

# Установка пакета AIPS

Установка AIPS тестировалась для версий LINUX: Ubuntu, Debian, Fedora.

Необходимые для установки AIPS файлы и инструкции по установке можно найти на сайтах:

<http://www.aips.nrao.edu/index.shtml>  
<http://www.aips.nrao.edu/dec12.shtml>  
<ftp://ftp.aoc.nrao.edu/pub/software/aips/31DEC12/>

Перед началом установки AIPS необходимо выполнить следующее:

1. добавить в конец файла `/etc/services` следующие строки:

```
sssin          5000/tcp      SSSIN         # AIPS TV server
ssslck         5002/tcp      SSSLOCK       # AIPS TV Lock
msgserv        5008/tcp      MSGSERV       # AIPS Message Server
tekserv        5009/tcp      TEKSERV       # AIPS TekServer
aipsmt0        5010/tcp      AIPSMT0       # AIPS remote FITS disk access
aipsmt1        5011/tcp      AIPSMT1       # AIPS remote tape 1
aipsmt2        5012/tcp      AIPSMT2       # AIPS remote tape 2
aipsmt3        5013/tcp      AIPSMT3
aipsmt4        5014/tcp      AIPSMT4
aipsmt5        5015/tcp      AIPSMT5
aipsmt6        5016/tcp      AIPSMT6
aipsmt7        5017/tcp      AIPSMT7
```

2. создать пользователя `aips`: создается директория `/home/aips`
3. изменить атрибуты директории `/home/aips`:

```
drwxr-xr-x  4 aips      aips      4096 2008-07-17 11:46 aips
на
drwxrwxr-x  4 aips      aips      4096 2008-07-17 11:46 aips
```

Для этого выполнить одну из команд:

```
chmod g+w /home/aips
chmod 775 /home/aips
```

4. скопировать из <ftp://ftp.aoc.nrao.edu/pub/software/aips/31DEC12/> в директорию `/home/aips` файл:

```
install.pl
```

В этом случае вам будет предложено сделать 'binary installation', то есть скачать заранее откомпилированные программы с сайта NRAO.

Если вы хотите компилировать программы самостоятельно, то вам понадобится еще файл:

```
31DEC12.tar.gz
```

5. ВОЙТИ В СИСТЕМУ КАК ПОЛЬЗОВАТЕЛЬ `aips`:

```
shoutenk@sky:~$ ssh -l aips sky (sky = имя моего компрьютера)
```

6. ВЫПОЛНИТЬ КОМАНДУ:

```
aips@sky:~$ perl install.pl
```

\* \* \*

В дальнейшем отвечать на вопросы (в тексте ответы будут выделены синим цветом) и следовать подсказкам, которые даются в квадратных скобках:

\* \* \*

```
aips@sky:~$ perl install.pl
I cannot find a tarball. Did you mean to do
AipsWiz: ==> a binary installation? [Y/N, default N] : y
```

\* \* \*

===== AIPS 31DEC12 Install Wizard=====

Screen 0: INTRODUCTION

-----

Welcome to the AIPS Install Wizard (AipsWiz)!  
It will do the following:

1. Look for (and/or download) the 'tarball' for 31DEC12 (skipped if installing from CD or network)
2. Unpack it wherever you specify (skipped if CD or network)
3. Ask you for various settings through a set of menus
4. Review your settings, and
5. Do the installation with no further input needed.

Things can go wrong (!) so this procedure is not perfect, but it saves state in a file `.AIPSRC` in your home area. So you can easily restart an interrupted install attempt, without re-entering all your settings. You can also go back a screen by typing 'B' to most prompts, or you can Quit at any menu by entering 'Q'.

[You may also type B for back, or Q to Quit]

AipsWiz: ==> Press <ENTER> or <RETURN> to get started: [нажать Enter](#)

\* \* \*

===== AIPS 31DEC12 Install Wizard=====

Screen 4: Group Ownership

-----

If more than one account is going to be using AIPS, you should select a 'Unix group' for these accounts. This can, but need not be, their primary group.

[You may also type B for back, or Q to Quit]

AipsWiz: ==> What group should be used for AIPS? [aips] нажать Enter

\* \* \*

===== AIPS 31DEC12 Install Wizard=====

Screen 4b: Group Write

-----

If more than one account will use AIPS, and you are using a group (aips) to permit filesharing, you should also allow this group write access to certain AIPS files.

[You may also type B for back, or Q to Quit]

AipsWiz: ==> Allow aips to have write access? [YES] нажать Enter

\* \* \*

===== AIPS 31DEC12 Install Wizard=====

Screen 5: Site Name

-----

Please enter a single word that will be used to describe your AIPS site. This may be used as a directory name. Example: at NRAO we use names such as NRAOCV, NRAOAC, etc.

[You may also type B for back, or Q to Quit]

AipsWiz: ==> Your site name: [required, no default] BLUESKY

\* \* \*

===== AIPS 31DEC12 Install Wizard=====

Screen 5a: Site type

-----

If your site consists of a single portable computer which may get different names at different times, it is best to force the name for AIPS to LOCALHOST.

[You may also type B for back, or Q to Quit]

AipsWiz: ==> If you want this, enter Y or y [N] нажать Enter

\* \* \*

===== AIPS 31DEC12 Install Wizard=====

Screen 5b: Architecture Confirmation

-----  
Your architecture appears to be LINUX

If this is correct, press RETURN or ENTER.  
If not, enter the correct architecture (or ? for a list)

[You may also type B for back, or Q to Quit]

AipsWiz: ==> Enter the architecture for this system [LINUX] [нажать Enter](#)

\* \* \*

===== AIPS 31DEC12 Install Wizard=====

Screen 6: Additional hosts if any

-----  
You may configure your installation so it runs on many systems,  
sharing the AIPS ROOT area via NFS. The list of host(s) is now:

SKY

Any new hosts will initially be set to arch=LINUX, but you can  
change this by editing HOSTS.LIST in /home/aips  
when the install is finished.

[You may also type B for back, or Q to Quit]

AipsWiz: ==> Enter new hosts (no commas!) or SKY to reset: [нажать Enter](#)

\* \* \*

===== AIPS 31DEC12 Install Wizard=====

Screen 7: User Data Areas

-----  
At least one data area needs to be defined for AIPS user data.  
Do it here unless there is already a DADEV.S.LIST file. It is  
important that the host name in caps appear in the data area name.  
Currently these area(s) are defined:

(no data areas have been defined yet)

You can add to this list after installing by editing the two files  
DADEV.S.LIST and NETSP in the /home/aips/DA00/ directory.

Please enter (additional) data area(s) now as a space-separated list,  
or the word RESET to re-set the list.

(If you want to use symlinks, use the notation

actual\_directory\_location:symbolic\_link\_location

instead of a simple directory location.)

The suggested data area is `/home/aips/DATA/SKY_1`

[You may also type B for back, or Q to Quit]

AipsWiz: ==> Data Areas: `/home/aips/DATA/SKY_1 /home/aips/DATA/SKY_2 /home/aips/DATA/SKY_3 /home/aips/DATA/SKY_4`

На этом этапе в директории `/home/aips/DATA` создаются четыре поддиректории для хранения данных, получающихся в процессе работы AIPS. Количество поддиректорий, которое можно создать зависит от вашего предпочтения.

\* \* \*

===== AIPS 31DEC12 Install Wizard=====

Screen 8: Printers

-----  
You may define several printers for use with AIPS.  
These will appear on startup as numbered choices to the user  
At least one printer must be defined. Currently defined:

(no printers are defined yet)

Paper Format: A

You can modify printer definitions after the install by editing the file `/home/aips/DA00/PRDEVS.LIST` .

Please indicate whether you want to

- add (N)ew printers
- (D)iscover your system's printers (may not work),
- (A)ccept the current settings as is, or
- (R)eset to clear the list.

(Paper format - A or A4 - will come next)

[You may also type B for back, or Q to Quit]

AipsWiz: ==> Your choice (default: Accept): **N**

AipsWiz: ==> How many printers?: **1**

AipsWiz: Configuring 1 printers. For each, you will be asked if you  
AipsWiz: want to configure AIPS to use it, its type, options, and a  
AipsWiz: description. AIPS printer types are:

AipsWiz:	PS	Black-and-white PostScript printer
AipsWiz:	COLOR	(or COLOUR) Color/Colour PostScrip printert
AipsWiz:	TEXT	Plain text printers (including line printers)
AipsWiz:	QMS	QUIC format (QMS [not QMS PS!], Talaris) printers
AipsWiz:	PREVIEW	Screen Previewers, e.g. gv, ghostview, pageview

AipsWiz: And the valid AIPS printer options are:

AipsWiz:	NONE	(default), nothing special.
AipsWiz:	DUP	Printer will print on both sides of the paper
AipsWiz:	DEF	This will be the default AIPS printer
AipsWiz:	BIG=nnn	Force use of this printer for jobs > nnn lines

AipsWiz: If you want to specify multiple options for a printer,  
AipsWiz: separate them with commas (NO SPACES!)

AipsWiz: ==> --Name ('xxx' in 'lpr -Pxxx') for printer 1: **HP-LaserJet-1022**  
AipsWiz: ==> Printer type for HP-LaserJet-1022 (N to skip) [PS]: **нажать Enter**  
AipsWiz: ==> Printer options for HP-LaserJet-1022 (N to skip) [NONE]: **нажать Enter**  
AipsWiz: ==> Description for HP-LaserJet-1022 (N to skip): **HP LaserJet 1022**  
AipsWiz: ==> Do your printer(s) use A or A4 paper? [A]: **A4**

\* \* \*

===== AIPS 31DEC12 Install Wizard=====

#### Screen 9: Tape Drives

-----  
If your network has any tape drives you would like to use for AIPS, you can specify those now. You need to configure each tape drive machine to run AIPS (or a subset of it). Current definitions:

(no tape drives are defined yet)

You can add to this list after the install by editing TPDEVS.LIST in the /home/aips/DA00 area.

Please indicate whether you want to

add (N)ew tape drive(s)  
(D)iscover tape drives on SKY (may not work)  
(A)ccept the current settings as is, or  
(R)eset to clear the list.

[You may also type B for back, or Q to Quit]

AipsWiz: ==> Your choice (default: Accept): **нажать Enter**

\* \* \*

===== AIPS 31DEC12 Install Wizard=====

#### Screen 9B: Tape Hosts

-----  
THIS IS IMPORTANT: READ ME!

The TPMON daemons that are automatically started or restarted with each AIPS session are servers that give remote systems access to your local tape drives (TPMON2,3,...) and FITS disk area (TPMON1). There is a mechanism to restrict connections to a set of hosts and/or IP addresses. You need to indicate what remote system(s) if any are allowed to use your tapes and FITS disk area. The default configuration is to ONLY allow your local host (127.0.0.1). The list of hosts and/or IP addresses is currently set to:

-----  
127.0.0.1  
-----

You can modify this list after the install by editing file TPHOSTS in the /home/aips/DA00 area. Each line in the file can be

- an IP address, e.g. 192.33.115.11
- a fully qualified domain name, e.g. orangutan.cv.nrao.edu,
- a limited IP address wildcard, e.g. 192.33.115.\*, or

- a limited domain name wildcard, e.g. \*.cv.nrao.edu.

Please indicate whether you want to

add (N)ew entries  
(A)cept the current settings as is, or  
(R)eset to the default.

[You may also type B for back, or Q to Quit]

AipsWiz: ==> Your choice (default: Accept): [нажать Enter](#)

\* \* \*

===== AIPS 31DEC12 Install Wizard=====

Screen 11: FINAL REVIEW before installing!

-----

This is your last, best hope for checking the settings before committing to the install. Please check these settings, and make sure they are what you want:

AIPS\_ROOT (screen 3): /home/aips  
Group (screen 4): aips  
Group Write (screen 4): YES  
Architecture (screen 5): LINUX  
Site name (screen 5): BLUESKY  
AIPS hosts (screen 6): SKY  
Data areas (screen 7): /home/aips/DATA/SKY\_4  
/home/aips/DATA/SKY\_3  
/home/aips/DATA/SKY\_1  
/home/aips/DATA/SKY\_2  
Printers (screen 8): HP-LaserJet-1022 PS NONE HP LaserJet 1022  
Paper type (screen 8): A4  
Tape drives (screen 9):  
Tape hosts (screen 9): 127.0.0.1

You can skip back to a previous menu by entering its number, or use the phrase 'start over' to go back to the beginning.  
[You may also type B for back, or Q to Quit]

AipsWiz: ==> [A]ccept (default) or menu number: [нажать Enter](#)

Окончательный просмотр заданных параметров показывает, что поддиректории данных созданы не в порядке их номеров. Увы, так бывает всегда! Это приведет к тому, что логические номера областей данных, которые используются в AIPS, будут не совпадать с их физическими номерами. Несколько позже мы устраним эту проблему.

AipsWiz: ==> Confirm: start the install with these settings [Y]: [нажать Enter](#)

На этом этапе программа установки AIPS начинает создавать файловую структуру директории /home/aips и скачивать необходимые файлы из архива NRAO.

В этот момент следует в другом терминале войти как пользователь aips и с помощью любого текстового редактора отредактировать два файла.

Файл /home/aips/DA00/DADEVS.LIST до редактирования выглядит так:

```
aips@sky:~/DA00$ more DADEVS.LIST
```

```
#-----  
#-----  
#; Copyright (C) 1995
```

```

#; Associated Universities, Inc. Washington DC, USA.
#;
#; This program is free software; you can redistribute it and/or
#; modify it under the terms of the GNU General Public License as
#; published by the Free Software Foundation; either version 2 of
#; the License, or (at your option) any later version.
#;
#; This program is distributed in the hope that it will be useful,
#; but WITHOUT ANY WARRANTY; without even the implied warranty of
#; MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
#; GNU General Public License for more details.
#;
#; You should have received a copy of the GNU General Public
#; License along with this program; if not, write to the Free
#; Software Foundation, Inc., 675 Massachusetts Ave, Cambridge,
#; MA 02139, USA.
#;
#; Correspondence concerning AIPS should be addressed as follows:
#;     Internet email: aipsmail@nrao.edu.
#;     Postal address: AIPS Project Office
#;                     National Radio Astronomy Observatory
#;                     520 Edgemont Road
#;                     Charlottesville, VA 22903-2475 USA
#-----
# DADEVS.LIST
#-----
# This is a DADEVS list file containing a list of AIPS data directories.
# Refer to $AIPS_ROOT/DADEVS.SH for more information.
#-----
- /home/aips/DATA/SKY_4
- /home/aips/DATA/SKY_3
- /home/aips/DATA/SKY_1
- /home/aips/DATA/SKY_2
aips@sky:~/DA00$

```

После редактирования список директорий в конце файла должен быть упорядочен и выглядеть так:

```

- /home/aips/DATA/SKY_1
- /home/aips/DATA/SKY_2
- /home/aips/DATA/SKY_3
- /home/aips/DATA/SKY_4

```

Аналогичные действия надо произвести с файлом `/home/aips/DA00/NETSP:`

```

aips@sky:~/DA00$ more NETSP
#-----
#; Copyright (C) 1995
#; Associated Universities, Inc. Washington DC, USA.
#;
#; This program is free software; you can redistribute it and/or
#; modify it under the terms of the GNU General Public License as
#; published by the Free Software Foundation; either version 2 of
#; the License, or (at your option) any later version.
#;
#; This program is distributed in the hope that it will be useful,
#; but WITHOUT ANY WARRANTY; without even the implied warranty of
#; MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
#; GNU General Public License for more details.
#;
#; You should have received a copy of the GNU General Public
#; License along with this program; if not, write to the Free
#; Software Foundation, Inc., 675 Massachusetts Ave, Cambridge,
#; MA 02139, USA.

```



```

#;
#; Correspondence concerning AIPS should be addressed as follows:
#; Internet email: aipsmail@nrao.edu.
#; Postal address: AIPS Project Office
#; National Radio Astronomy Observatory
#; 520 Edgemont Road
#; Charlottesville, VA 22903-2475 USA
#-----
# NETSP contains network-wide AIPS system parameter definitions.
#-----
#
# ZDCHIN will look for this file in $NET0 if it succeeds in translating
# logical NVOL, indicating that the AIPS network data disk allocation
# facility is in use. The system is implemented via the DADEV.S.H
# and optional DADEV.PL perl script which defines NVOL, and DA0[1-Z].
#
# ZDCHIN interprets each entry as
# 1) location of the data disk (translated value of DA0[1-F])
# e.g. /DATA/ATELES_3
# 2) the TIMDEST limit for the disk, in days
# e.g. 7.0
# 3) eight AIPS booking system user numbers (-1 in first => scratch)
# e.g. 1 29 0 0 0 0 0 0
#
# When editing this file, DO NOT USE THE TAB KEY OR INSERT ANY TABS!
# (the tab is usually control-I). The "white space" between parameters
# MUST be comprised of nothing but spaces. Also, make sure the last
# line includes a newline, otherwise that data area will not be counted.
#-----
# Disk name TIMDEST -----Allowed Users-----
/home/aips/DATA/SKY_4 365.0 0 0 0 0 0 0 0 0
/home/aips/DATA/SKY_3 365.0 0 0 0 0 0 0 0 0
/home/aips/DATA/SKY_1 365.0 0 0 0 0 0 0 0 0
/home/aips/DATA/SKY_2 365.0 0 0 0 0 0 0 0 0
aips@sky:~/DA00$

```

Конец этого файла после редактирования должен выглядеть так:

```

# Disk name TIMDEST -----Allowed Users-----
/home/aips/DATA/SKY_1 365.0 0 0 0 0 0 0 0 0
/home/aips/DATA/SKY_2 365.0 0 0 0 0 0 0 0 0
/home/aips/DATA/SKY_3 365.0 0 0 0 0 0 0 0 0
/home/aips/DATA/SKY_4 365.0 0 0 0 0 0 0 0 0

```

Редактирование необходимо выполнить до выполнения последующих действий.

\* \* \*

Пока мы занимались редактированием файлов программа установки AIPS подошла к следующим запросам.

\* \* \*

```

MAKE.BMNJ - -----
MAKE.BMNJ - If you wish to change any of these settings, refer to the
MAKE.BMNJ - comments at the start of /home/aips/31DEC12/SYSTEM/UNIX/UPDATE/UPDCONFIG
MAKE.BMNJ - and edit /home/aips/31DEC12/LINUX/SYSTEM/BLUESKY/UPDCONFIG yourself.
MAKE.BMNJ - Press <RETURN> to acknowledge....: нажать Enter

```

\* \* \*

Logging in to :pserver:anoncvs@mnj.aoc.nrao.edu:2401/home/aipssrc/cvs  
CVS password: [нажать Enter](#)

\* \* \*

MAKE.BMNJ - Created /home/aips/do\_daily.sky  
MAKE.BMNJ - Please inspect it to make sure it fits your needs.  
MAKE.BMNJ - Press <RETURN> when ready to proceed...: [нажать Enter](#)

\* \* \*

AipsWiz: =====  
AipsWiz: MAKE.BMNJ seemed to work (/home/aips/31DEC12/LINUX/SYSTEM/BLUESKY/UPDCONFIG  
found)  
AipsWiz: ==> Press <ENTER> to continue...: [нажать Enter](#)

\* \* \*

**В конце установки программа выдает нам сообщение:**

Data disk assignments:  
DADEVS.PL: This program is untested under Perl version 5.010  
(Using global default file /home/aips/DA00/DADEVS.LIST for DADEVS.PL)  
Disk 1 (1) is /home/aips/DATA/SKY\_1  
Disk 2 (2) is /home/aips/DATA/SKY\_2  
Disk 3 (3) is /home/aips/DATA/SKY\_3  
Disk 4 (4) is /home/aips/DATA/SKY\_4

Starting up POPSGN (RELEASE OF 31DEC12)  
Enter Idebug, Mname, Version (1 I, 2 A's) (NO COMMAS)  
POPSG1: Popsgen complete  
POPSG1: sky 31DEC12 TST: Cpu= 0.0 Real= 0 IO= 1  
>AipsWiz: Copying DA00/SKY/\* files to 31DEC12/LINUX/TEMPLATE/ area

AipsWiz: =====> We're DONE! Let's have a nice Banana Split! <=====

AipsWiz: Here are the final setup instructions for running AIPS

1. Reference the LOGIN.SH file in your .profile file  
(dot it now too, via ". ./LOGIN.SH")
2. Check that it works:  
  
aips notv tpok  
  
(this will not start a TV or tape servers).  
Try 'print 2 + 2' for a very basic test.
3. Make a cron entry for the do\_daily.SKY file  
that the MAKE.MNJ created, so you can run the  
AIPS 'midnight job'. This is optional but  
strongly recommended.

AipsWiz: That's it. You should now have the latest AIPS! Enjoy.  
aips@sky:~\$

**Из этого сообщения мы видим, что номера логических дисков Disk 1 ... Disk 4 уже совпадают с номерами директорий.**

И, в заключении, программа установки советует нам запустить программу `aips` и сделать элементарную проверку работоспособности программы.

\* \* \*

Для запуска программы `aips` надо выйти из режима пользователя `aips`:

```
aips@sky:~$ exit
logout
Connection to sky closed.
shoutenk@sky:~$
```

Запуск программы `aips` осуществляется последовательным выполнением трех команд:

```
shoutenk@sky:~$ . /home/aips/LOGIN.SH           задает переменные окружения
shoutenk@sky:~$ $CDTST                          печатает текущую версию aips
AIPS_VERSION=/home/aips/31DEC12
shoutenk@sky:~$ aips                             запускает программу в работу
```

Эти три команды могут быть объединены в одну следующим образом:

- в корневой директории пользователя нужно создать файл псевдонимов `.bash_aliases`
- в этот файл записать команду:

```
alias aips='. /home/aips/LOGIN.SH; $CDTST; aips'
```

Теперь для запуска программы `aips` необходимо выполнить команду `'aips'` и задать User ID number – номер пользователя, при входе под которым вы будете видеть только свои файлы в директориях `/home/aips/DATA/SKY_1`, `/home/aips/DATA/SKY_2`, `/home/aips/DATA/SKY_3`, `/home/aips/DATA/SKY_4`.

```
shoutenk@sky:~$ aips
AIPS_VERSION=/home/aips/31DEC12
START_AIPS: Your initial AIPS printer is the HP LaserJet 1022
START_AIPS: - system name HP-LaserJet-1022, AIPS type PS
```

```
START_AIPS: User data area assignments:
DADEVS.PL: This program is untested under Perl version 5.010
(Using global default file /home/aips/DA00/DADEVS.LIST for DADEVS.PL)
Disk 1 (1) is /home/aips/DATA/SKY_1
Disk 2 (2) is /home/aips/DATA/SKY_2
Disk 3 (3) is /home/aips/DATA/SKY_3
Disk 4 (4) is /home/aips/DATA/SKY_4
```

```
Tape assignments:
Tape 1 is REMOTE
Tape 2 is REMOTE
```

```
START_AIPS: I am GUESSING you are at a workstation called sky
START_AIPS: Starting TV servers on sky asynchronously
START_AIPS: - with Internet Sockets...
START_AIPS: Starting TPMON daemons on SKY asynchronously...
DADEVS.PL: This program is untested under Perl version 5.010
Starting up 31DEC12 AIPS with normal priority
Begin the one true AIPS number 1 (release of 31DEC12) at priority = 0
AIPS 1: You are assigned TV device/server 1
AIPS 1: You are assigned graphics device/server 1
AIPS 1: Enter user ID number
?880
XASERVERS: Start TV LOCK daemon TVSERV on sky
TVSERVER: Starting AIPS TV locking, Inet domain
XASERVERS: Start XAS on sky, DISPLAY :0
XASERVERS: Start graphics server TEKSRV on sky, DISPLAY :0
```

```

XAS: ** TrueColor FOUND!!!
XAS: *** Using shared memory option for speed ***
XAS: Using screen width 1270 height 924,
      max grey level 8191 in 16 grey-scale memories
XASERVERS: Start message server MSGSRV on sky, DISPLAY :0
STARTPMON: [SKY] Old TPMON1 link found in /home/aips/31DEC12/LINUX/LOAD
STARTPMON: [SKY] - will TRY to replace & restart it here.
STARTPMON: [SKY] - TPMON daemons on other LINUX hosts may need restarted.
STARTPMON: [SKY] Starting TPMON1 with output SUPPRESSED
AIPS 1:                               31DEC12 AIPS:
AIPS 1:      Copyright (C) 1995-2012 Associated Universities, Inc.
AIPS 1:      AIPS comes with ABSOLUTELY NO WARRANTY;
AIPS 1:      for details, type HELP GNUGPL
AIPS 1: This is free software, and you are welcome to redistribute it
AIPS 1: under certain conditions; type EXPLAIN GNUGPL for details.
AIPS 1: Previous session command-line history *not* recovered.
AIPS 1: TAB-key completions enabled, type HELP READLINE for details.
AIPS 1: Loading a brand new POPS vocabulary
>

```

Для проверки работоспособности AIPS, можно выполнить несколько команд:

>uc

```

AIPS 1: Catalog on disk 1
AIPS 1:  Cat Usid Mapname      Class  Seq  Pt      Last access      Stat
AIPS 1: Catalog on disk 2
AIPS 1:  Cat Usid Mapname      Class  Seq  Pt      Last access      Stat
AIPS 1: Catalog on disk 3
AIPS 1:  Cat Usid Mapname      Class  Seq  Pt      Last access      Stat
AIPS 1: Catalog on disk 4
AIPS 1:  Cat Usid Mapname      Class  Seq  Pt      Last access      Stat
>

```

>mc

```

AIPS 1: Catalog on disk 1
AIPS 1:  Cat Usid Mapname      Class  Seq  Pt      Last access      Stat
AIPS 1: Catalog on disk 2
AIPS 1:  Cat Usid Mapname      Class  Seq  Pt      Last access      Stat
AIPS 1: Catalog on disk 3
AIPS 1:  Cat Usid Mapname      Class  Seq  Pt      Last access      Stat
AIPS 1: Catalog on disk 4
AIPS 1:  Cat Usid Mapname      Class  Seq  Pt      Last access      Stat
>

```

>tvini

>

>print 11\*5

```
AIPS 1:      55
```

>

И закончить работу:

>exit

```

AIPS 1: Begin check for any 'standard' scratch files
AIPS 1: Scratch files -- destroyed:    0  still active:    0
AIPS 1: Destroyed empty user catalog on disk 1
AIPS 1: Destroyed empty user catalog on disk 2
AIPS 1: Destroyed empty user catalog on disk 3
AIPS 1: Destroyed empty user catalog on disk 4
AIPS 1: User 880: 49 messages, oldest written 31-JUL-2012 14:17:01
AIPS 1: Deleted 0 messages
AIPS 1: Saved POPS environment in area named 'LASTEXIT'
AIPS 1: Session command-line history saved.
AIPS 1: sky 31DEC12 TST: Cpu=    0.0  Real=    598  IO=    2
shoutenk@sky:~$

```