



# Puff

## Volcanic Ash Tracking Model

### Quick Start Guide



- Install PUFF according to *PUFF-AFWA Installation Procedures.doc*.
- Confirm that the arguments listed in the table below have been modified in the files specified below and that they point to valid data paths. The only GRIB file path that must be specified is the one that matches your “model” ARG.

ARG NAME	Value	Location and File
model	<wind model name (avn, nogaps, mm5, avn-datacube, or merge-datacube)>	<your installation directory>/src/puff.args
avnDatacubePath	<path to your AVN-based Datacube GRIB files>	<your installation directory>/src/puff.args
avnPath	<path to your AVN model GRIB files>	<your installation directory>/src/puff.args
mergeDatacubePath	<path to your AVN and merged MM5-based Datacube GRIB files>	<your installation directory>/src/puff.args
mm5Path	<path to your MM5 model GRIB files>	<your installation directory>/src/puff.args
nogapsPath	<path to your MM5 model GRIB files>	<your installation directory>/src/puff.args
pinPath	<your installation path>/src/viewgmt/pushpins.txt	<your installation directory>/src/puff.args, puffview.args
pushpinCfg	<your installation path>/src/viewgmt/pushpins.cfg	<your installation directory>/src/puff.args, puffview.args
volvPath	<your installation path>/src/puffsrc/volcanos.txt	<your installation directory>/src/puff.args, puffview.args

Verify that the following symbolic links have been established:

<your installation directory>/src/puffsrc/ashdump\_args.C linked to  
<your installation directory>/src/puffsrc/ args.C

**<your installation directory>/src/puffsrc/puff\_args.C linked to  
<your installation directory>/src/puffsrc/ args.C**

**<your installation directory>/src/puffsrc/uni2puff\_args.C linked to  
<your installation directory>/src/puffsrc/ args.C**

**<your installation directory>/src/dstsrc/afwa2puff.args linked to  
<your installation directory>/src/puffsrc/puff.args**

**<your installation directory>/src/dstsrc/afwa2puff\_args.C linked to  
<your installation directory>/src/puffsrc/args.C**

**<your installation directory>/src/gui/puffgui.args linked to  
<your installation directory>/src/puffsrc/puff.args**

**<your installation directory>/src/gui/puffgui\_args.C linked to  
<your installation directory>/src/puffsrc/args.C**

**<your installation directory>/src/viewgmt/puffview\_args.C linked to  
<your installation directory>/src/puffsrc/args.C**

Verify that the following environment variables are set according to the installation procedures:

```
setenv OPENWINHOME <your openwin directory>
setenv GMTHOME <your GMT directory>/GMT3.3.4
set path= ( <your installation directory>/src/bin <your GMT directory >/bin
$OPENWINHOME/bin <your SUNWspro path>/bin $path )
```

Verify that the required executables are in your path by issuing the following calls to the unix “which” function:

- a. Puff and related executables installation  
> which puff
- b. Puff Graphic User Interface  
> which puffgui
- c. GRIB reader utility installation  
> which wgrib-afwa

d. netCDF library and utility installation

```
> which ncdump
```

e. ghostscript Postscript reader installation

```
> which gs
```

f. ImageMagick image file conversion tool installation

```
> which convert
```

g. Generic Mapping Tools (GMT) installation

```
> which pscoast
```

If any of these did not return an executable filename, review the installation procedures and verify the correct setting of the path variable for your login and the location of the executables. See the *PUFF-AFWA Support Plan.doc*, section 3.3, for more information on required software.

- Run PUFF by issuing the following command at a unix prompt:

```
> puffgui
```

Select a volcano and set the eruption date to one for which you have wind data available. You may also call puffgui with the optional “eruptDate” argument, using the format below, so that puffgui starts with the correct eruption date:

```
> puffgui -eruptDate “YYYY MM DD HH:MM”
```

Convert GRIB format wind data to PUFF input data by selecting *File->GRIB Convert* from the main menu.

Run PUFF by selecting *File->Run* from the main menu.

Adjust map settings, if desired.

Select *File->Exit* from the Puffview main menu to quit.

- See the *PUFF-AFWA Users Guide.doc* Troubleshooting guide (section 11) if you have problems running PUFF.