

## **Astronomy Lab**

Astronomy Lab is one of the most innovative, interesting, and useful shareware astronomy programs available for Microsoft Windows 3.1. Astronomy Lab generates animated movies that simulate a host of astronomical events (including solar and lunar eclipses, lunar occultations, planetary occultations, transits of Mercury and Venus, the orbits of Jupiter's bright moons, and the motions of the planets in the plane of the ecliptic). In addition, Astronomy Lab produces several reports that predict the most important and exciting astronomical events of the present, future and past. Also, Astronomy Lab generates several graphs that illustrate many fundamental astronomical concepts.

This program will provide hour after hour of fascination and education to anyone interested in astronomy. The novice can use Astronomy Lab as an excellent learning tool. Seasoned astronomers can make the best use of their observing time by using the program to calculate when astronomical events will occur, and where in the sky they will be found.

## **Required Hardware and Software**

Astronomy Lab requires Microsoft Windows 3.1 or later, 1 megabyte of available memory, and a mouse. Astronomy Lab will use an 8X87 compatible math coprocessor if one is installed. A Windows compatible printer is optional.

## **Automatic Installation**

Uncompress the files on the distribution disk if necessary. Then run the `SETUP.EXE` program from Windows. You can run `SETUP.EXE` as follows: from the Program Manager select File Run (Alt,F,R). In the Command Line field enter the full filename of the `SETUP.EXE` file, for example:  
`A:\SETUP.EXE.`

You can also run `SETUP.EXE` by double-clicking its name with the Windows File Manager.

## **Manual Installation**

If the automatic installation fails, or if you prefer to install Astronomy Lab manually, do the following:

Uncompress the files on the distribution disk if necessary.

Go to the MS-DOS shell.

Create a subdirectory for Astronomy Lab, for example:

```
MKDIR C:\ALW
```

Go into that subdirectory, for example:

```
C:  
CD \ALW
```

Enter the following commands:

```
A:\EXPAND A:\ALW.EX_      ALW.EXE  
A:\EXPAND A:\ALW.HL_      ALW.HLP
```

```
A:\EXPAND A:\CITIES.DA_ CITIES.DAT
A:\EXPAND A:\STARS.DA_ STARS.DAT
```

NOTE: the above commands assume that the program files are on a floppy disk in drive A. If the files are located elsewhere, modify the commands accordingly. For example, if the files were stored in C:\TEMP, the commands would be:

```
C:\TEMP\EXPAND C:\TEMP\ALW.EX_ ALW.EXE
...
C:\TEMP\EXPAND C:\TEMP\STARS.DA_ STARS.DAT
```

Go to the Program Manager and select the File menu and the New item (Alt,F,N). Press the Program Group button and the OK button. Enter *Astronomy Lab* in the Description text box, and *ALW* in the Group File text box. Press the OK button.

Select the File menu and the New item. Press the Program Item button and the OK button. Enter *Astronomy Lab* in the Description text box, and enter the location of the program in the Command Line text box (for example, C:\ALW\ALW.EXE). Press the OK button.

### **Un-Installing Astronomy Lab**

To remove Astronomy Lab from your computer system, delete the subdirectory containing the program (for example, C:\ALW) and all files in that subdirectory. Then delete *ALW.INI* from your Windows directory.

### **On-Line Help**

Astronomy Lab has a comprehensive on-line help system. Press F1 to get on-line help.

To get help on a given menu item (e.g. the Printer Setup item), select the appropriate menu (e.g. Alt,F). Then move to the item by typing the up and down arrow keys. Then press F1 for help on the menu item.

To get help on a given dialog box, simply press F1 when the dialog box is displayed.

You can also get help by selecting an item from the Help menu.

Astronomy Lab has a comprehensive User's Guide available as on-line help. To read the User's Guide, type Alt,H,G.

### **Other Versions of Astronomy Lab**

Windows NT and Win32s versions of Astronomy Lab are available.

### **Distribution and Registration**

Astronomy Lab is shareware, and can be freely distributed provided it is not changed in any way. To register your copy, please send \$15.00 US plus postage and handling to:

Personal MicroCosms  
8547 E. Arapahoe Road

Suite J-147  
Greenwood Village, CO 80112 USA

Postage and Handling:

US and Canada: \$2.50 Overseas: \$10.00 (for airmail delivery)

What you get for registering:

Disk containing the latest version of Astronomy Lab. Please specify disk type: 5 1/4" high density or 3 1/2" high density.

Personal MicroCosms' customer support telephone number.

Notification by mail when future versions of Astronomy Lab are available.

We Accept:

Checks in US funds drawn on a US bank  
Registration on CompuServe ("GO SWREG")  
International Postal Mail Orders  
American Express International Money Orders  
US Cash

**Astronomy Lab is Brought to You By:**

Personal MicroCosms  
8547 E. Arapahoe Road  
Suite J-147  
Greenwood Village, CO 80112 USA