ISSIAtomicData/phase2_20161006/04_observed/loop

Here we loop over all of the sets of intensities and all of the realizaitons of CHIANTI atomic data. Simply run `fe_13_fit_intensities_loop.pro`, which does the same calculation as `fe_13_fit_intensities.pro` but in a loop. Slow, takes 2708.5s. Outputs for each pixel:

- eis_l1_20130708_002042.fe_density.hist.0217.txt: The output for intensity set (pixel) 217 for all realizations of CHIANTI. n = 0 is the CHIANTI default. For example,

```
    n chianti = 0 <-- CHIANTI default
      n pixel = 217 <--- From the paper (n=1 is the first pixel)
  model log_n = 9.68 +- 0.010 <-- This is the log_n error from least-squares
 model log_ds = 8.67 +- 0.021 <-- This is the log_ds error from least-squares
         chi2 = 154.5
normalized chi2 = 30.9
     Line      Iobs    SigmaI    Imodel      dI/I  dI/Sigma
  196.525    1473.1      18.8    1473.8       0.0       0.0
  200.021    1521.4      29.1    1749.9      15.0       7.9
  201.121    2373.2      44.4    1987.0      16.3       8.7
  202.044    2866.5      53.6    2989.1       4.3       2.3
  203.165     775.2      42.5     767.5       1.0       0.2
  203.826    9237.6     142.6    8751.2       5.3       3.4
  209.916     530.2      56.4     516.2       2.6       0.2
```

- eis_l1_20130708_002042.fe_density.hist.0217.jpg: A plot of the density and path length histograms. For example:

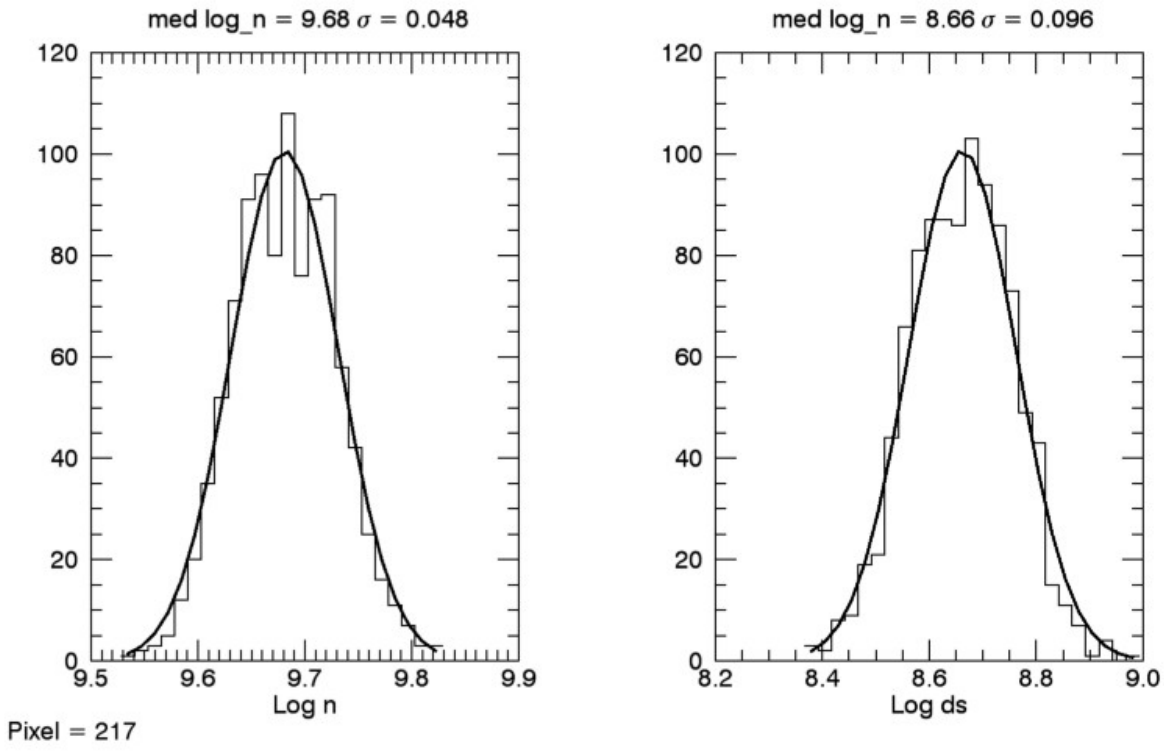

Figure 1: Distributions of density and path length.

- eis_l1_20130708_002042.fe_density.hist.0217.h5: The actual histograms and other relevant data

```
dataset    /fit_log_ds <-- Gaussian fit parameters for log_ds distribution
dataset    /fit_log_n <-- Gaussian fit parameters for log_n distribution
dataset    /fits <-- Array of all fit parameters
dataset    /hist_log_ds <-- Histogram of log_ds distribution
dataset    /hist_log_n <-- Histogram of log_n distribution
dataset    /med_log_ds <-- Median log_ds
dataset    /med_log_n <-- Median log_n
dataset    /std_log_ds <-- Standard deviation of log_ds
dataset    /std_log_n <-- Standard deviation of log_n
dataset    /xhist_log_ds <-- Locations for log_ds histogram
dataset    /xhist_log_n <-- Locations for log_n histogram
```