

Read in a FITS file from disk

```
>>> from astropy.io import fits
>>> hdus = fits.open("sample.fits")
```

Access the header of the first HDU:

```
>>> hdus[0].header
SIMPLE      =                               T
BITPIX      =                             -32
NAXIS       =                               3
NAXIS1      =                             200
NAXIS2      =                             200
NAXIS2      =                              10
EXTEND      =                               T
...
```

Access the shape of the data in the first HDU:

```
>>> hdus[0].data.shape
(10, 200, 200)
```

Update/add header keywords

```
>>> hdus[0].header["TELESCOP"] = "Mt Wilson"
>>> hdus[0].header["INSTRUME"] = "Edwin Hubble"
```

Multiply data by 1.2

```
>>> hdus[0].data *= 1.2
```

Write out to disk

```
>>> hdus.writeto("new_file.fits")
```