

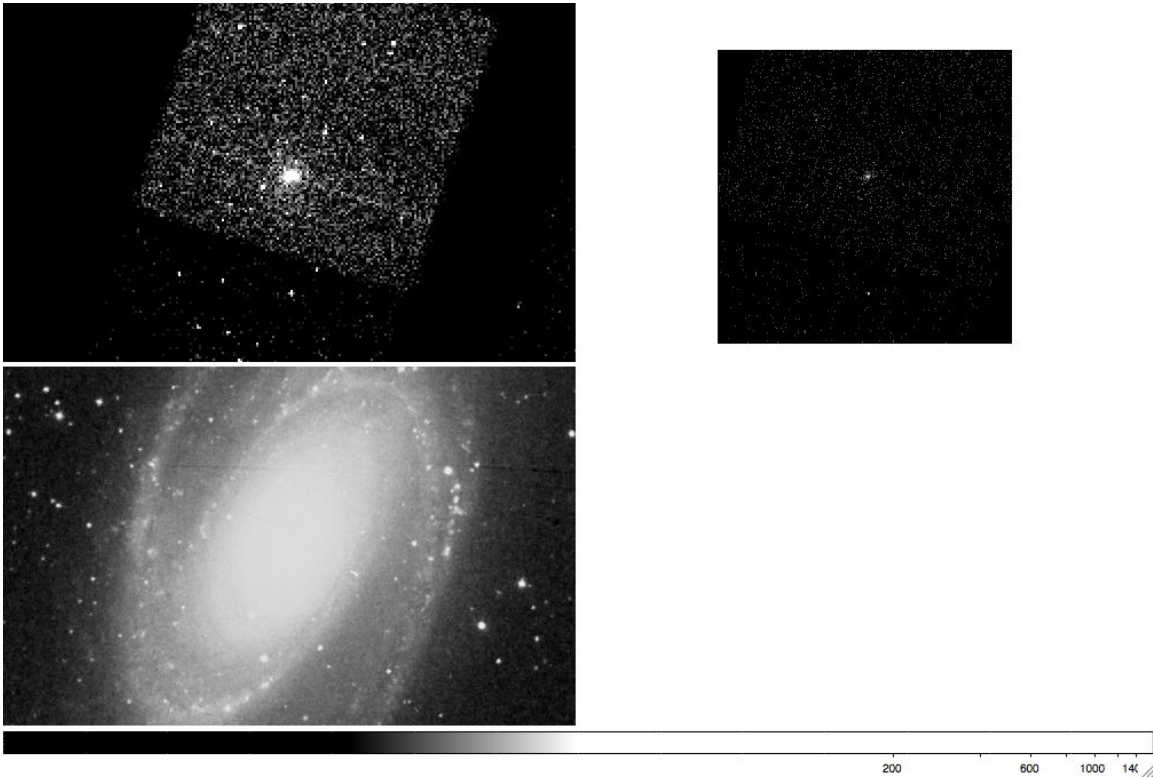
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Chandra Astrophysics Institute  
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## M81: Fit observation of spectrum to a BLACKBODY model

ObsID 5943

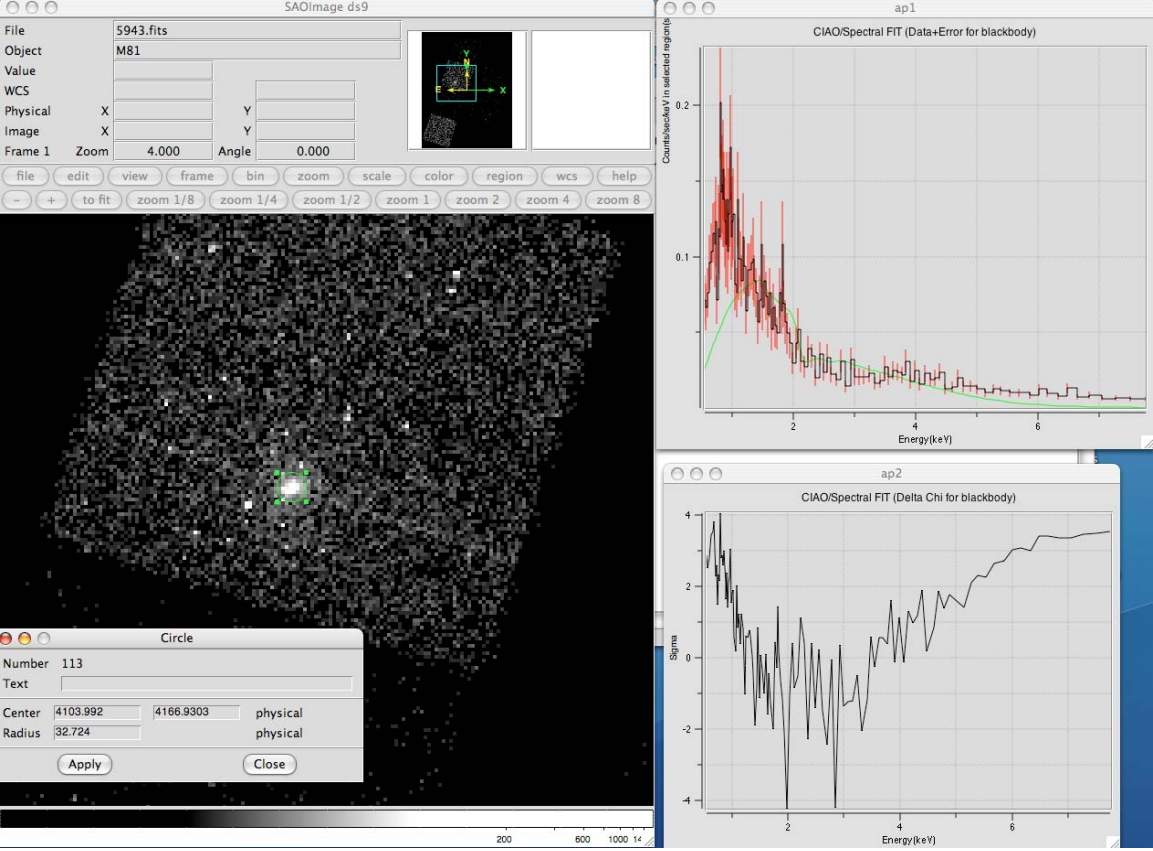


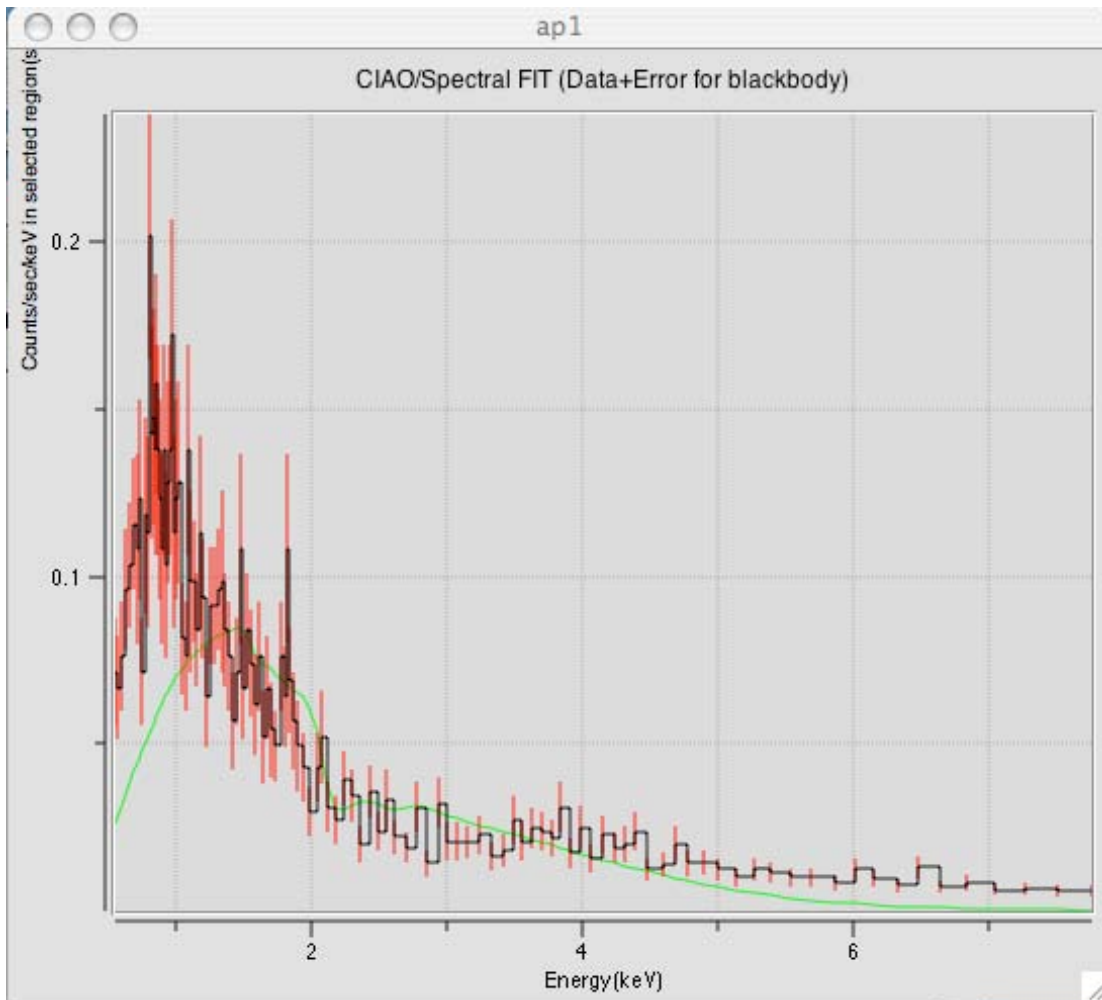
Upper left: Chandra bin 8

Upper right: Chandra bin 1

Lower left: DSS image, WCS matched frames.

**Blackbody fit:**





\*\*\*\*\* SHERPA FIT RESULTS \*\*\*\*\*

Input File: /data/archive/5943/5943.fits  
 Model: blackbody  
 Energy: :0.5,8:  
 Region:  
 circle(4103.992,4166.9303,32.72399)

Temperature = 0.895781 keV

Fit performed using absorbtion model multiplied by selected model.  
 The first two lines below indicate the predicted flux we receive at Chandra  
 (i.e. what came through the absorbing dust).  
 The second two lines below indicate the predicted flux from selected model  
 if there was no absorbing dust in the way.  
 If the model choice is valid, this flux can be used to predict the intrinsic  
 luminosity of the object.

Flux for source dataset 1: 1.57532e-12 ergs/cm\*\*2/s  
 Flux for source dataset 1: 0.000402221 photons/cm\*\*2/s  
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 Flux for source dataset 1: 0.000402221 photons/cm\*\*2/s

Statistic value = 448.852  
Probability [Q-value] = 5.82001e-41  
Reduced statistic = 3.90306

\*\*\*\*\*  
\*\*\*\*\* SHERPA LOG \*\*\*\*\*  
\*\*\*\*\*

Abundances set to Anders & Grevesse  
Model parameter prompting is off  
The inferred file type is PHA. If this is not what you want, please  
specify the type explicitly in the data command.  
The inferred file type is ARF. If this is not what you want, please  
specify the type explicitly in the data command.  
LVMQT: V2.0  
LVMQT: initial statistic value = 1770.43  
LVMQT: final statistic value = 448.852 at iteration 166  
a1.nH 1e-07 10<sup>22</sup>/cm<sup>2</sup>  
x1.kT 0.895781 keV  
x1.ampl 0.00023573

WARNING:

The value of a1.nH is equal to the a1.nH.min limit boundary.  
You may wish to consider changing min/max values and refitting.

Flux for source dataset 1: 1.57532e-12 ergs/cm<sup>2</sup>/s  
Flux for source dataset 1: 0.000402221 photons/cm<sup>2</sup>/s  
Flux for source dataset 1: 1.57532e-12 ergs/cm<sup>2</sup>/s  
Flux for source dataset 1: 0.000402221 photons/cm<sup>2</sup>/s  
Goodness: computed with Chi-Squared Gehrels

DataSet 1: 118 data points -- 115 degrees of freedom.  
Statistic value = 448.852  
Probability [Q-value] = 5.82001e-41  
Reduced statistic = 3.90306