

# Downloading and installing SPAM

Here are some instructions on how to install SPAM on your Linux 64-bit system. If you want to install it on some other Unix-based system, you're on your own 😊.

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## Download SPAM and dependencies

An installation of SPAM on Linux requires at least the following items:

- The latest SPAM package, found [here](#)
- SPAM support files, found [here](#)
- AIPS version 31DEC13 (LNX64 binary tarball with extras), found [here](#)
- ParselTongue version 2.3 (with changes), found [here](#)
- Obit core (LNX64 binary with changes), found [here](#)

The following necessary items are often already available on a standard scientific Linux installation:

- Python version 2.7 (plus C include files)
  - Python packages: pylab / matplotlib, numpy, scipy, astropy
  - gcc
  - make
  - swig
  - optional: mencoder / mplayer (for making phase screen movies)
  - optional: ImageMagick convert (for making phase screen movies)
- 

## Install SPAM

Make a new directory that will hold all spam software

In your Linux shell, type

```
cd <local software path>
mkdir spam
cd spam
```

Move the downloaded tarballs to here.

In your Linux shell, type

```
mv <download path>/AIPS_<version>.tgz .
mv <download path>/parseltongue-<version>.tgz .
mv <download path>/obit_<version>.tgz .
mv <download path>/spam_<version>.tgz .
mv <download path>/spam_etc_<version>.tgz .
```

## Install SPAM support files

```
> tar xzf spam_etc_<version>.tgz
```

Edit setup file(s) and modify SPAM\_PATH to point to <local software path>/spam, SPAM\_HOST to your machine name in capitals, and PYTHON to point to your python2.7 executable

```
gedit setup.*sh
```

Next, run the setup file. In Linux bash (sh) this is done through:

```
. setup.sh
```

In Linux C-shell ([t]csh) this is done through:

```
source setup.csh
```

## Install AIPS

In your Linux shell, type

```
tar xzf AIPS_31DEC13.tgz  
cd AIPS
```

These next two steps may not apply to you, but must be executed when you have installed and/or run AIPS locally.

```
mv ~/.AIPSRC ~/.AIPSRC_previous  
mv ~/.dadevs ~/.dadevs_previous
```

Then start the actual install

```
perl install.pl -n
```

Here's how to quickly get through the AIPS installation

```
screen 0: <enter>  
screen 4: <enter>  
screen 4b: <enter>  
screen 5: <e.g., your institute name in capitals (no spaces), and enter>  
screen 5a: <enter>  
screen 5b: <check that this is set to LNX64, and enter>  
screen 6: <enter>  
screen 7: <copy/paste suggested path and enter>  
screen 8: <2x enter>
```

```
screen 9: <enter>
screen 9B: <enter>
screen 11: <2x enter>
```

And during installation: <3x enter>

Now we need to increase number of interactive AIPS sessions to 32. In your Linux shell, type n Linux bash (sh)

```
. LOGIN.SH
```

or in C-shell ([t]csh)

```
source LOGIN.CSH
```

Then

```
RUN SETPAR
```

In SETPAR

```
2 <enter>
10 <enter>
32 <enter>
-1 <enter>
AMANAGER <enter>
4 <enter>
```

Test AIPS by entering

```
aips tv=local
```

In AIPS POPS terminal, enter

```
11 <enter>
print 2+2 <enter>
kleenex <enter>
```

Exit AIPS directory

```
cd ..
```

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## Install Obit core

In your Linux shell, type

```
tar xzf obit_<version>.tgz
```

## Install ParselTongue

In your Linux shell, type

```
tar xzf parseltongue-<version>.tgz
cd parseltongue-<version>
sh ./configure --prefix=${SPAM_PATH}/ParselTongue --with-
obit=${SPAM_PATH}/Obit
```

This should return without errors (see below if it can't find obit). Then type:

```
make install
cd ..
```

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## Install SPAM package

In your Linux shell, type

```
tar xzf spam-<version>.tgz
cd python/spam
```

Edit the makefile so that the SWIGFLAGS and CCFLAGS point to the correct Python C header file directory (will contain Python.h; typically something like /usr/include/python2.7).

```
gedit makefile
make
cd ../..
```

And that's all folks!

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## Obit is missing?

The ParselTongue configuration may give you the following error message:

```
checking for Obit... missing
configure: error: Obit is not available
```

This is likely to be caused by a missing python package, not because Obit is missing (the script looks for Obit.so in the \${SPAM\_PATH}/Obit/python/ directory. To find what is causing the problem, please do the following:

In bash:

```
export PYTHONPATH=${SPAM_PATH}/0bit/python:${PYTHONPATH}
```

Or in (t)osh:

```
setenv PYTHONPATH ${SPAM_PATH}/0bit/python:${PYTHONPATH}
```

Then

```
${PYTHON}
```

And in python:

```
import OSystem, OErr
```

Something will fail here, probably a missing python package or a missing library. Some of the missing libraries can be found [here](#).

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