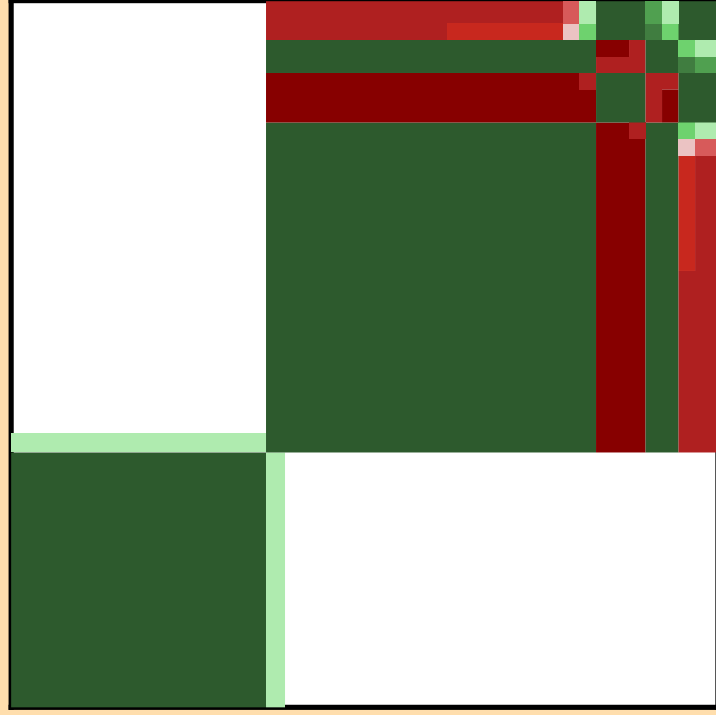
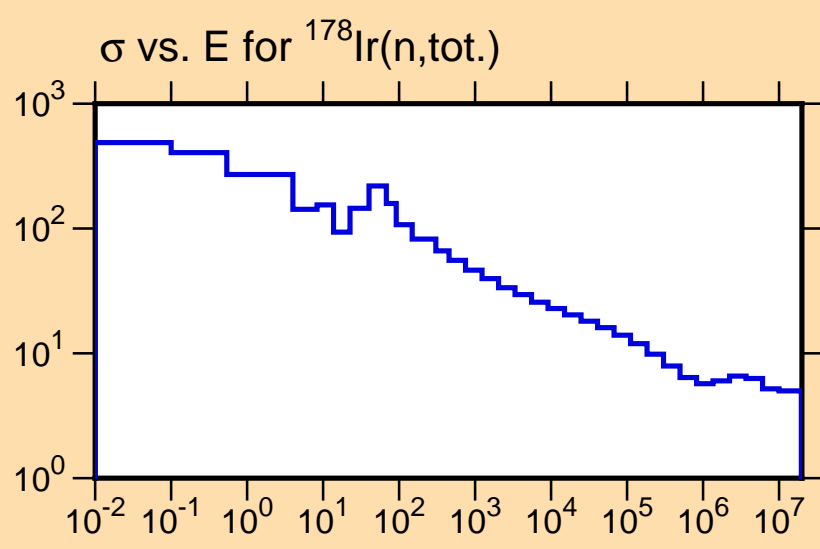


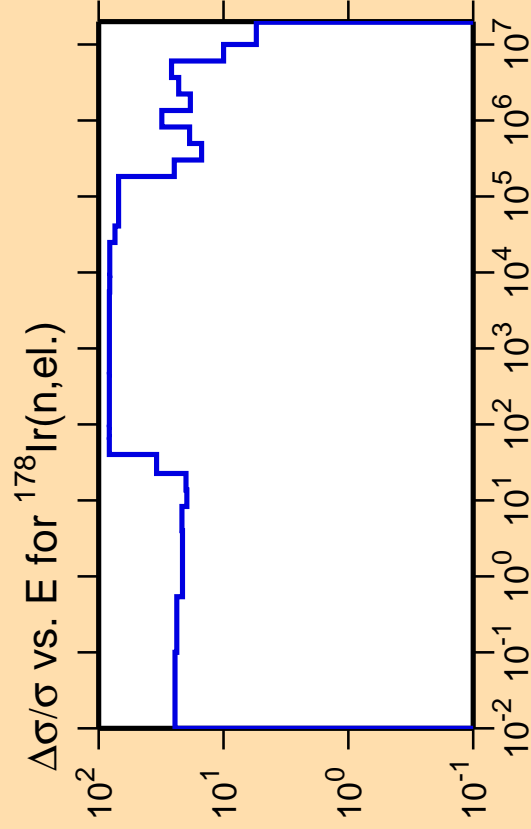
Ordinate scales are % relative standard deviation and barns.

Abscissa scales are energy (eV).



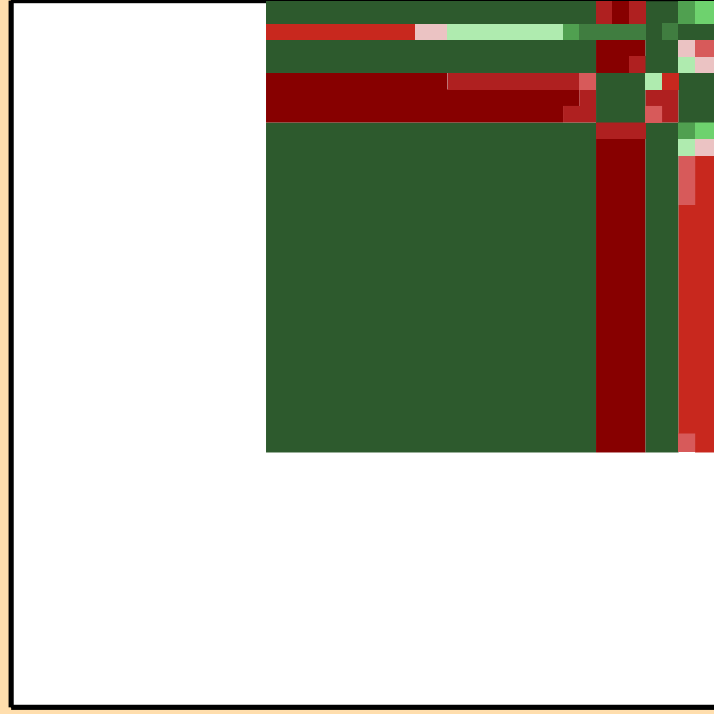
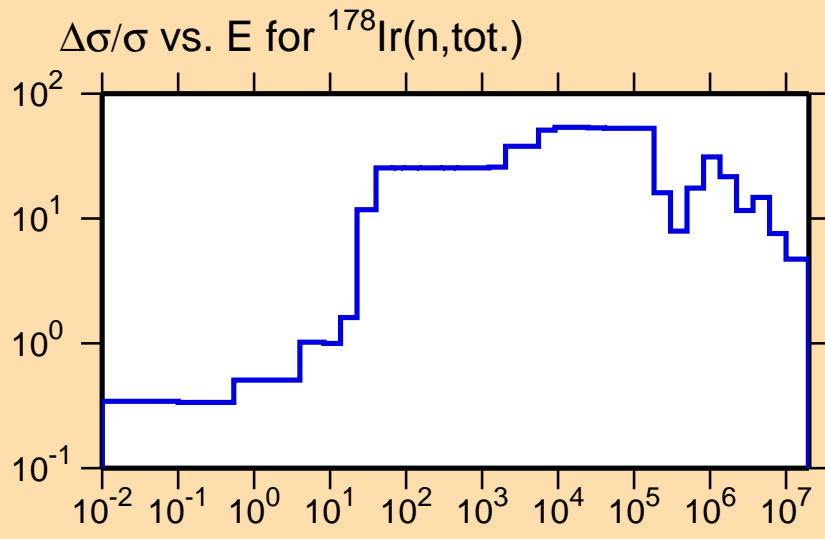
Correlation Matrix





Ordinate scale is %  
relative standard deviation.

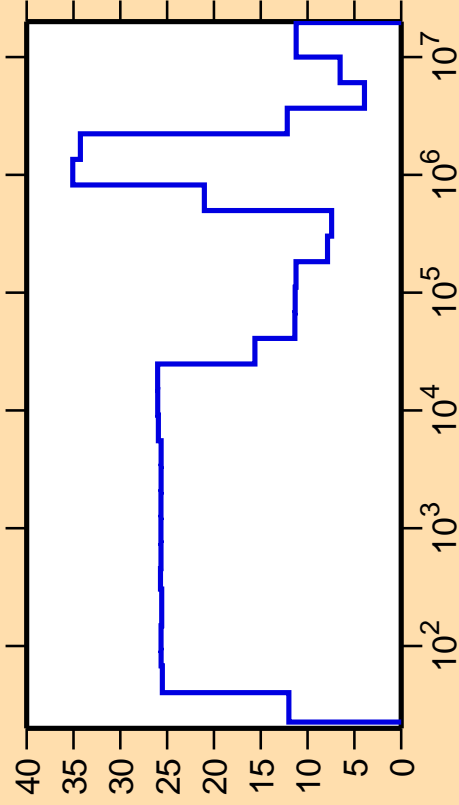
Abscissa scales are energy (eV).



Correlation Matrix



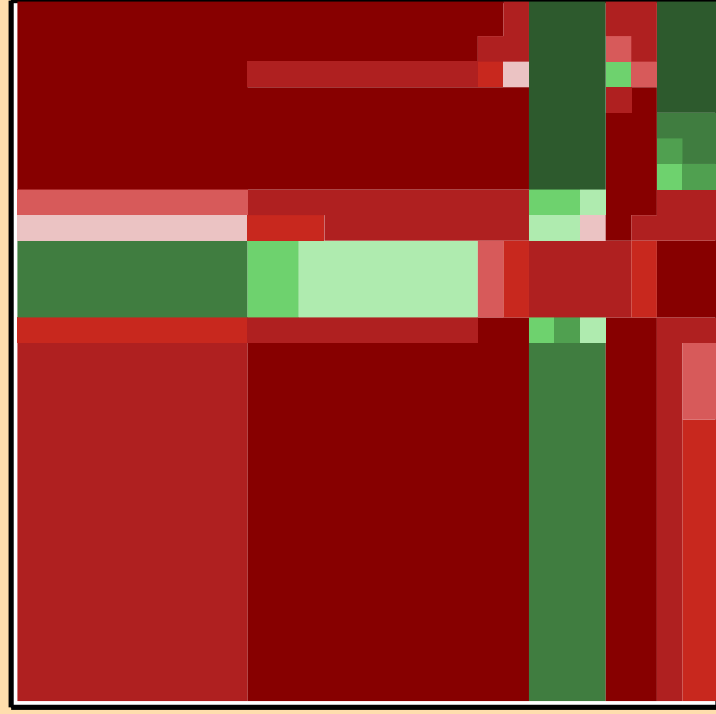
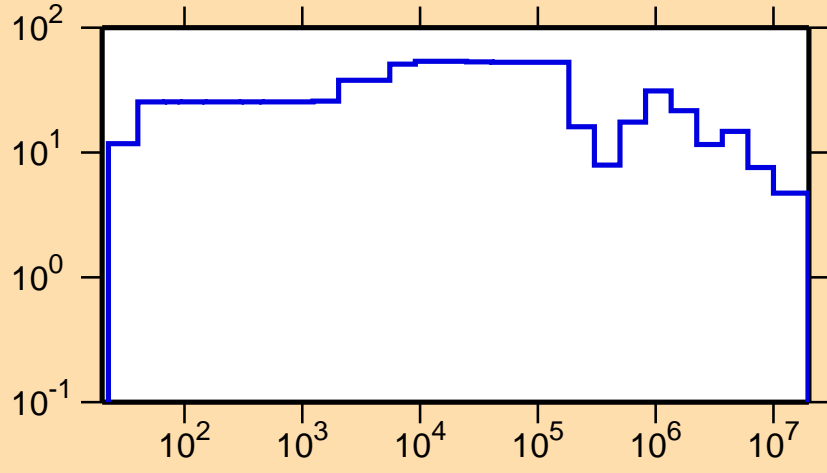
$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,\text{nonel.})$



Ordinate scale is %  
relative standard deviation.

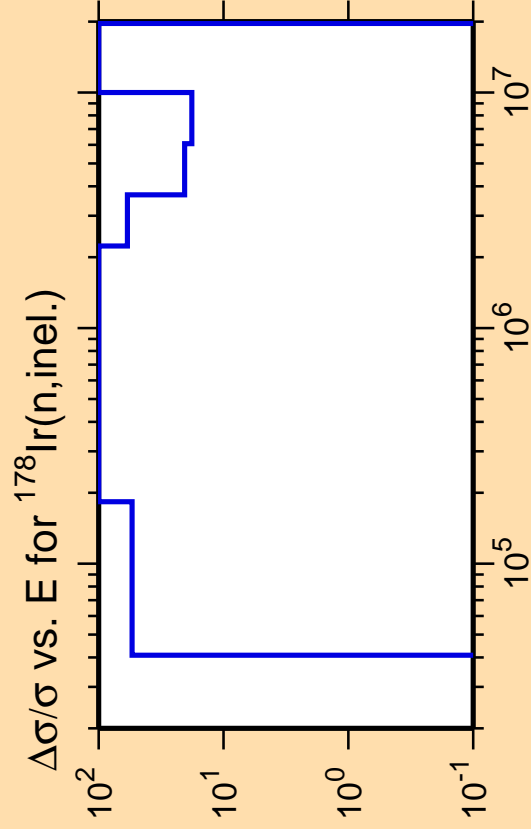
Abscissa scales are energy (eV).

$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,\text{tot.})$



Correlation Matrix

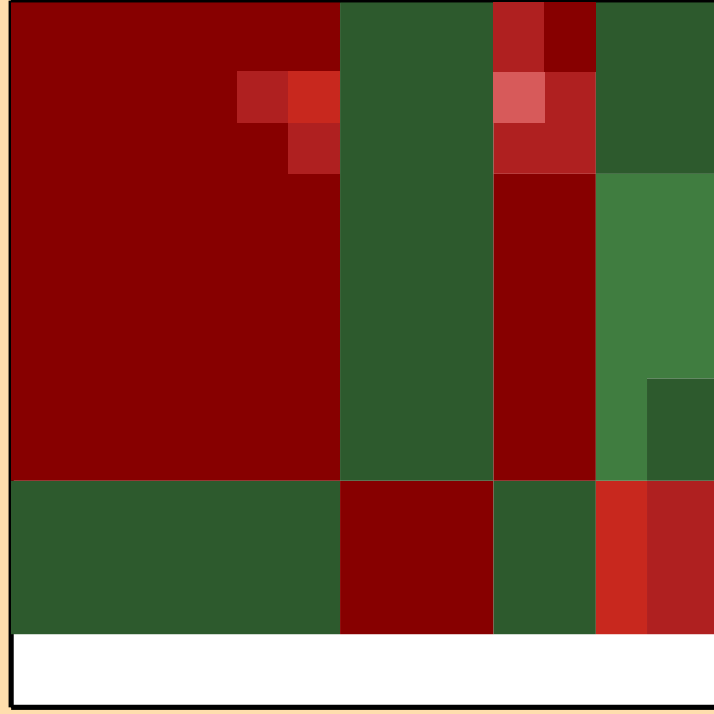
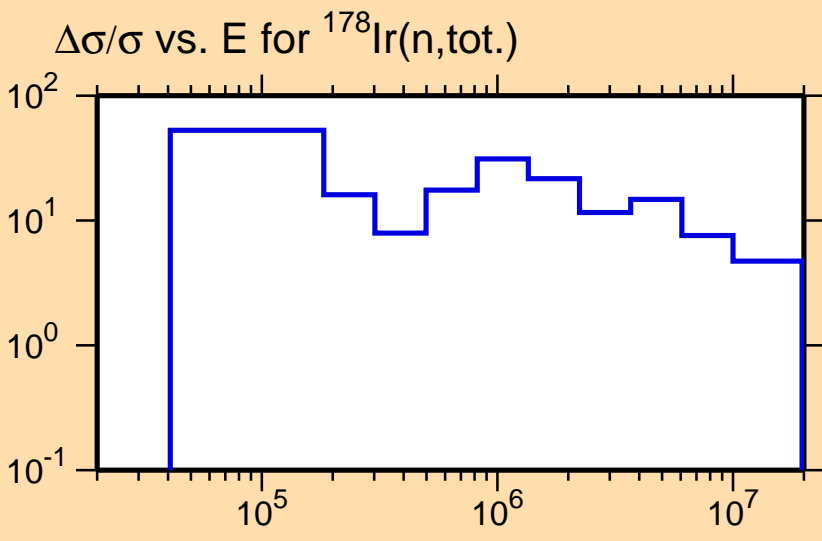




Ordinate scale is %  
relative standard deviation.

Abscissa scales are energy (eV).

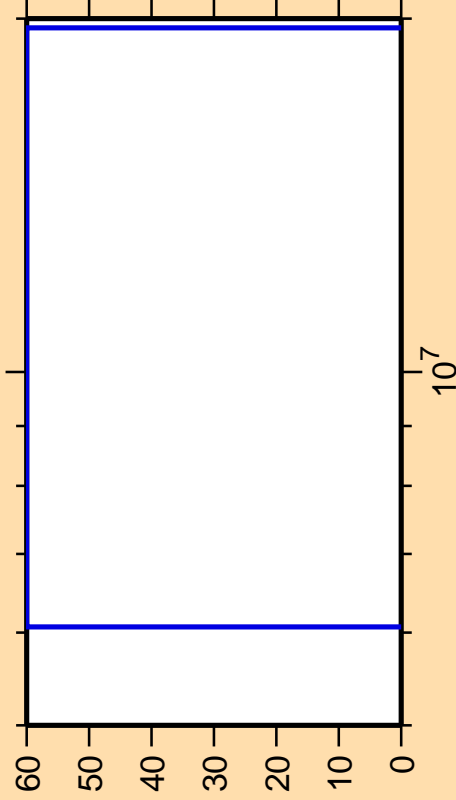
Warning: some uncertainty  
data were suppressed.



Correlation Matrix



$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,2n)$

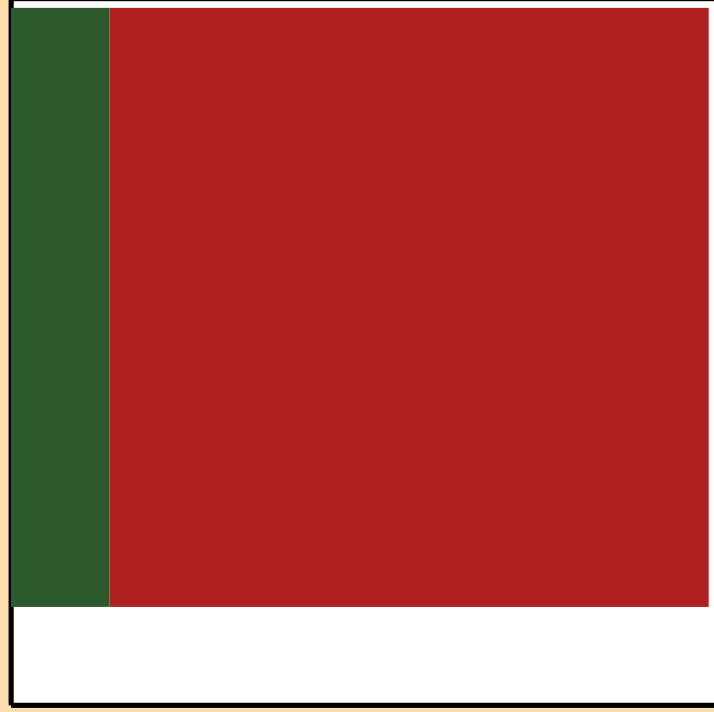
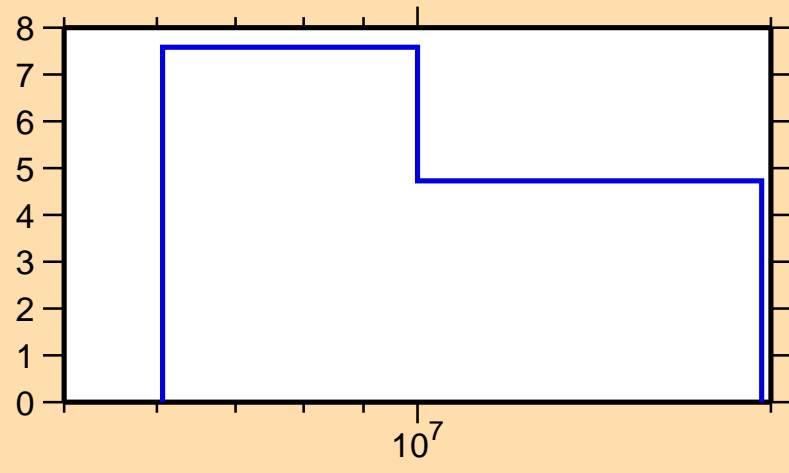


Ordinate scale is %  
relative standard deviation.

Abscissa scales are energy (eV).

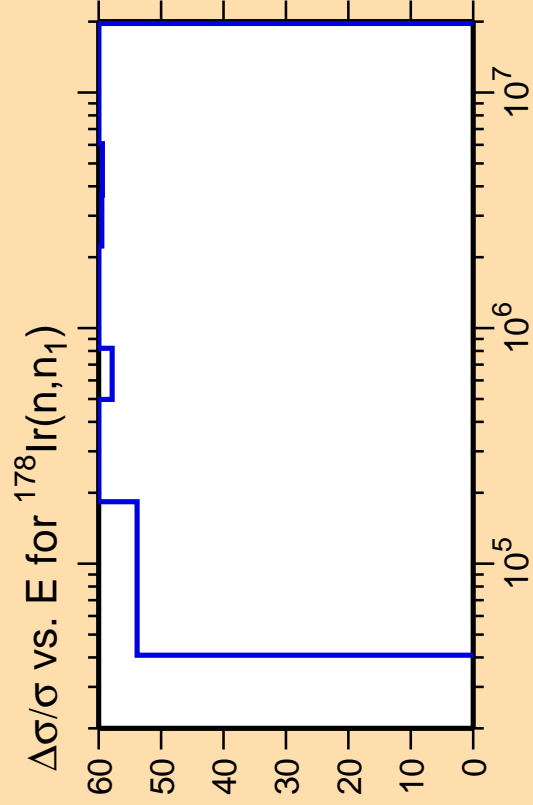
Warning: some uncertainty  
data were suppressed.

$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,\text{tot.})$



Correlation Matrix

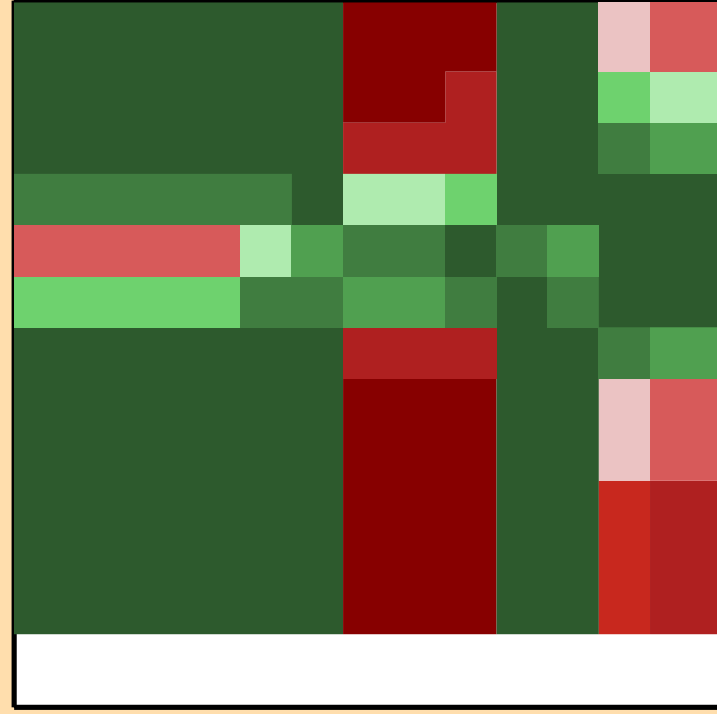
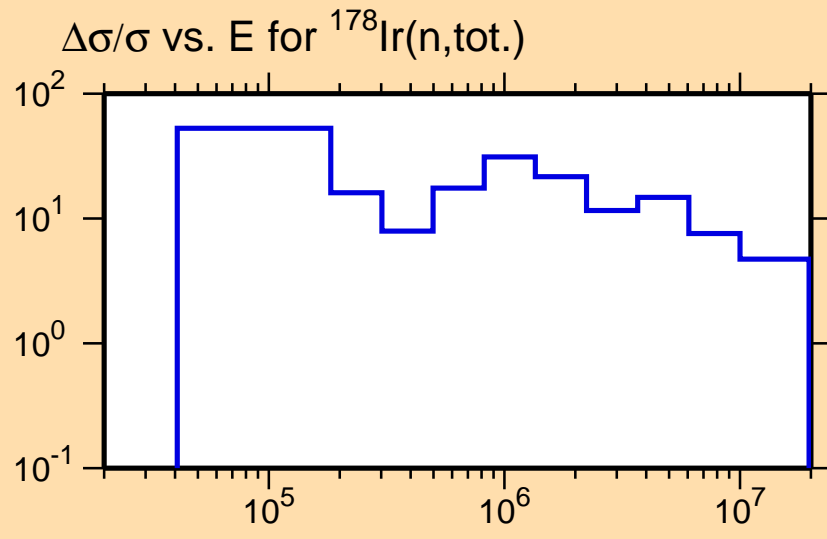




Ordinate scale is %  
relative standard deviation.

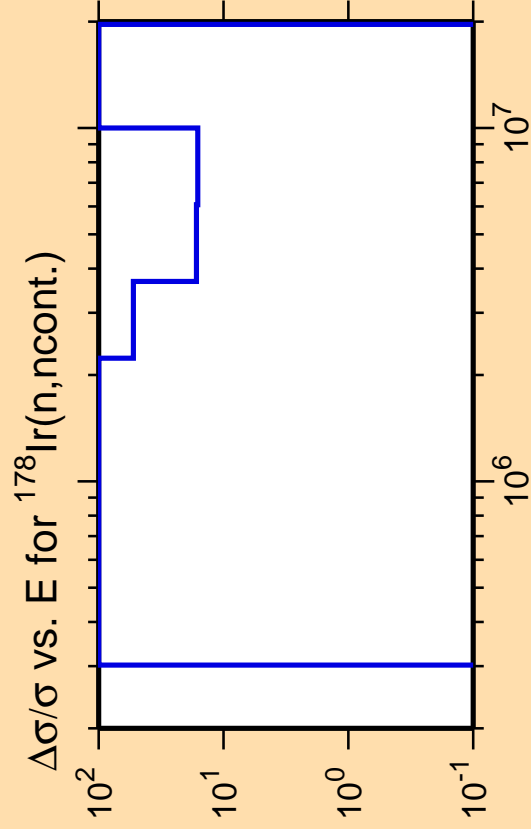
Abscissa scales are energy (eV).

Warning: some uncertainty  
data were suppressed.



Correlation Matrix



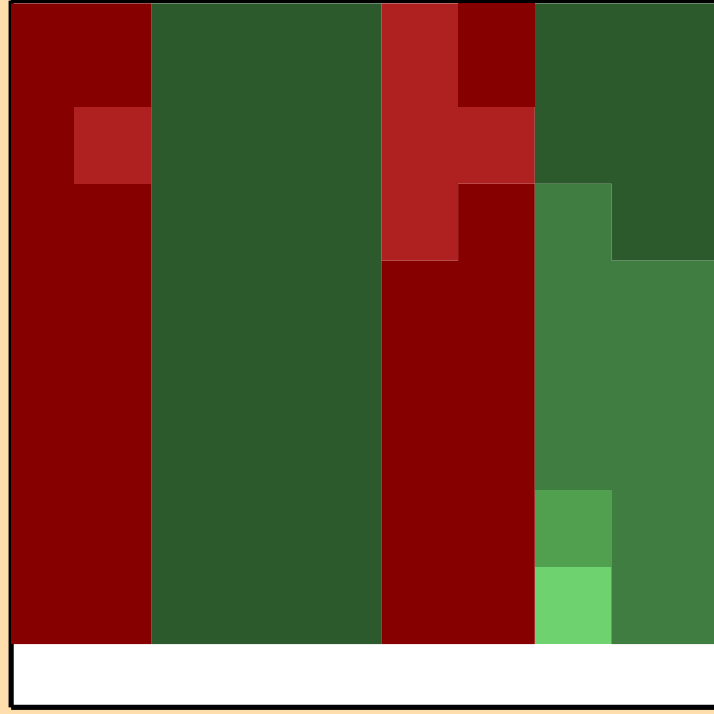
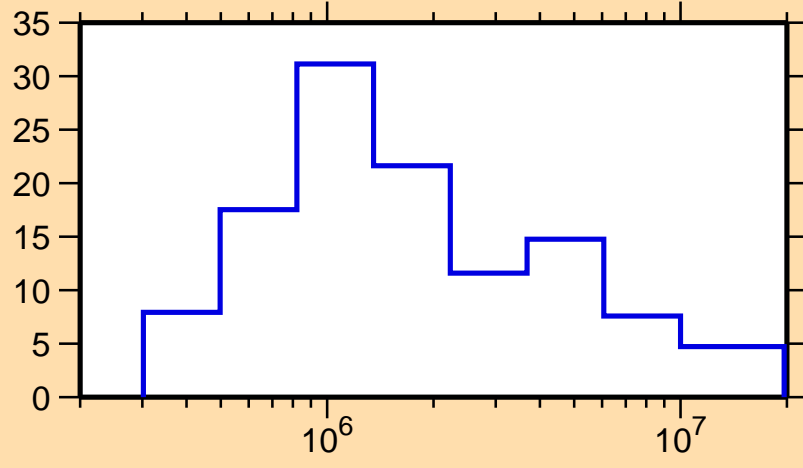


Ordinate scale is %  
relative standard deviation.

Abscissa scales are energy (eV).

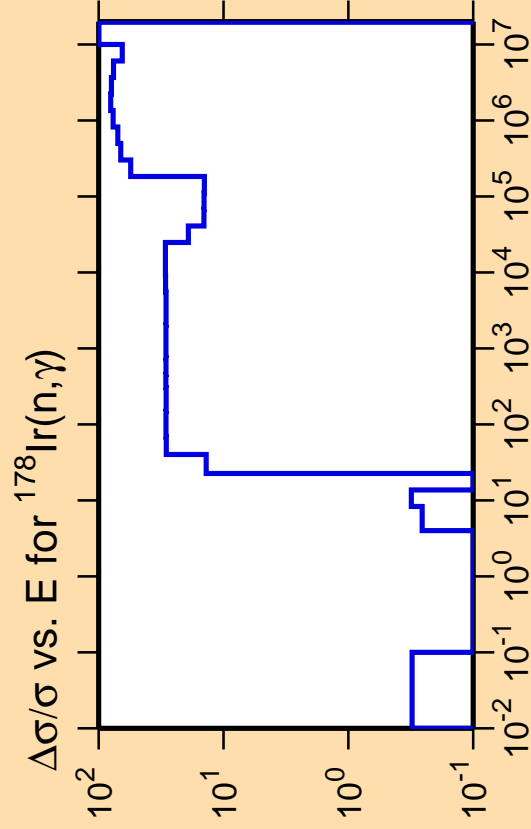
Warning: some uncertainty  
data were suppressed.

$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,\text{tot.})$



Correlation Matrix



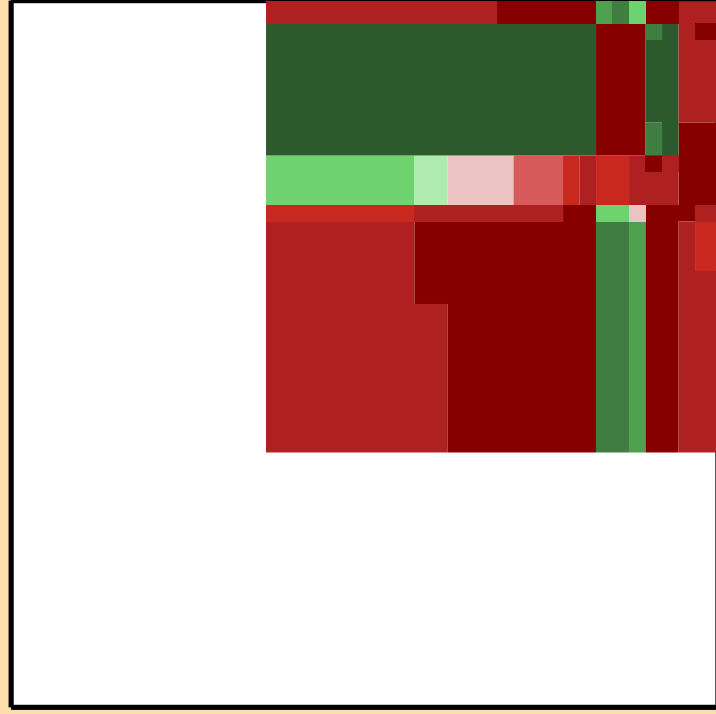
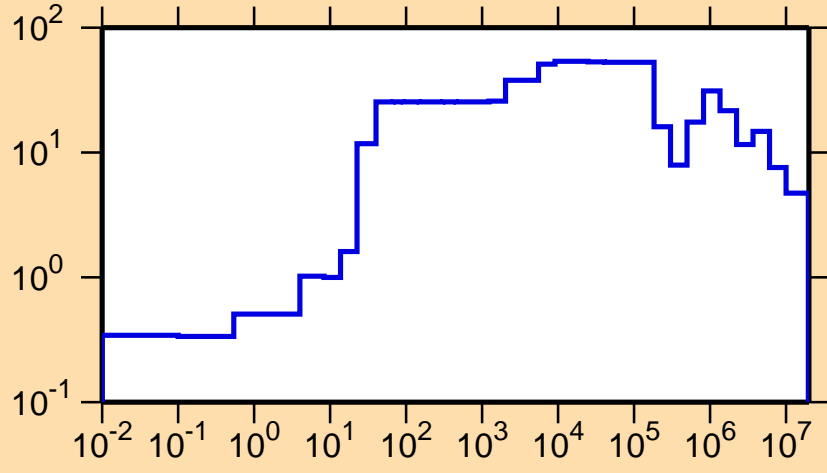


Ordinate scale is %  
relative standard deviation.

Abscissa scales are energy (eV).

Warning: some uncertainty  
data were suppressed.

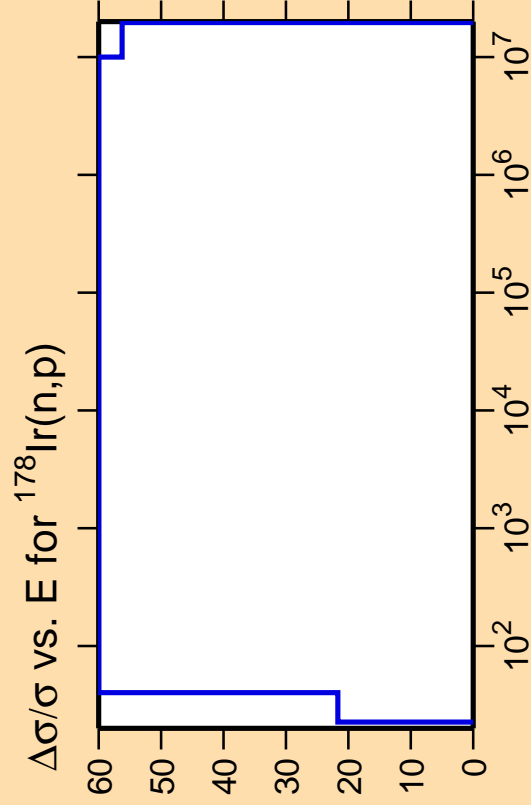
$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,\text{tot.})$



Correlation Matrix





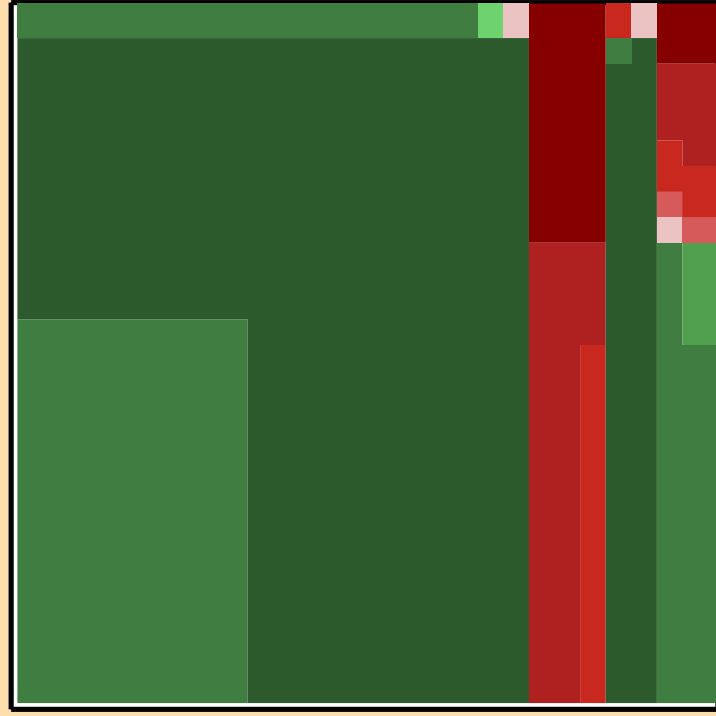
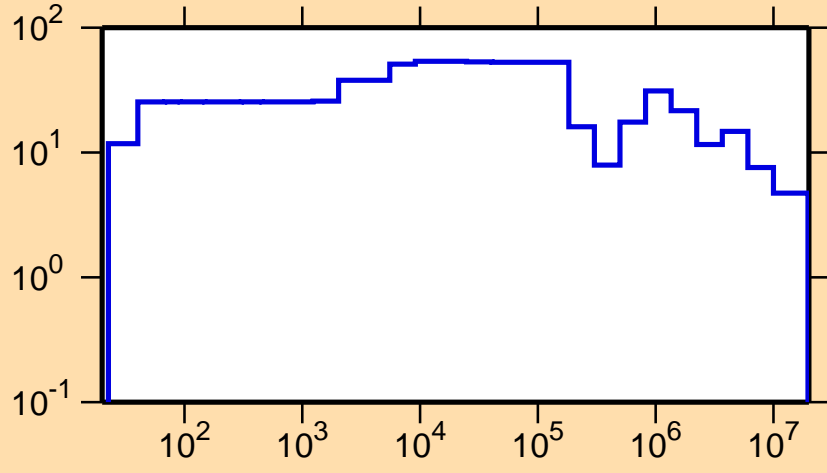


Ordinate scale is %  
relative standard deviation.

Abscissa scales are energy (eV).

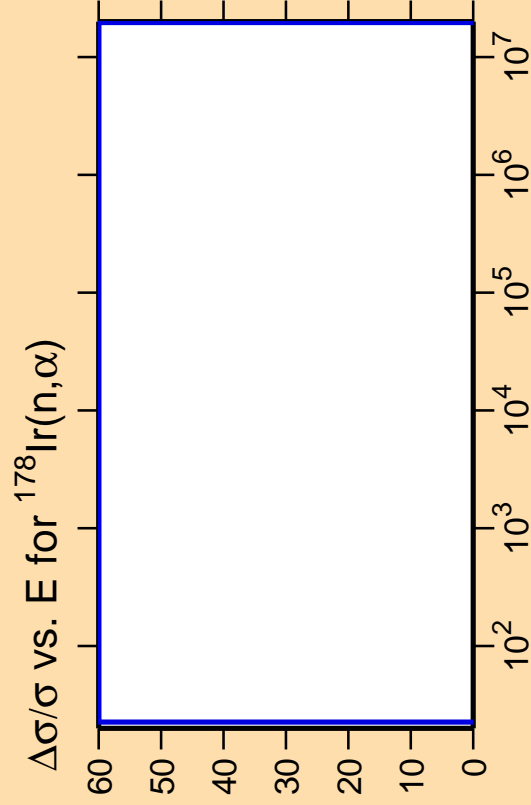
Warning: some uncertainty  
data were suppressed.

$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,\text{tot.})$



Correlation Matrix



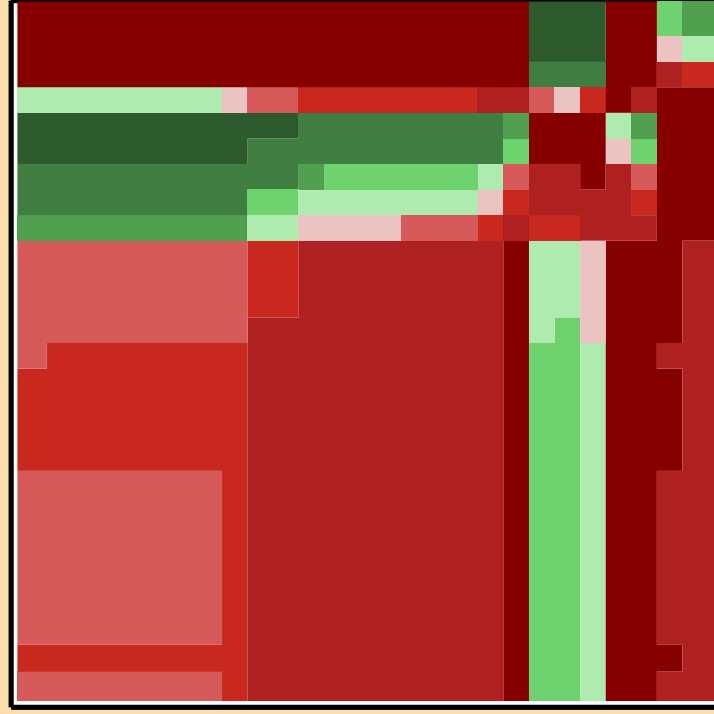
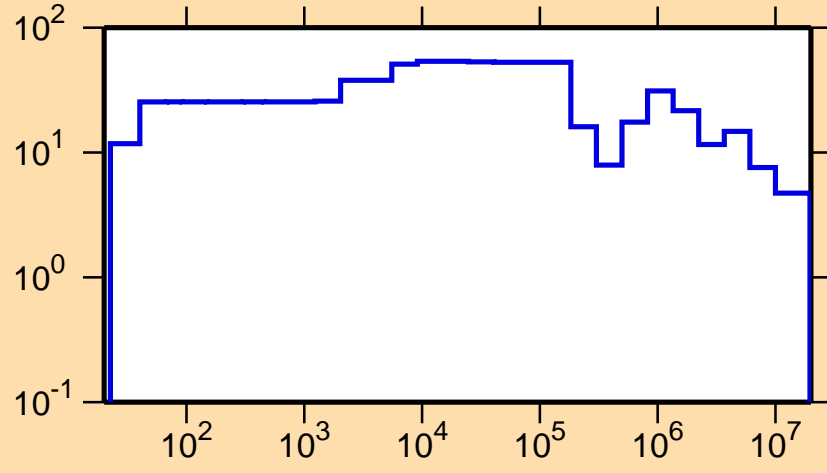


Ordinate scale is %  
relative standard deviation.

Abscissa scales are energy (eV).

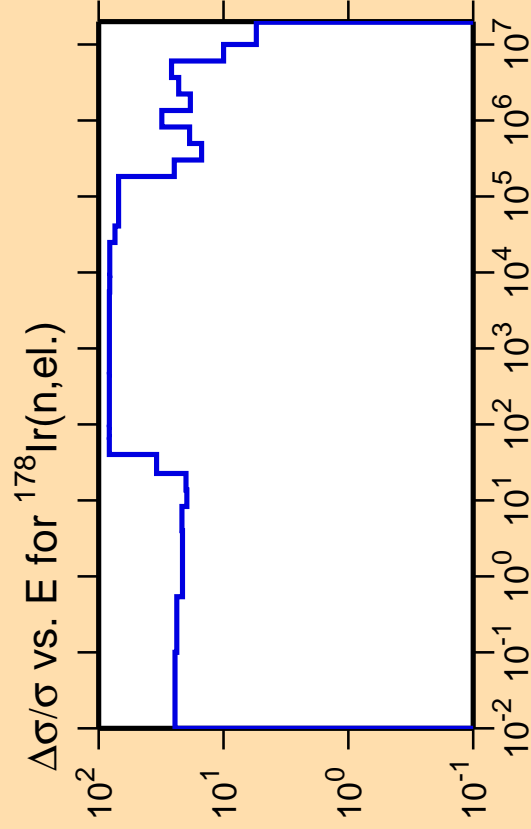
Warning: some uncertainty  
data were suppressed.

$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,\text{tot.})$



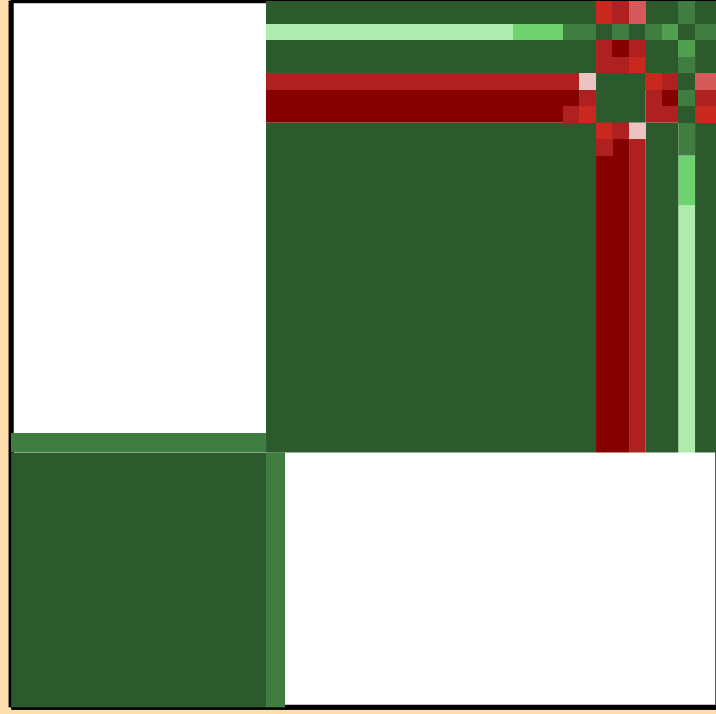
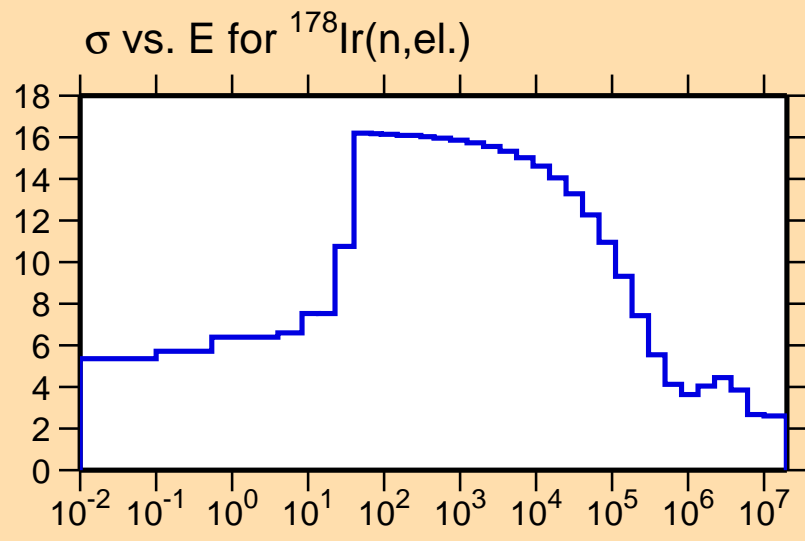
Correlation Matrix





Ordinate scales are % relative standard deviation and barns.

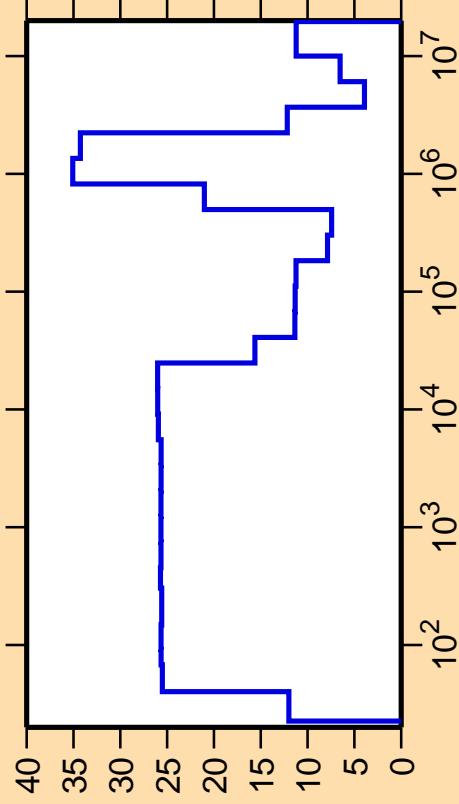
Abscissa scales are energy (eV).



Correlation Matrix



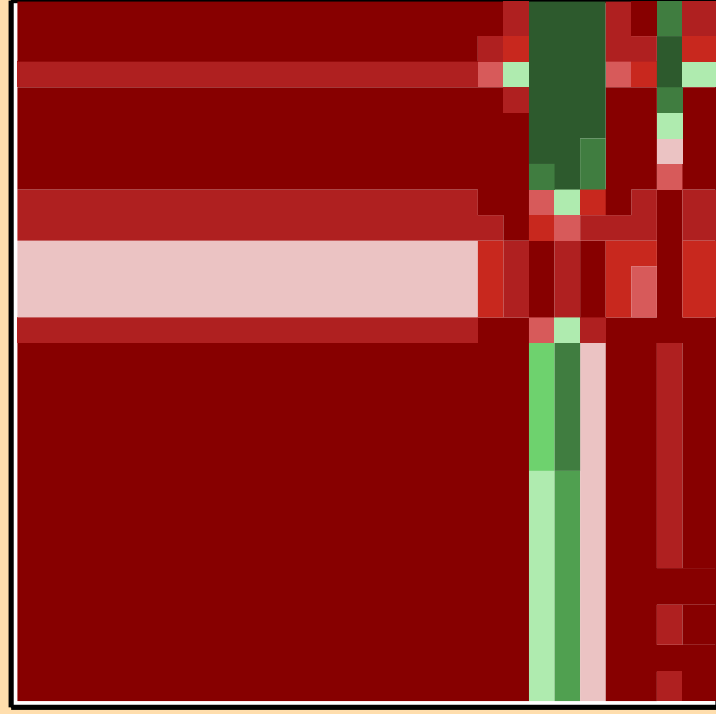
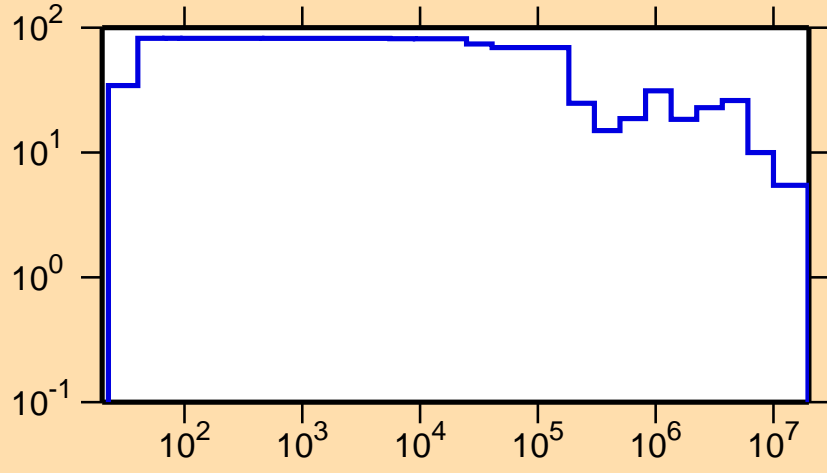
$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,\text{nonel.})$



Ordinate scale is %  
relative standard deviation.

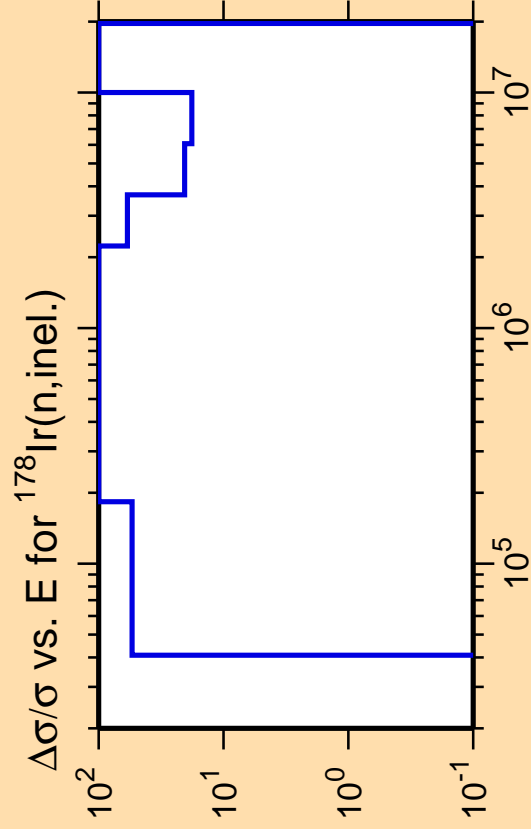
Abscissa scales are energy (eV).

$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,\text{el.})$



Correlation Matrix



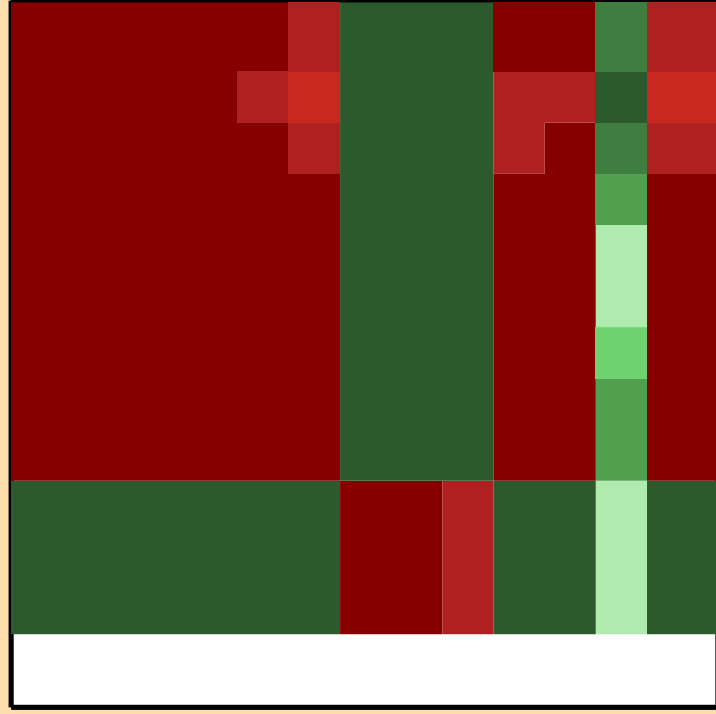
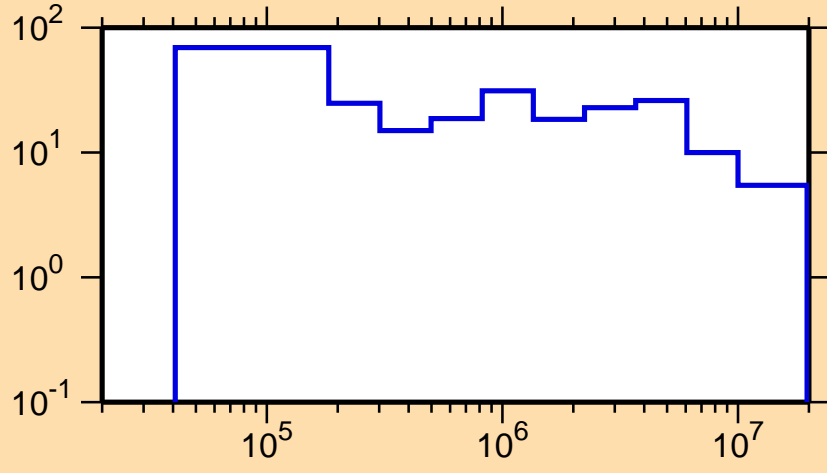


Ordinate scale is %  
relative standard deviation.

Abscissa scales are energy (eV).

Warning: some uncertainty  
data were suppressed.

$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,\text{el.})$



Correlation Matrix



$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,2n)$

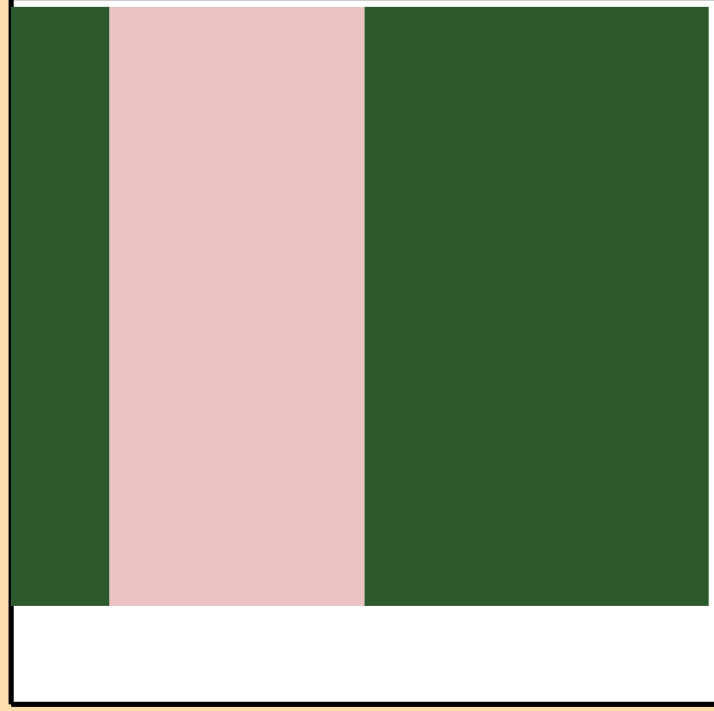
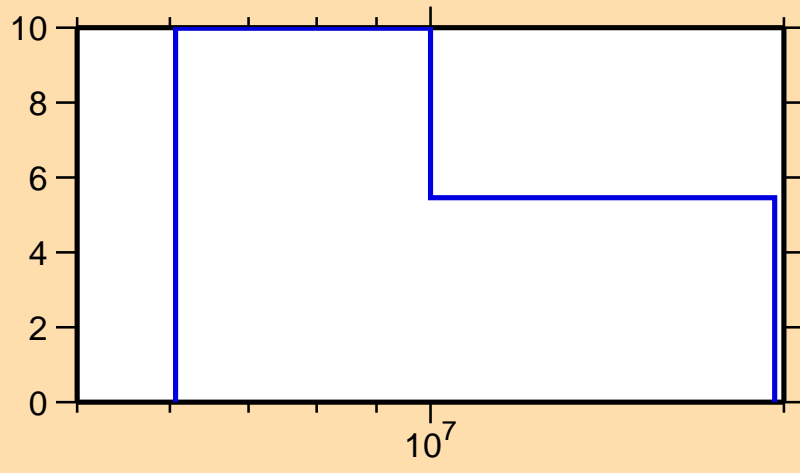


Ordinate scale is %  
relative standard deviation.

Abscissa scales are energy (eV).

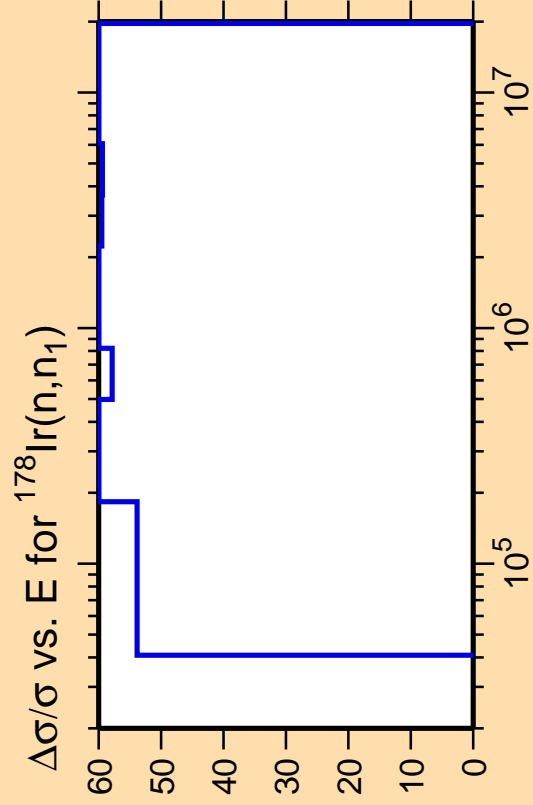
Warning: some uncertainty  
data were suppressed.

$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,\text{el.})$



Correlation Matrix

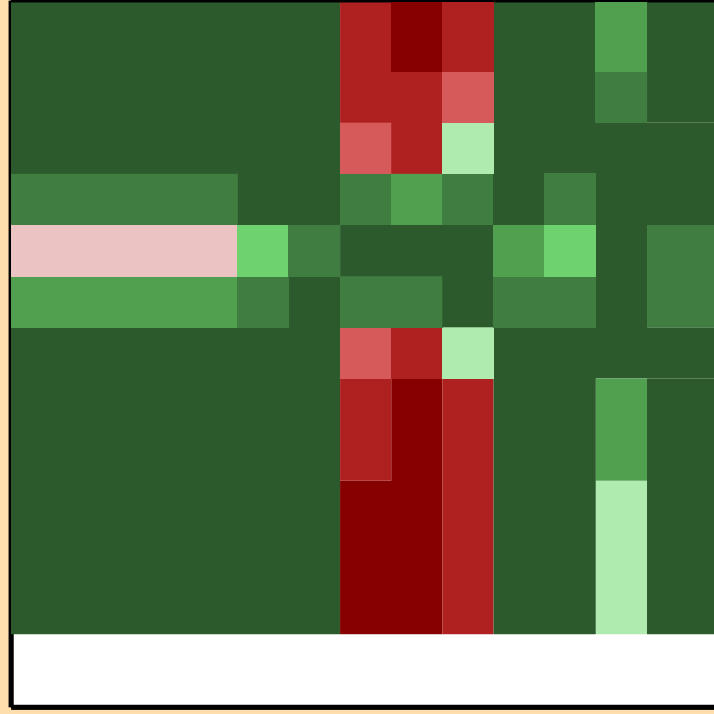
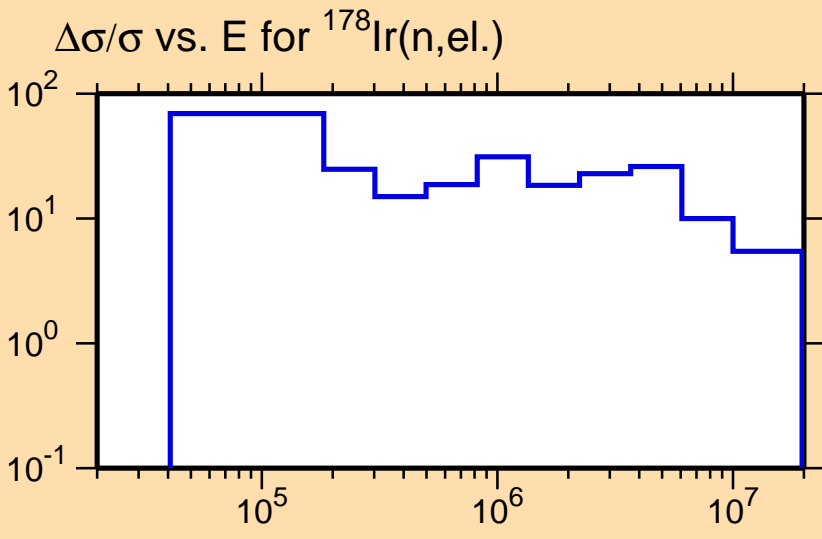




Ordinate scale is %  
relative standard deviation.

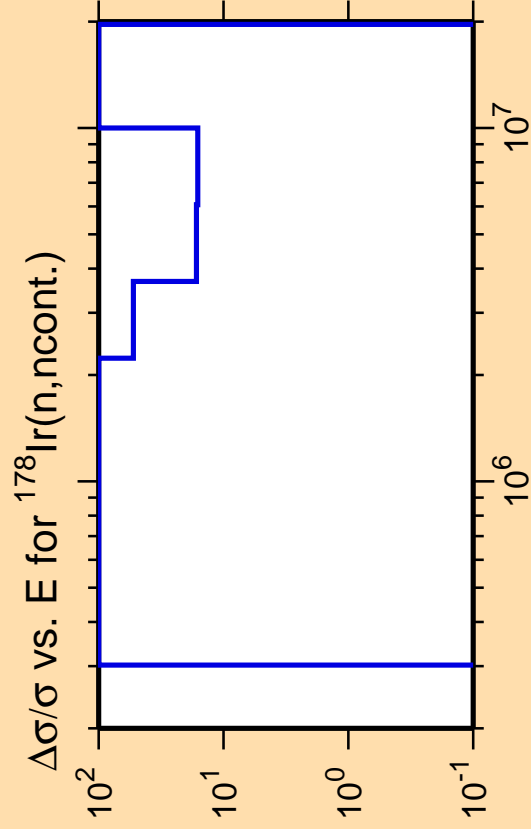
Abscissa scales are energy (eV).

Warning: some uncertainty  
data were suppressed.



Correlation Matrix



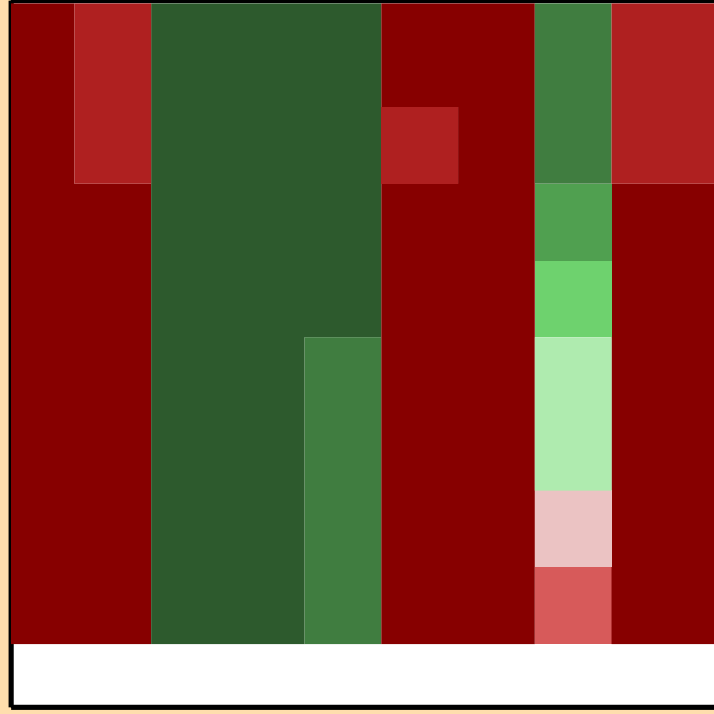
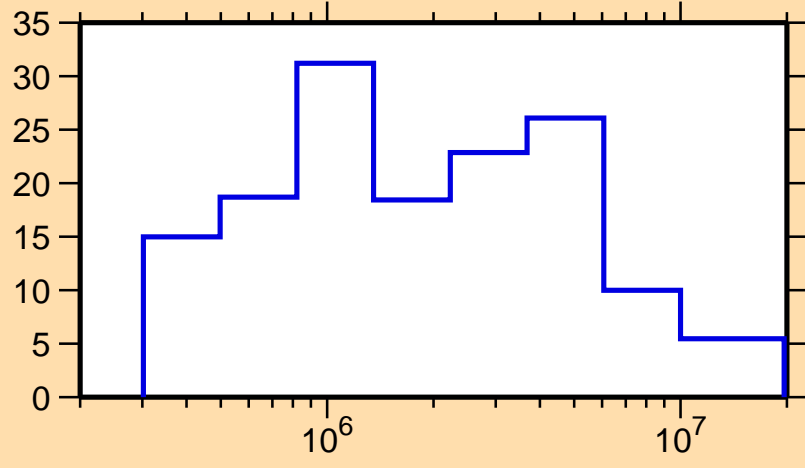


Ordinate scale is %  
relative standard deviation.

Abscissa scales are energy (eV).

Warning: some uncertainty  
data were suppressed.

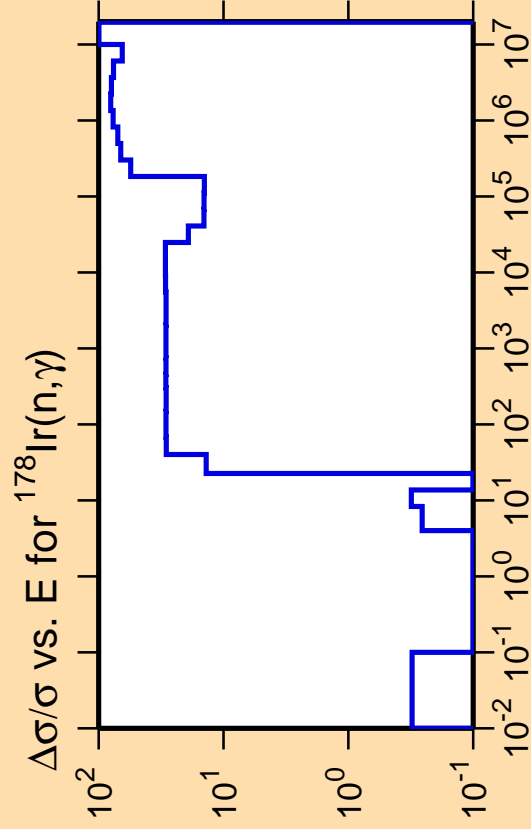
$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,\text{el.})$



Correlation Matrix





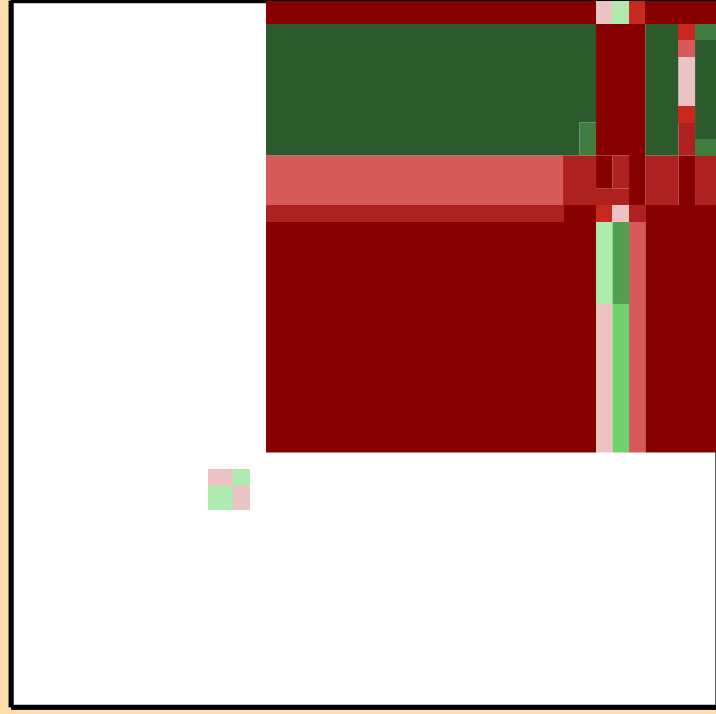
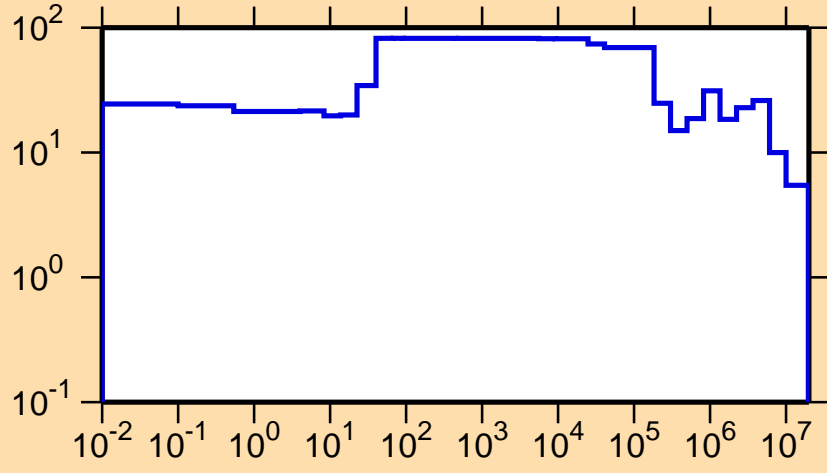


Ordinate scale is %  
relative standard deviation.

Abscissa scales are energy (eV).

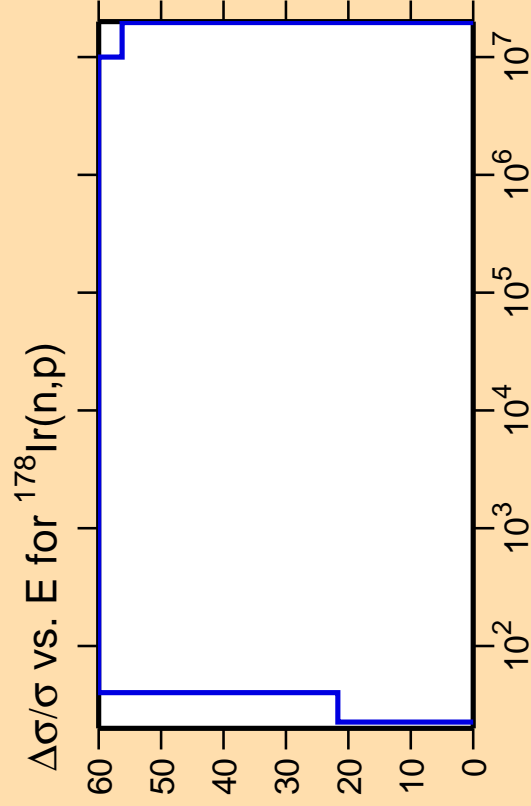
Warning: some uncertainty  
data were suppressed.

$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,\text{el.})$



Correlation Matrix

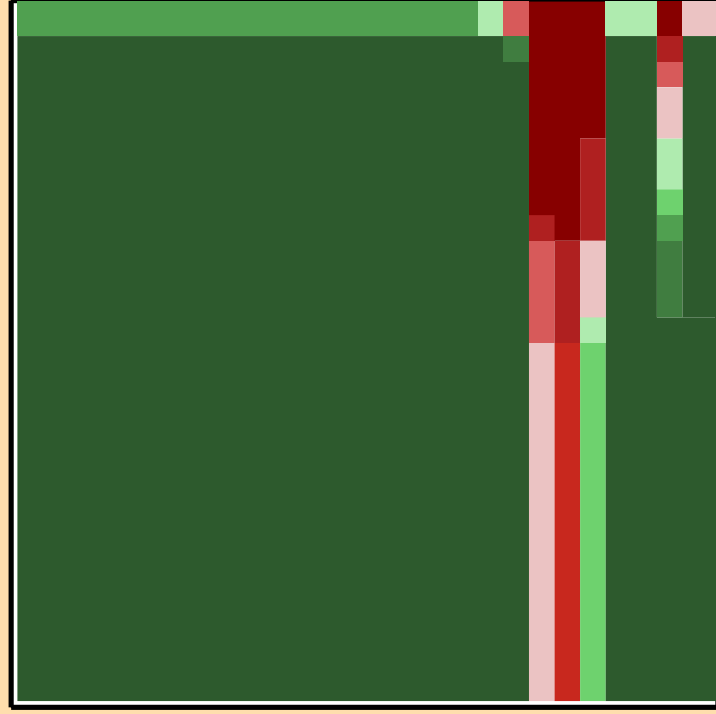
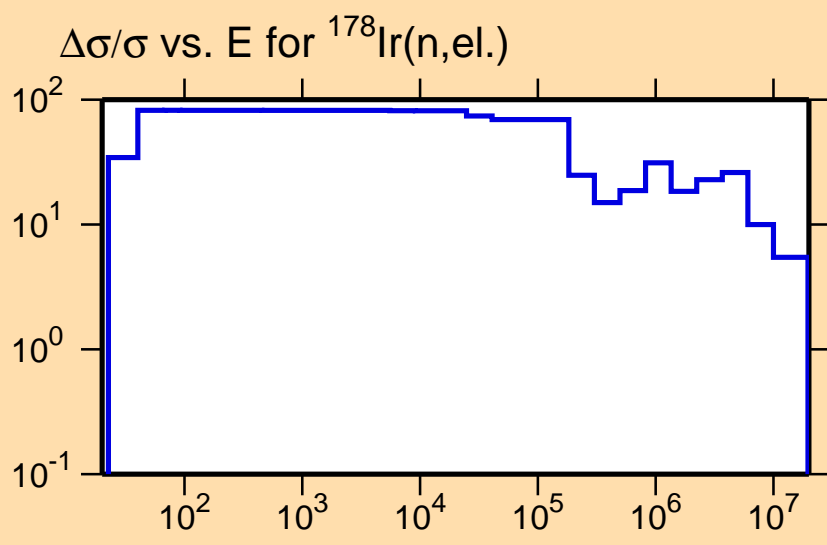




Ordinate scale is %  
relative standard deviation.

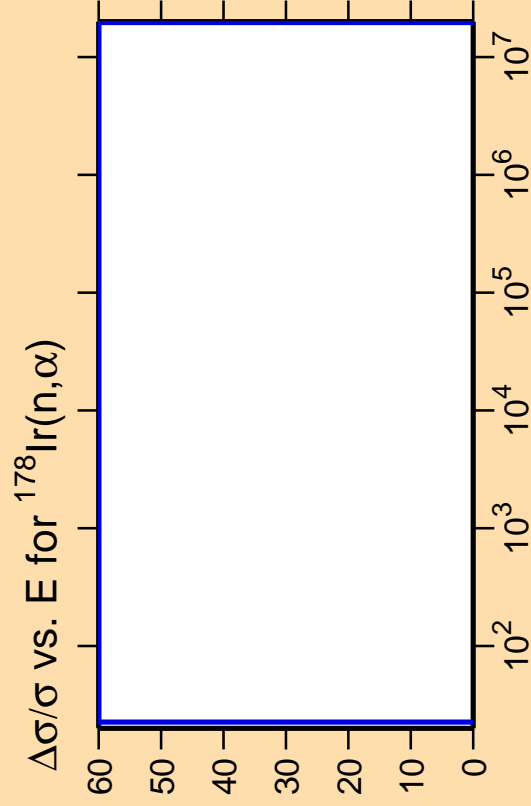
Abscissa scales are energy (eV).

Warning: some uncertainty  
data were suppressed.



Correlation Matrix



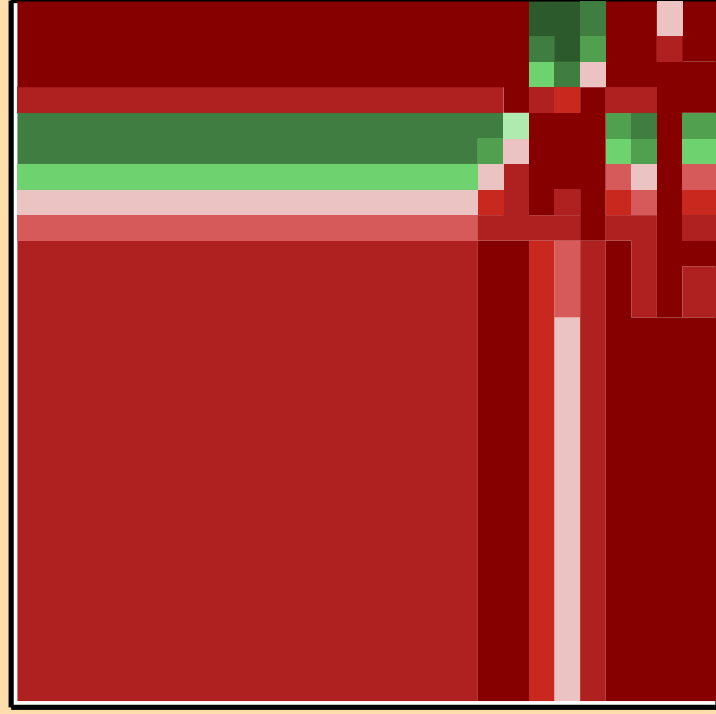
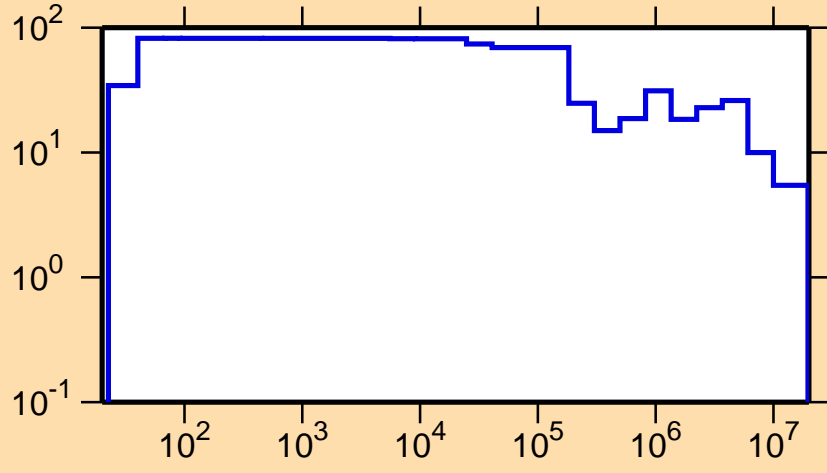


Ordinate scale is %  
relative standard deviation.

Abscissa scales are energy (eV).

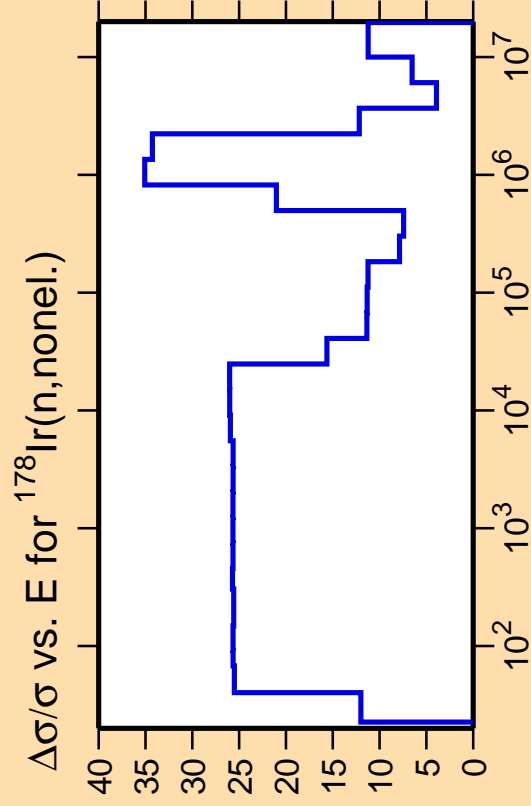
Warning: some uncertainty  
data were suppressed.

$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,\text{el.})$



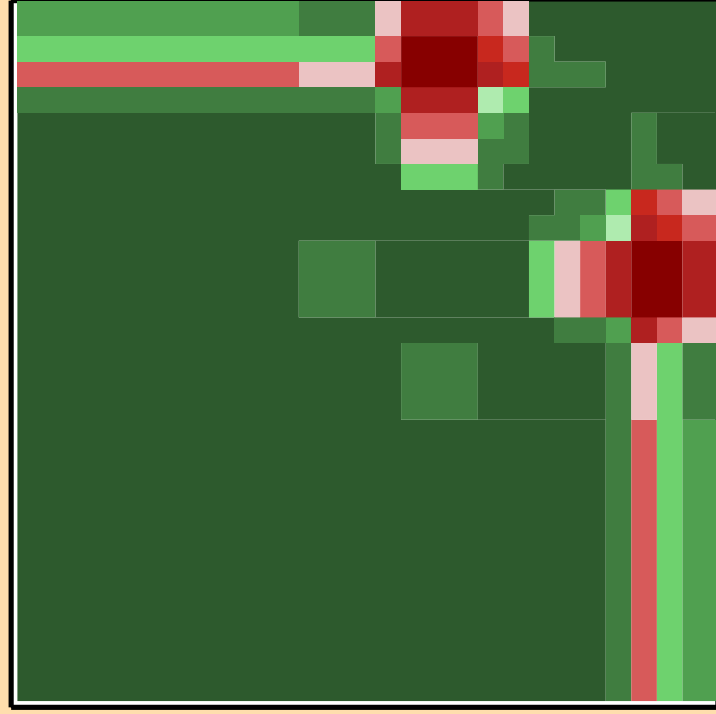
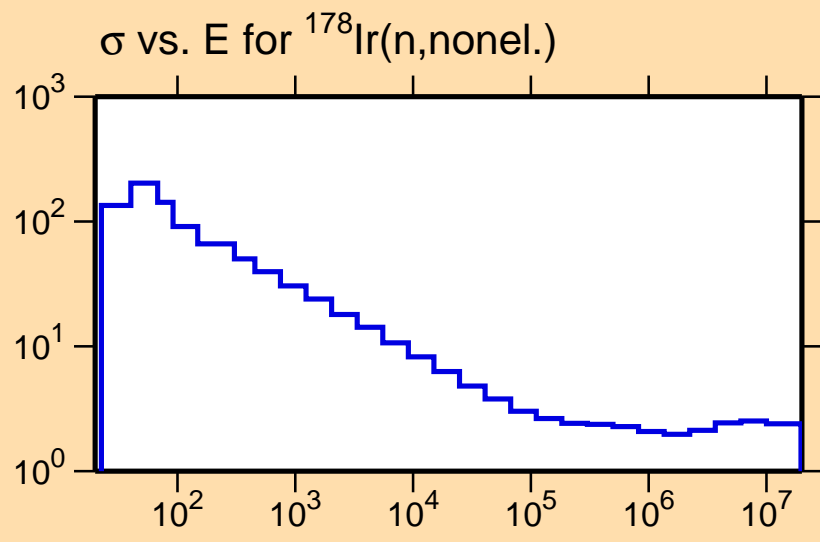
Correlation Matrix





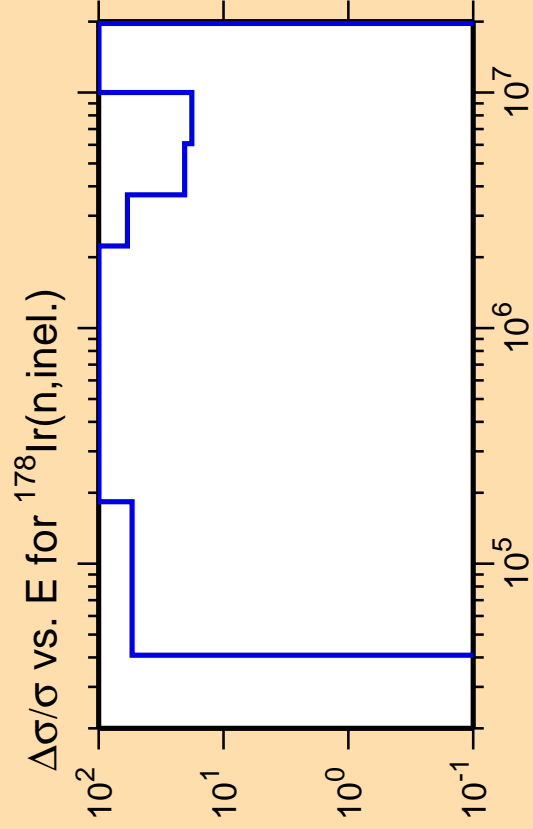
Ordinate scales are % relative standard deviation and barns.

Abscissa scales are energy (eV).



Correlation Matrix



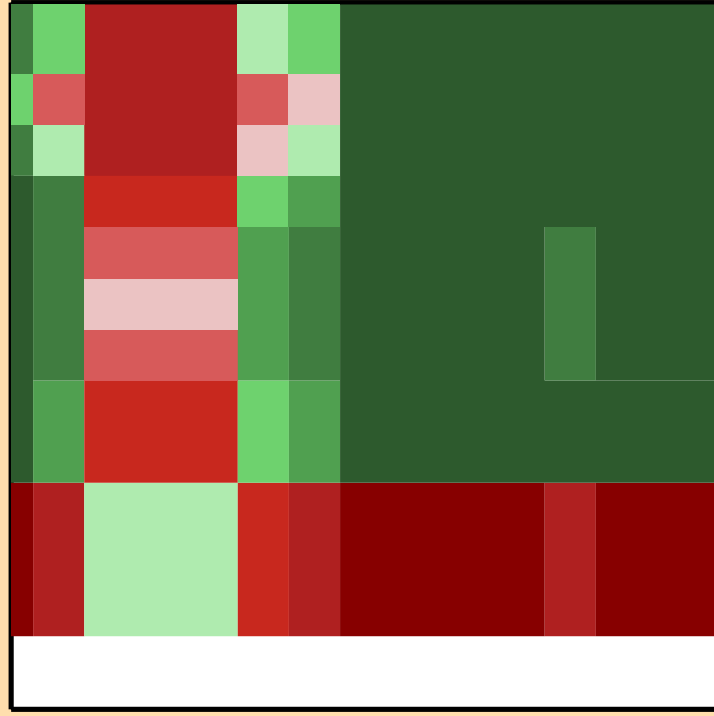
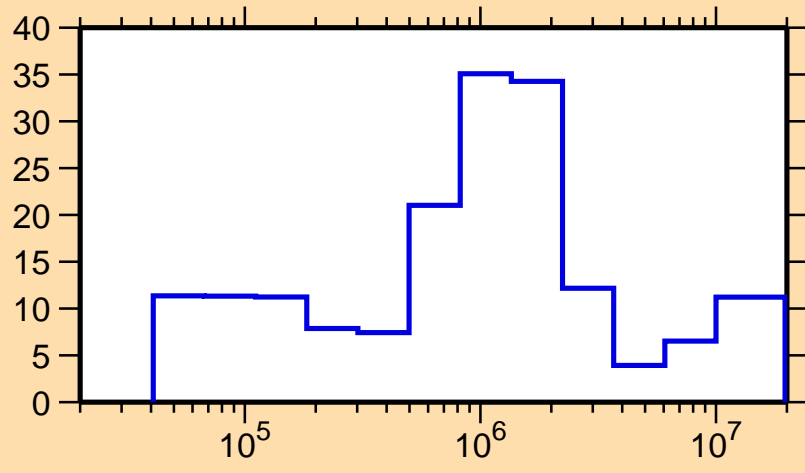


Ordinate scale is %  
relative standard deviation.

Abscissa scales are energy (eV).

Warning: some uncertainty  
data were suppressed.

$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,\text{nonel.})$



Correlation Matrix



$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,2n)$

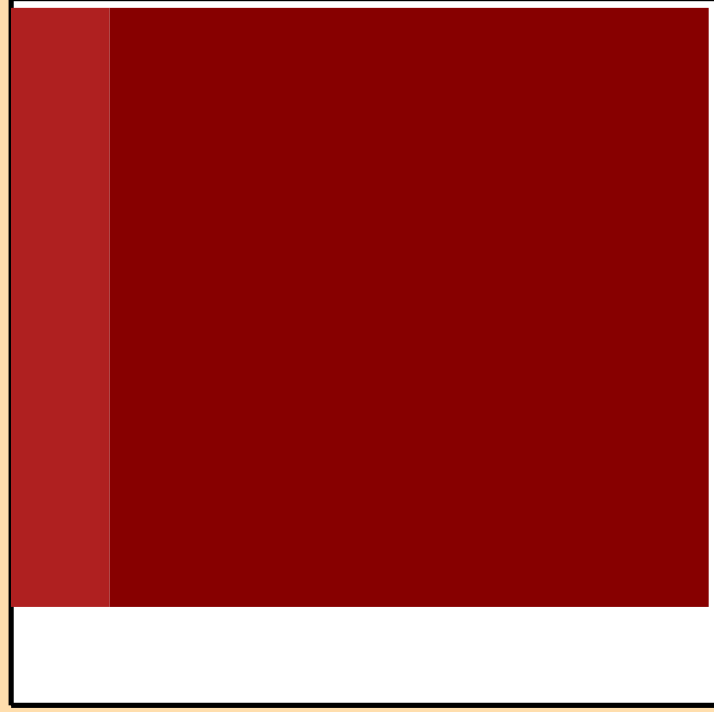
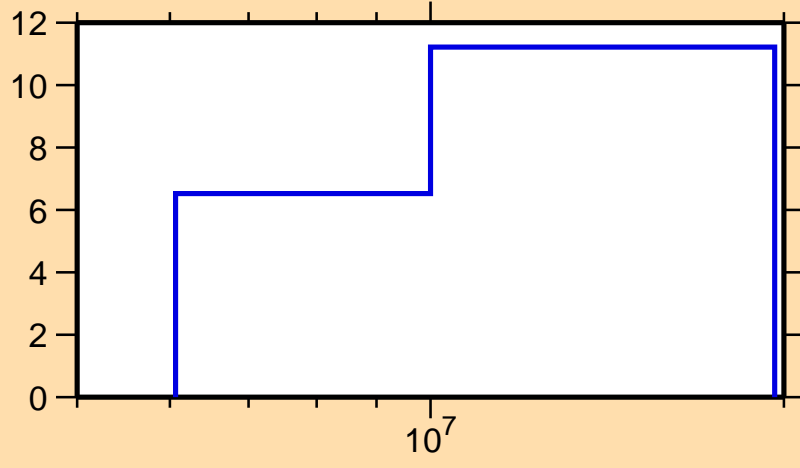


Ordinate scale is %  
relative standard deviation.

Abscissa scales are energy (eV).

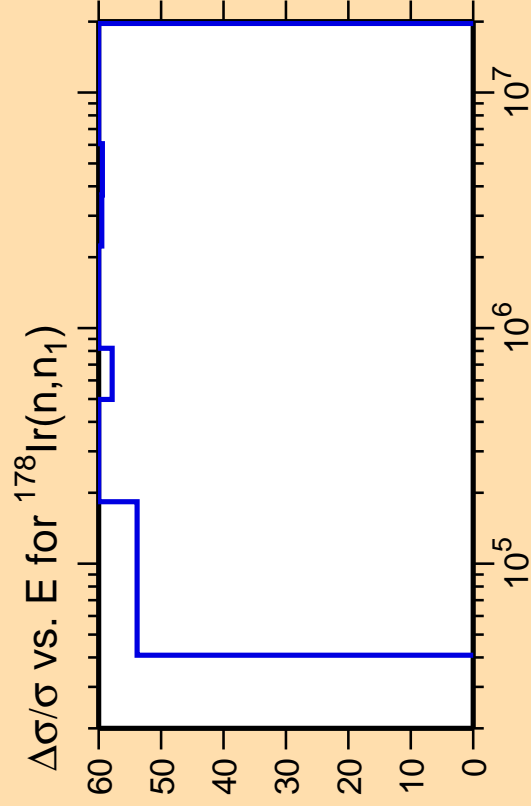
Warning: some uncertainty  
data were suppressed.

$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,\text{nonel.})$



Correlation Matrix



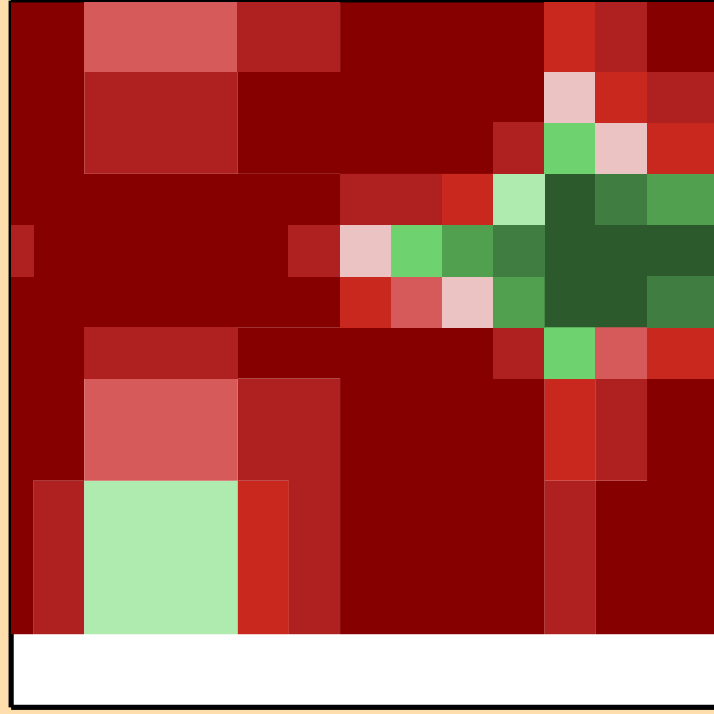
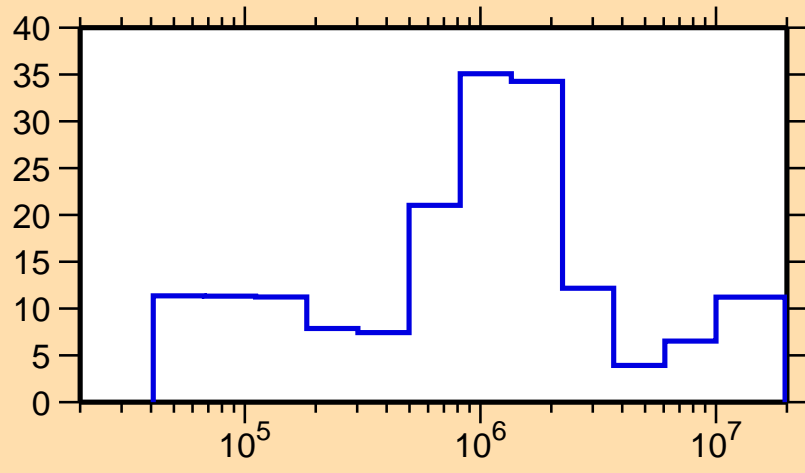


Ordinate scale is %  
relative standard deviation.

Abscissa scales are energy (eV).

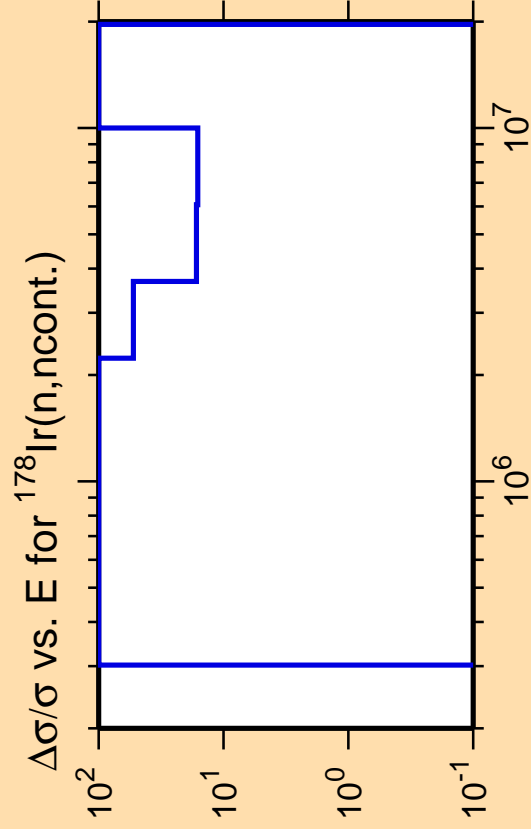
Warning: some uncertainty  
data were suppressed.

$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,\text{nonel.})$



Correlation Matrix



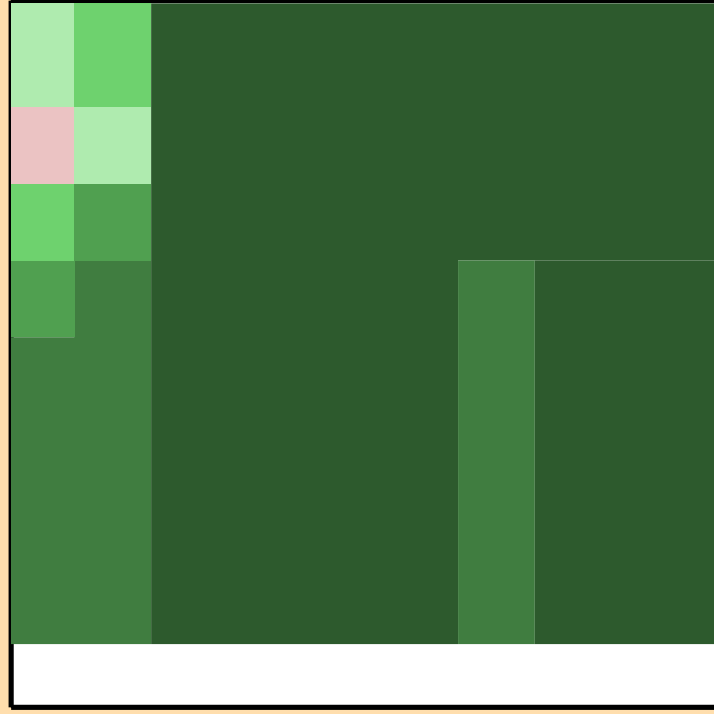
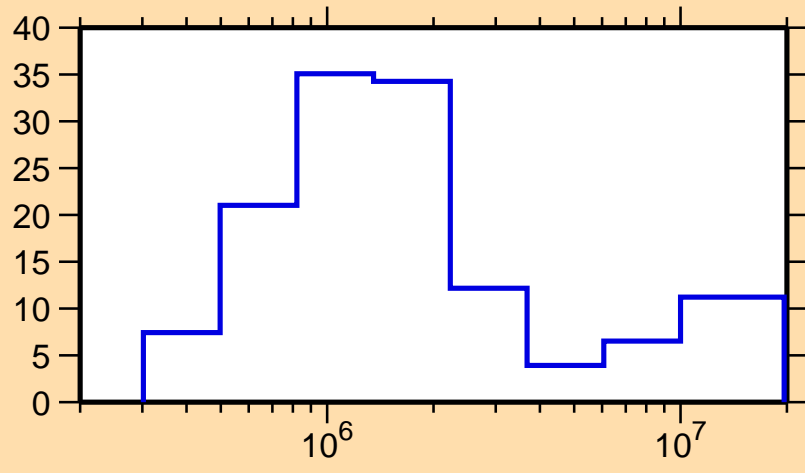


Ordinate scale is %  
relative standard deviation.

Abscissa scales are energy (eV).

Warning: some uncertainty  
data were suppressed.

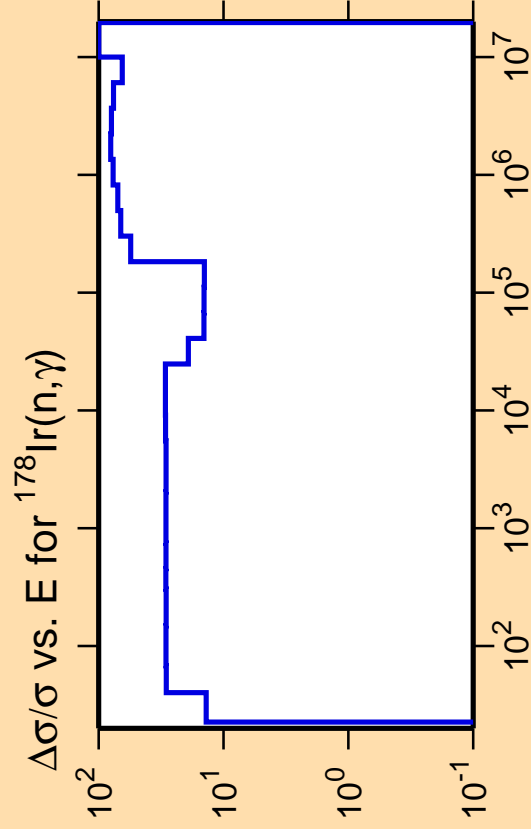
$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,\text{nonel.})$



Correlation Matrix





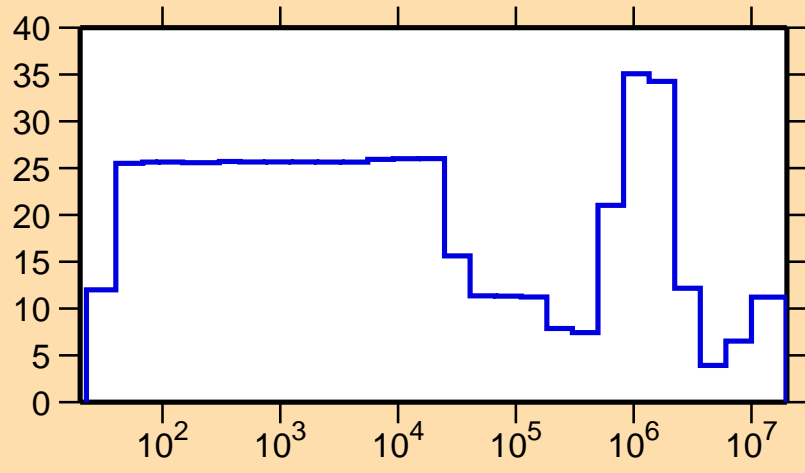


Ordinate scale is %  
relative standard deviation.

Abscissa scales are energy (eV).

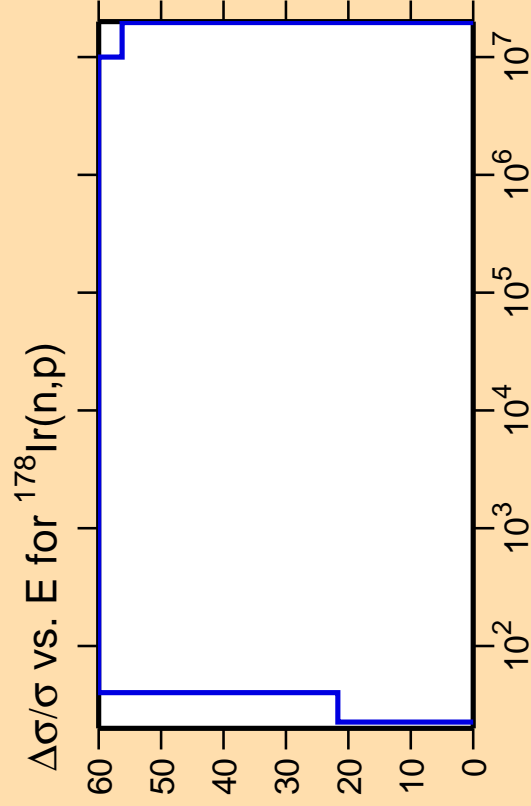
Warning: some uncertainty  
data were suppressed.

$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,\text{nonel.})$



Correlation Matrix



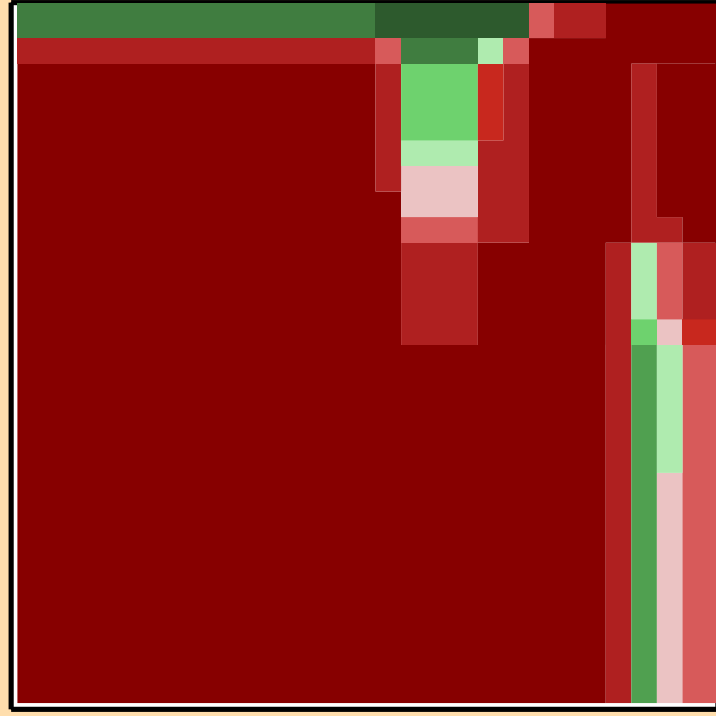
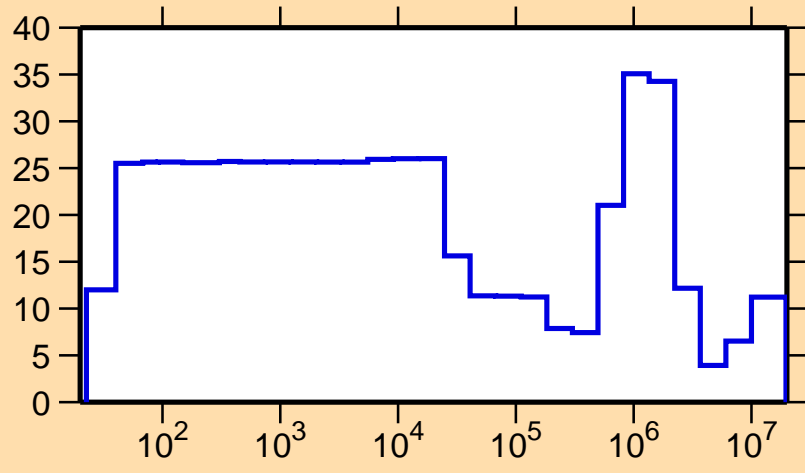


Ordinate scale is %  
relative standard deviation.

Abscissa scales are energy (eV).

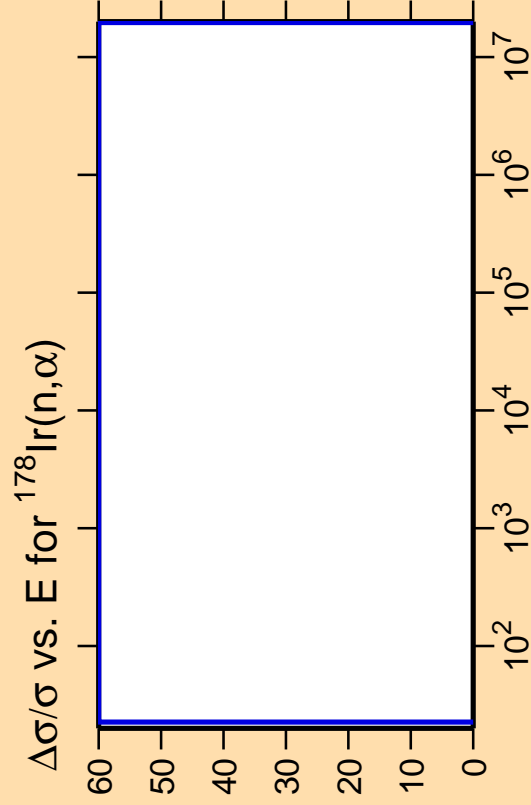
Warning: some uncertainty  
data were suppressed.

$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,\text{nonel.})$



Correlation Matrix



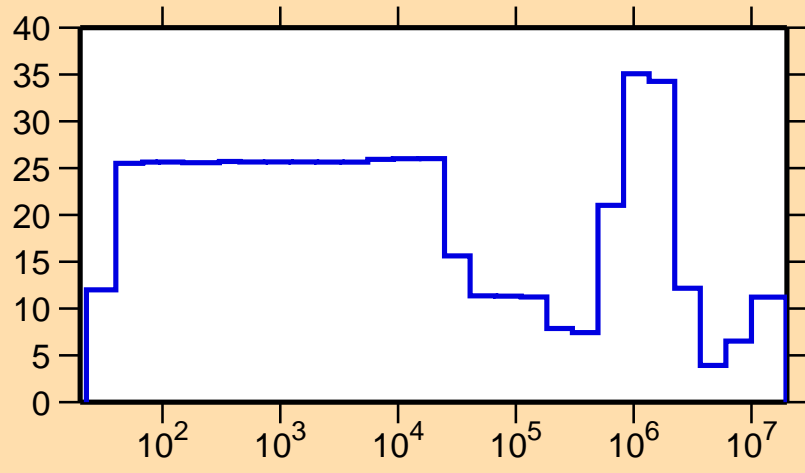


Ordinate scale is %  
relative standard deviation.

Abscissa scales are energy (eV).

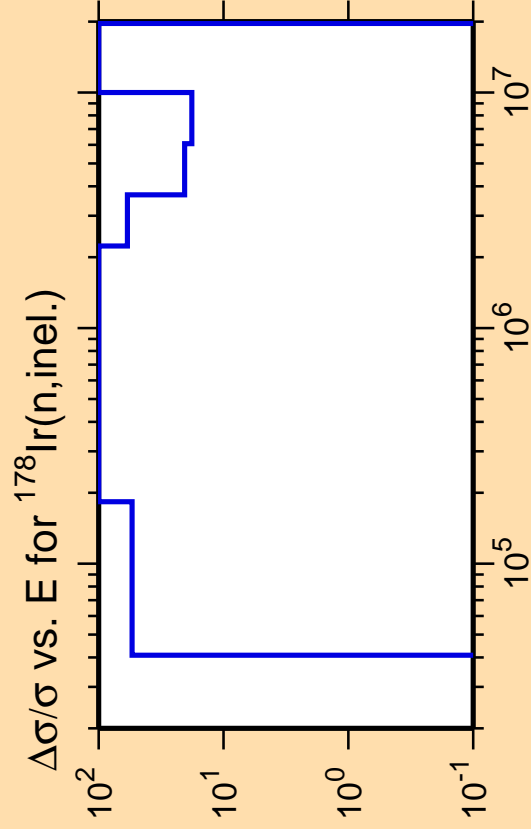
Warning: some uncertainty  
data were suppressed.

$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,\text{nonel.})$



Correlation Matrix

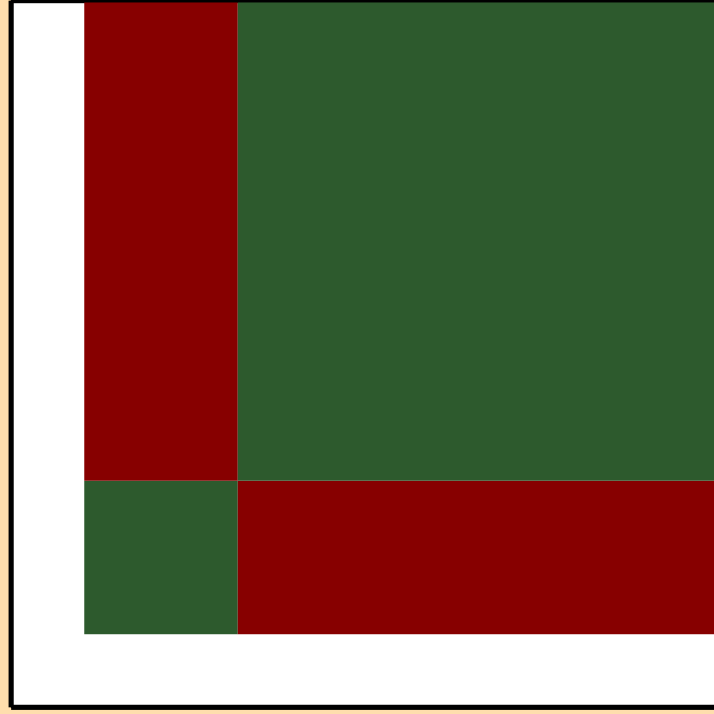
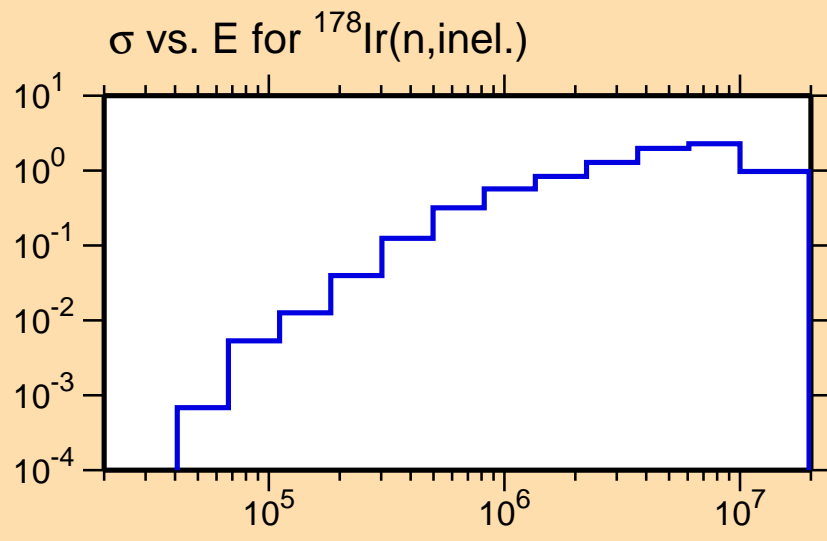




Ordinate scales are % relative standard deviation and barns.

Abscissa scales are energy (eV).

Warning: some uncertainty data were suppressed.



Correlation Matrix



$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,2n)$

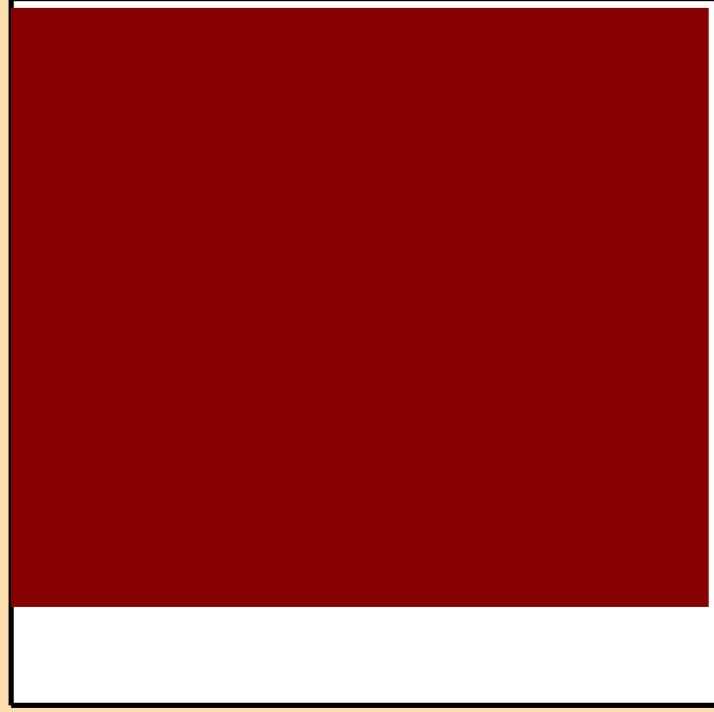
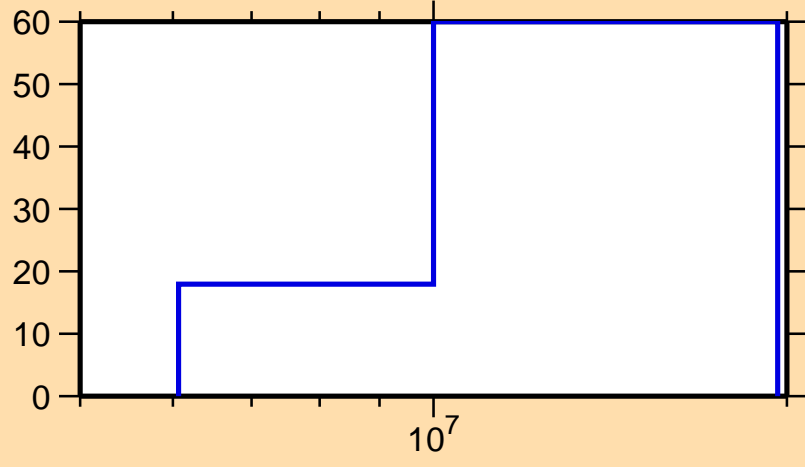


Ordinate scale is %  
relative standard deviation.

Abscissa scales are energy (eV).

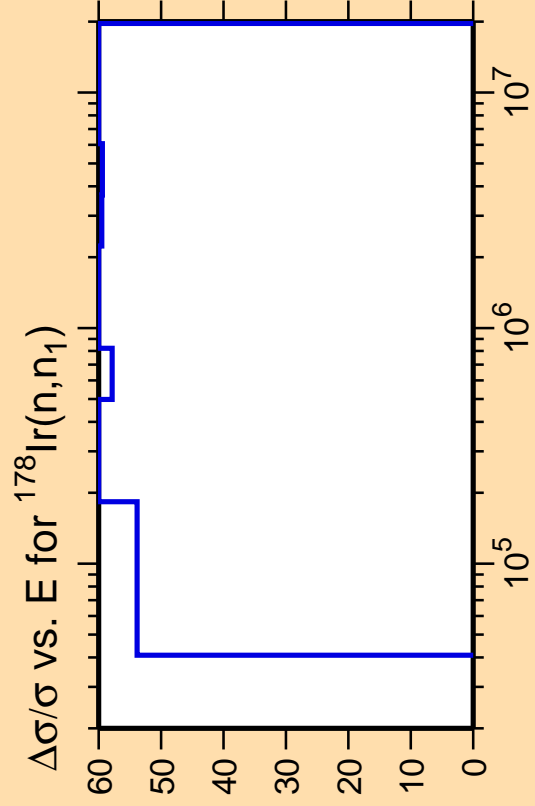
Warning: some uncertainty  
data were suppressed.

$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,\text{inel.})$



Correlation Matrix

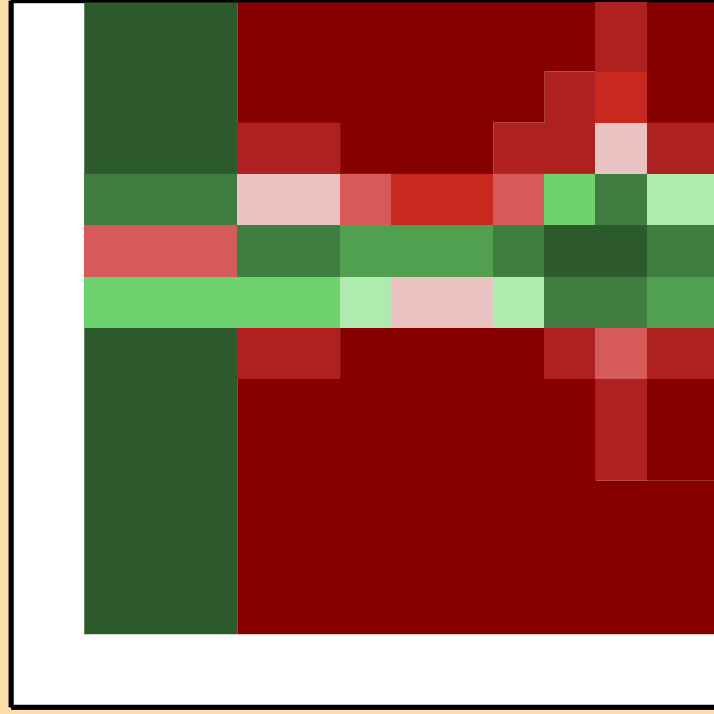
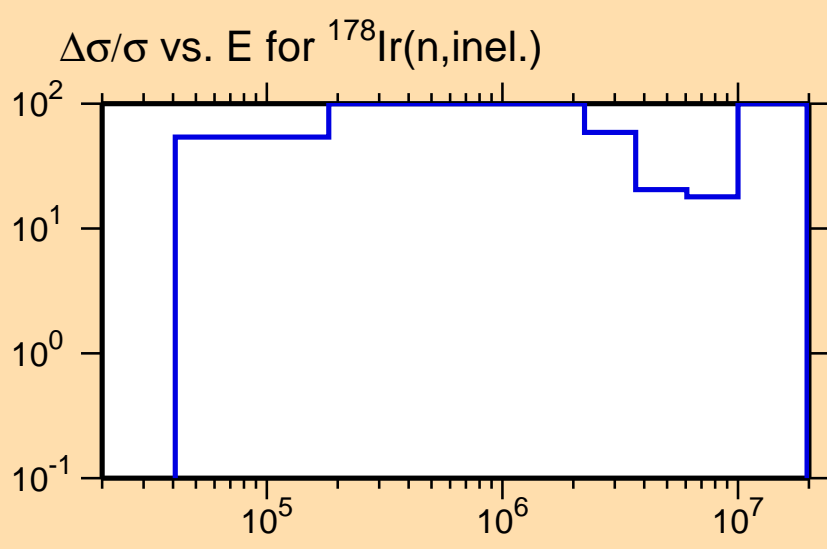




Ordinate scale is %  
relative standard deviation.

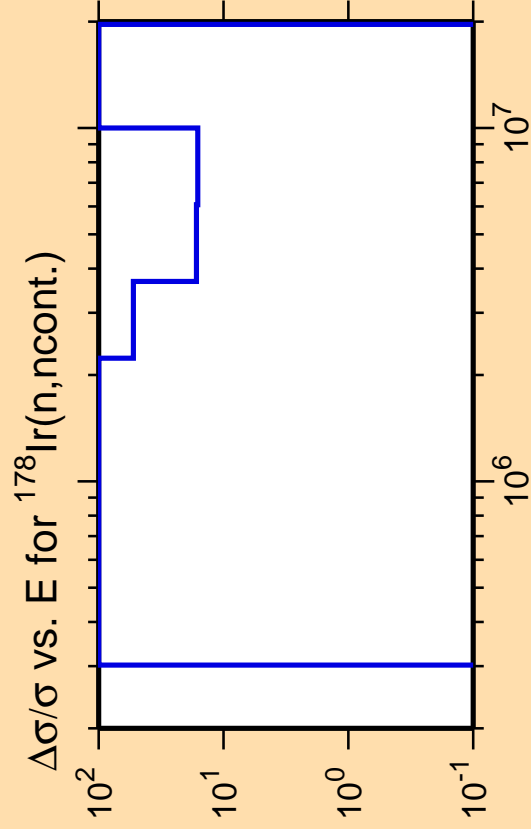
Abscissa scales are energy (eV).

Warning: some uncertainty  
data were suppressed.



Correlation Matrix

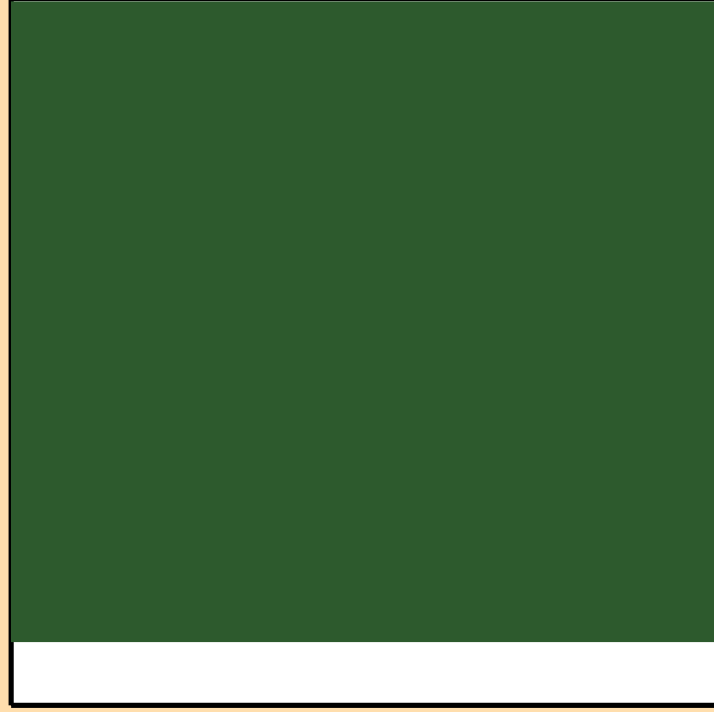
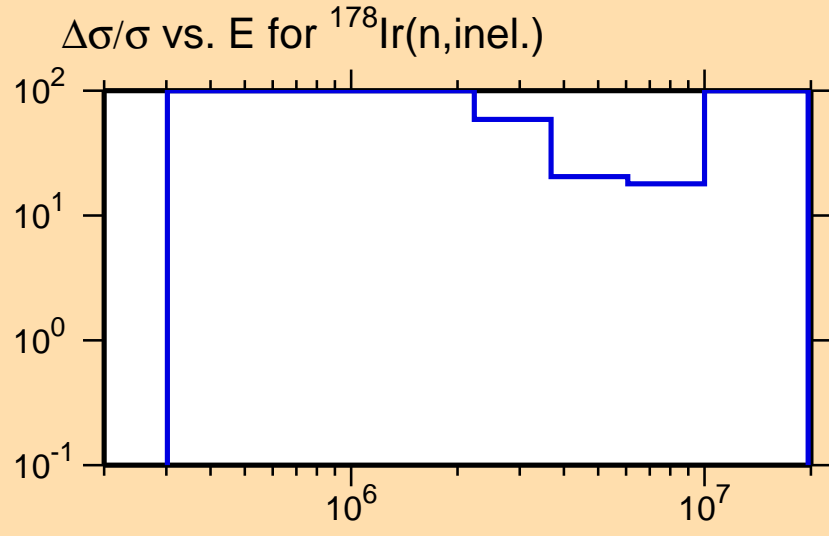




Ordinate scale is %  
relative standard deviation.

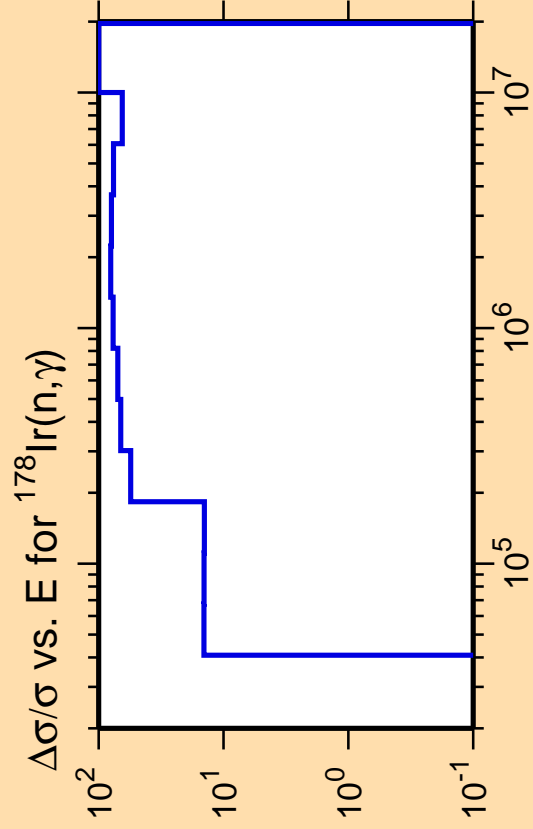
Abscissa scales are energy (eV).

Warning: some uncertainty  
data were suppressed.



Correlation Matrix



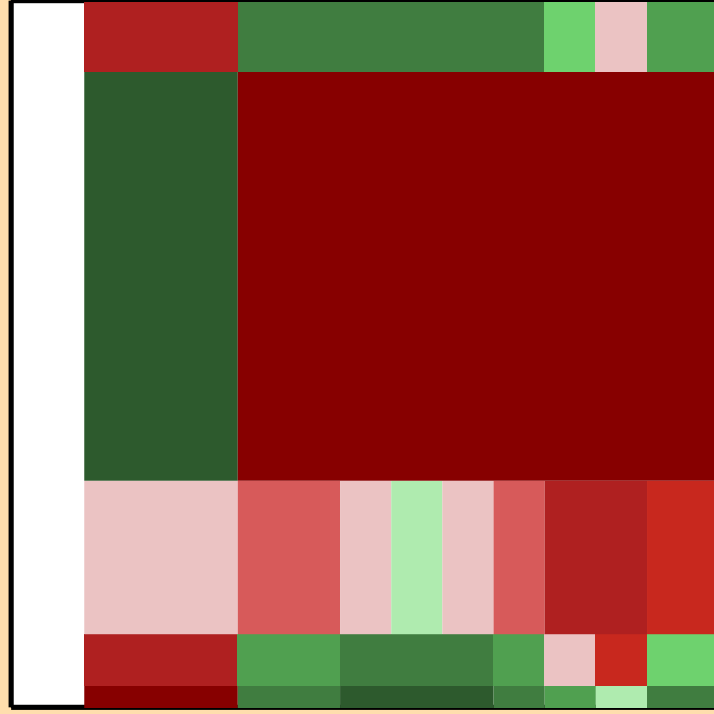
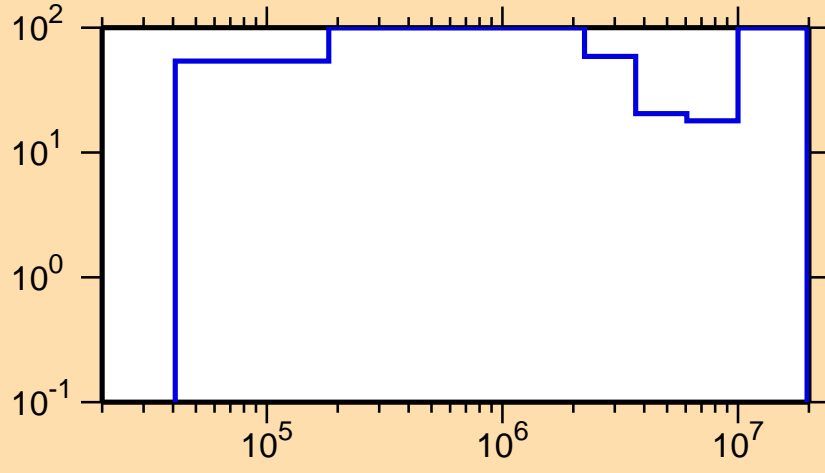


Ordinate scale is %  
relative standard deviation.

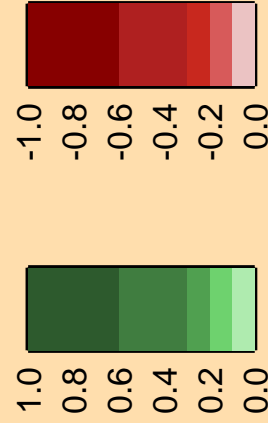
Abscissa scales are energy (eV).

Warning: some uncertainty  
data were suppressed.

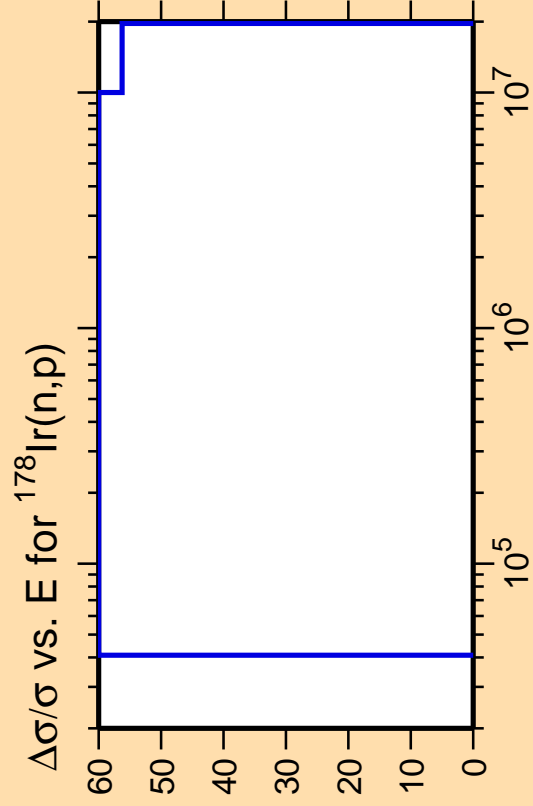
$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,\text{inel.})$



Correlation Matrix



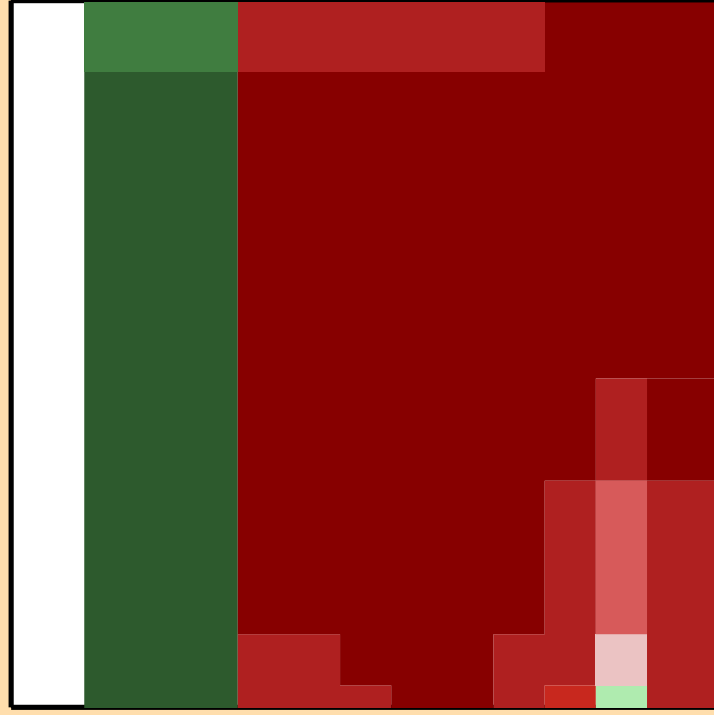
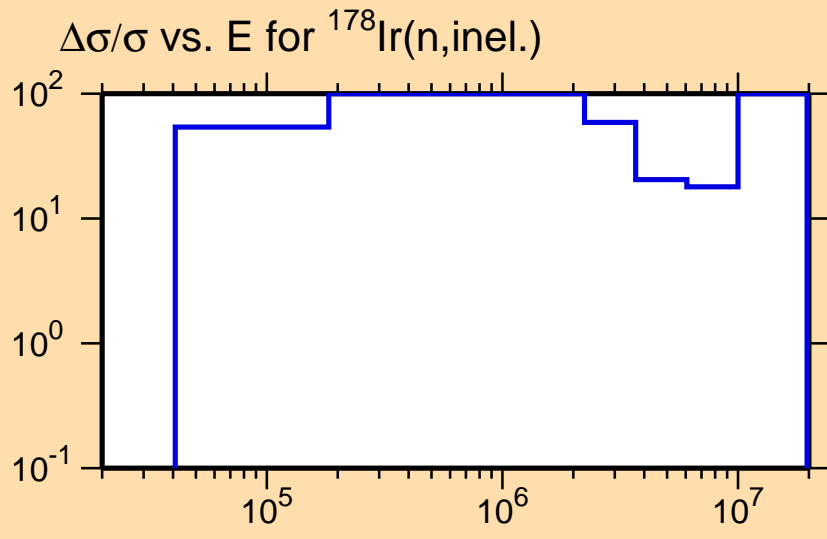




Ordinate scale is %  
relative standard deviation.

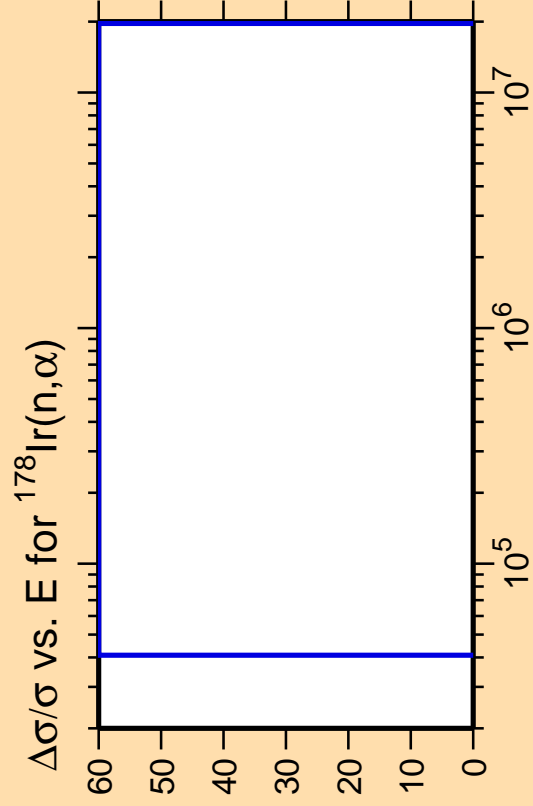
Abscissa scales are energy (eV).

Warning: some uncertainty  
data were suppressed.



Correlation Matrix

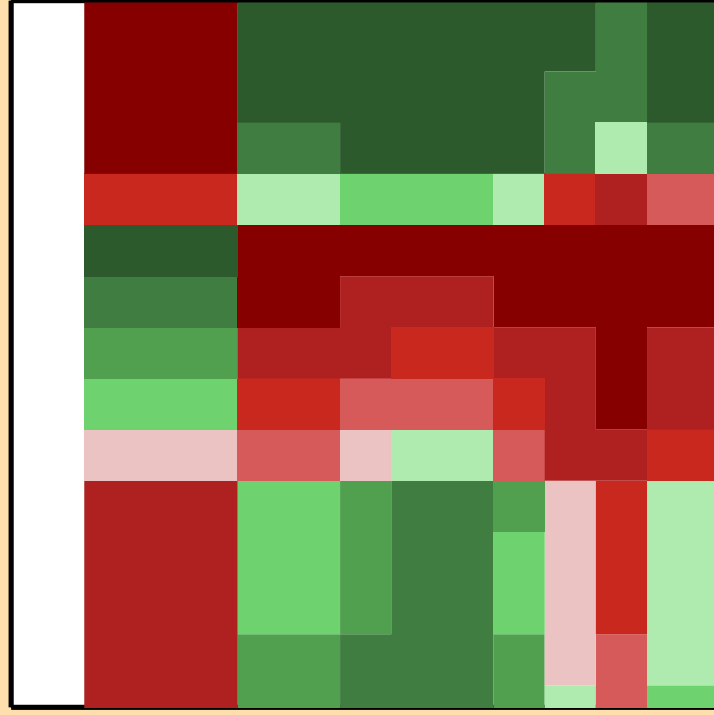
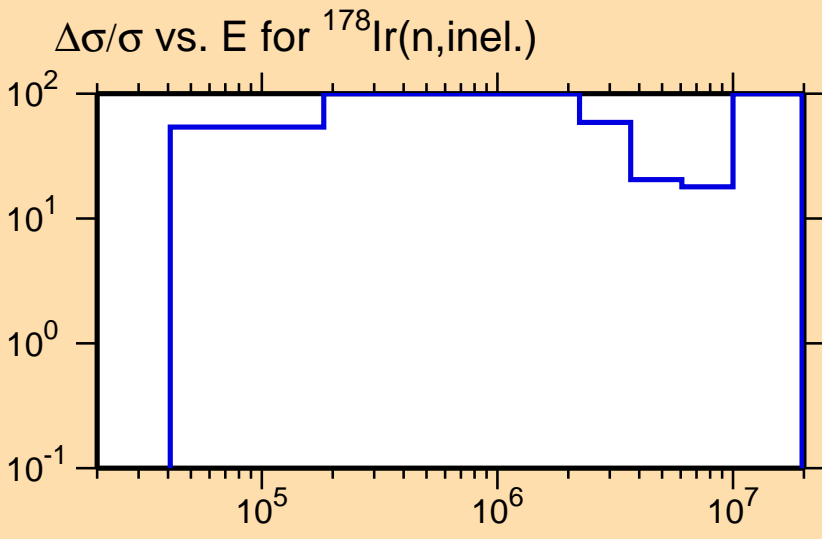




Ordinate scale is %  
relative standard deviation.

Abscissa scales are energy (eV).

Warning: some uncertainty  
data were suppressed.



Correlation Matrix



$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,2n)$

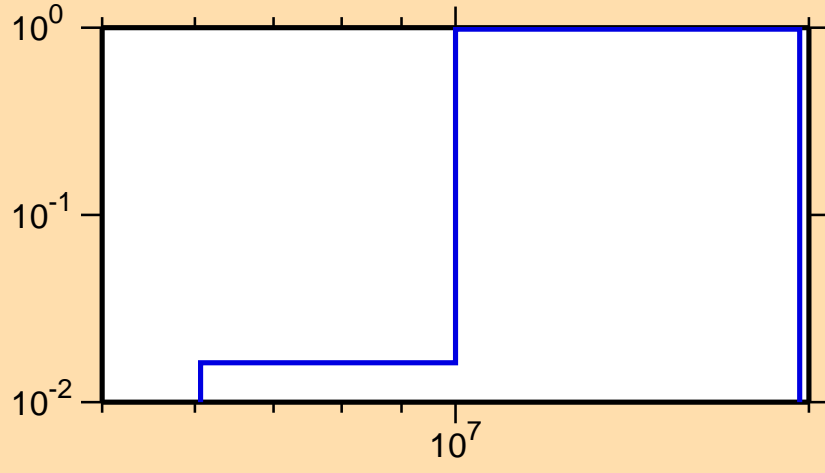


Ordinate scales are % relative standard deviation and barns.

Abscissa scales are energy (eV).

Warning: some uncertainty data were suppressed.

$\sigma$  vs. E for  $^{178}\text{Ir}(n,2n)$



Correlation Matrix



$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,n_1)$

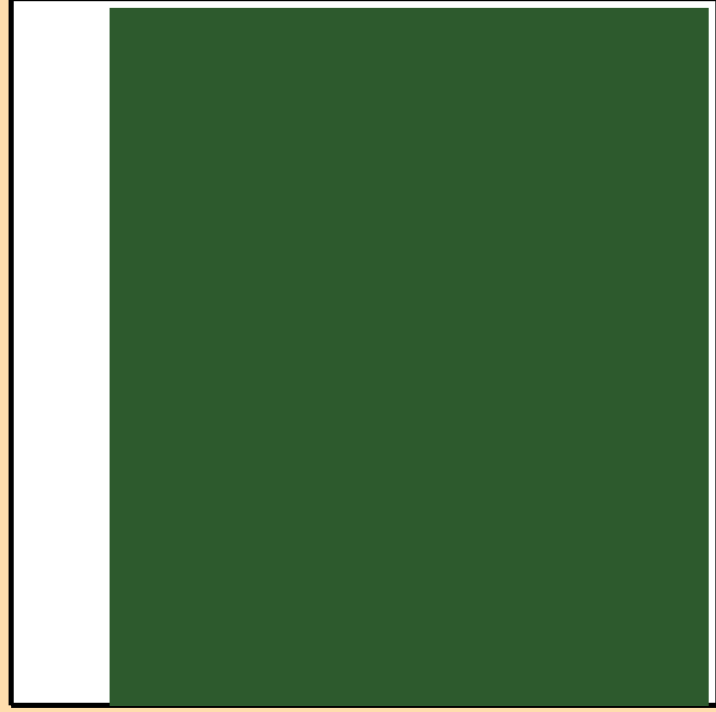
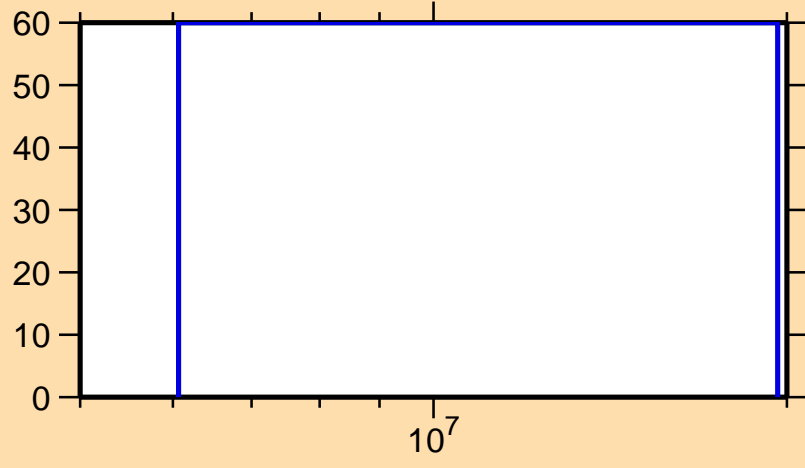


Ordinate scale is %  
relative standard deviation.

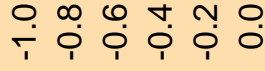
Abscissa scales are energy (eV).

Warning: some uncertainty  
data were suppressed.

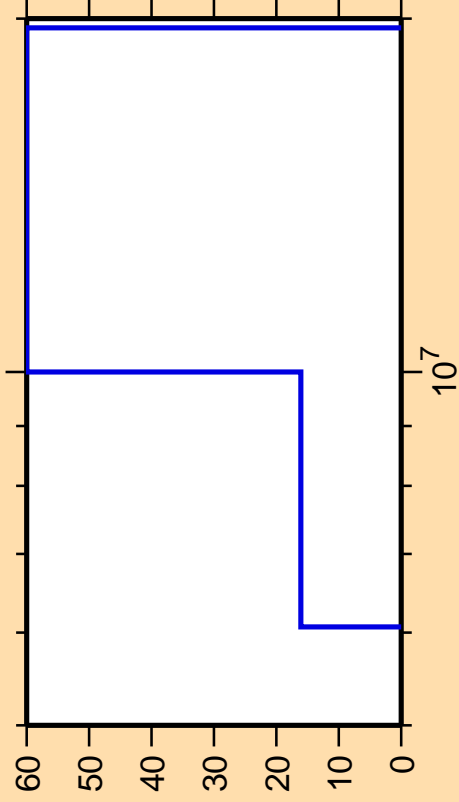
$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,2n)$



Correlation Matrix



$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,n\text{cont.})$

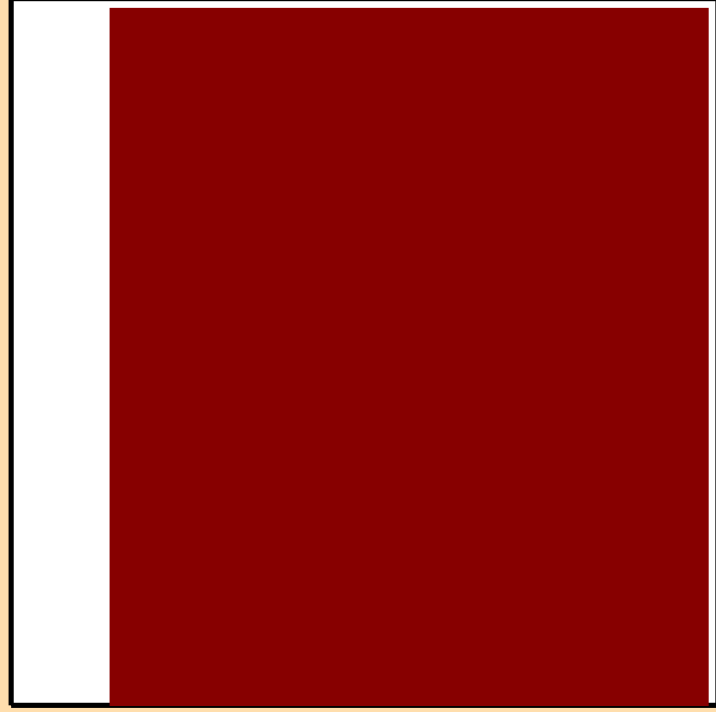


Ordinate scale is %  
relative standard deviation.

Abscissa scales are energy (eV).

Warning: some uncertainty  
data were suppressed.

$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,2n)$



Correlation Matrix



$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,\gamma)$

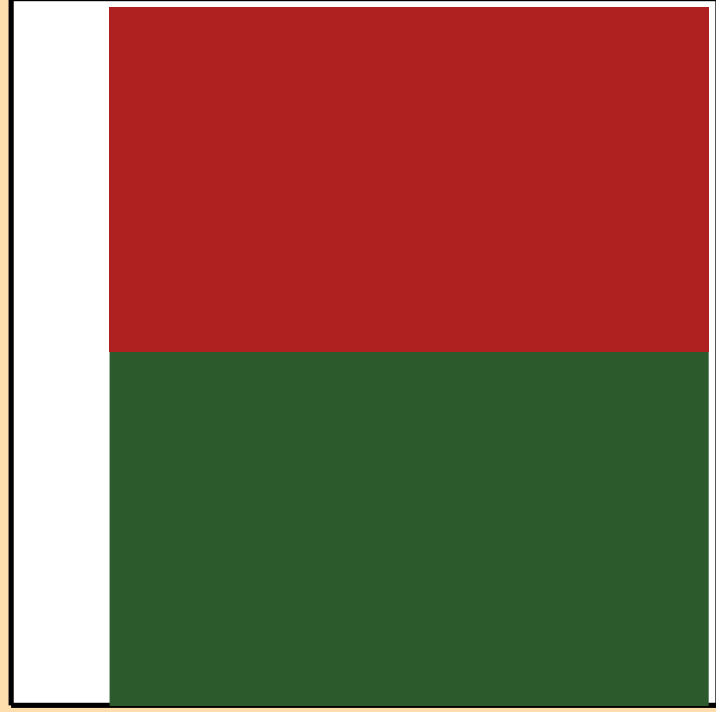
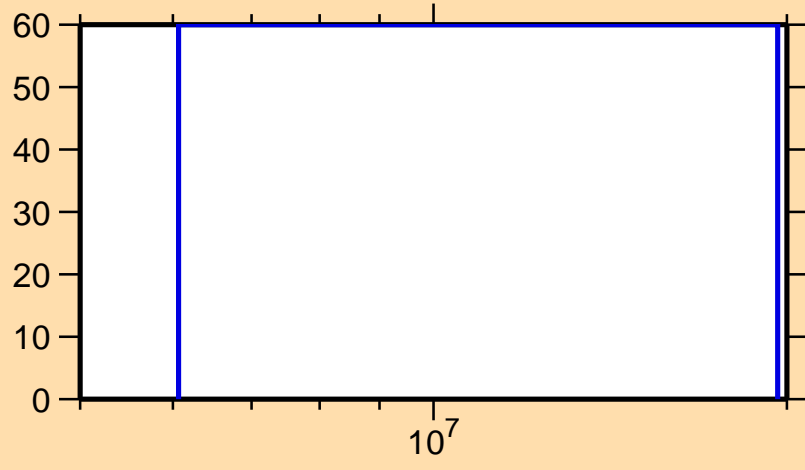


Ordinate scale is %  
relative standard deviation.

Abscissa scales are energy (eV).

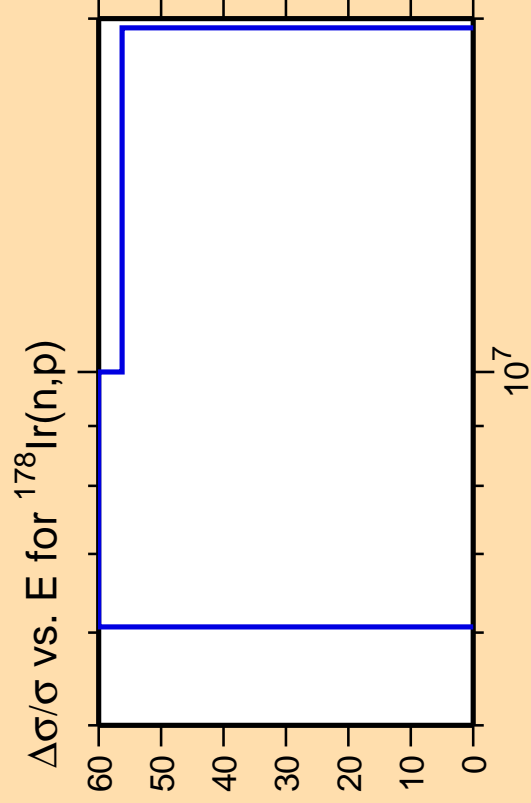
Warning: some uncertainty  
data were suppressed.

$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,2n)$



Correlation Matrix

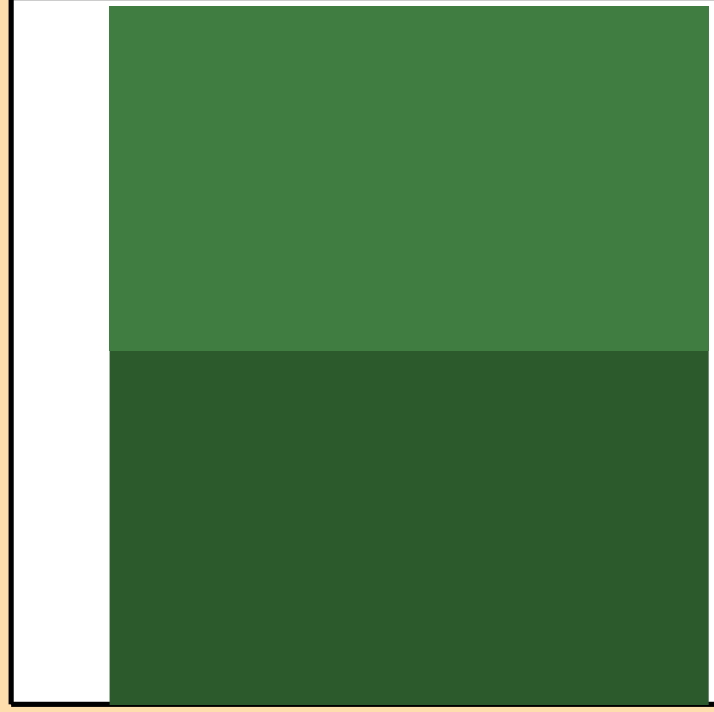
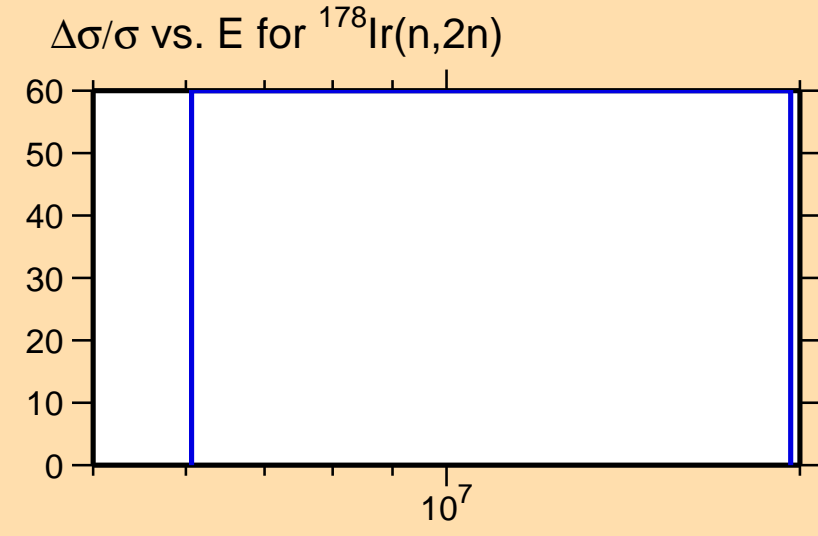




Ordinate scale is %  
relative standard deviation.

Abscissa scales are energy (eV).

Warning: some uncertainty  
data were suppressed.



Correlation Matrix



$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,\alpha)$

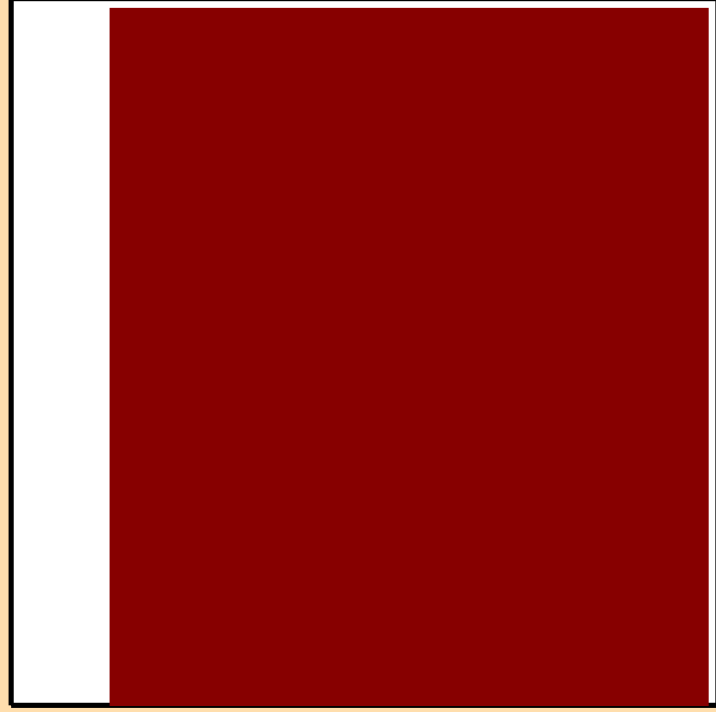


Ordinate scale is %  
relative standard deviation.

Abscissa scales are energy (eV).

Warning: some uncertainty  
data were suppressed.

$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,2n)$



Correlation Matrix





$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,3n)$

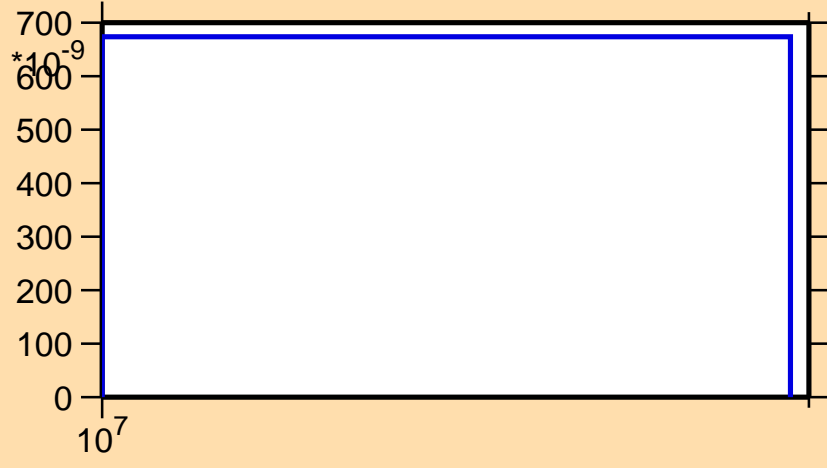


Ordinate scales are % relative standard deviation and barns.

Abscissa scales are energy (eV).

Warning: some uncertainty data were suppressed.

$\sigma$  vs. E for  $^{178}\text{Ir}(n,3n)$

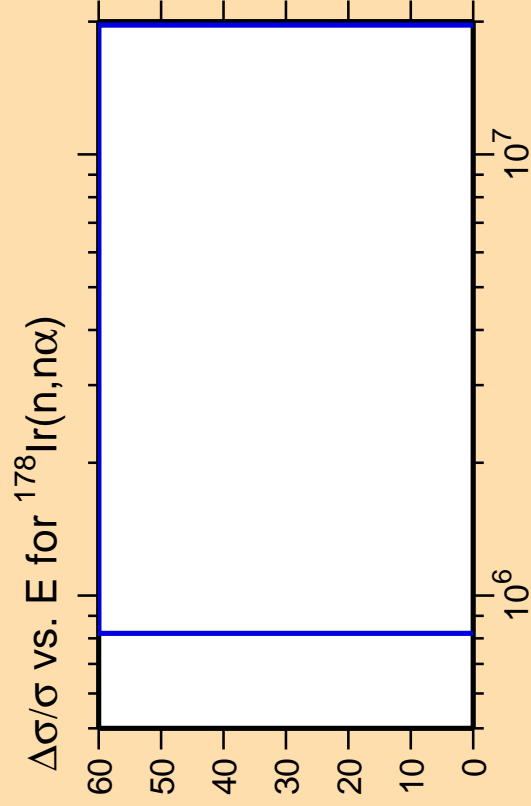


$10^7$



Correlation Matrix



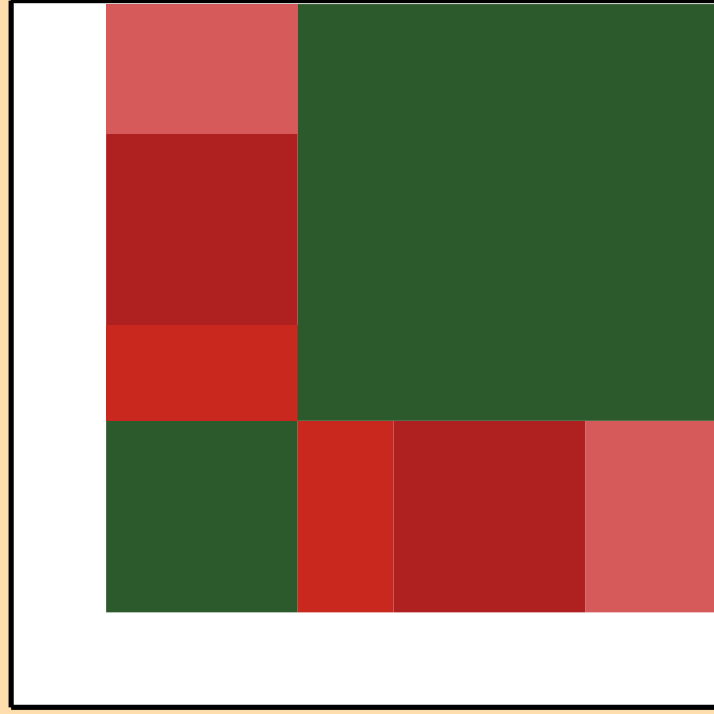
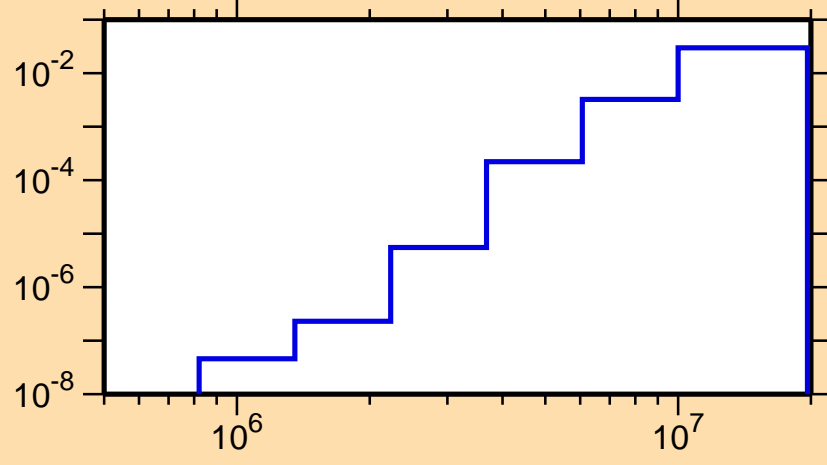


Ordinate scales are % relative standard deviation and barns.

Abscissa scales are energy (eV).

Warning: some uncertainty data were suppressed.

$\sigma$  vs. E for  $^{178}\text{Ir}(n,n\alpha)$



Correlation Matrix



$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,2n\alpha)$

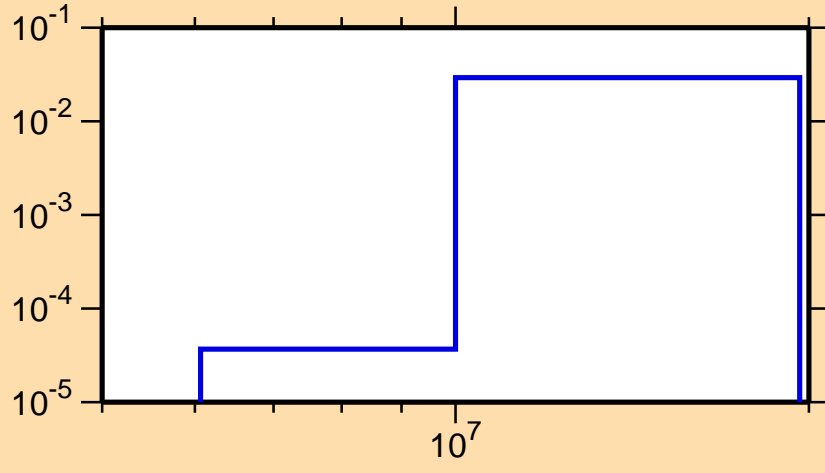


Ordinate scales are % relative standard deviation and barns.

Abscissa scales are energy (eV).

Warning: some uncertainty data were suppressed.

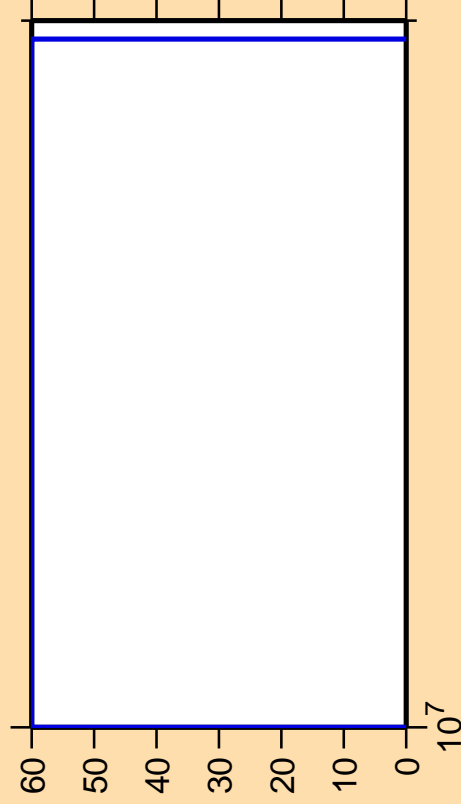
$\sigma$  vs. E for  $^{178}\text{Ir}(n,2n\alpha)$



Correlation Matrix



$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,3n\alpha)$

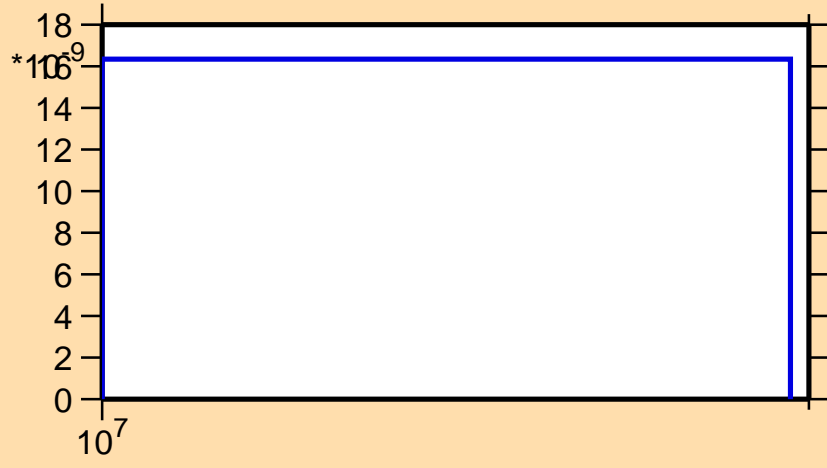


Ordinate scales are % relative standard deviation and barns.

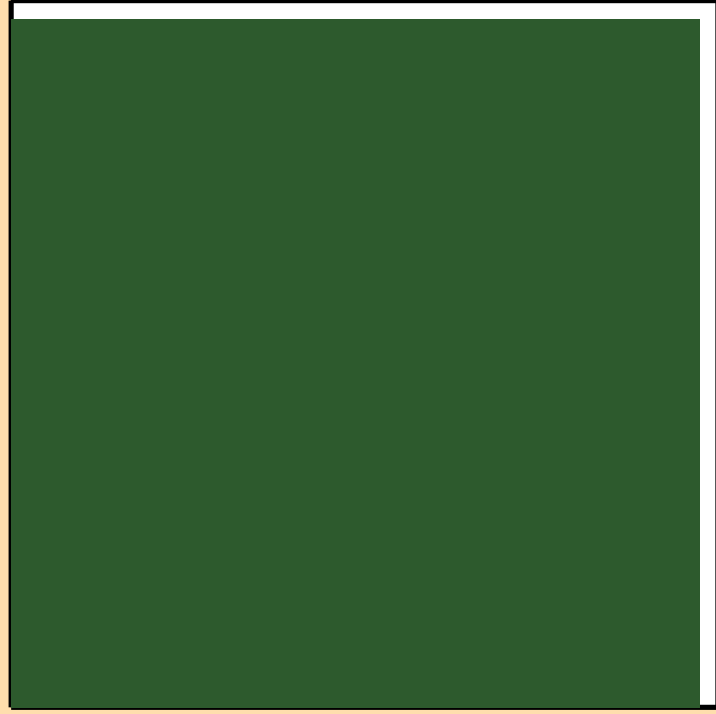
Abscissa scales are energy (eV).

Warning: some uncertainty data were suppressed.

$\sigma$  vs. E for  $^{178}\text{Ir}(n,3n\alpha)$

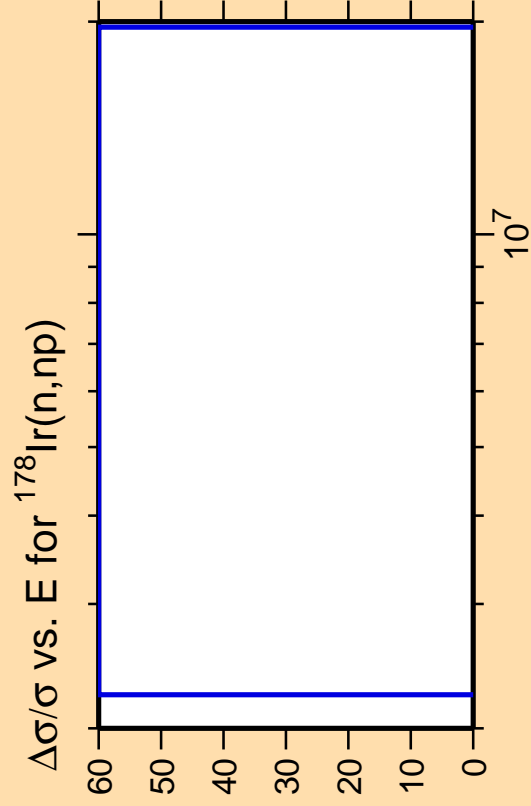


$10^7$



Correlation Matrix

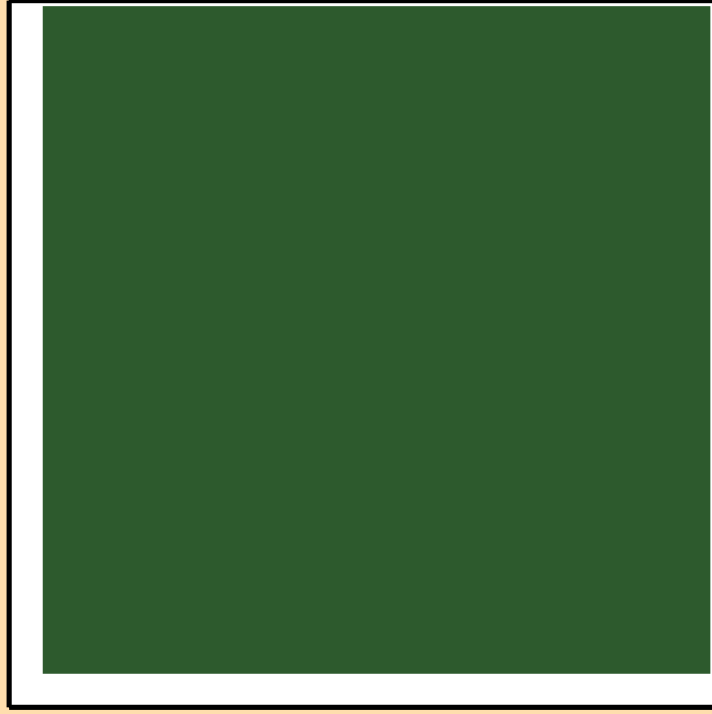
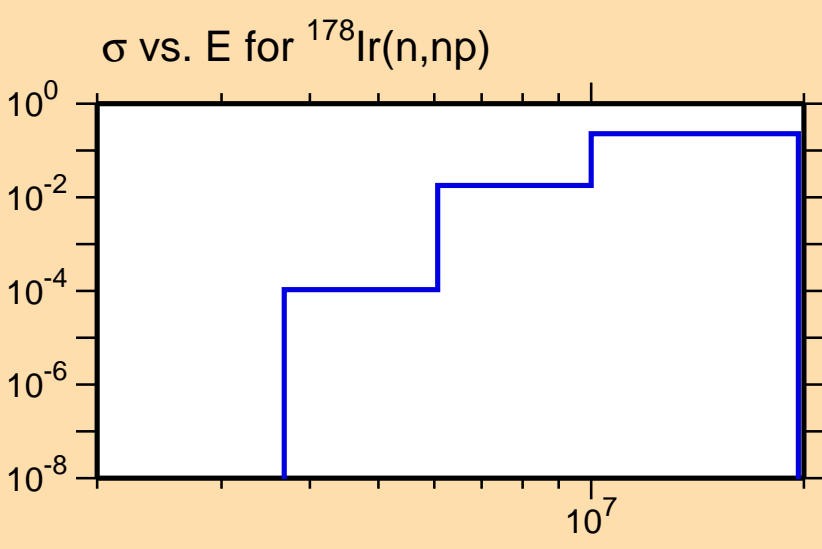




Ordinate scales are % relative standard deviation and barns.

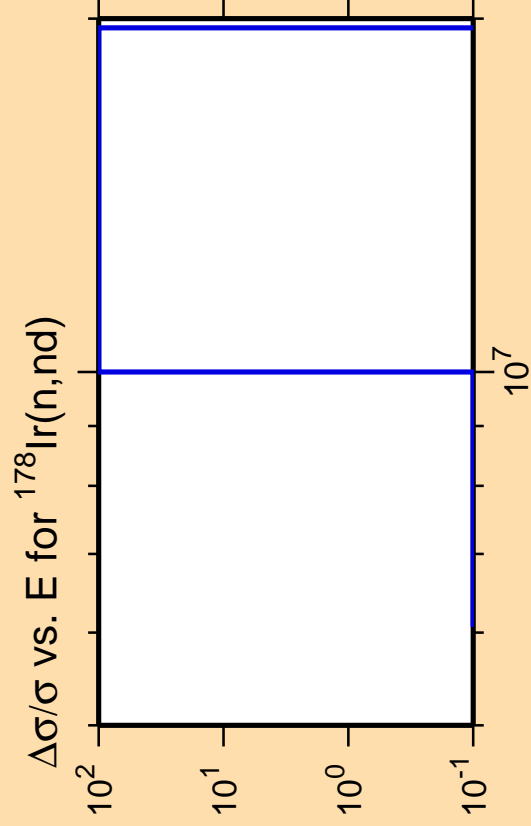
Abscissa scales are energy (eV).

Warning: some uncertainty data were suppressed.



Correlation Matrix

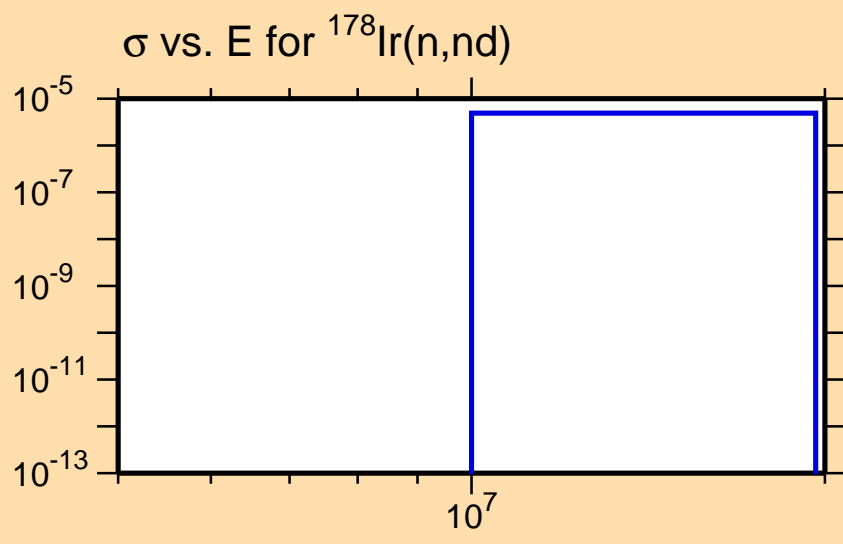




Ordinate scales are % relative standard deviation and barns.

Abscissa scales are energy (eV).

Warning: some uncertainty data were suppressed.



Correlation Matrix



$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,nt)$



Ordinate scales are % relative standard deviation and barns.

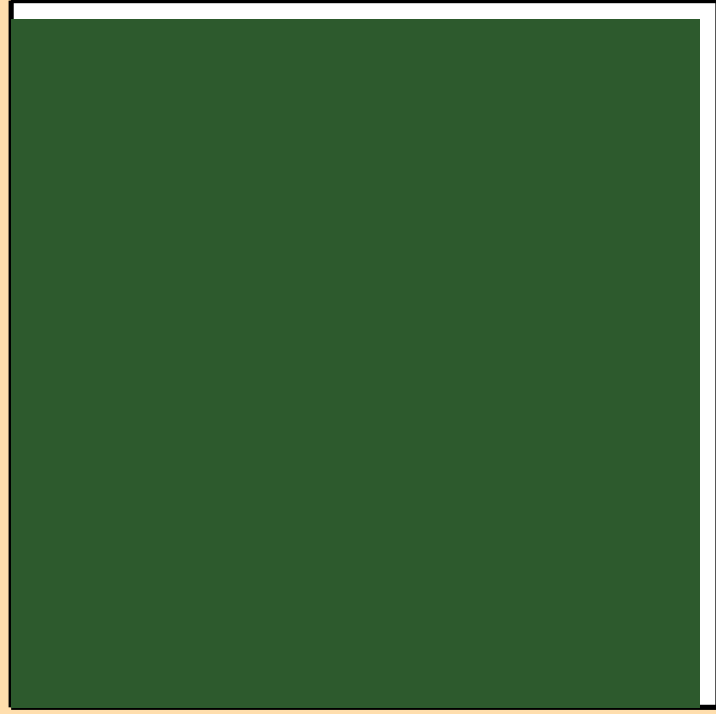
Abscissa scales are energy (eV).

Warning: some uncertainty data were suppressed.

$\sigma$  vs. E for  $^{178}\text{Ir}(n,nt)$



$10^7$



Correlation Matrix



$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(\text{mt } 34)$

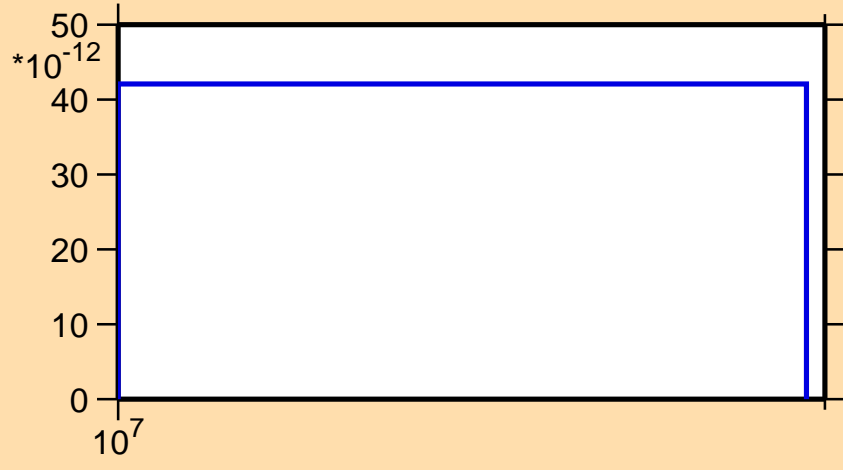


Ordinate scales are % relative standard deviation and barns.

Abscissa scales are energy (eV).

Warning: some uncertainty data were suppressed.

$\sigma$  vs. E for  $^{178}\text{Ir}(\text{mt } 34)$

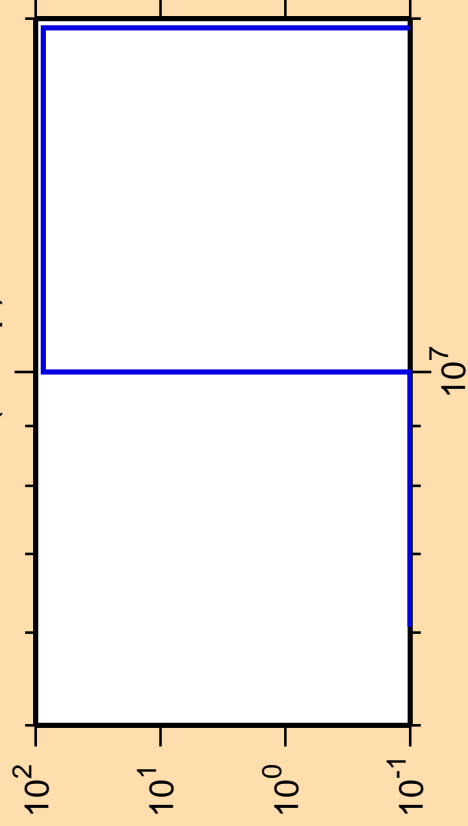


Correlation Matrix





$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,2np)$

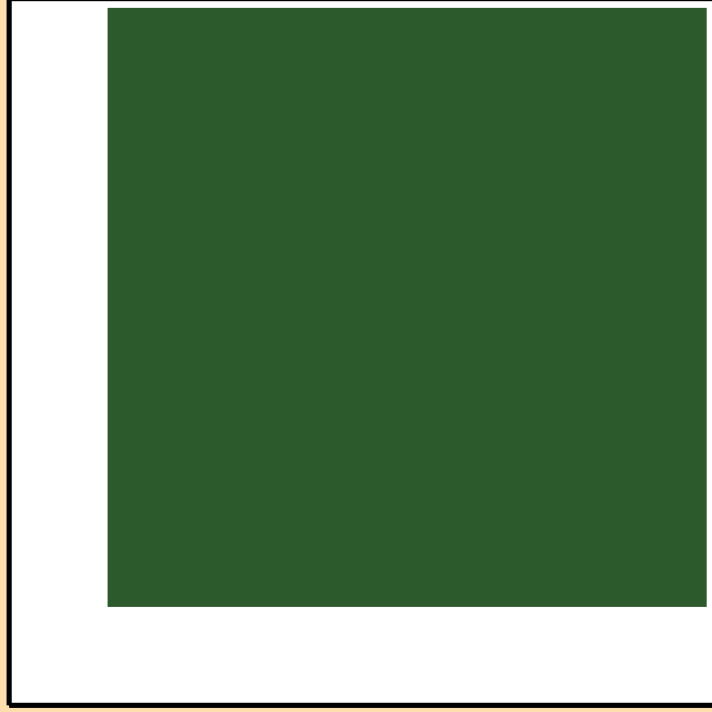
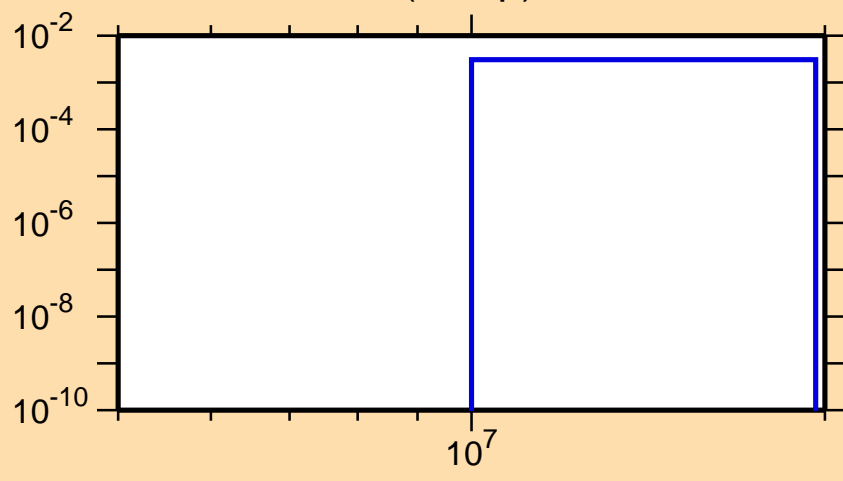


Ordinate scales are % relative standard deviation and barns.

Abscissa scales are energy (eV).

Warning: some uncertainty data were suppressed.

$\sigma$  vs. E for  $^{178}\text{Ir}(n,2np)$



Correlation Matrix



$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(\text{mt } 45)$

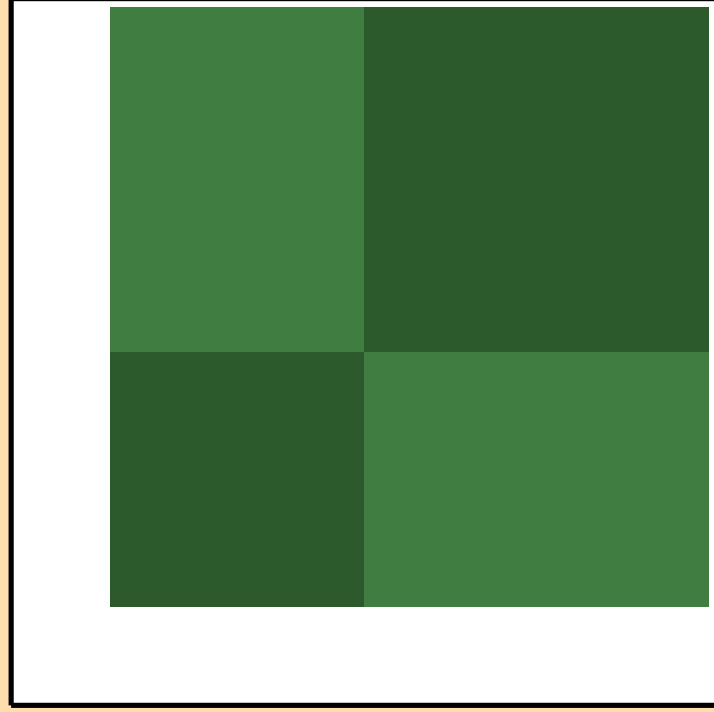
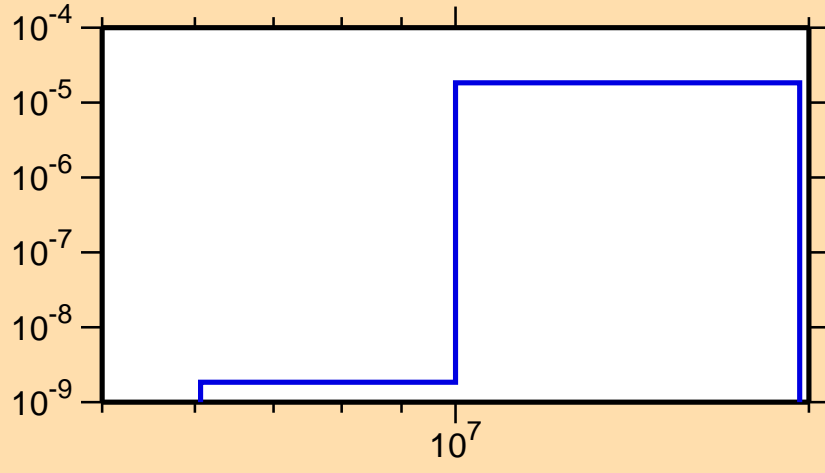


Ordinate scales are % relative standard deviation and barns.

Abscissa scales are energy (eV).

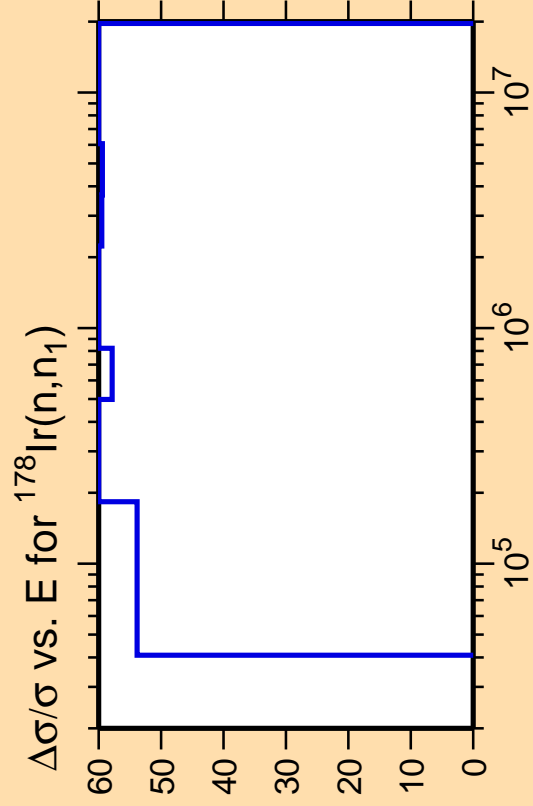
Warning: some uncertainty data were suppressed.

$\sigma$  vs. E for  $^{178}\text{Ir}(\text{mt } 45)$



Correlation Matrix

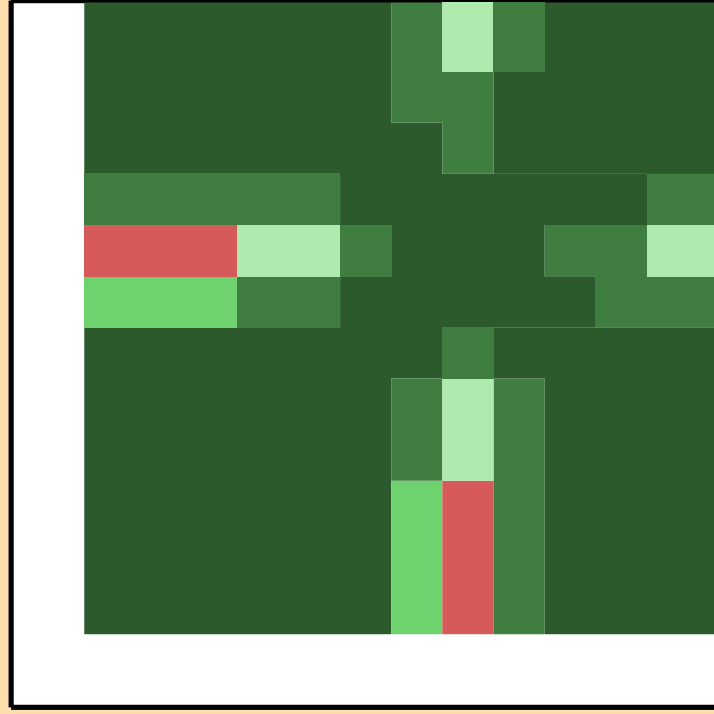
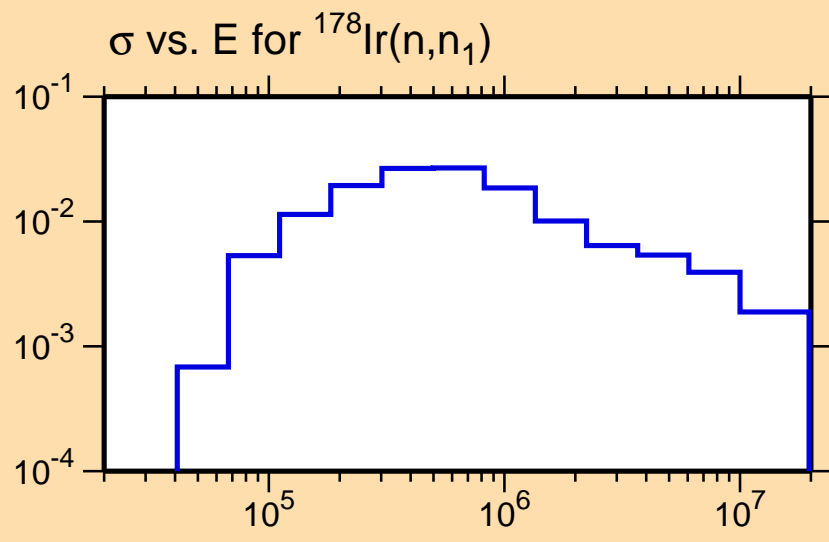




Ordinate scales are % relative standard deviation and barns.

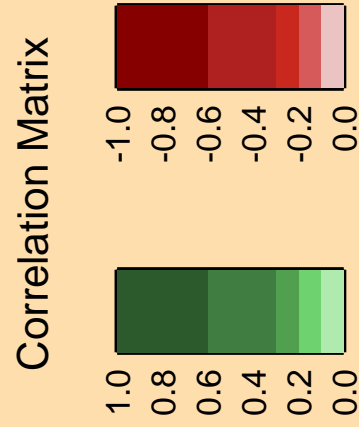
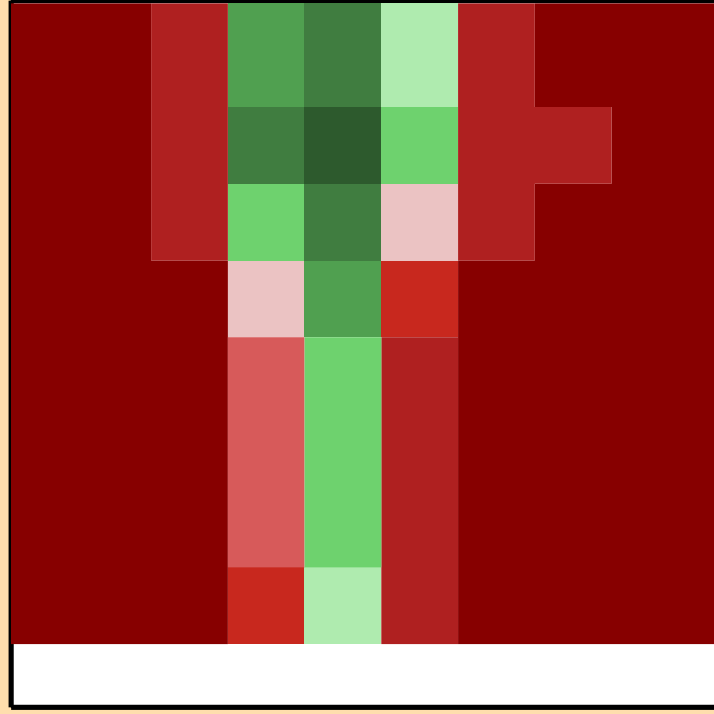
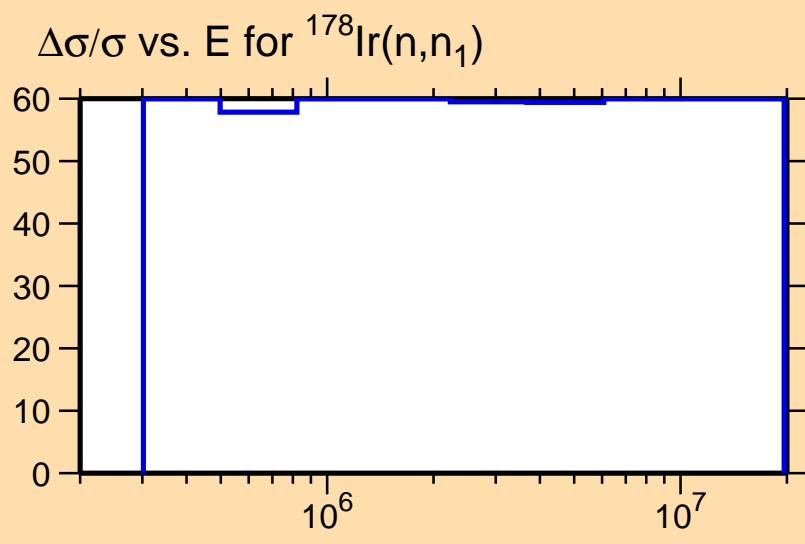
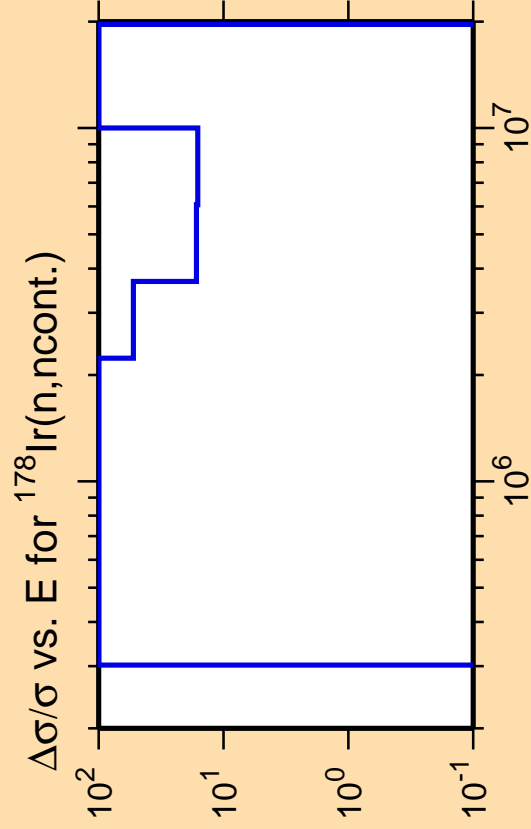
Abscissa scales are energy (eV).

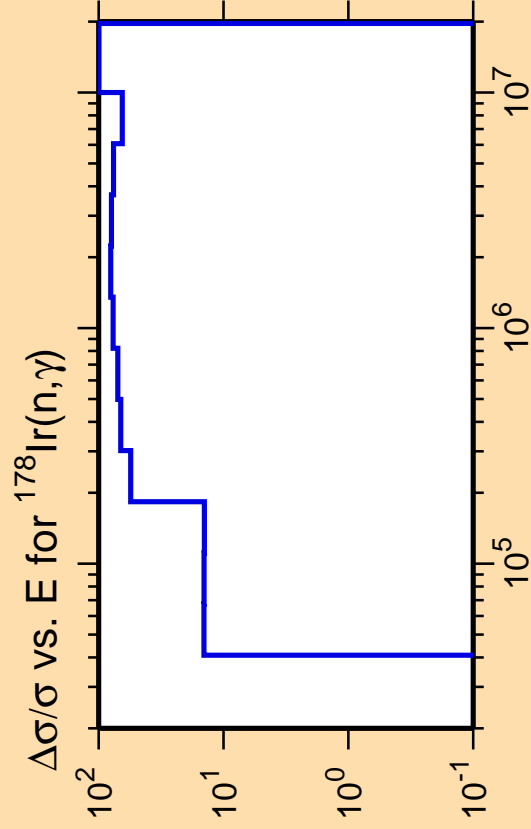
Warning: some uncertainty data were suppressed.



Correlation Matrix





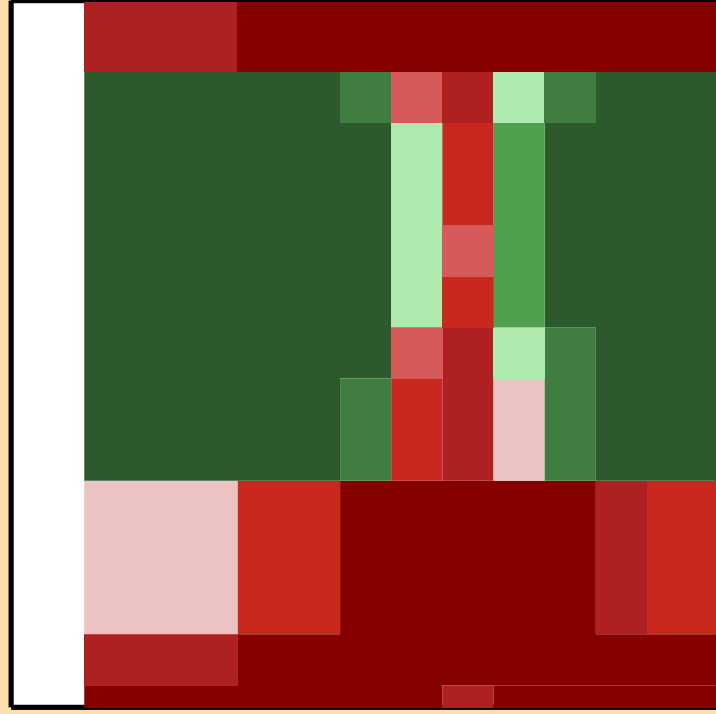
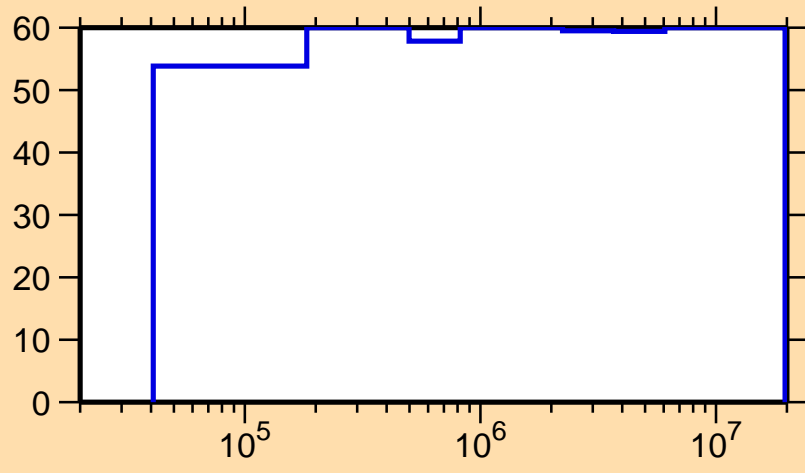


Ordinate scale is %  
relative standard deviation.

Abscissa scales are energy (eV).

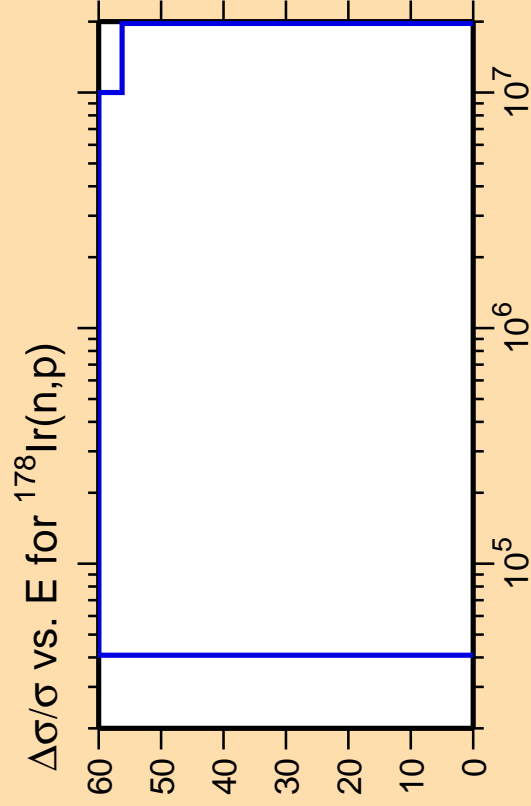
Warning: some uncertainty  
data were suppressed.

$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,n_1)$



Correlation Matrix

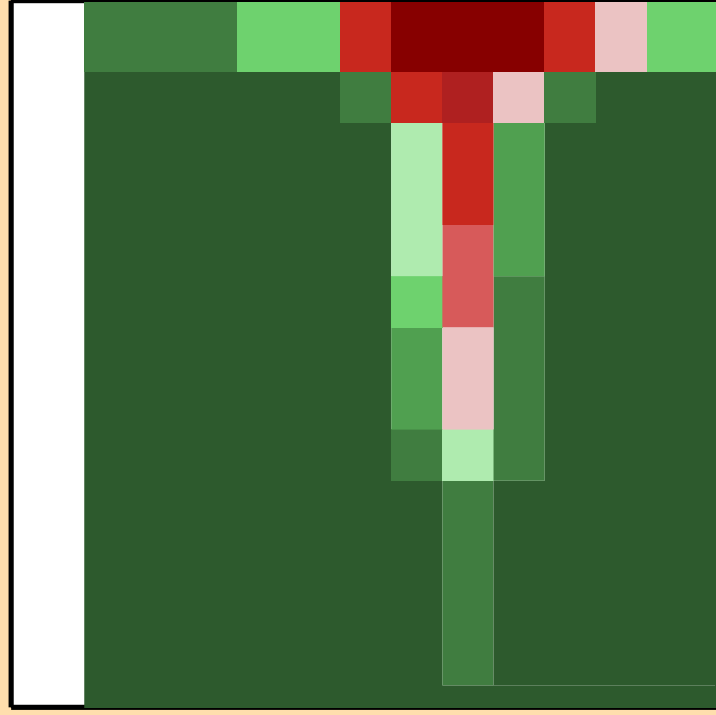
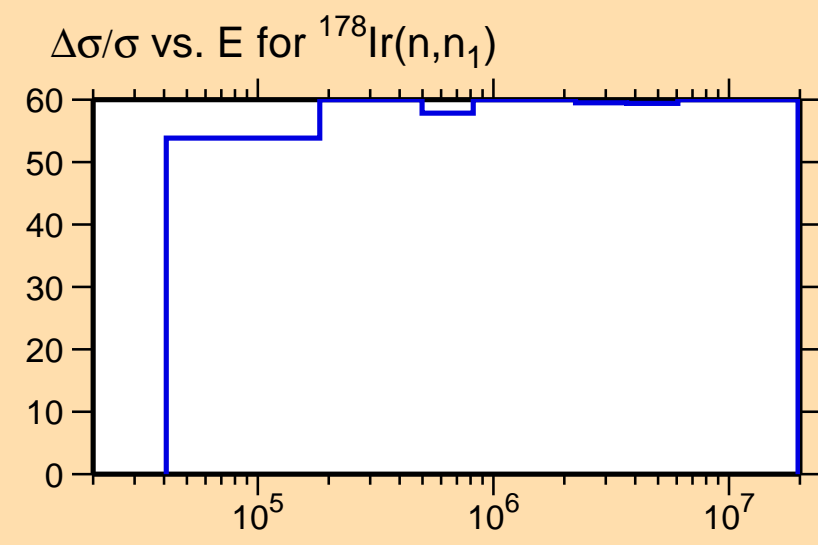




Ordinate scale is %  
relative standard deviation.

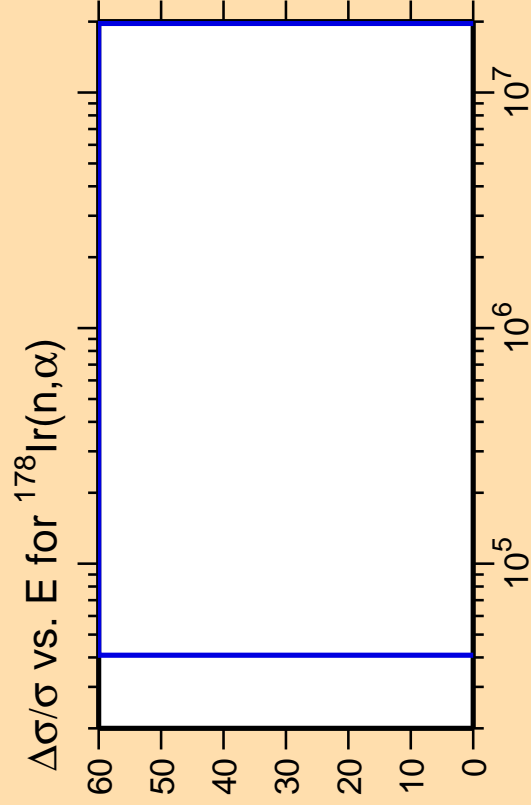
Abscissa scales are energy (eV).

Warning: some uncertainty  
data were suppressed.



Correlation Matrix

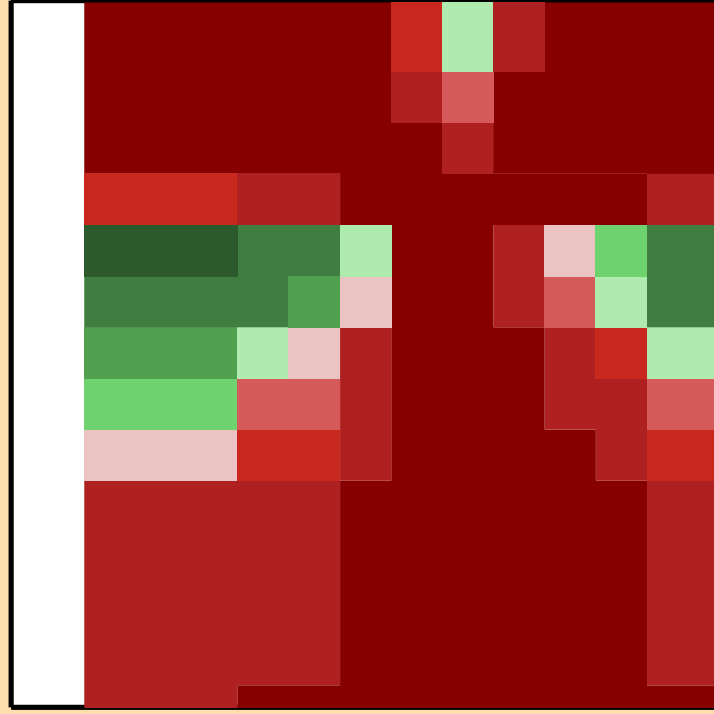
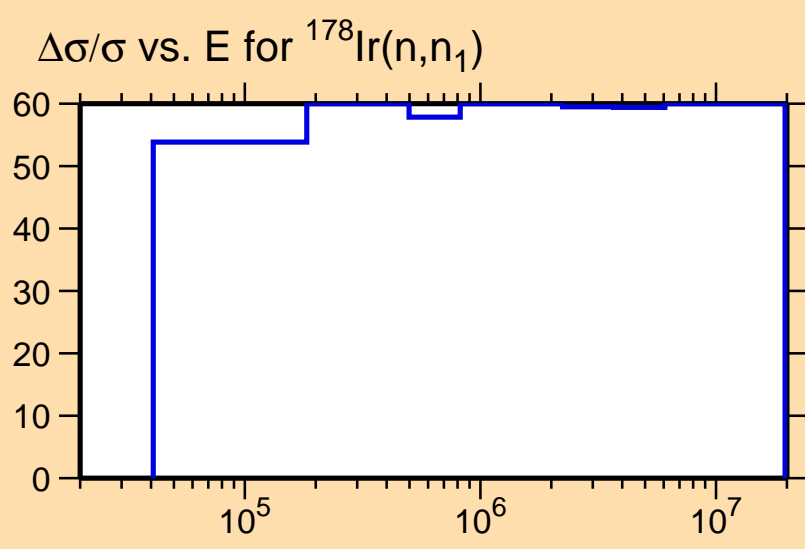




Ordinate scale is %  
relative standard deviation.

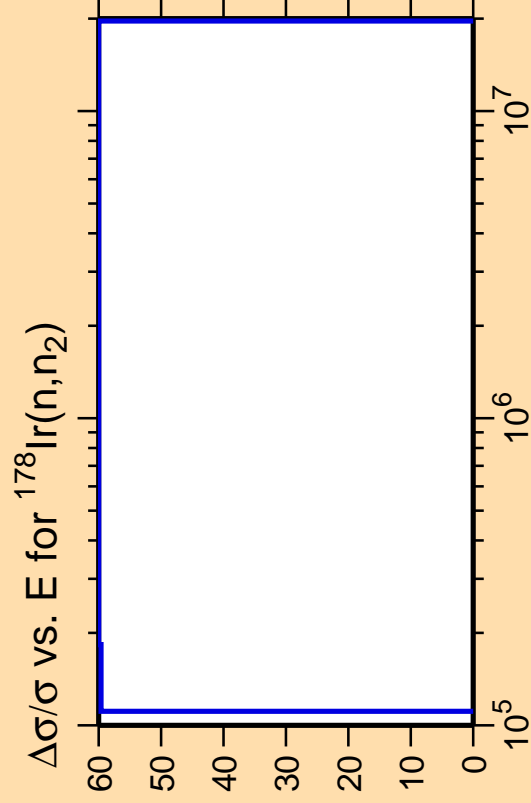
Abscissa scales are energy (eV).

Warning: some uncertainty  
data were suppressed.



Correlation Matrix

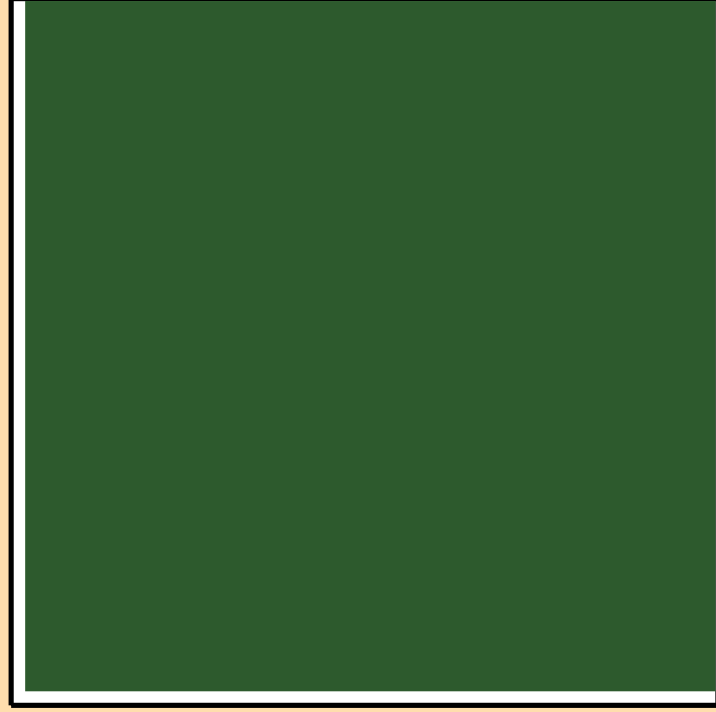
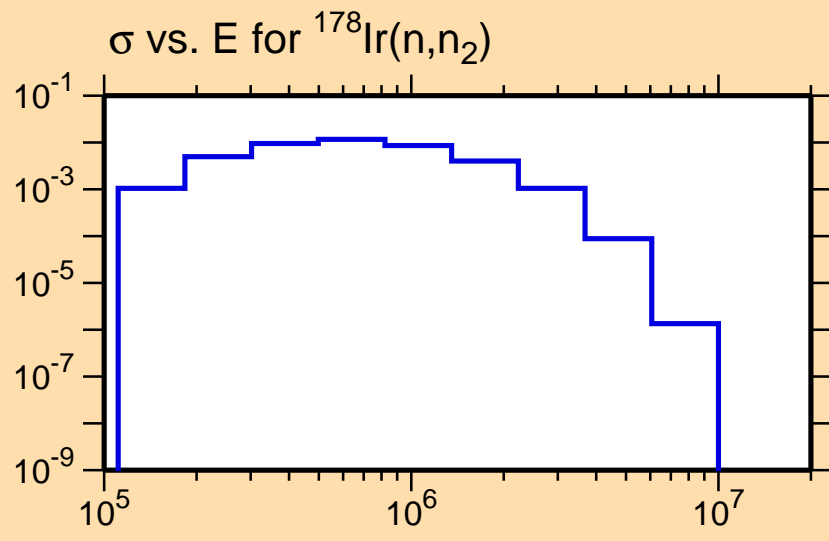




Ordinate scales are % relative standard deviation and barns.

Abscissa scales are energy (eV).

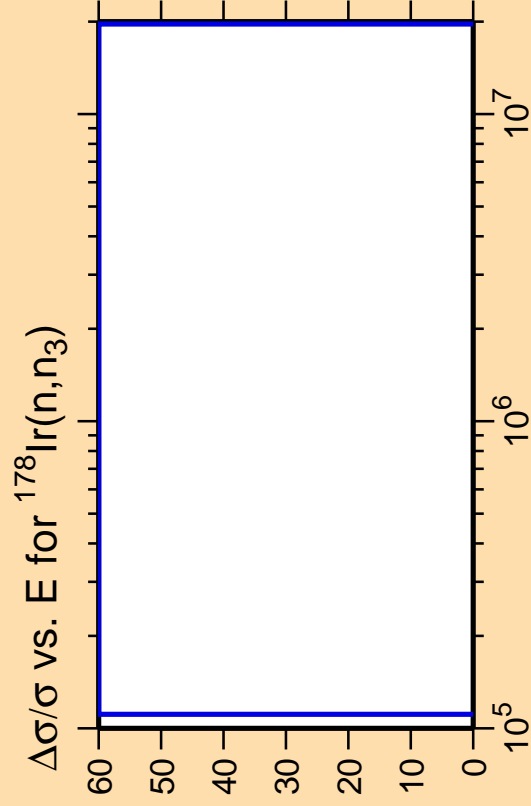
Warning: some uncertainty data were suppressed.



Correlation Matrix



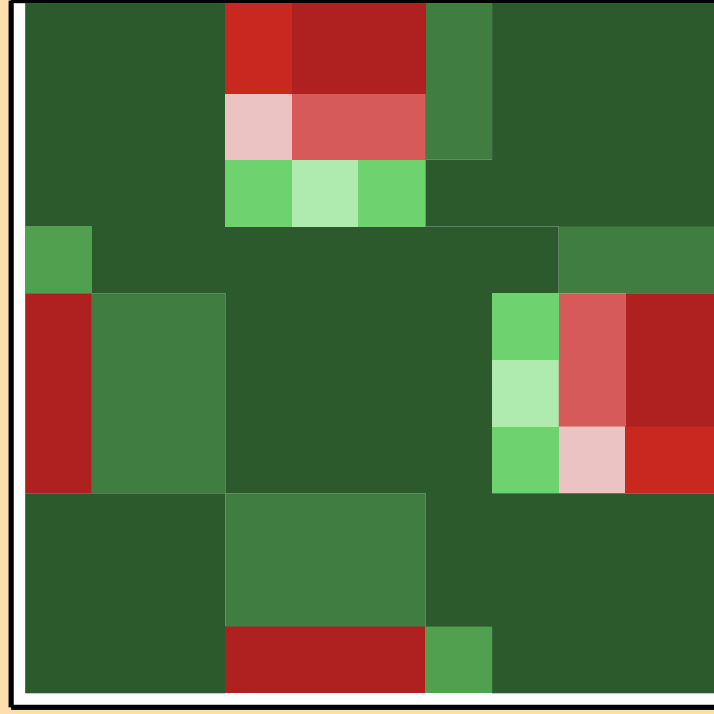
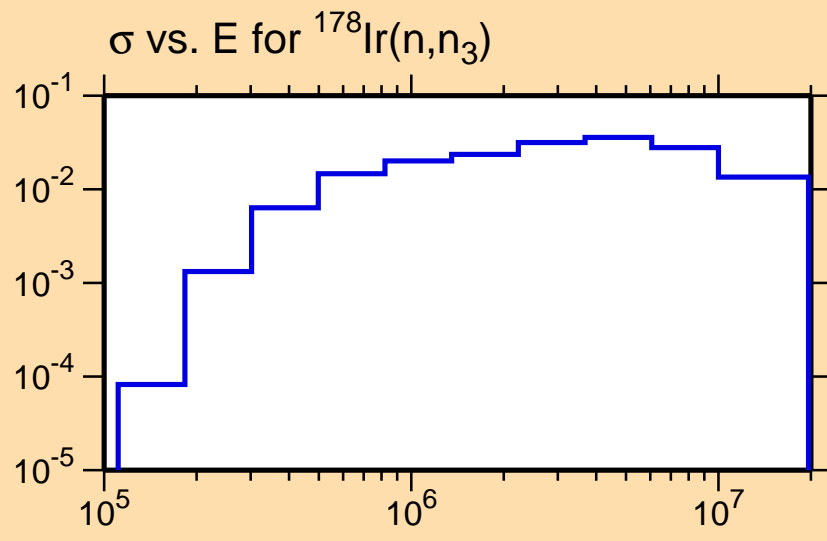




Ordinate scales are % relative standard deviation and barns.

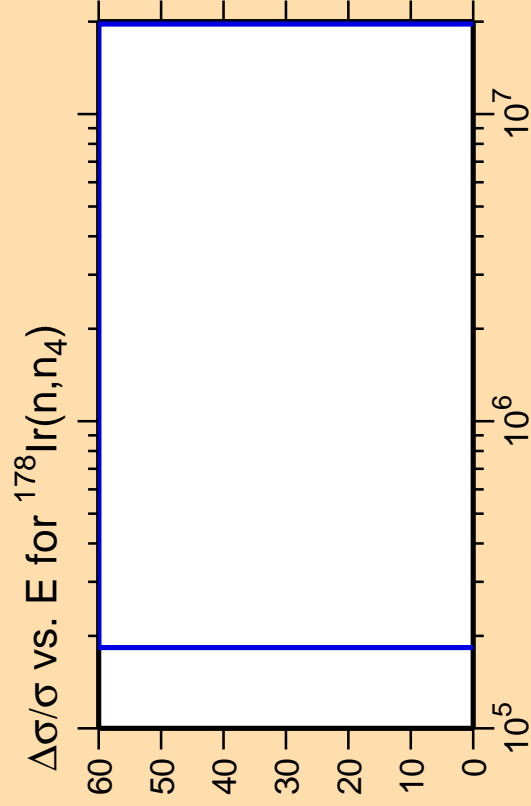
Abscissa scales are energy (eV).

Warning: some uncertainty data were suppressed.



Correlation Matrix



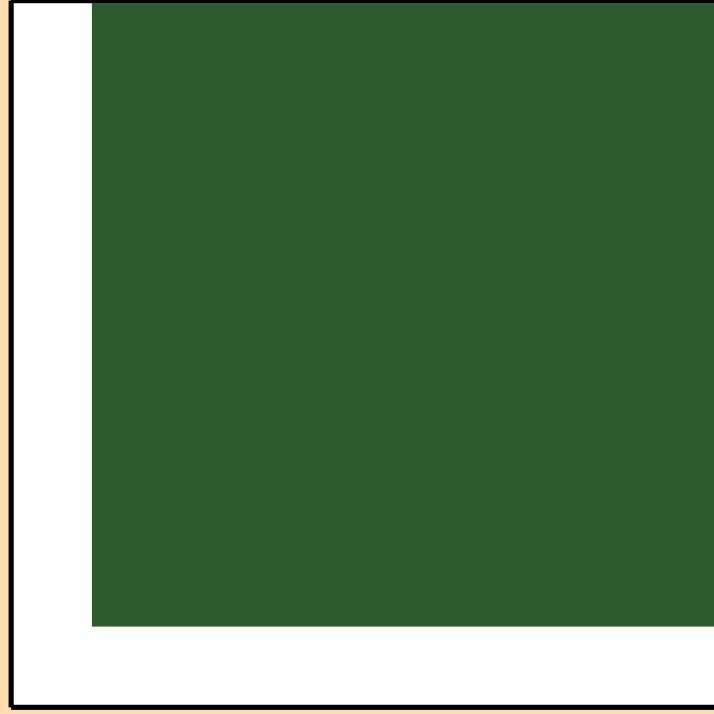
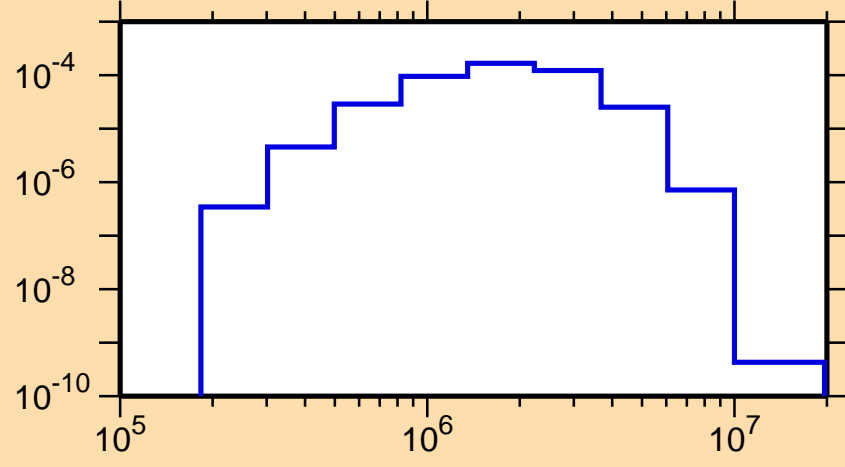


Ordinate scales are % relative standard deviation and barns.

Abscissa scales are energy (eV).

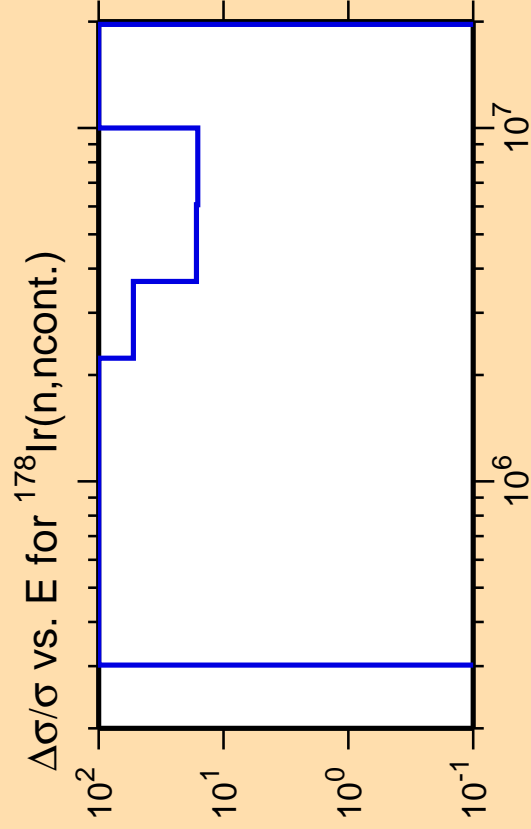
Warning: some uncertainty data were suppressed.

$\sigma$  vs. E for  $^{178}\text{Ir}(n,n_4)$



Correlation Matrix



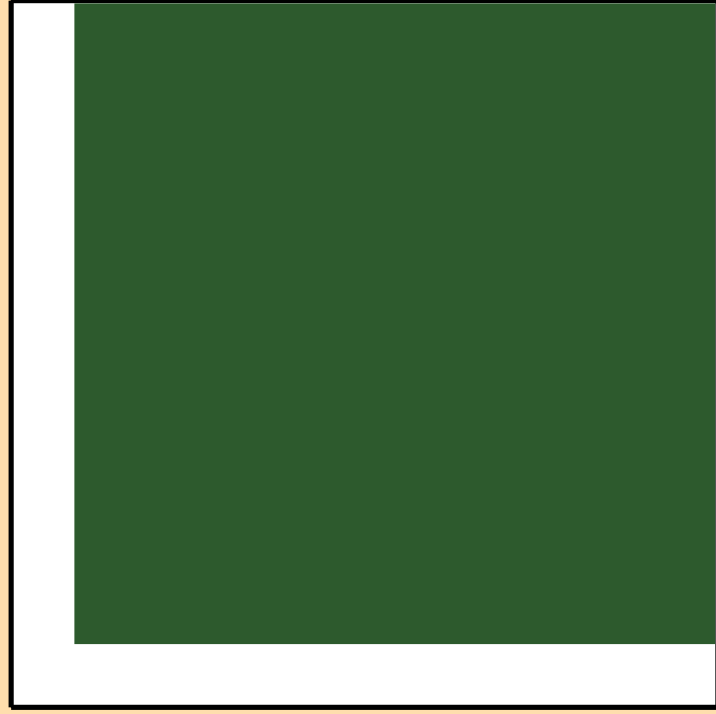
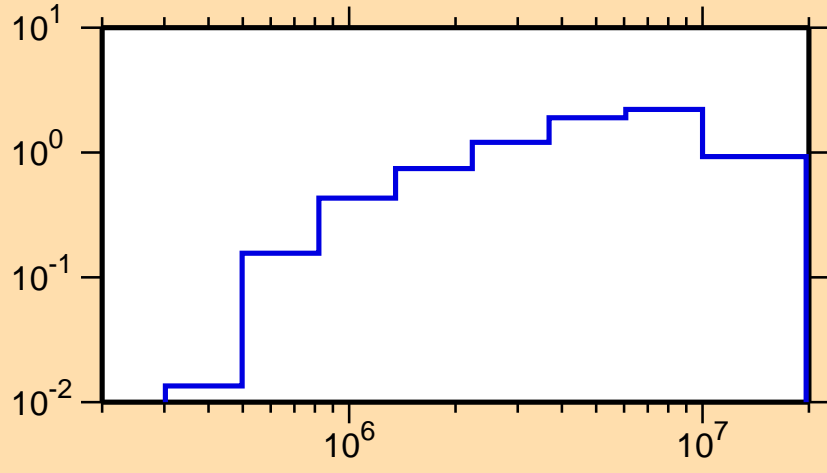


Ordinate scales are % relative standard deviation and barns.

Abscissa scales are energy (eV).

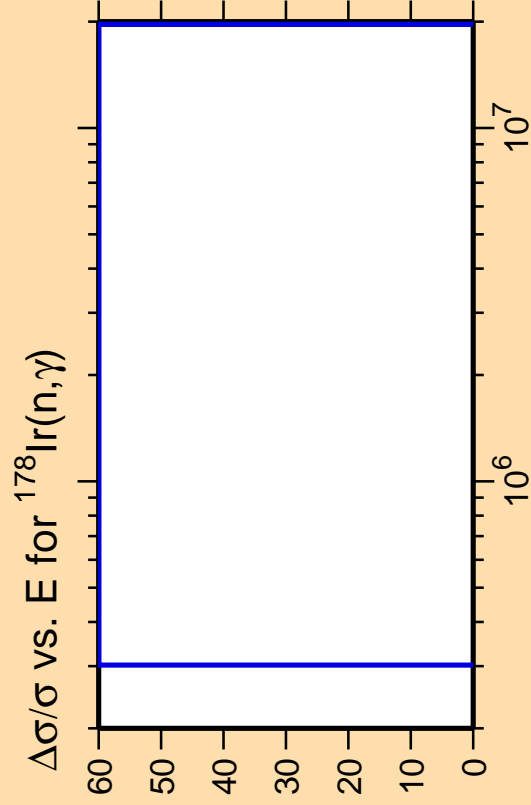
Warning: some uncertainty data were suppressed.

$\sigma$  vs. E for  $^{178}\text{Ir}(n,n\text{cont.})$



Correlation Matrix

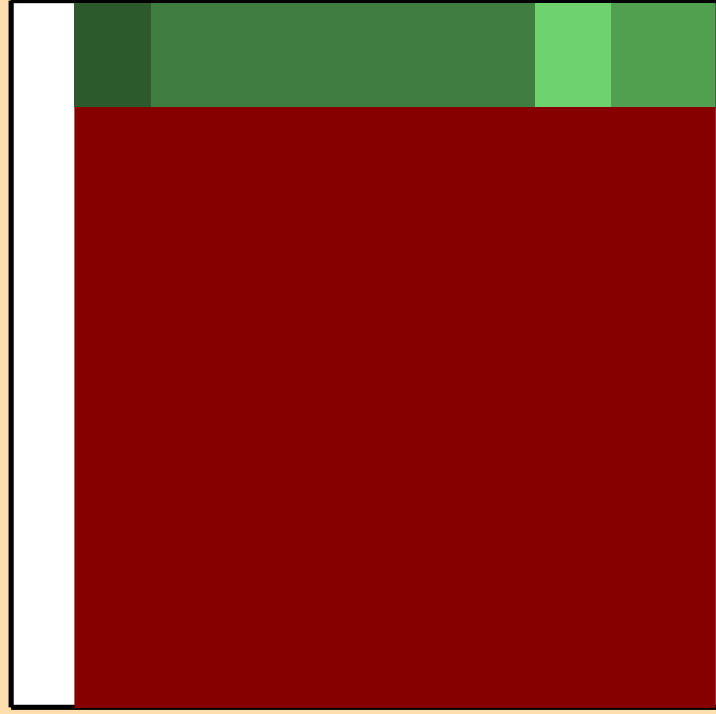
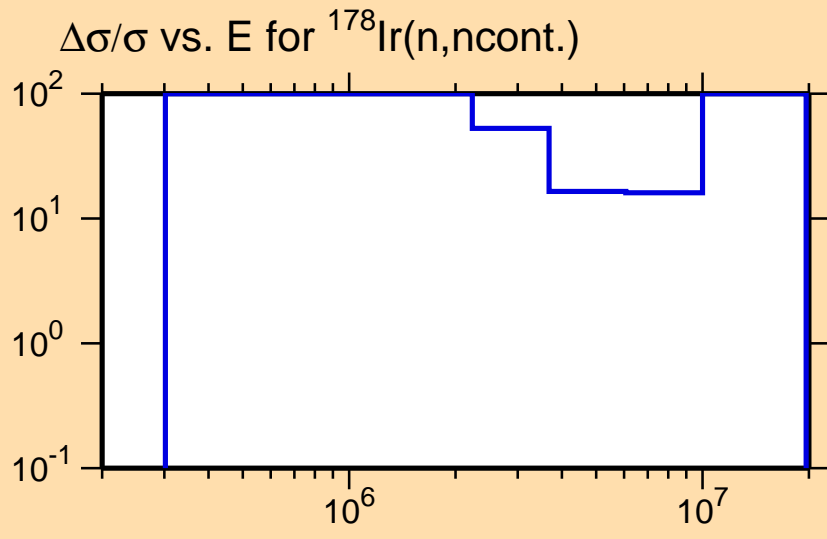




Ordinate scale is %  
relative standard deviation.

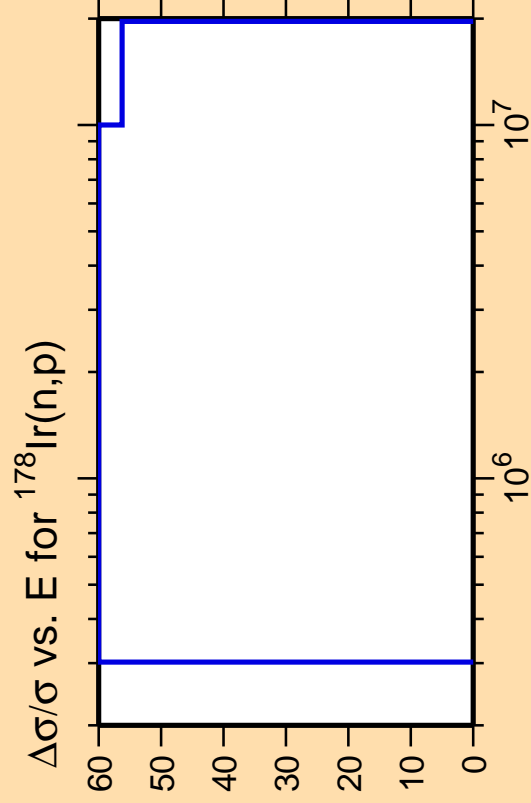
Abscissa scales are energy (eV).

Warning: some uncertainty  
data were suppressed.



Correlation Matrix

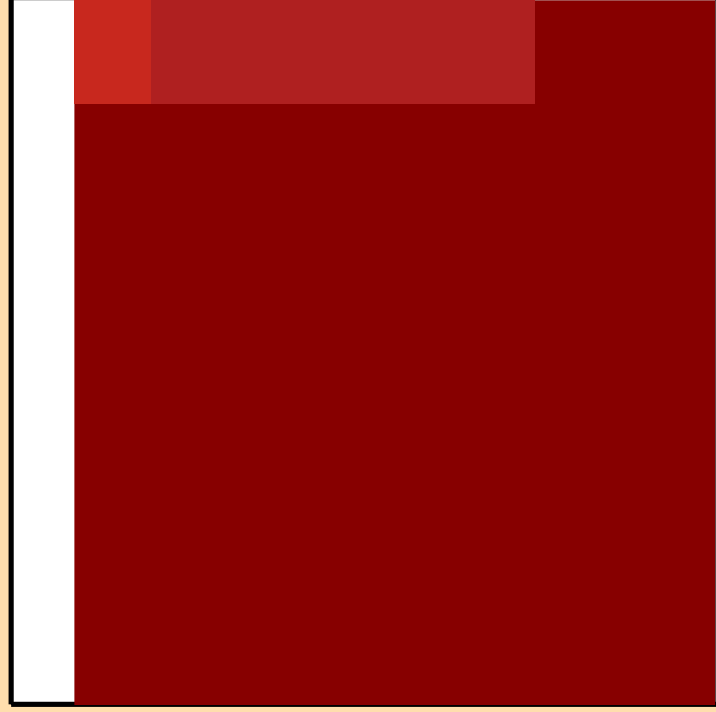
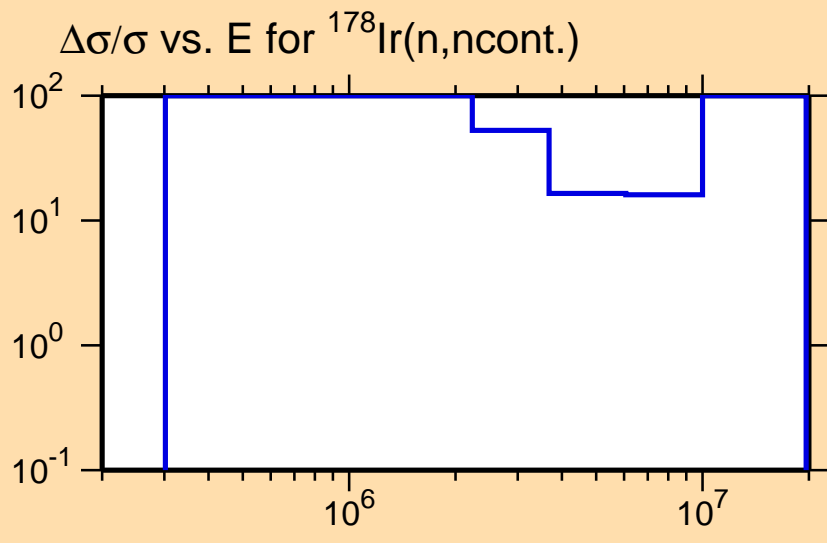




Ordinate scale is %  
relative standard deviation.

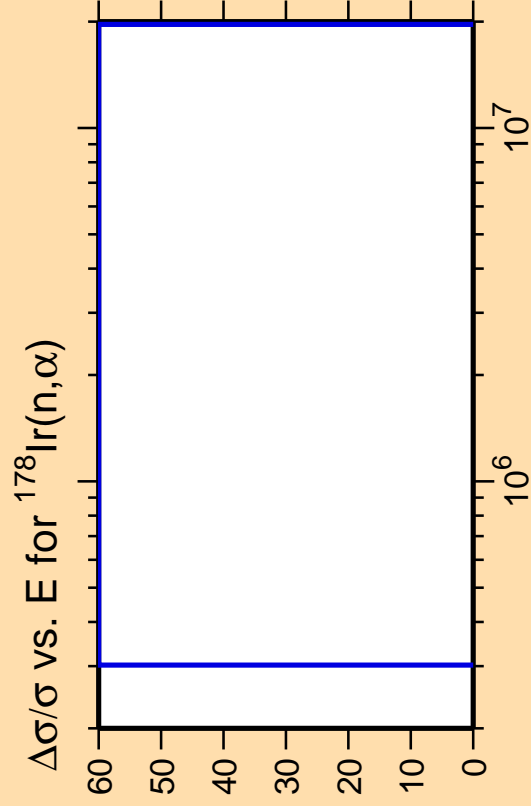
Abscissa scales are energy (eV).

Warning: some uncertainty  
data were suppressed.



Correlation Matrix

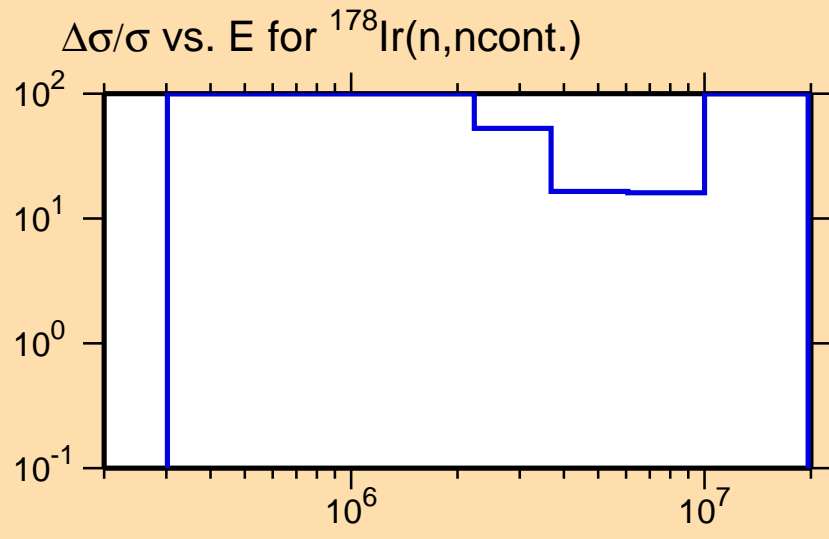




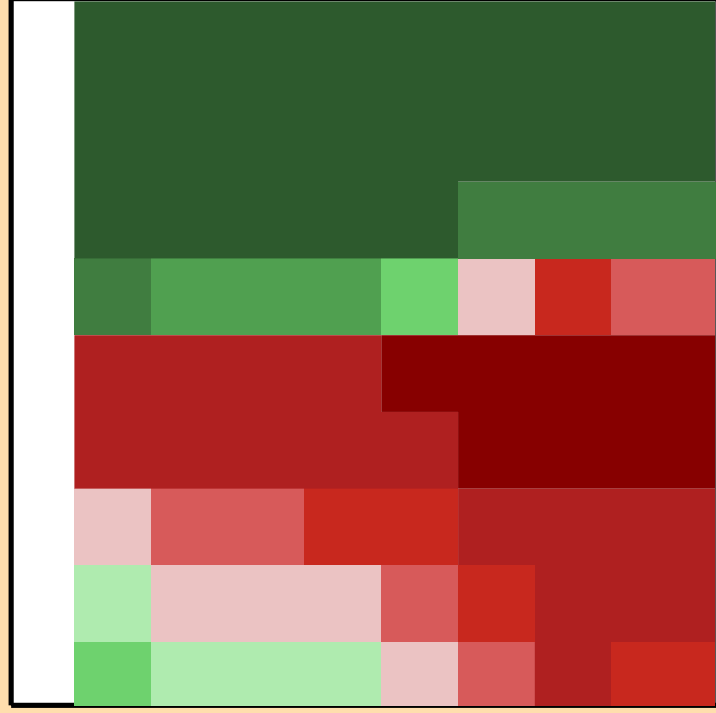
Ordinate scale is %  
relative standard deviation.

Abscissa scales are energy (eV).

Warning: some uncertainty  
data were suppressed.

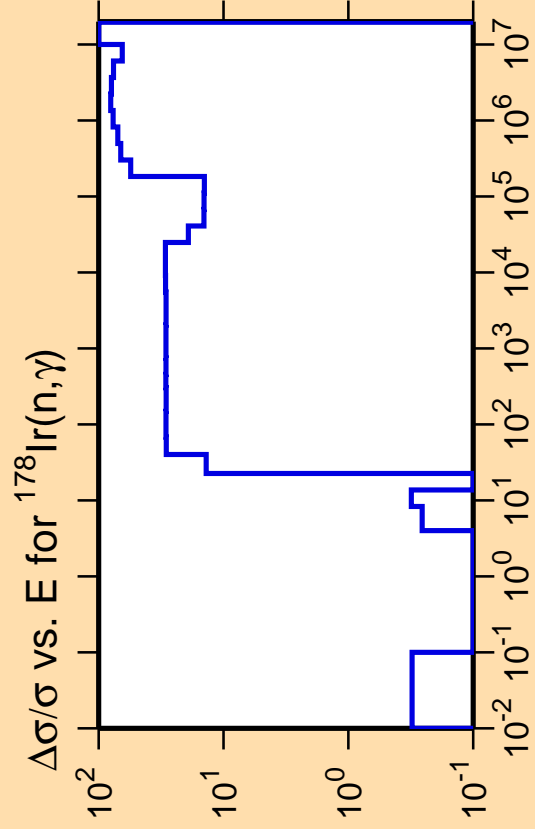


$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,n\text{cont.})$



Correlation Matrix

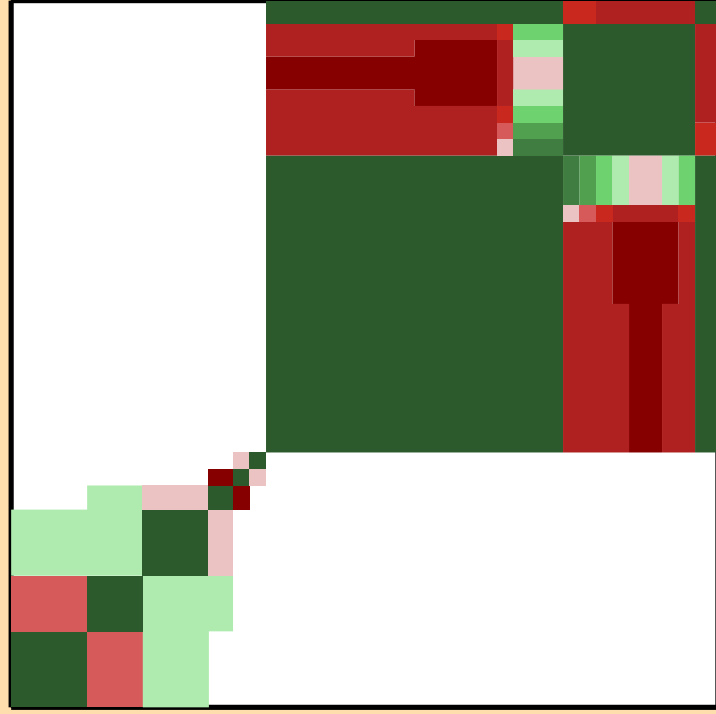
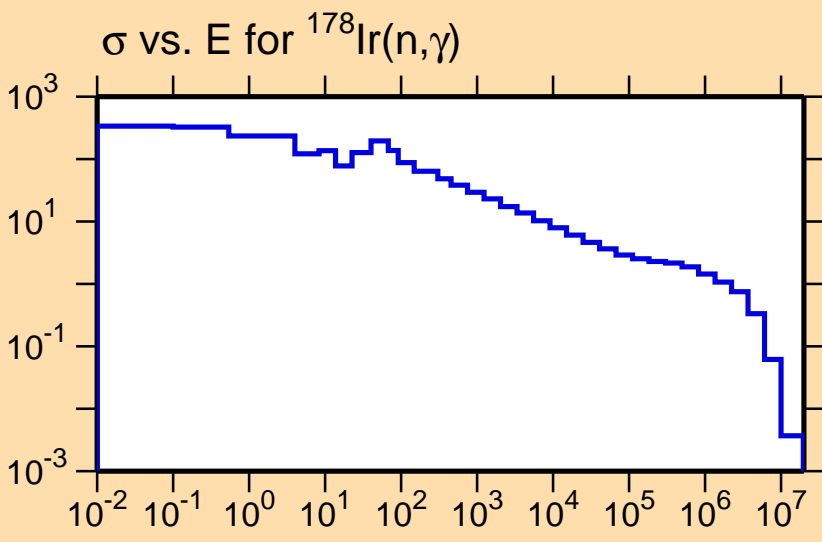




Ordinate scales are % relative standard deviation and barns.

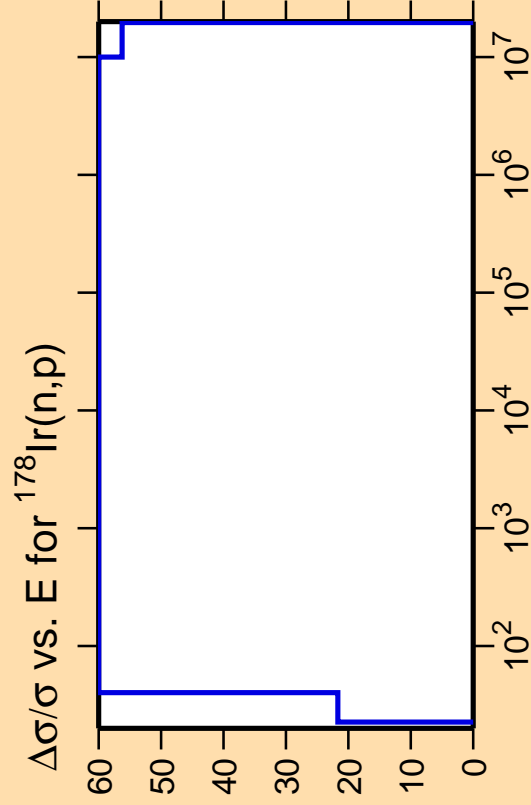
Abscissa scales are energy (eV).

Warning: some uncertainty data were suppressed.



Correlation Matrix

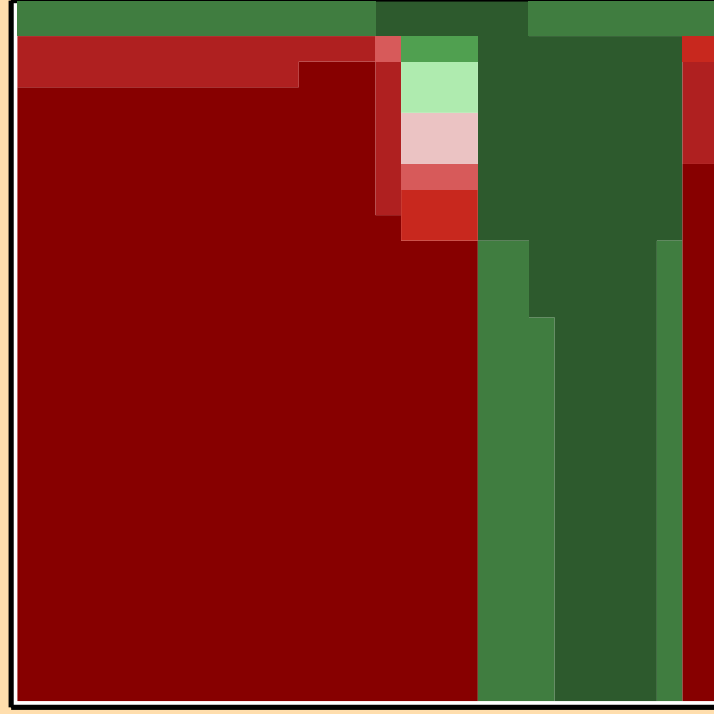
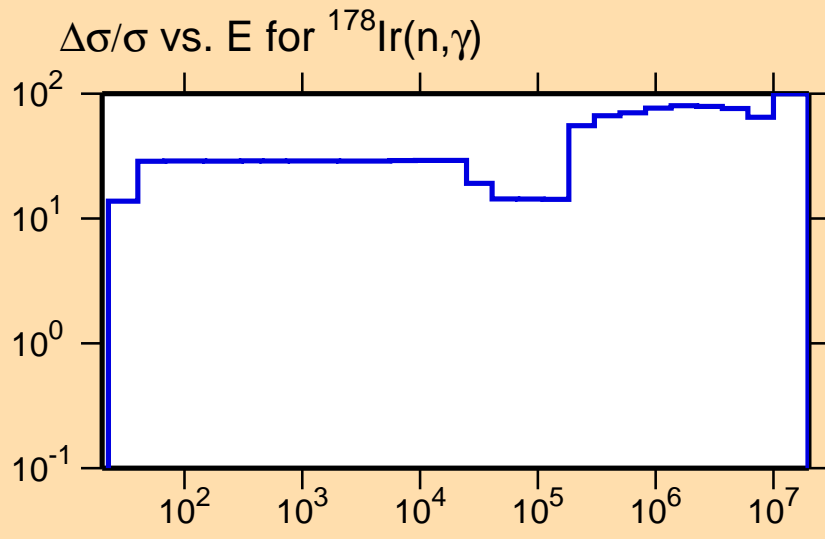




Ordinate scale is %  
relative standard deviation.

Abscissa scales are energy (eV).

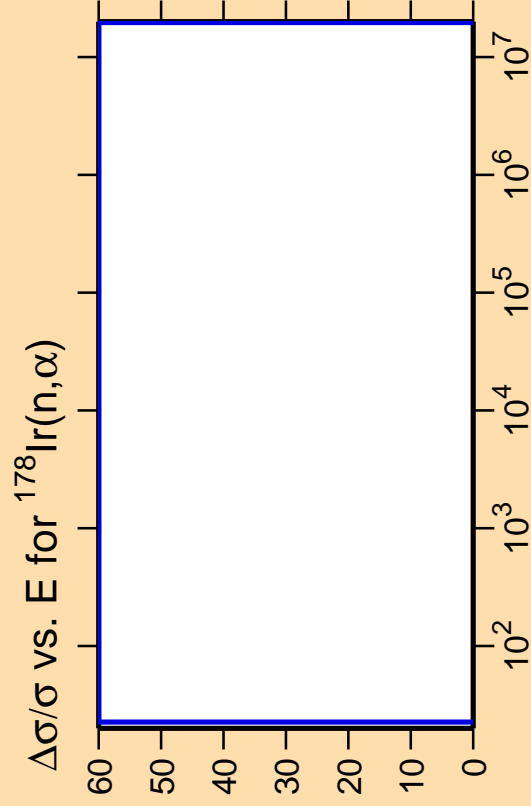
Warning: some uncertainty  
data were suppressed.



Correlation Matrix



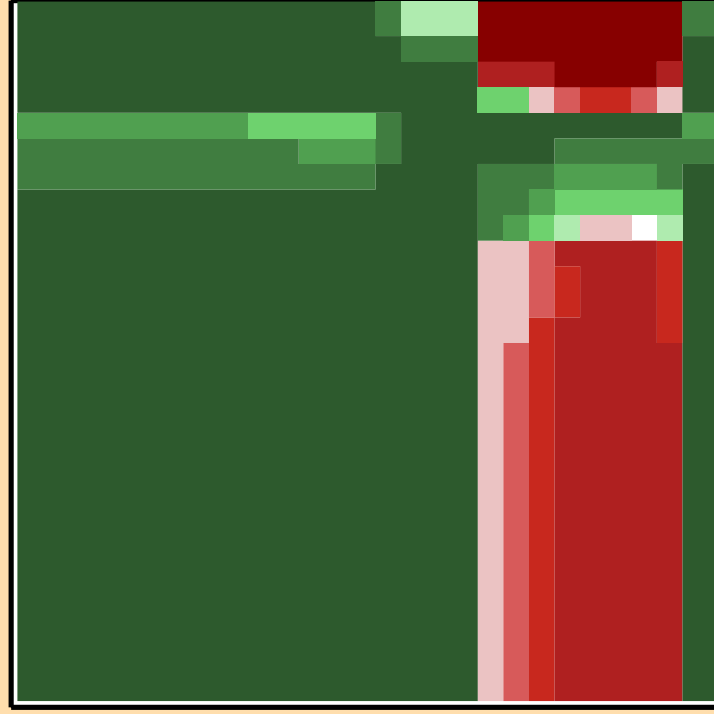
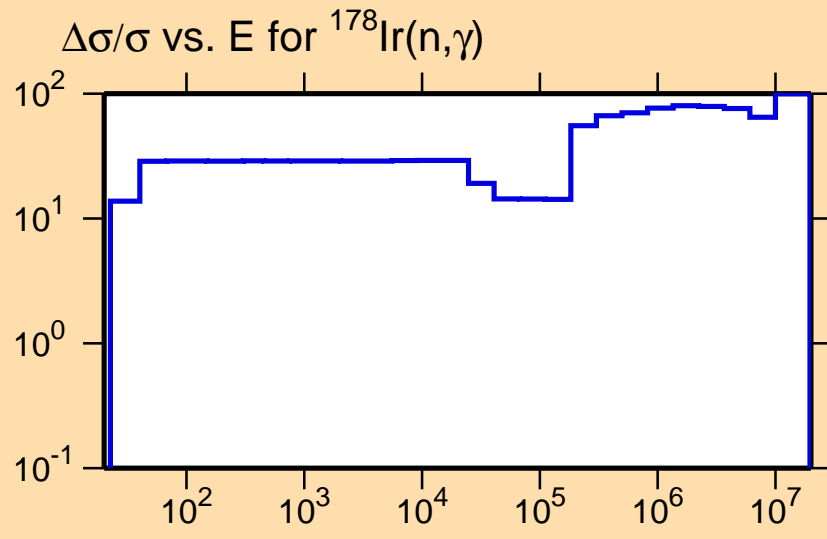




Ordinate scale is %  
relative standard deviation.

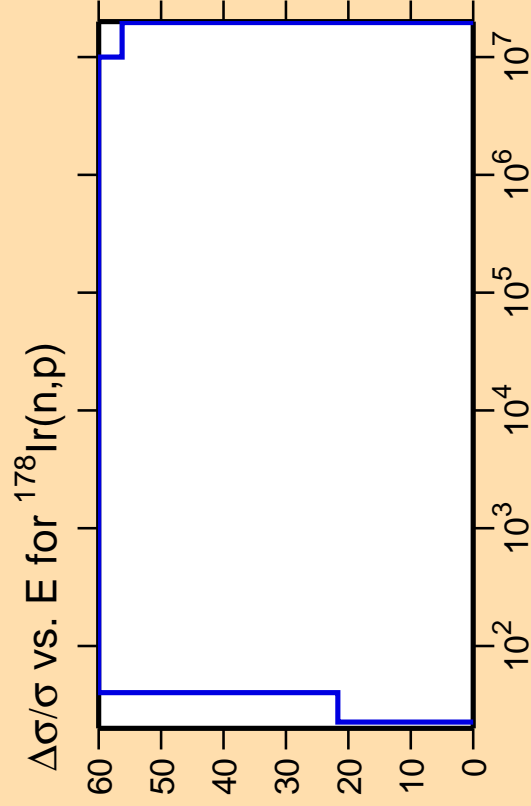
Abscissa scales are energy (eV).

Warning: some uncertainty  
data were suppressed.



Correlation Matrix

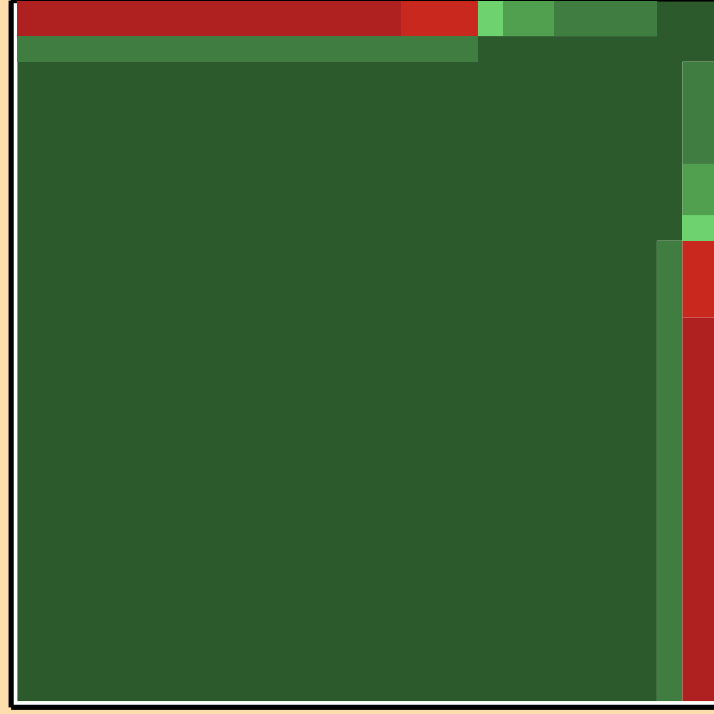
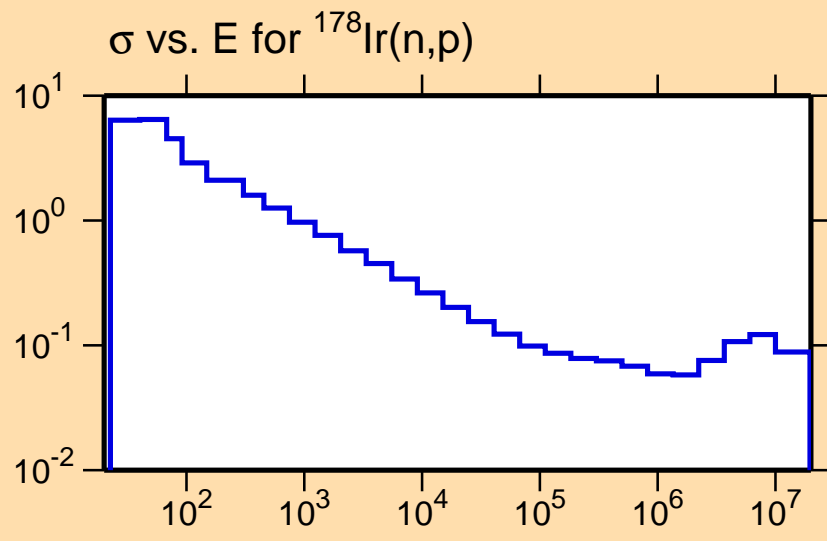




Ordinate scales are % relative standard deviation and barns.

Abscissa scales are energy (eV).

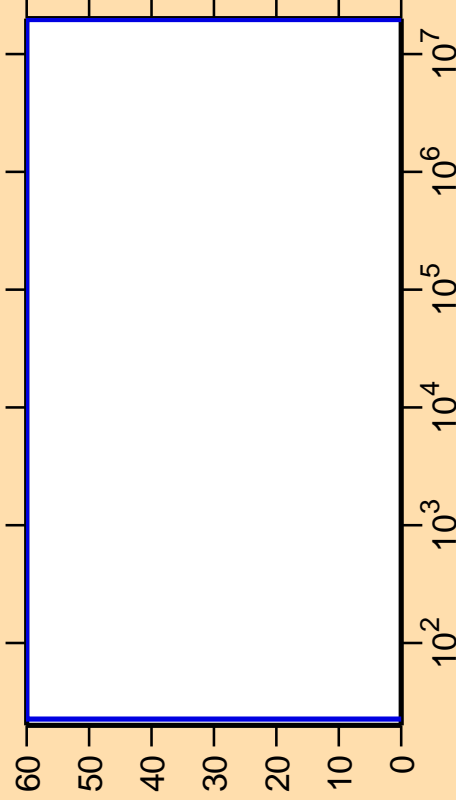
Warning: some uncertainty data were suppressed.



Correlation Matrix



$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,\alpha)$

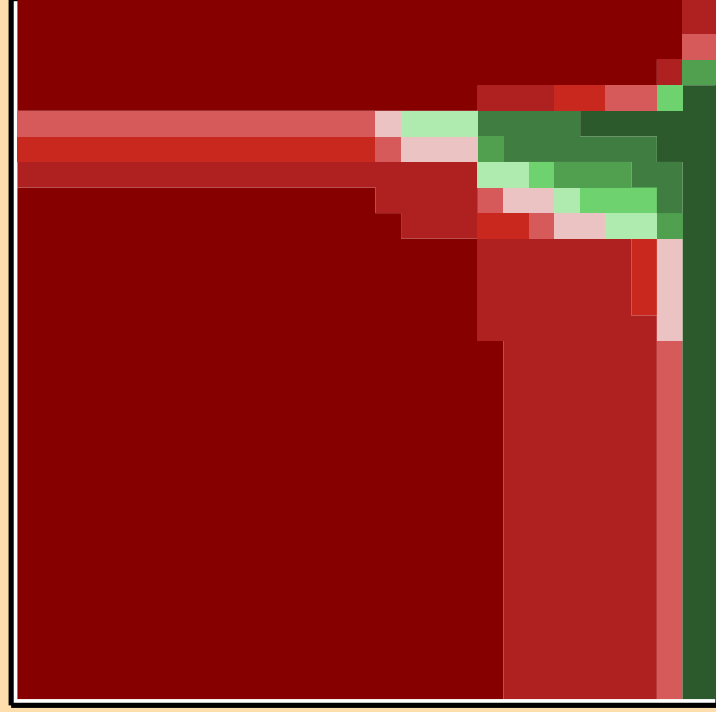
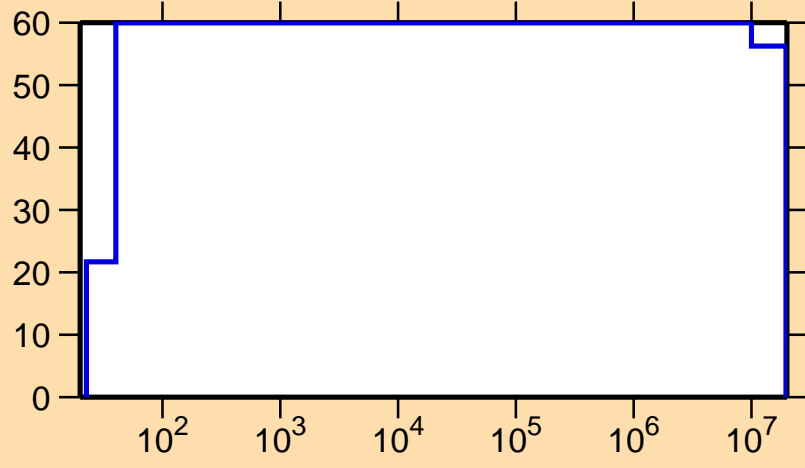


Ordinate scale is %  
relative standard deviation.

Abscissa scales are energy (eV).

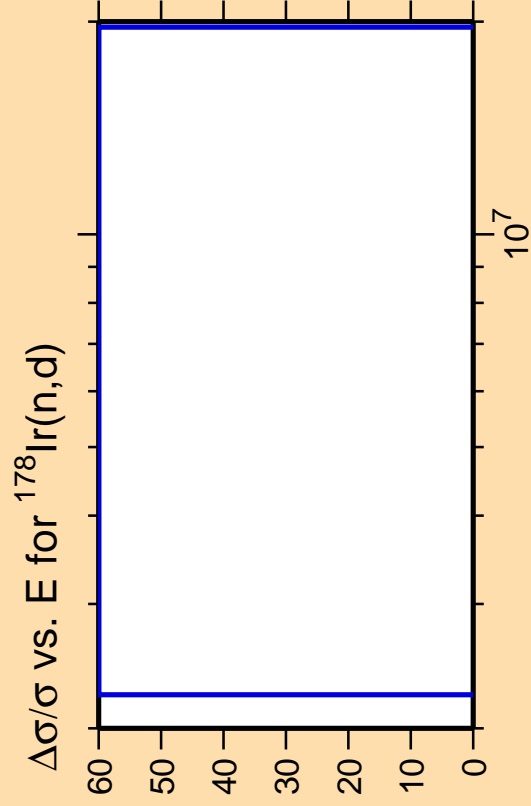
Warning: some uncertainty  
data were suppressed.

$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,p)$



Correlation Matrix

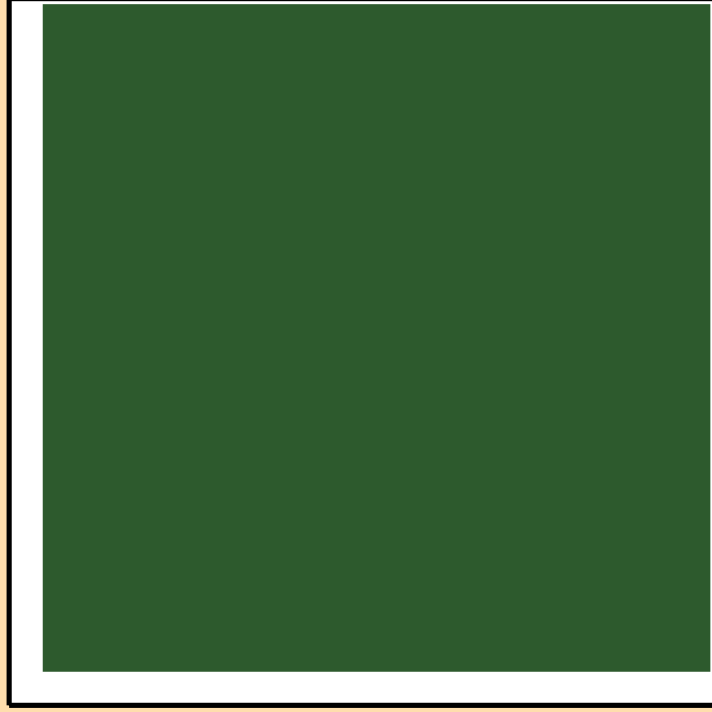
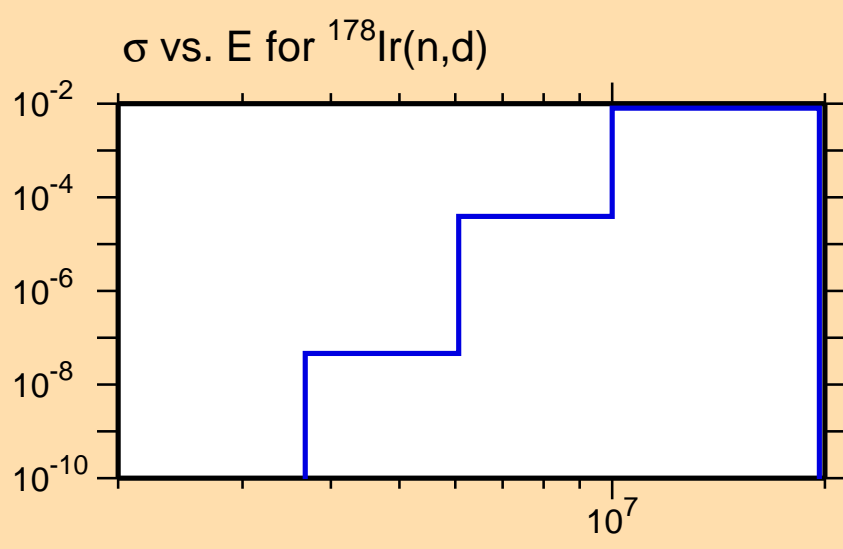




Ordinate scales are % relative standard deviation and barns.

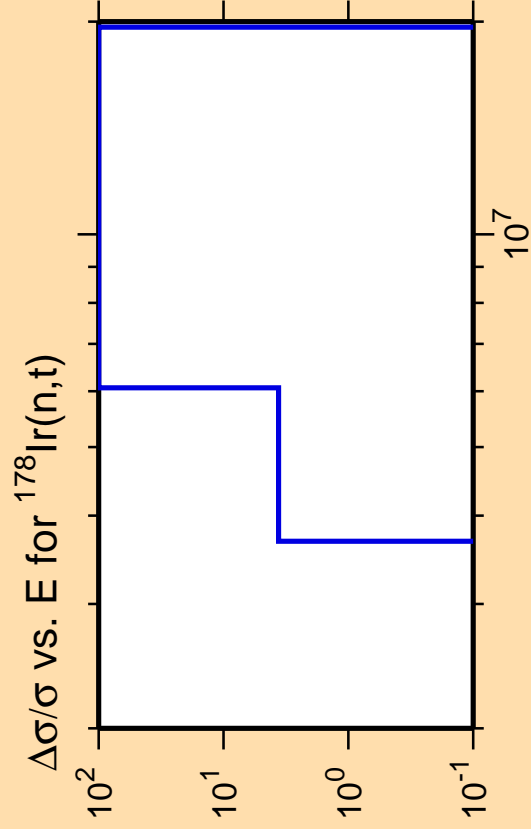
Abscissa scales are energy (eV).

Warning: some uncertainty data were suppressed.



Correlation Matrix

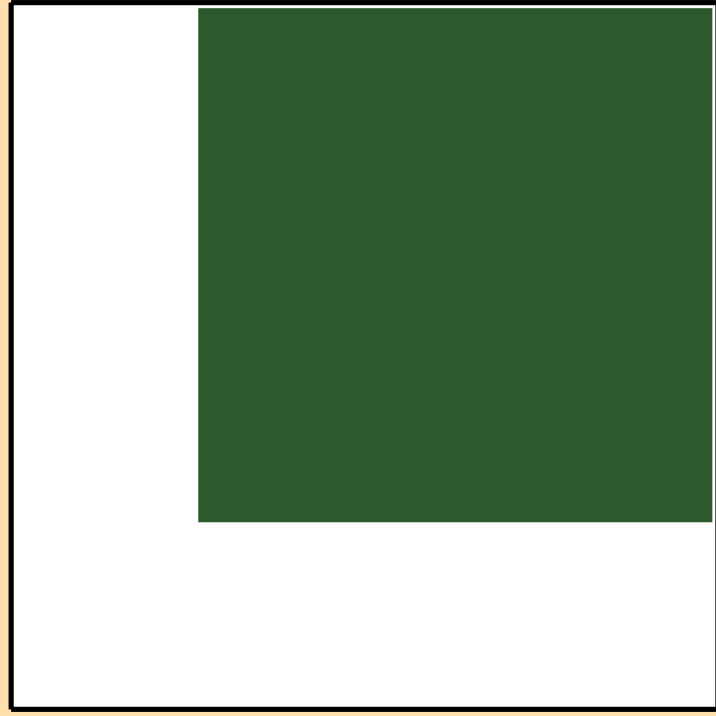
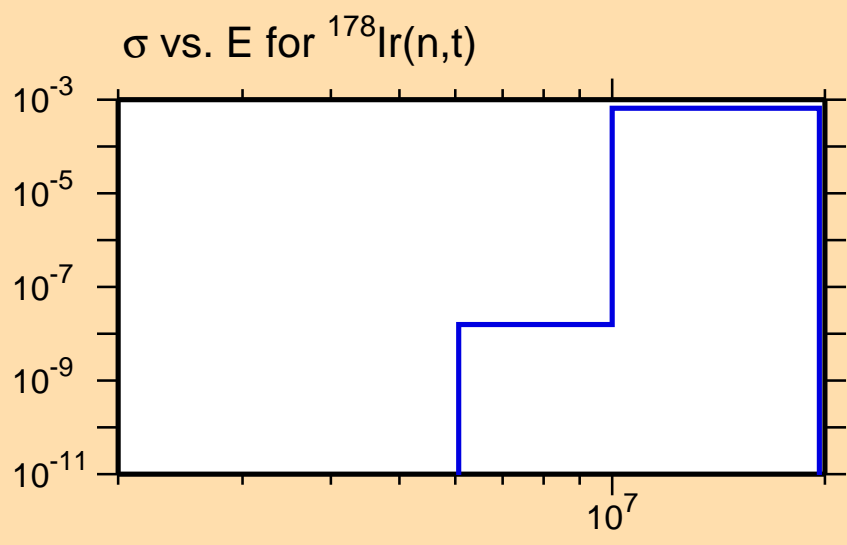




Ordinate scales are % relative standard deviation and barns.

Abscissa scales are energy (eV).

Warning: some uncertainty data were suppressed.



Correlation Matrix



$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,\text{He3})$

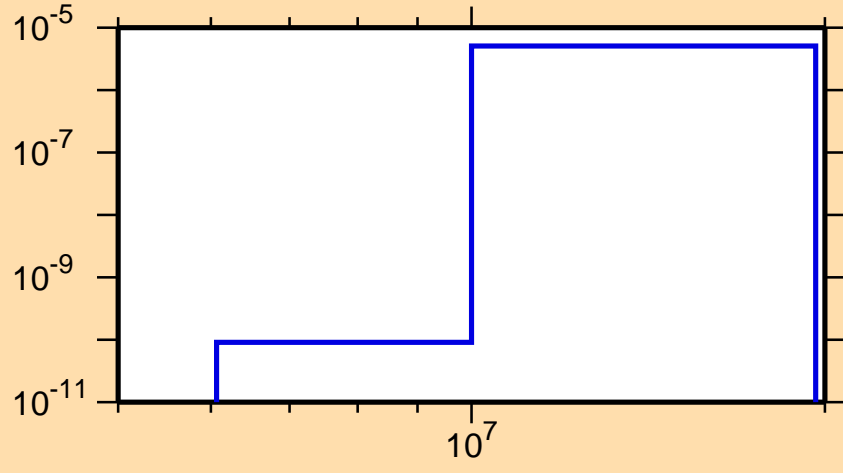


Ordinate scales are % relative standard deviation and barns.

Abscissa scales are energy (eV).

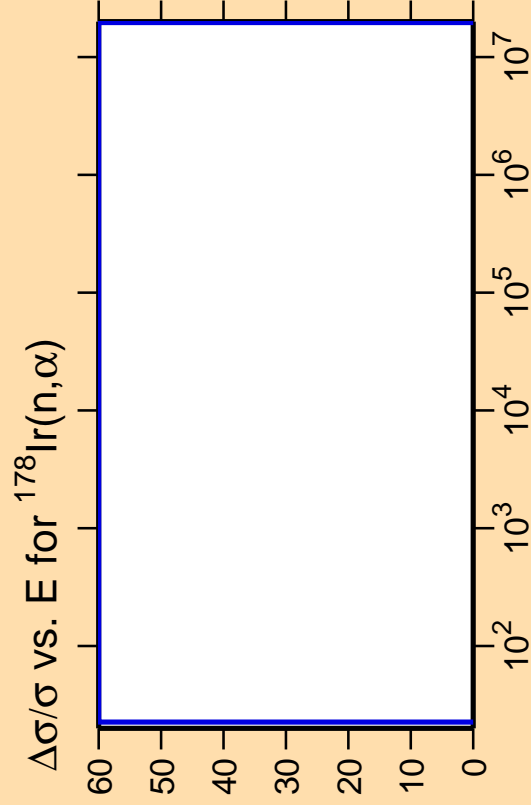
Warning: some uncertainty data were suppressed.

$\sigma$  vs. E for  $^{178}\text{Ir}(n,\text{He3})$



Correlation Matrix

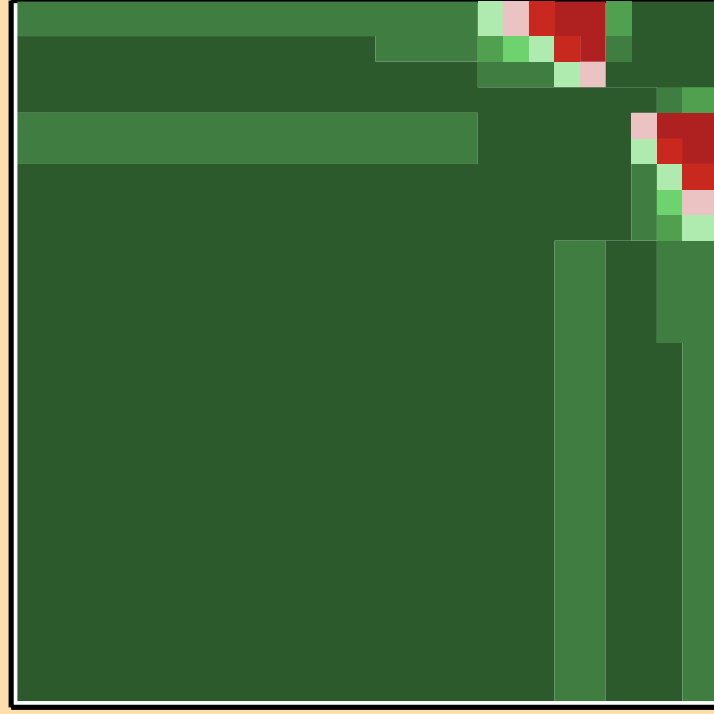
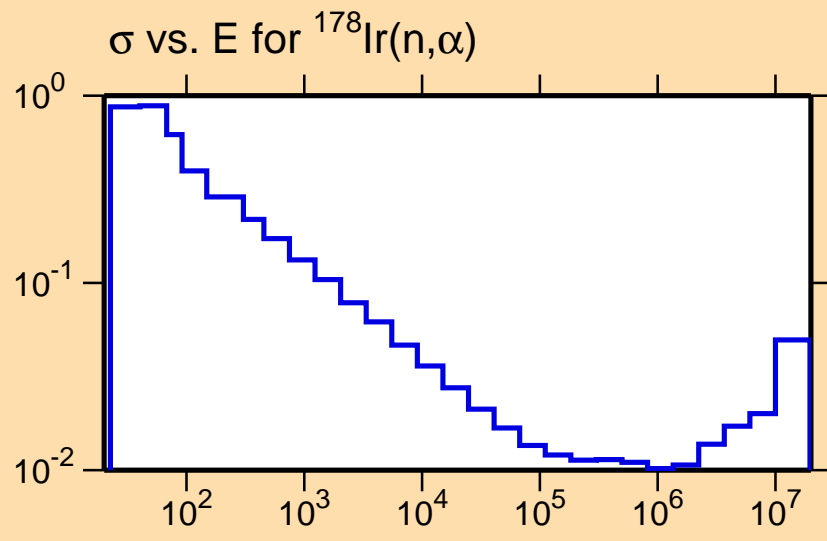




Ordinate scales are % relative standard deviation and barns.

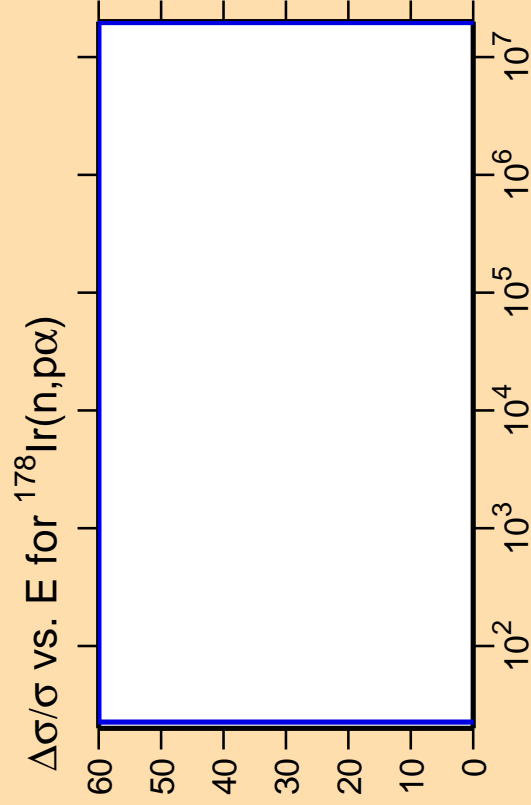
Abscissa scales are energy (eV).

Warning: some uncertainty data were suppressed.



Correlation Matrix

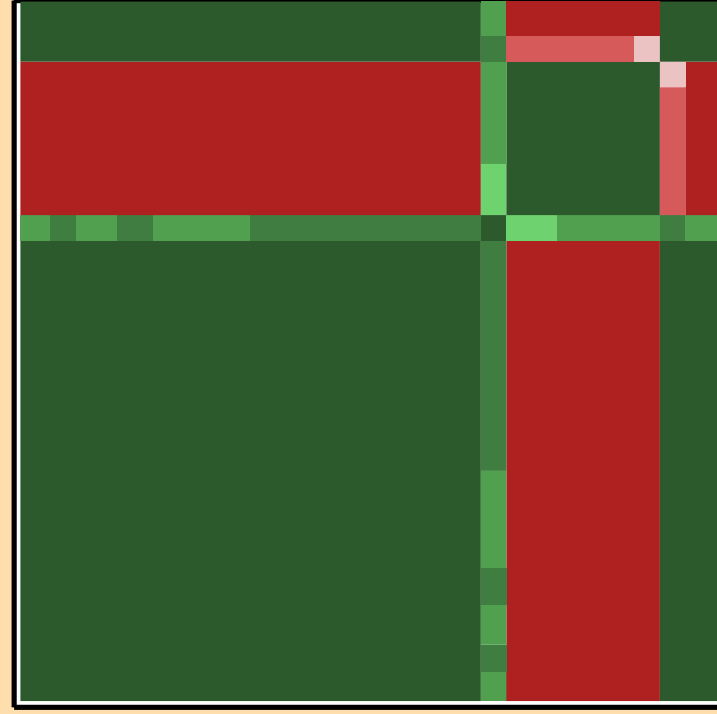
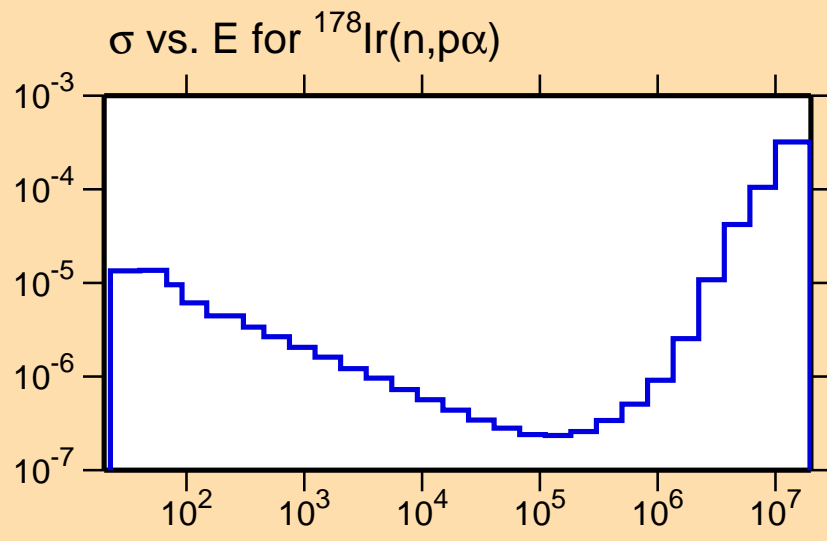




Ordinate scales are % relative standard deviation and barns.

Abscissa scales are energy (eV).

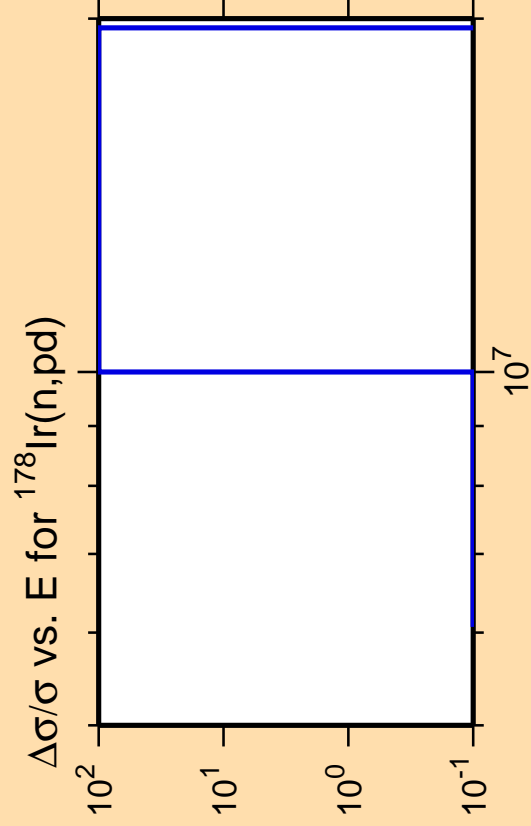
Warning: some uncertainty data were suppressed.



Correlation Matrix



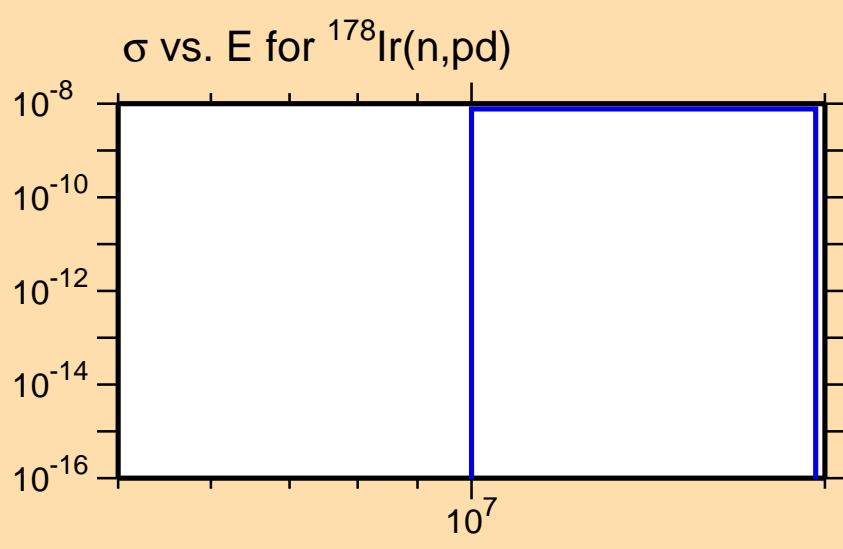




Ordinate scales are % relative standard deviation and barns.

Abscissa scales are energy (eV).

Warning: some uncertainty data were suppressed.



Correlation Matrix



$\Delta\sigma/\sigma$  vs. E for  $^{178}\text{Ir}(n,\text{pt})$

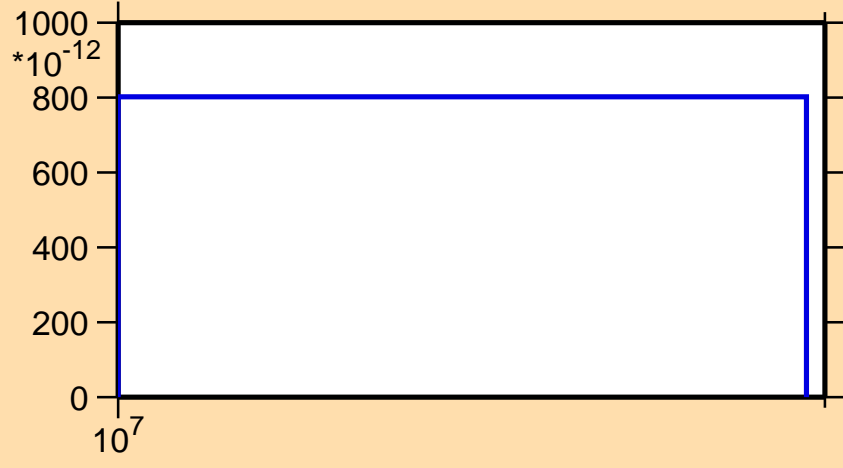


Ordinate scales are % relative standard deviation and barns.

Abscissa scales are energy (eV).

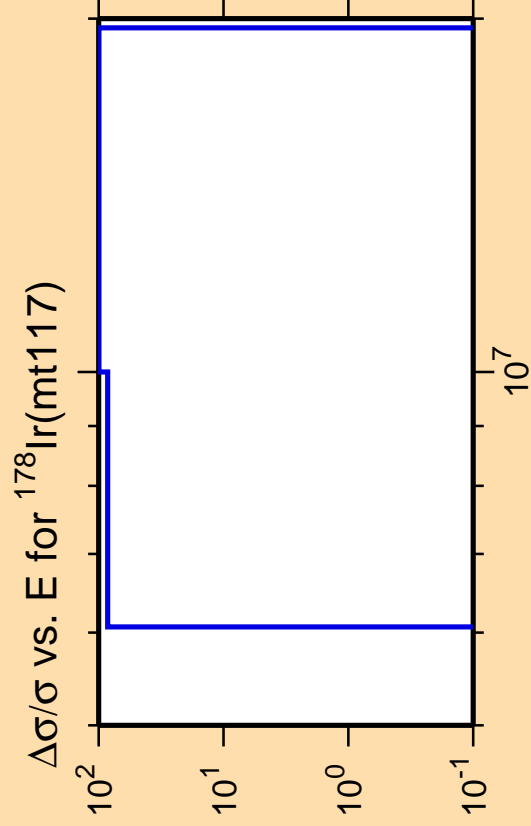
Warning: some uncertainty data were suppressed.

$\sigma$  vs. E for  $^{178}\text{Ir}(n,\text{pt})$



Correlation Matrix

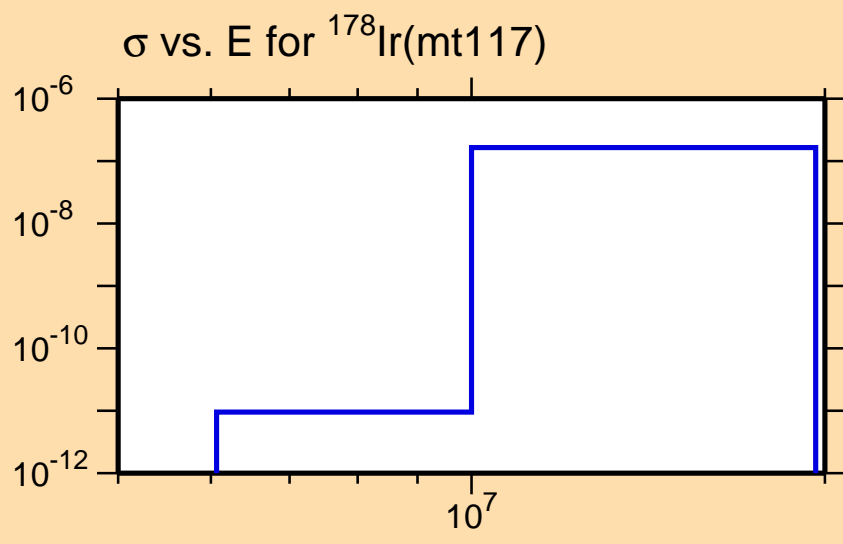




Ordinate scales are % relative standard deviation and barns.

Abscissa scales are energy (eV).

Warning: some uncertainty data were suppressed.



Correlation Matrix

