   1     3   15-MAY-1990  15:59:14     AIPS       13  126 TDDTS       .MXBEM .     1 MA 15-MAY-1990 11:57:14
   1     3   15-MAY-1990  15:59:14     AIPS       14  126 TDDTS       .MXCLN .     1 MA 15-MAY-1990 11:58:17
```

Pops	Prior	Date	Time	Task	Messages for user 126
1	2	15-MAY-1990	15:59:16	AIPS	YES
1	2	15-MAY-1990	15:59:17	AIPS	YES
1	2	15-MAY-1990	15:59:17	AIPS	* ==========
1	2	15-MAY-1990	15:59:17	AIPS	* Make new clean map with MX:
1	2	15-MAY-1990	15:59:17	AIPS	GET DDT032
1	2	15-MAY-1990	15:59:18	AIPS	DDTPROC
1	4	15-MAY-1990	15:59:21	AIPS	Limited to files matching name parms TDDTS .IBEAM . 0
1	4	15-MAY-1990	15:59:21	AIPS	Destroy all files for user 126 disks 3-3? enter YES or NO
1	0	15-MAY-1990	15:59:21	AIPS	YES
1	4	15-MAY-1990	15:59:21	AIPS	Limited to files matching name parms TDDTS .MXCLN . 0
1	4	15-MAY-1990	15:59:21	AIPS	Destroy all files for user 126 disks 3-3? enter YES or NO
1	0	15-MAY-1990	15:59:21	AIPS	YES
1	3	15-MAY-1990	15:59:21	AIPS	Destroying MA file TDDTS .MXCLN . 1 disk 3 user 126
1	2	15-MAY-1990	15:59:22	AIPS	Destroyed 1 extension files of type HI
1	2	15-MAY-1990	15:59:23	AIPS	Destroyed 1 extension files of type CC
1	4	15-MAY-1990	15:59:24	AIPS	Limited to files matching name parms TDDTS .MXBEM . 0
1	4	15-MAY-1990	15:59:24	AIPS	Destroy all files for user 126 disks 3-3? enter YES or NO
1	0	15-MAY-1990	15:59:24	AIPS	YES
1	3	15-MAY-1990	15:59:24	AIPS	Destroying MA file TDDTS .MXBEM . 1 disk 3 user 126
1	2	15-MAY-1990	15:59:25	AIPS	Destroyed 1 extension files of type HI
1	4	15-MAY-1990	15:59:26	AIPS	Limited to files matching name parms TDDTS .ICLN . 0
1	4	15-MAY-1990	15:59:26	AIPS	Destroy all files for user 126 disks 3-3? enter YES or NO
1	0	15-MAY-1990	15:59:26	AIPS	YES
1	2	15-MAY-1990	15:59:27	AIPS	MX: Task to map and CLEAN. More general than UVMAP, APCLN
1	2	15-MAY-1990	15:59:27	AIPS	Adverbs Values Comments
1	2	15-MAY-1990	15:59:27	AIPS	----------
1	2	15-MAY-1990	15:59:27	AIPS	INNAME 'MDDTS ' Input UV data (name)
1	2	15-MAY-1990	15:59:28	AIPS	INCLASS 'ASCAL ' Input UV data (class)
1	2	15-MAY-1990	15:59:28	AIPS	INSEQ 0 Input UV data (seq. #)
1	2	15-MAY-1990	15:59:28	AIPS	INDISK 3 Input UV data disk drive #
1	2	15-MAY-1990	15:59:28	AIPS	IN2NAME ' ' UV work file name
1	2	15-MAY-1990	15:59:28	AIPS	IN2CLASS ' ' UV work file class
1	2	15-MAY-1990	15:59:28	AIPS	IN2SEQ 0 UV work file seq
1	2	15-MAY-1990	15:59:29	AIPS	IN2DISK 3 UV work file disk
1	2	15-MAY-1990	15:59:29	AIPS	BCHAN 1 Low freq. channel 0 for cont.
1	2	15-MAY-1990	15:59:29	AIPS	ECHAN 0 Highest freq channel
1	2	15-MAY-1990	15:59:29	AIPS	CHANNEL 0 Restart channel number
1	2	15-MAY-1990	15:59:29	AIPS	NPOINTS 1 Number of chan. to average.
1	2	15-MAY-1990	15:59:29	AIPS	CHINC 1 Channel incr. between maps.
1	2	15-MAY-1990	15:59:30	AIPS	STOKES 'I ' Stokes parameters (see HELP)
1	2	15-MAY-1990	15:59:30	AIPS	BIF 0 First IF in average.
1	2	15-MAY-1990	15:59:30	AIPS	EIF 0 Last IF in average.
1	2	15-MAY-1990	15:59:30	AIPS	OUTNAME 'TDDTS ' Output image name (name)
1	2	15-MAY-1990	15:59:30	AIPS	OUTDISK 3 Output image disk drive #
1	2	15-MAY-1990	15:59:30	AIPS	OUTSEQ 1 Output seq. no.
1	2	15-MAY-1990	15:59:30	AIPS	CELLSIZE 1.3 1.3 (X,Y) size of grid in asec
1	2	15-MAY-1990	15:59:31	AIPS	IMSIZE 256 256 Minumum image size
1	2	15-MAY-1990	15:59:31	AIPS	NFIELD 1 Number of fields (max. 16)
1	2	15-MAY-1990	15:59:31	AIPS	FLDSIZE *all 0 Size of each field.
1	2	15-MAY-1990	15:59:31	AIPS	RASHIFT -5.2 *rest 0 RA shift per field (asec)
1	2	15-MAY-1990	15:59:31	AIPS	DECSHIFT -5.2 *rest 0 DEC shift per field (asec)
1	2	15-MAY-1990	15:59:31	AIPS	NBOXES 1 Number of boxes for CLEAN
1	2	15-MAY-1990	15:59:32	AIPS	NB: field 1 only.
1	2	15-MAY-1990	15:59:32	AIPS	BOX 102 108 Four coordinates for each box
1	2	15-MAY-1990	15:59:32	AIPS	194 155 *rest 0
1	2	15-MAY-1990	15:59:32	AIPS	UVTAPER 0 0 (U,V) gaussian taper

Pops	Prior	Date	Time	Task	Messages for user 126
1	2	15-MAY-1990	15:59:32	AIPS	units are kilolambda
1	2	15-MAY-1990	15:59:32	AIPS	UVRANGE 0 0 Min & max baseline (klambda)
1	2	15-MAY-1990	15:59:32	AIPS	UVWTFN ' ' UV dist. weight function
1	2	15-MAY-1990	15:59:32	AIPS	blank => uniform
1	2	15-MAY-1990	15:59:33	AIPS	UVBOX 0 Additional rows and columns
1	2	15-MAY-1990	15:59:33	AIPS	used in weighting.
1	2	15-MAY-1990	15:59:33	AIPS	ZEROSP *all 0 0-spacing fluxes and weights
1	2	15-MAY-1990	15:59:33	AIPS	XTYPE 5 Conv. function type in x
1	2	15-MAY-1990	15:59:33	AIPS	default spheroidal
1	2	15-MAY-1990	15:59:33	AIPS	YTYPE 5 Conv. function type in y
1	2	15-MAY-1990	15:59:33	AIPS	default spheroidal
1	2	15-MAY-1990	15:59:33	AIPS	XPARM *all 0 Conv. function parms for x
1	2	15-MAY-1990	15:59:34	AIPS	YPARM *all 0 Conv. function parms for y
1	2	15-MAY-1990	15:59:34	AIPS	GAIN 0.1 CLEAN loop gain
1	2	15-MAY-1990	15:59:34	AIPS	FLUX 0 Minimum CLEAN component (Jy)
1	2	15-MAY-1990	15:59:34	AIPS	MINPATCH 51 Min. BEAM halfwidth in AP.
1	2	15-MAY-1990	15:59:34	AIPS	NITER 2000 Maximum # of CLEAN components
1	2	15-MAY-1990	15:59:34	AIPS	BCOMP *all 0 Begin at BCOMP component
1	2	15-MAY-1990	15:59:34	AIPS	Specify for each field.
1	2	15-MAY-1990	15:59:35	AIPS	BMAJ 0 FWHM(asec) maj. axis CLEAN
1	2	15-MAY-1990	15:59:35	AIPS	restoring beam.
1	2	15-MAY-1990	15:59:35	AIPS	BMIN 0 FWHM(asec) min. axis CLEAN
1	2	15-MAY-1990	15:59:35	AIPS	restoring beam.
1	2	15-MAY-1990	15:59:35	AIPS	BPA 0 CLEAN beam position angle
1	2	15-MAY-1990	15:59:35	AIPS	PHAT 0 Prussian hat height.
1	2	15-MAY-1990	15:59:35	AIPS	FACTOR 0 Speedup factor see HELP
1	2	15-MAY-1990	15:59:35	AIPS	DOTV -1 If >0 display resid. field
1	2	15-MAY-1990	15:59:35	AIPS	number DOTV
1	2	15-MAY-1990	15:59:36	AIPS	CMETHOD ' ' Modeling method:
1	2	15-MAY-1990	15:59:36	AIPS	'DFT','GRID',' '
1	2	15-MAY-1990	15:59:36	AIPS	BADDISK 2 3 Disks to avoid for scratch.
1	2	15-MAY-1990	15:59:36	AIPS	4 5 6 *rest 0
1	5	15-MAY-1990	15:59:40	MX	Task MX (release of 15OCT90) begins
1	2	15-MAY-1990	15:59:46	MX	Create TDDTS .IBEAM . 1 (MA) on disk 3 cno 13
1	2	15-MAY-1990	15:59:52	MX	Create TDDTS .ICLN . 1 (MA) on disk 3 cno 14
1	2	15-MAY-1990	15:59:59	MX	Create TDDTS .UVWORK. 1 (UV) on disk 3 cno 16
1	4	15-MAY-1990	16:00:25	MX	Using all 7956 visibilities
1	2	15-MAY-1990	16:00:25	MX	Got data Time= 16: 0:25 CPU time= 11.52
1	4	15-MAY-1990	16:00:26	MX	UVUNIF: Weighting grid = 256 X 256, Box = 0
1	4	15-MAY-1990	16:00:32	MX	UVGRID: 1 Channel Pass(es); 2 Row Pass(es)
1	4	15-MAY-1990	16:00:32	MX	UVGRID: Only 92 Rows in 64k AP
1	4	15-MAY-1990	16:00:32	MX	UVGRID: Max Baseline 52643. lambda (= 86 cells)
1	4	15-MAY-1990	16:00:54	MX	UVGRID: End Pass 1, 1: Rows 86- 1, with 7856 Pts
1	4	15-MAY-1990	16:00:55	MX	UVGRID: End Pass 1, 2: Rows 0- 0, with 100 Pts
1	4	15-MAY-1990	16:00:55	MX	Sum of gridding weights = 1.36202E+05
1	4	15-MAY-1990	16:01:51	MX	Fit Gaussian (FWHM in sec) = 4.73589 4.09602 23.6
1	2	15-MAY-1990	16:01:51	MX	Beam made Time= 16: 1:51 CPU time= 88.50
1	4	15-MAY-1990	16:03:11	MX	Field 1 min = -2.0 Jy, max = 12.0 Jy
1	2	15-MAY-1990	16:03:12	MX	Maps made Time= 16: 3:12 CPU time= 162.94
1	2	15-MAY-1990	16:03:12	MX	In-AP CLEAN uses residual points brighter than 680.619 MilliJy
1	2	15-MAY-1990	16:03:12	MX	and a beam half-width of 127 cells
1	2	15-MAY-1990	16:03:13	MX	MXMPAC: 162 Residual map points loaded into AP
1	4	15-MAY-1990	16:03:14	MX	Reached min. algorithm flux = 2.222 Jy iter = 17.
1	3	15-MAY-1990	16:03:15	MX	Total CLEANed flux density = 9.992 Jy
1	2	15-MAY-1990	16:03:15	MX	CLEAN cycle Time= 16: 3:15 CPU time= 165.16
1	3	15-MAY-1990	16:03:15	MX	Begin DFT component subtraction

Pops	Prior	Date	Time	Task	Messages for user 126
1	2	15-MAY-1990	16:03:16	MX	Model components of type Point
1	3	15-MAY-1990	16:03:16	MX	I Polarization data processed
1	2	15-MAY-1990	16:03:34	MX	Comps subbed Time= 16: 3:34 CPU time= 181.72
1	4	15-MAY-1990	16:04:53	MX	Field 1 min = -337.9 MilliJy, max = 2.0 Jy
1	2	15-MAY-1990	16:04:54	MX	Maps made Time= 16: 4:54 CPU time= 255.70
1	2	15-MAY-1990	16:04:54	MX	In-AP CLEAN uses residual points brighter than 127.068 MilliJy
1	2	15-MAY-1990	16:04:54	MX	and a beam half-width of 127 cells
1	2	15-MAY-1990	16:04:54	MX	MXMPAC: 265 Residual map points loaded into AP
1	4	15-MAY-1990	16:04:58	MX	Reached min. algorithm flux = 261.151 MilliJy iter = 55
1	3	15-MAY-1990	16:04:58	MX	Total CLEANed flux density = 12.691 Jy
1	2	15-MAY-1990	16:04:59	MX	CLEAN cycle Time= 16: 4:59 CPU time= 259.68
1	3	15-MAY-1990	16:04:59	MX	Begin DFT component subtraction
1	2	15-MAY-1990	16:04:59	MX	Model components of type Point
1	3	15-MAY-1990	16:05:00	MX	I Polarization data processed
1	2	15-MAY-1990	16:05:36	MX	Comps subbed Time= 16: 5:36 CPU time= 293.88
1	4	15-MAY-1990	16:06:55	MX	Field 1 min = -236.8 MilliJy, max = 257.8 MilliJy
1	2	15-MAY-1990	16:06:56	MX	Maps made Time= 16: 6:56 CPU time= 366.38
1	2	15-MAY-1990	16:06:56	MX	In-AP CLEAN uses residual points brighter than 14.934 MilliJy
1	2	15-MAY-1990	16:06:56	MX	and a beam half-width of 127 cells
1	2	15-MAY-1990	16:06:57	MX	MXMPAC: 1784 Residual map points loaded into AP
1	4	15-MAY-1990	16:08:05	MX	Reached min. algorithm flux = -38.938 MilliJy iter = 285
1	3	15-MAY-1990	16:08:05	MX	Total CLEANed flux density = 14.103 Jy
1	2	15-MAY-1990	16:08:06	MX	CLEAN cycle Time= 16: 8: 6 CPU time= 430.70
1	3	15-MAY-1990	16:08:06	MX	Begin DFT component subtraction
1	2	15-MAY-1990	16:08:07	MX	Model components of type Point
1	3	15-MAY-1990	16:08:07	MX	I Polarization data processed
1	2	15-MAY-1990	16:11:38	MX	Comps subbed Time= 16:11:38 CPU time= 628.02
1	4	15-MAY-1990	16:12:57	MX	Field 1 min = -38.9 MilliJy, max = 39.6 MilliJy
1	2	15-MAY-1990	16:12:58	MX	Maps made Time= 16:12:58 CPU time= 702.08
1	2	15-MAY-1990	16:12:58	MX	In-AP CLEAN uses residual points brighter than 2.227 MilliJy
1	2	15-MAY-1990	16:12:58	MX	and a beam half-width of 127 cells
1	2	15-MAY-1990	16:12:59	MX	MXMPAC: 3467 Residual map points loaded into AP
1	4	15-MAY-1990	16:25:06	MX	Reached min. algorithm flux = -6.357 MilliJy iter = 1836
1	3	15-MAY-1990	16:25:06	MX	Total CLEANed flux density = 15.208 Jy
1	2	15-MAY-1990	16:25:07	MX	CLEAN cycle Time= 16:25: 7 CPU time= 1381.64
1	4	15-MAY-1990	16:25:07	MX	Gridded-interpolation model computation
1	3	15-MAY-1990	16:26:50	MX	I Polarization data processed
1	2	15-MAY-1990	16:27:31	MX	Comps subbed Time= 16:27:31 CPU time= 1513.84
1	4	15-MAY-1990	16:28:51	MX	Field 1 min = -19.7 MilliJy, max = 22.6 MilliJy
1	2	15-MAY-1990	16:28:52	MX	Maps made Time= 16:28:52 CPU time= 1588.64
1	2	15-MAY-1990	16:28:52	MX	In-AP CLEAN uses residual points brighter than 363.540 MicroJy
1	2	15-MAY-1990	16:28:52	MX	and a beam half-width of 127 cells
1	2	15-MAY-1990	16:28:54	MX	MXMPAC: 4146 Residual map points loaded into AP
1	4	15-MAY-1990	16:30:56	MX	Reached iteration limit 2000 max. res= 5.831 MilliJy
1	5	15-MAY-1990	16:30:57	MX	Total CLEANed flux density = 15.239 Jy
1	2	15-MAY-1990	16:30:57	MX	CLEAN cycle Time= 16:30:57 CPU time= 1704.78
1	3	15-MAY-1990	16:30:57	MX	Begin DFT component subtraction
1	2	15-MAY-1990	16:30:57	MX	Model components of type Point
1	3	15-MAY-1990	16:30:58	MX	I Polarization data processed
1	2	15-MAY-1990	16:33:31	MX	Comps subbed Time= 16:33:31 CPU time= 1847.98
1	4	15-MAY-1990	16:34:50	MX	Field 1 min = -19.2 MilliJy, max = 21.7 MilliJy
1	2	15-MAY-1990	16:34:50	MX	Maps made Time= 16:34:50 CPU time= 1922.30
1	2	15-MAY-1990	16:36:12	MX	Finished channel 1 at 16:36:12 CPU time= 1998.00
1	5	15-MAY-1990	16:36:12	MX	Total CLEANed flux density = 15.24 Jy
1	4	15-MAY-1990	16:36:12	MX	Field 1 min= -38.16 MilliJy, max= 12.05 Jy
1	3	15-MAY-1990	16:36:25	MX	Appears to have ended successfully

Pops	Prior	Date	Time	Task	Messages for user 126
1	5	15-MAY-1990	16:36:25	MX	SAIPS 15OCT90 TST: Cpu= 2003.62 Real= 2205.0 IO= 2075
1	2	15-MAY-1990	16:36:32	AIPS	Resumes
1	2	15-MAY-1990	16:36:33	AIPS	Rename TDDTS .IBEAM . 1 (MA) on disk 3 cno 13
1	2	15-MAY-1990	16:36:33	AIPS	To TDDTS .MXBEM . 1 (MA) on disk 3 cno 13
1	2	15-MAY-1990	16:36:34	AIPS	Rename TDDTS .ICLN . 1 (MA) on disk 3 cno 14
1	2	15-MAY-1990	16:36:35	AIPS	To TDDTS .MXCLN . 1 (MA) on disk 3 cno 14
1	4	15-MAY-1990	16:36:35	AIPS	Limited to files matching name parms TDDTS .UVWORK. 0
1	4	15-MAY-1990	16:36:35	AIPS	Destroy all files for user 126 disks 3-3? enter YES or NO
1	0	15-MAY-1990	16:36:35	AIPS	YES
1	3	15-MAY-1990	16:36:36	AIPS	Destroying UV file TDDTS .UVWORK. 1 disk 3 user 126
1	2	15-MAY-1990	16:36:37	AIPS	Image=3C161 (MA) Filename=TDDTS .MXCLN . 1
1	2	15-MAY-1990	16:36:37	AIPS	Telescope= Receiver=
1	2	15-MAY-1990	16:36:37	AIPS	Observer=LISZ User #= 126
1	2	15-MAY-1990	16:36:37	AIPS	Observ. date=29-JAN-1984 Map date=15-MAY-1990
1	2	15-MAY-1990	16:36:37	AIPS	Minimum=-3.81593816E-02 Maximum= 1.20536280E+01 JY/BEAM
1	2	15-MAY-1990	16:36:38	AIPS	
1	2	15-MAY-1990	16:36:38	AIPS	Type Pixels Coord value at Pixel Coord incr Rotat
1	2	15-MAY-1990	16:36:38	AIPS	RA---SIN 256 06 24 43.177 124.00 -1.300 0.00
1	2	15-MAY-1990	16:36:38	AIPS	DEC--SIN 256 -05 51 11.600 133.00 1.300 56.00
1	2	15-MAY-1990	16:36:38	AIPS	FREQ 1 1.4200140E+09 1.00 7.9000000E+04 0.00
1	2	15-MAY-1990	16:36:38	AIPS	STOKES 1 1.0000000E+00 1.00 1.0000000E+00 0.00
1	2	15-MAY-1990	16:36:38	AIPS	
1	2	15-MAY-1990	16:36:38	AIPS	Map type=NORMAL Number of iterations= 2000
1	2	15-MAY-1990	16:36:38	AIPS	Conv size= 4.74 X 4.10 Position angle= 23.59
1	2	15-MAY-1990	16:36:38	AIPS	Phase shifted in X -7.186 in Y -1.725
1	2	15-MAY-1990	16:36:38	AIPS	Maximum version number of extension files of type CC is 1
1	2	15-MAY-1990	16:36:38	AIPS	Maximum version number of extension files of type HI is 1
1	2	15-MAY-1990	16:36:39	AIPS	Image=3C161 (MA) Filename=MDDTS .MXCLN . 1
1	2	15-MAY-1990	16:36:39	AIPS	Telescope= Receiver=
1	2	15-MAY-1990	16:36:39	AIPS	Observer=LISZ User #= 126
1	2	15-MAY-1990	16:36:39	AIPS	Observ. date=29-JAN-1984 Map date=22-OCT-1987
1	2	15-MAY-1990	16:36:39	AIPS	Minimum=-3.82081307E-02 Maximum= 1.20537720E+01 JY/BEAM
1	2	15-MAY-1990	16:36:40	AIPS	Map scale= 0.0000000E+00 Map offset= 0.0000000E+00 applied
1	2	15-MAY-1990	16:36:40	AIPS	
1	2	15-MAY-1990	16:36:40	AIPS	Type Pixels Coord value at Pixel Coord incr Rotat
1	2	15-MAY-1990	16:36:40	AIPS	RA---SIN 256 06 24 43.177 124.00 -1.300 0.00
1	2	15-MAY-1990	16:36:40	AIPS	DEC--SIN 256 -05 51 11.600 133.00 1.300 56.00
1	2	15-MAY-1990	16:36:40	AIPS	FREQ 1 1.4200140E+09 1.00 7.9000000E+04 0.00
1	2	15-MAY-1990	16:36:40	AIPS	STOKES 1 1.0000000E+00 1.00 1.0000000E+00 0.00
1	2	15-MAY-1990	16:36:40	AIPS	
1	2	15-MAY-1990	16:36:40	AIPS	Map type=NORMAL Number of iterations= 2000
1	2	15-MAY-1990	16:36:40	AIPS	Conv size= 4.74 X 4.10 Position angle= 23.59
1	2	15-MAY-1990	16:36:40	AIPS	Phase shifted in X -7.186 in Y -1.725
1	2	15-MAY-1990	16:36:40	AIPS	Maximum version number of extension files of type HI is 1
1	2	15-MAY-1990	16:36:40	AIPS	Maximum version number of extension files of type CC is 1
1	4	15-MAY-1990	16:36:41	AIPS	Limited to files matching name parms TDDTS .DIFF . 0
1	4	15-MAY-1990	16:36:41	AIPS	Destroy all files for user 126 disks 3-3? enter YES or NO
1	0	15-MAY-1990	16:36:41	AIPS	YES
1	3	15-MAY-1990	16:36:41	AIPS	Destroying MA file TDDTS .DIFF . 1 disk 3 user 126
1	2	15-MAY-1990	16:36:41	AIPS	Destroyed 1 extension files of type HI
1	2	15-MAY-1990	16:36:43	AIPS	COMB: Task to combine in many ways two overlapping images
1	2	15-MAY-1990	16:36:43	AIPS	Adverbs Values Comments
1	2	15-MAY-1990	16:36:43	AIPS	
1	2	15-MAY-1990	16:36:44	AIPS	USERID 0 User ID. 0 => current user,
1	2	15-MAY-1990	16:36:44	AIPS	32000 => any user.
1	2	15-MAY-1990	16:36:44	AIPS	INNAME 'TDDTS First image name (name)

Pops	Prior	Date	Time	Task	Messages for user 126			
1	2	15-MAY-1990	16:36:44	AIPS	INCLASS	'MXCLN '		First image name (class)
1	2	15-MAY-1990	16:36:44	AIPS	INSEQ	0		First image name (seq. #)
1	2	15-MAY-1990	16:36:44	AIPS	INDISK	3		First image disk drive #
1	2	15-MAY-1990	16:36:44	AIPS	IN2NAME	'MDDTS '		Second image name (name)
1	2	15-MAY-1990	16:36:44	AIPS	IN2CLASS	'MXCLN '		Second image name (class)
1	2	15-MAY-1990	16:36:44	AIPS	IN2SEQ	0		Second image name (seq. #)
1	2	15-MAY-1990	16:36:45	AIPS	IN2DISK	3		Second image disk drive #
1	2	15-MAY-1990	16:36:45	AIPS	DOALIGN	1		Should images be coincident?
1	2	15-MAY-1990	16:36:45	AIPS				(See HELP.)
1	2	15-MAY-1990	16:36:45	AIPS	OUTNAME	'TDDTS '		Output image name (name)
1	2	15-MAY-1990	16:36:45	AIPS	OUTCLASS	'DIFF '		Output image name (class)
1	2	15-MAY-1990	16:36:45	AIPS	OUTSEQ	1		Output image name (seq. #)
1	2	15-MAY-1990	16:36:45	AIPS	OUTDISK	3		Output image disk drive #
1	2	15-MAY-1990	16:36:45	AIPS	BLC	*all 0		Bottom left corner
1	2	15-MAY-1990	16:36:45	AIPS	TRC	*all 0		Top right corner
1	2	15-MAY-1990	16:36:46	AIPS	OPCODE	'SUM '		Algorithm type:
1	2	15-MAY-1990	16:36:46	AIPS				'SUM ','DIV ','SPIX','POLI',
1	2	15-MAY-1990	16:36:46	AIPS				'POLA','MULT','OPTD','CLIP'
1	2	15-MAY-1990	16:36:46	AIPS				'REAL','IMAG','MEAN','RM
1	2	15-MAY-1990	16:36:46	AIPS				'POLC'
1	2	15-MAY-1990	16:36:46	AIPS	APARM	1	-1	Parameters for algorithm:
1	2	15-MAY-1990	16:36:46	AIPS		*rest 0		(1) - (4) scale and offset
1	2	15-MAY-1990	16:36:46	AIPS				(8) > 0 => blank with 0.0
1	2	15-MAY-1990	16:36:46	AIPS				(9) Map1 clip level
1	2	15-MAY-1990	16:36:46	AIPS				(10) Map2 clip level
1	2	15-MAY-1990	16:36:47	AIPS				see HELP COMB
1	2	15-MAY-1990	16:36:47	AIPS	BPARM	*all 0		Noise/control parameters:
1	2	15-MAY-1990	16:36:47	AIPS				(1) Map1 noise level
1	2	15-MAY-1990	16:36:47	AIPS				(2) Map2 noise level
1	2	15-MAY-1990	16:36:47	AIPS				(3) > 0 => output noise
1	2	15-MAY-1990	16:36:47	AIPS				(4) < 0.5 => clip w inputs
1	2	15-MAY-1990	16:36:47	AIPS				> 1.5 => clip w S/N
1	2	15-MAY-1990	16:36:47	AIPS				else => clip w noise
1	2	15-MAY-1990	16:36:47	AIPS				(5) minimum ok S/N or
1	2	15-MAY-1990	16:36:47	AIPS				maximum ok noise
1	2	15-MAY-1990	16:36:47	AIPS				(6) max output noise
1	2	15-MAY-1990	16:36:48	AIPS				see HELP COMB
1	5	15-MAY-1990	16:36:50	COMB	Task COMB (release of 15OCT90) begins			
1	2	15-MAY-1990	16:36:57	COMB	Create TDDTS .DIFF . 1 (MA) on disk 3 cno 12			
1	2	15-MAY-1990	16:36:57	COMB	Sum: 1.000E+00*Map(1) + -1.000E+00*Map(2) + 0.000E+00			
1	2	15-MAY-1990	16:36:57	COMB	Magic blanking used for clipped & illegal values.			
1	2	15-MAY-1990	16:37:13	COMB	History file created and written			
1	3	15-MAY-1990	16:37:13	COMB	Appears to have ended successfully			
1	5	15-MAY-1990	16:37:14	COMB	SAIPS 15OCT90 TST: Cpu= 11.24 Real= 24.0 IO= 142			
1	2	15-MAY-1990	16:37:14	AIPS	Resumes			
1	5	15-MAY-1990	16:37:14	AIPS	##			
1	5	15-MAY-1990	16:37:14	AIPS	##########---------MXCLN---------#############			
1	5	15-MAY-1990	16:37:14	AIPS	##			
1	5	15-MAY-1990	16:37:23	AIPS	Mean= 1.2920E-06 rms= 5.9837E-05 JY/BEAM over 61504. pixels			
1	5	15-MAY-1990	16:37:24	AIPS	Maximum= 3.8940E-04 at 128 132 1 1 1 1 1			
1	5	15-MAY-1990	16:37:24	AIPS	Skypos: RA 06 24 43.054 DEC -05 51 16.64			
1	5	15-MAY-1990	16:37:24	AIPS	Skypos: IPOL 1420.014 MHZ			
1	5	15-MAY-1990	16:37:24	AIPS	Minimum=-4.0576E-04 at 199 84 1 1 1 1 1			
1	5	15-MAY-1990	16:37:24	AIPS	Skypos: RA 06 24 43.062 DEC -05 53 8.05			
1	5	15-MAY-1990	16:37:24	AIPS	Skypos: IPOL 1420.014 MHZ			
1	5	15-MAY-1990	16:37:24	AIPS	Flux density = 6.1097E-03 Jy. Beam area = 13.01 pixels			

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Pops  Prior    Date        Time        Task        Messages for user  126

   1     5   15-MAY-1990  16:37:25     AIPS     RELATIVE TO ABS(MAXIMUM):                0.000034
   1     5   15-MAY-1990  16:37:25     AIPS     NUMBER CORRECT BITS MAX:      14.8584
   1     5   15-MAY-1990  16:37:25     AIPS     NUMBER CORRECT BITS RMS:      17.6199
   1     5   15-MAY-1990  16:37:25     AIPS     ##############################################
   1     5   15-MAY-1990  16:37:25     AIPS     MDDTS  IMSTAT
   1     5   15-MAY-1990  16:37:34     AIPS     Mean= 3.2143E-03 rms= 1.2723E-01 JY/BEAM   over   61504. pixels
   1     5   15-MAY-1990  16:37:34     AIPS     Maximum= 1.2054E+01 at  124  133    1    1    1    1    1
   1     5   15-MAY-1990  16:37:34     AIPS     Skypos: RA 06 24 43.177  DEC -05 51 11.60
   1     5   15-MAY-1990  16:37:34     AIPS     Skypos: IPOL  1420.014 MHZ
   1     5   15-MAY-1990  16:37:34     AIPS     Minimum=-3.8208E-02 at  121  142    1    1    1    1    1
   1     5   15-MAY-1990  16:37:34     AIPS     Skypos: RA 06 24 42.673  DEC -05 51  1.82
   1     5   15-MAY-1990  16:37:34     AIPS     Skypos: IPOL  1420.014 MHZ
   1     5   15-MAY-1990  16:37:34     AIPS     Flux density =  1.5200E+01 Jy.   Beam area =  13.01 pixels
   1     5   15-MAY-1990  16:37:35     AIPS     ##############################################
   1     5   15-MAY-1990  16:37:35     AIPS     MDDTS  MAXFIT
   1     5   15-MAY-1990  16:37:35     AIPS     Map pixel position:   124.08  133.08
   1     5   15-MAY-1990  16:37:36     AIPS     Skypos: RA 06 24 43.167  DEC -05 51 11.63
   1     5   15-MAY-1990  16:37:36     AIPS     Skypos: IPOL  1420.014 MHZ
   1     5   15-MAY-1990  16:37:36     AIPS     PEAK =   11.845       JY/BEAM
   1     5   15-MAY-1990  16:37:37     AIPS     ##############################################
   1     5   15-MAY-1990  16:37:37     AIPS     TDDTS  MAXFIT
   1     5   15-MAY-1990  16:37:37     AIPS     Map pixel position:   124.08  133.08
   1     5   15-MAY-1990  16:37:37     AIPS     Skypos: RA 06 24 43.167  DEC -05 51 11.63
   1     5   15-MAY-1990  16:37:37     AIPS     Skypos: IPOL  1420.014 MHZ
   1     5   15-MAY-1990  16:37:37     AIPS     PEAK =   11.845       JY/BEAM
   1     5   15-MAY-1990  16:37:38     AIPS     ##############################################
   1     5   15-MAY-1990  16:37:38     AIPS     **** DIFFERENCE IN X, Y, VAL: ****
   1     5   15-MAY-1990  16:37:38     AIPS     (  1)      0.000015      0          0.00014
   1     5   15-MAY-1990  16:37:38     AIPS     ##############################################
   1     5   15-MAY-1990  16:37:38     AIPS     ##############################################
   1     3   15-MAY-1990  16:37:38     AIPS     Catalog on disk  3
   1     3   15-MAY-1990  16:37:38     AIPS      Cat Usid Mapname      Class   Seq  Pt     Last access      Stat
   1     3   15-MAY-1990  16:37:38     AIPS        1  126 MDDTS       .ASCAL .     1 UV 15-MAY-1990 16:36:18
   1     3   15-MAY-1990  16:37:39     AIPS        2  126 MDDTS       .ASCALT.     1 UV 14-MAY-1990 11:18:47
   1     3   15-MAY-1990  16:37:39     AIPS        4  126 TDDTS       .MXBEAM.     1 MA 15-MAY-1990 15:59:11
   1     3   15-MAY-1990  16:37:39     AIPS        6  126 MDDTS       .MXCLN .     1 MA 15-MAY-1990 16:37:35
   1     3   15-MAY-1990  16:37:39     AIPS        7  126 TDDTS       .MXMAP .     1 MA 15-MAY-1990 15:58:09
   1     3   15-MAY-1990  16:37:39     AIPS        8  126 MDDTS       .MXBEAM.     1 MA 15-MAY-1990 15:59:10
   1     3   15-MAY-1990  16:37:39     AIPS        9  126 MDDTS       .MXMAP .     1 MA 15-MAY-1990 15:58:08
   1     3   15-MAY-1990  16:37:39     AIPS       12  126 TDDTS       .DIFF  .     1 MA 15-MAY-1990 16:37:15
   1     3   15-MAY-1990  16:37:39     AIPS       13  126 TDDTS       .MXBEM .     1 MA 15-MAY-1990 16:36:34
   1     3   15-MAY-1990  16:37:39     AIPS       14  126 TDDTS       .MXCLN .     1 MA 15-MAY-1990 16:37:37
   1     2   15-MAY-1990  16:37:42     AIPS     YES
   1     2   15-MAY-1990  16:37:42     AIPS     YES
   1     2   15-MAY-1990  16:37:42     AIPS     YES
   1     2   15-MAY-1990  16:37:43     AIPS     * ============================================================
   1     2   15-MAY-1990  16:37:43     AIPS     * Deconvolve dirty map using VTESS:
   1     2   15-MAY-1990  16:37:43     AIPS     GET DDT064
   1     2   15-MAY-1990  16:37:44     AIPS     DDTPROC
   1     2   15-MAY-1990  16:37:50     AIPS     YES
   1     2   15-MAY-1990  16:37:51     AIPS     YES
   1     2   15-MAY-1990  16:37:51     AIPS     YES
   1     2   15-MAY-1990  16:37:51     AIPS     YES
   1     2   15-MAY-1990  16:37:51     AIPS     YES
   1     2   15-MAY-1990  16:37:52     AIPS     * ============================================================
   1     2   15-MAY-1990  16:37:52     AIPS     * Clean up:
```

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Pops  Prior    Date        Time        Task        Messages for user  126

   1     2   15-MAY-1990  16:37:52     AIPS      GET DDT9999
   1     2   15-MAY-1990  16:37:52     AIPS      DDTPROC
   1     3   15-MAY-1990  16:37:56     AIPS      Catalog on disk  3
   1     3   15-MAY-1990  16:37:56     AIPS       Cat Usid Mapname      Class   Seq  Pt     Last access      Stat
   1     3   15-MAY-1990  16:37:57     AIPS         1  126 MDDTS        .ASCAL .     1 UV 15-MAY-1990 16:36:18
   1     3   15-MAY-1990  16:37:57     AIPS         2  126 MDDTS        .ASCALT.     1 UV 14-MAY-1990 11:18:47
   1     3   15-MAY-1990  16:37:57     AIPS         4  126 TDDTS        .MXBEAM.     1 MA 15-MAY-1990 15:59:11
   1     3   15-MAY-1990  16:37:57     AIPS         6  126 MDDTS        .MXCLN .     1 MA 15-MAY-1990 16:37:35
   1     3   15-MAY-1990  16:37:57     AIPS         7  126 TDDTS        .MXMAP .     1 MA 15-MAY-1990 15:58:09
   1     3   15-MAY-1990  16:37:57     AIPS         8  126 MDDTS        .MXBEAM.     1 MA 15-MAY-1990 15:59:10
   1     3   15-MAY-1990  16:37:58     AIPS         9  126 MDDTS        .MXMAP .     1 MA 15-MAY-1990 15:58:08
   1     3   15-MAY-1990  16:37:58     AIPS        12  126 TDDTS        .DIFF  .     1 MA 15-MAY-1990 16:37:15
   1     3   15-MAY-1990  16:37:58     AIPS        13  126 TDDTS        .MXBEM .     1 MA 15-MAY-1990 16:36:34
   1     3   15-MAY-1990  16:37:58     AIPS        14  126 TDDTS        .MXCLN .     1 MA 15-MAY-1990 16:37:37
   1     5   15-MAY-1990  16:37:58     AIPS      MXMAP              13.4922      19.161
   1     5   15-MAY-1990  16:37:58     AIPS      MXBEAM             14.574       19.7722
   1     5   15-MAY-1990  16:37:58     AIPS      MXCLN              14.8584      17.6199
   1     5   15-MAY-1990  16:37:58     AIPS      MXMAP               0            0        -0.0000038
   1     5   15-MAY-1990  16:37:58     AIPS      MXBEAM              0            0         0
   1     5   15-MAY-1990  16:37:58     AIPS      MXCLN            0.000015        0          0.00014
   1     5   15-MAY-1990  16:37:59     AIPS      ################################################
   1     5   15-MAY-1990  16:37:59     AIPS      PRINTING MESSAGES SUGGESTIVE OF ERROR: PRIO > 5
   1     5   15-MAY-1990  16:37:59     AIPS      ################################################
   1     5   15-MAY-1990  16:37:59     AIPS      User  126:   864 messages, oldest written 15-MAY-1990  15:51:10
   1     5   15-MAY-1990  16:38:00     AIPS      ################################################
   1     5   15-MAY-1990  16:38:00     AIPS      PRINTING ANSWERS, ERRORS, OTHER IMPORTANT MESSAGES
   1     5   15-MAY-1990  16:38:00     AIPS      ################################################
   1     2   15-MAY-1990  16:38:00     AIPS      ZLPOPN: printer file = /tmp/ZLPOPN.a21564
   1     7   15-MAY-1990  16:38:21     AIPS      ZLPCL2: deleted /tmp/ZLPOPN.a21564
   1     5   15-MAY-1990  16:38:21     AIPS      User  126:   868 messages, oldest written 15-MAY-1990  15:51:10
   1     5   15-MAY-1990  16:38:23     AIPS      IF YOU WANT ACCOUNTING INFO TYPE:
   1     5   15-MAY-1990  16:38:23     AIPS                TGET PRTAC; GO PRTAC
   1     5   15-MAY-1990  16:38:23     AIPS      IF YOU WANT EVEN MORE MESSAGES, SET PRIORITY=0
   1     5   15-MAY-1990  16:38:23     AIPS       AND TYPE: PRTMSG     (NOT RECOMMENDED USUALLY)
         15-MAY-1990  16:38:23     AIPS                 ...
         15-MAY-1990  16:38:23     AIPS      THAT"S ALL, FOLKS!
         15-MAY-1990  16:38:23     AIPS      GET ENVIRONMENT
         15-MAY-1990  16:38:24     AIPS      SGDESTR ENVIRONMENT
         15-MAY-1990  16:39:29     AIPS       docrt -1
         15-MAY-1990  16:39:35     AIPS      set prio 0
         15-MAY-1990  16:39:35     AIPS      SYMBOL?       SET
         15-MAY-1990  16:39:41     AIPS      priori=0
         15-MAY-1990  16:39:44     AIPS      prtmsg
```