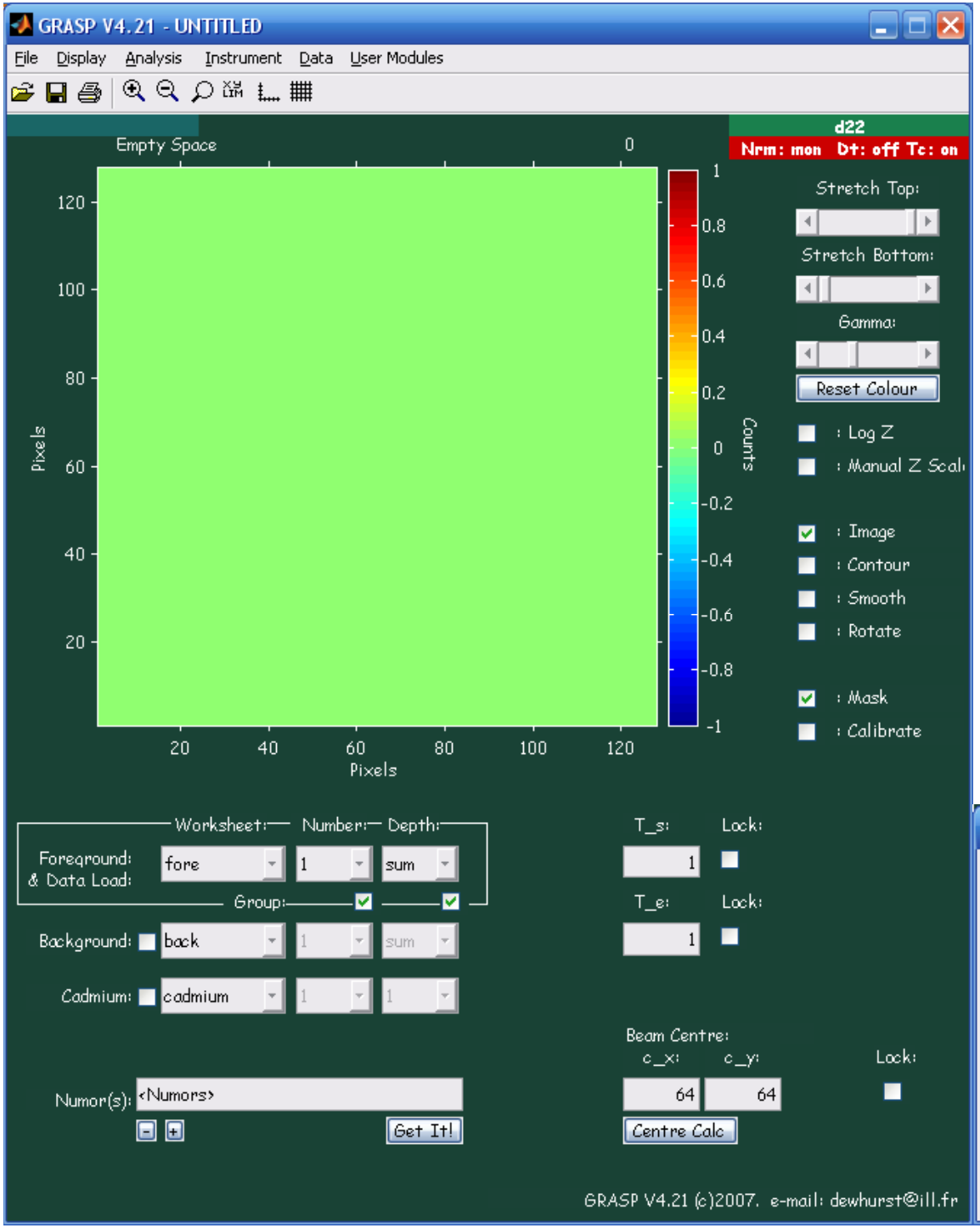
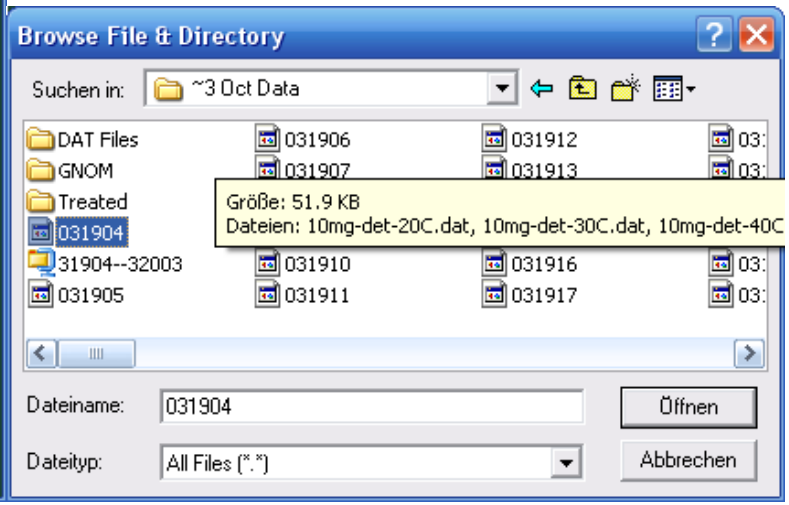


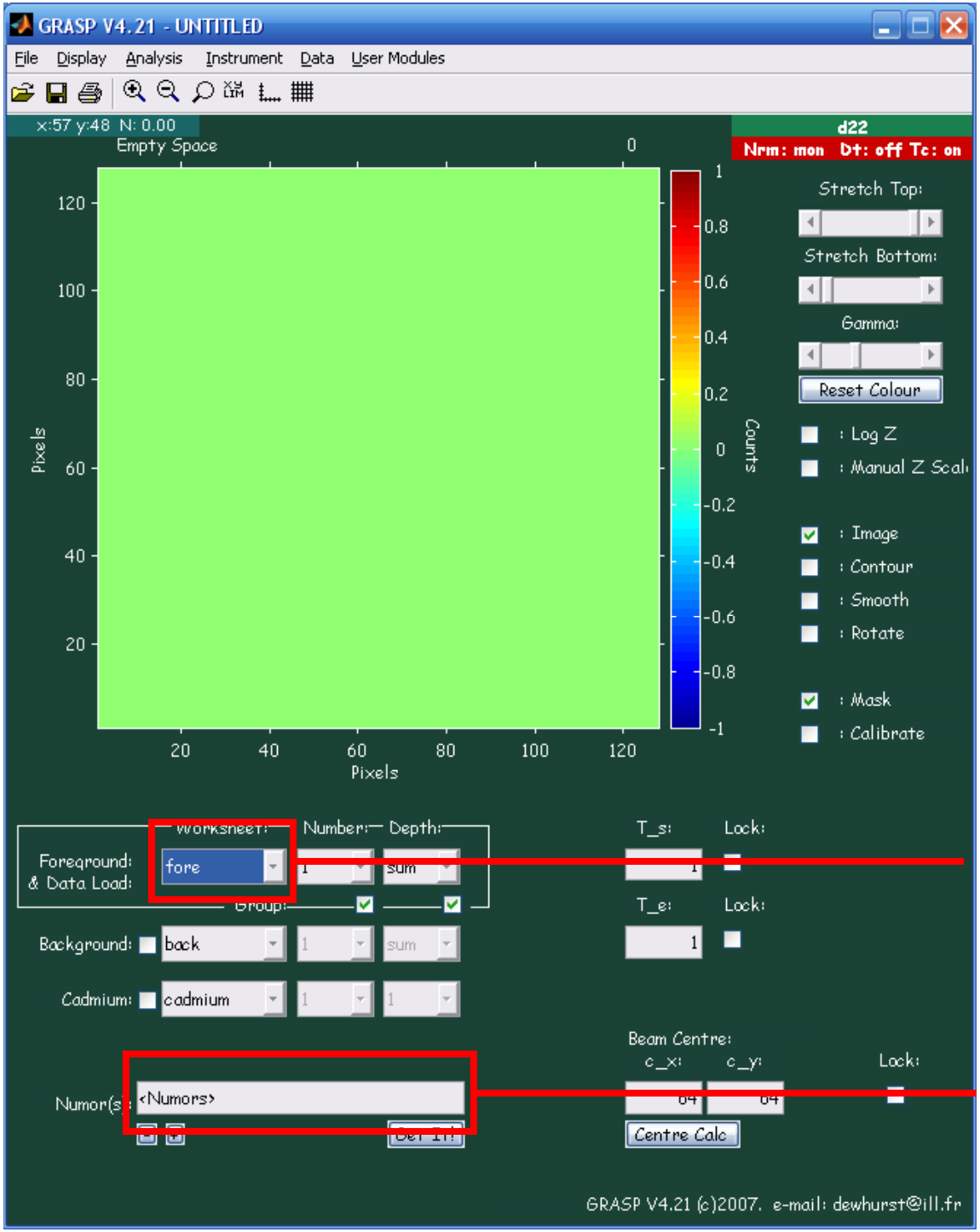
Set Data Directory so that GRASP knows where to look for data

-File

- Set Data Directory

- Then browse to data folder





Use - Foreground: & Data Load:

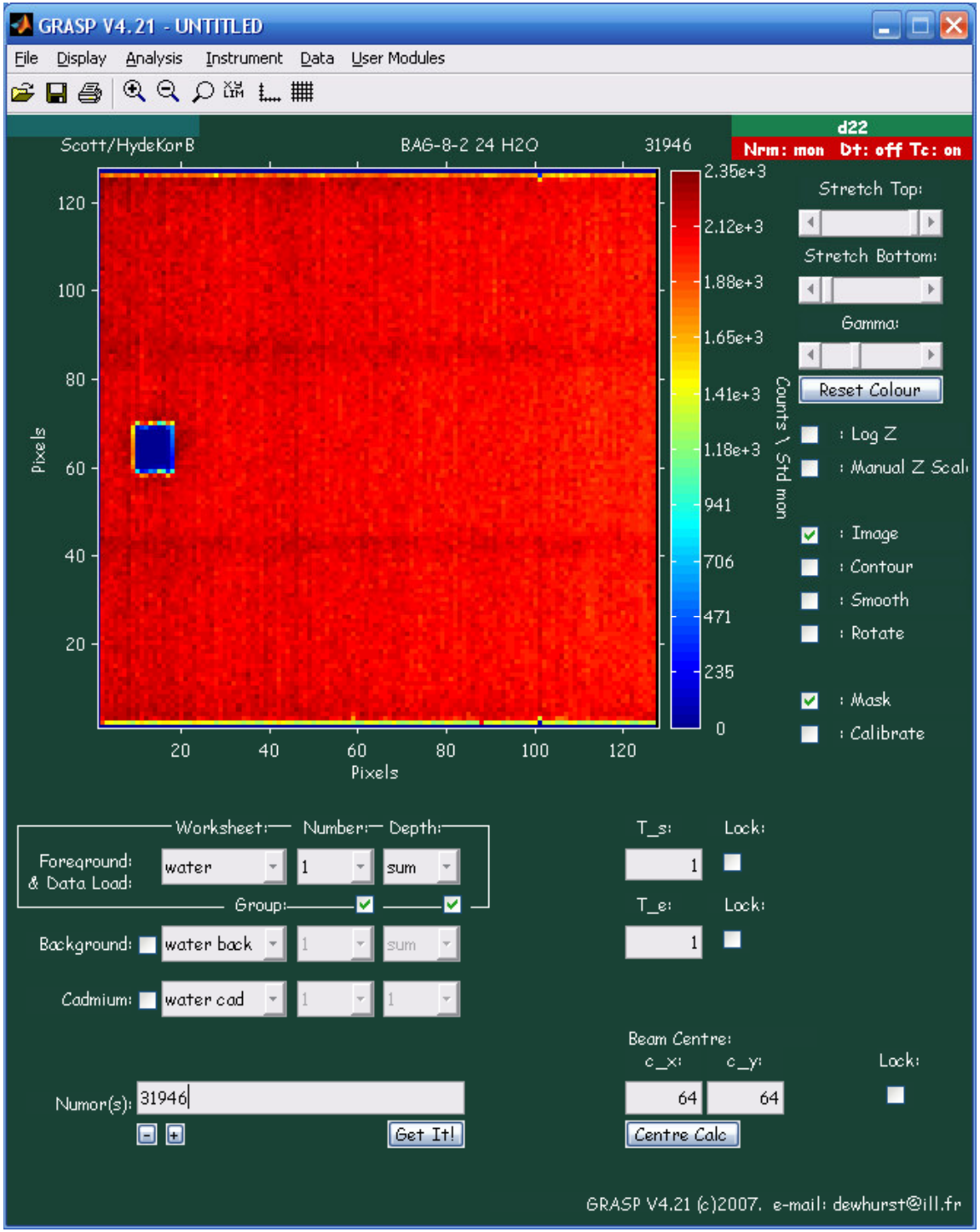
- **Only use this tag for loading data**
- **Type number on Numor(s) line**

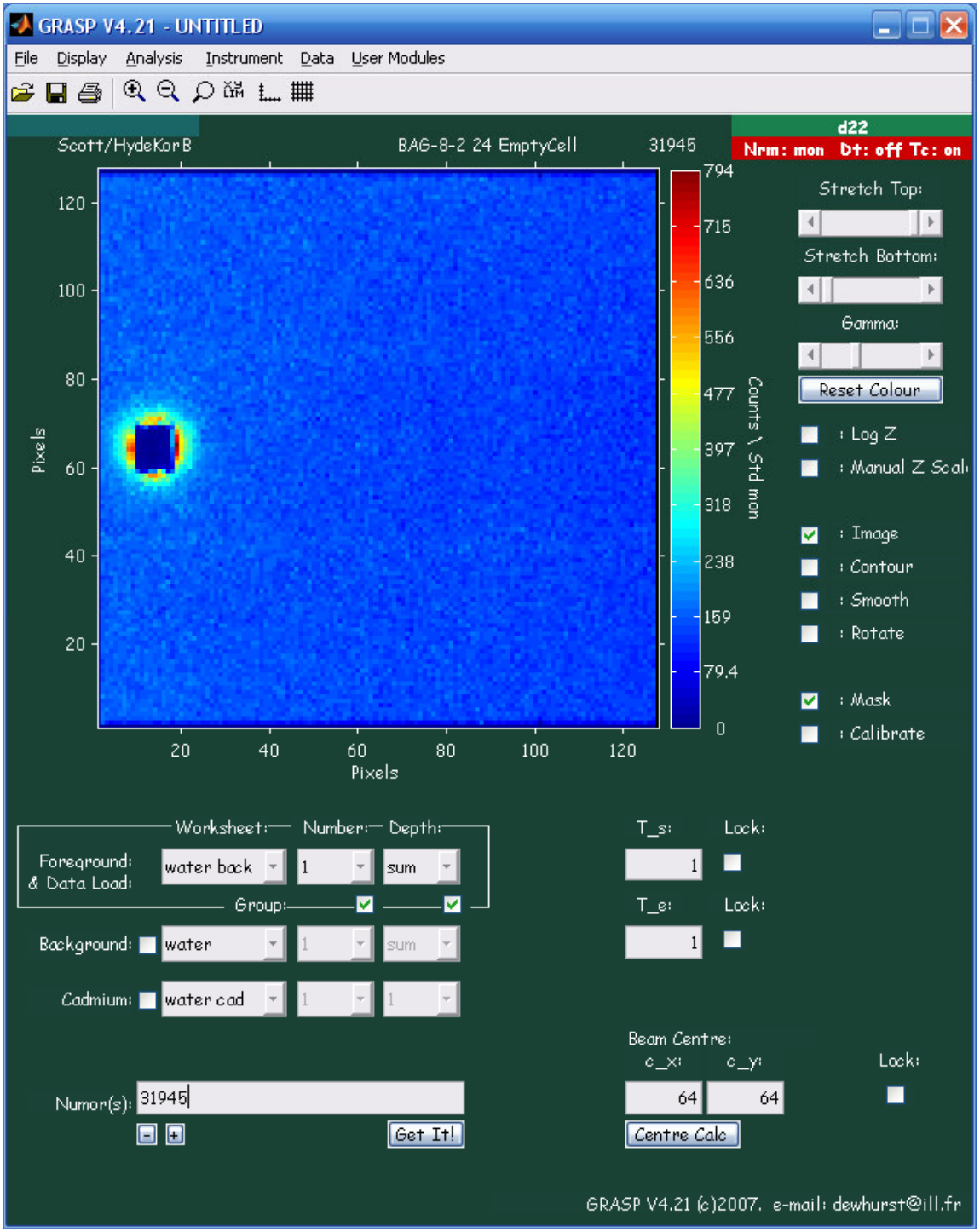
First part of SANS data treatment –

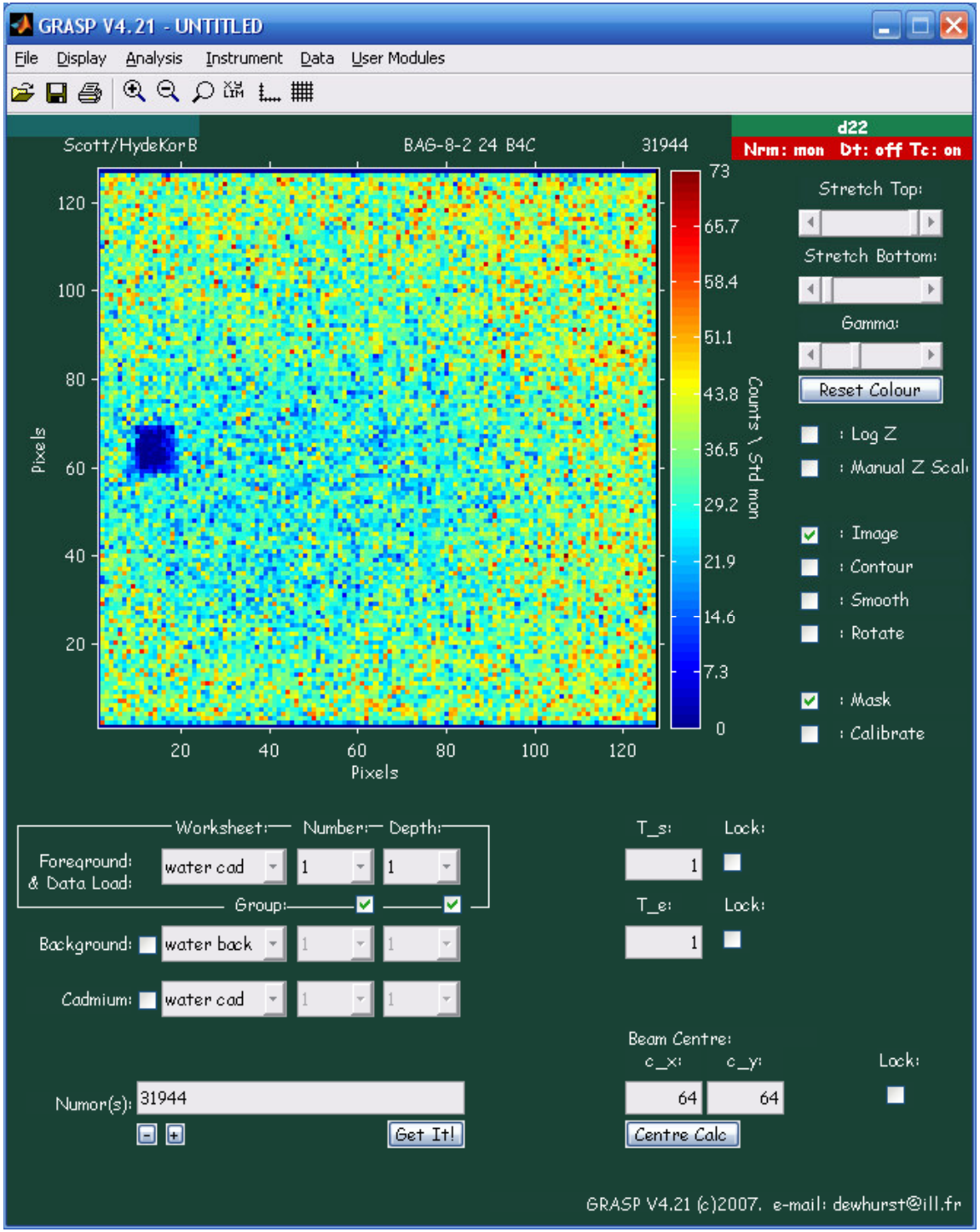
<u>Correct for Detector Efficiency</u>

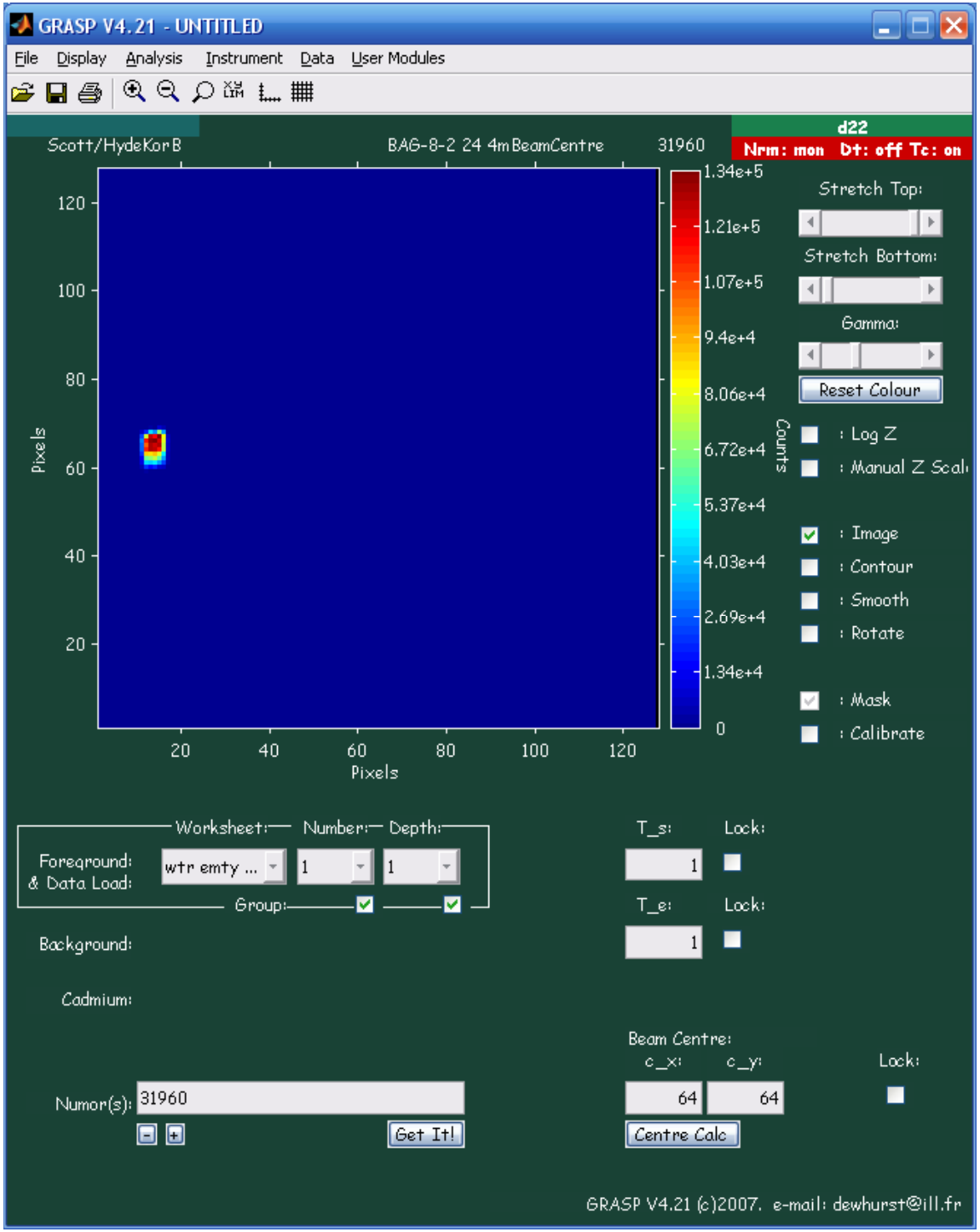
Using a scattering substance that scatters uniformally across the detector

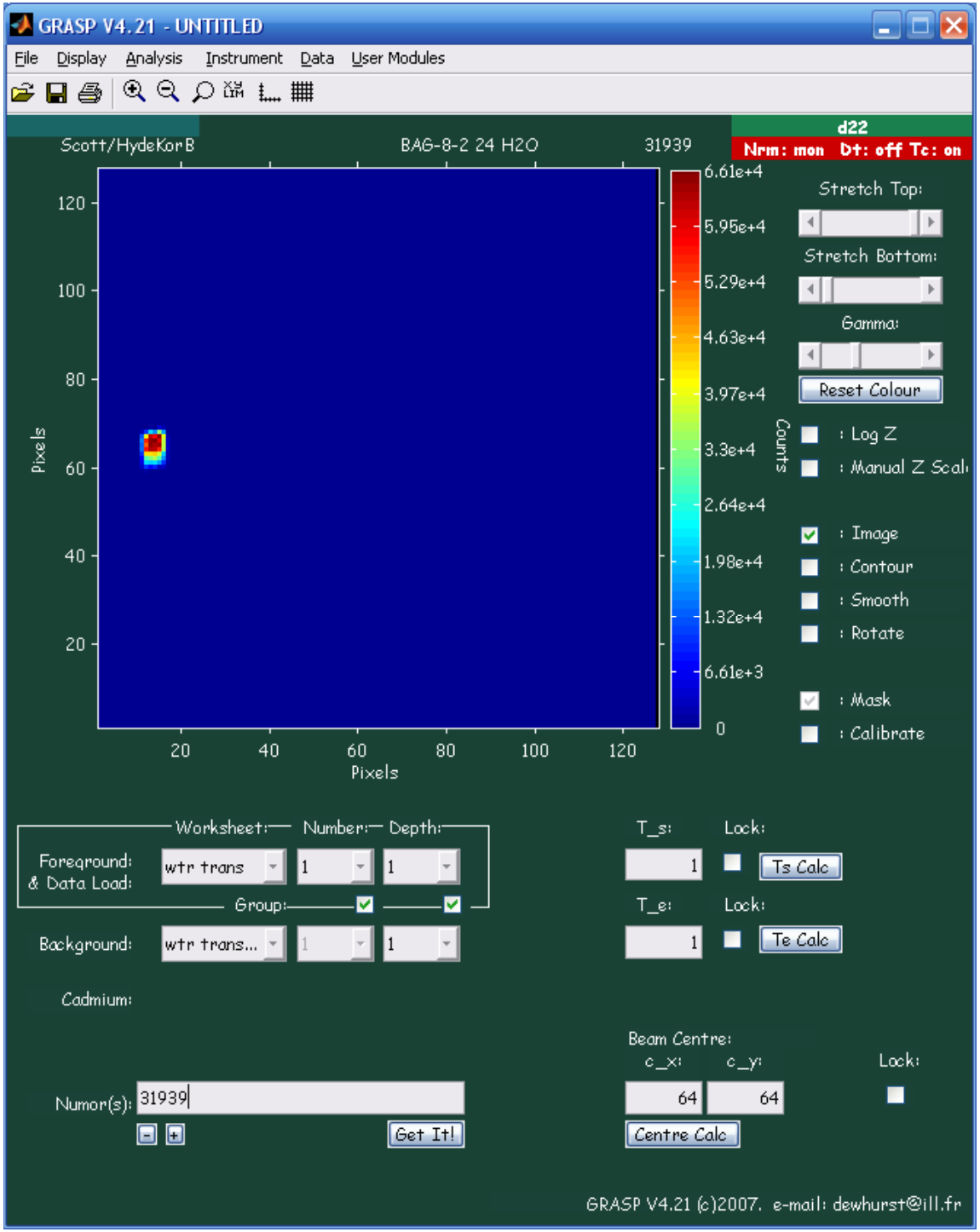
For this use H_2O

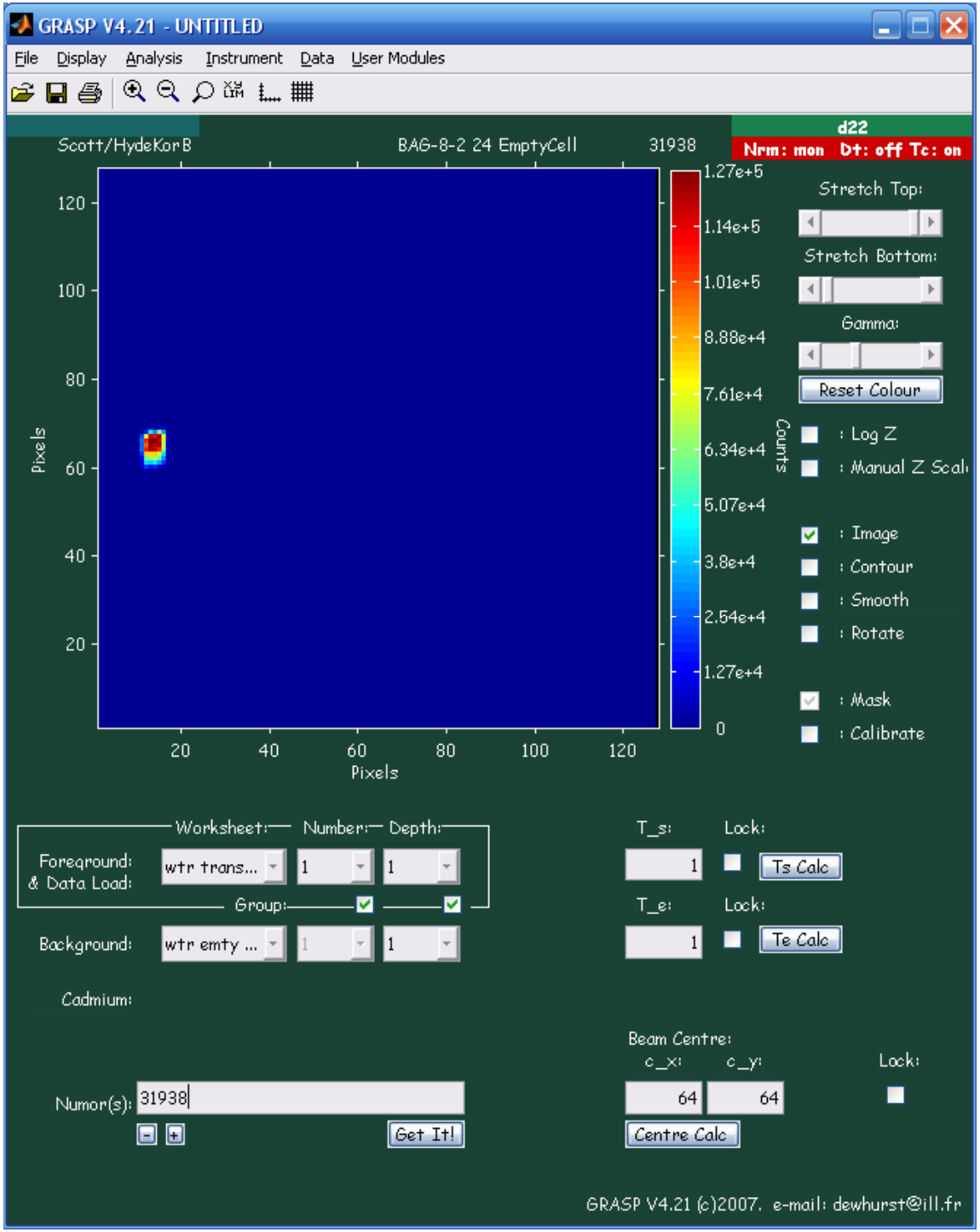

GRASP V4.21 - UNTITLED
File Display Analysis Instrument Data User Modules
Scott/HydeKorB
BAG-8-2 24 H2O
31946
d22
Nrm: mon Dt: off Tc: on
Pixels
Counts \ Std mon
2.35e+3
2.12e+3
1.88e+3
1.65e+3
1.41e+3
1.18e+3
941
706
471
235
0
Stretch Top:
Stretch Bottom:
Gamma:
Reset Colour
: Log Z
: Manual Z Scal
: Image
: Contour
: Smooth
: Rotate
: Mask
: Calibrate
Worksheet: Number: Depth:
Foreground: & Data Load:
water
1
sum
Group:
Background:
water back
Cadmium:
water cad
T_s:
Lock:
T_e:
Beam Centre:
c_x:
c_y:
64
Numor(s):
31946
Get It!
Centre Calc
GRASP V4.21 (c)2007. e-mail: dewhurst@ill.fr

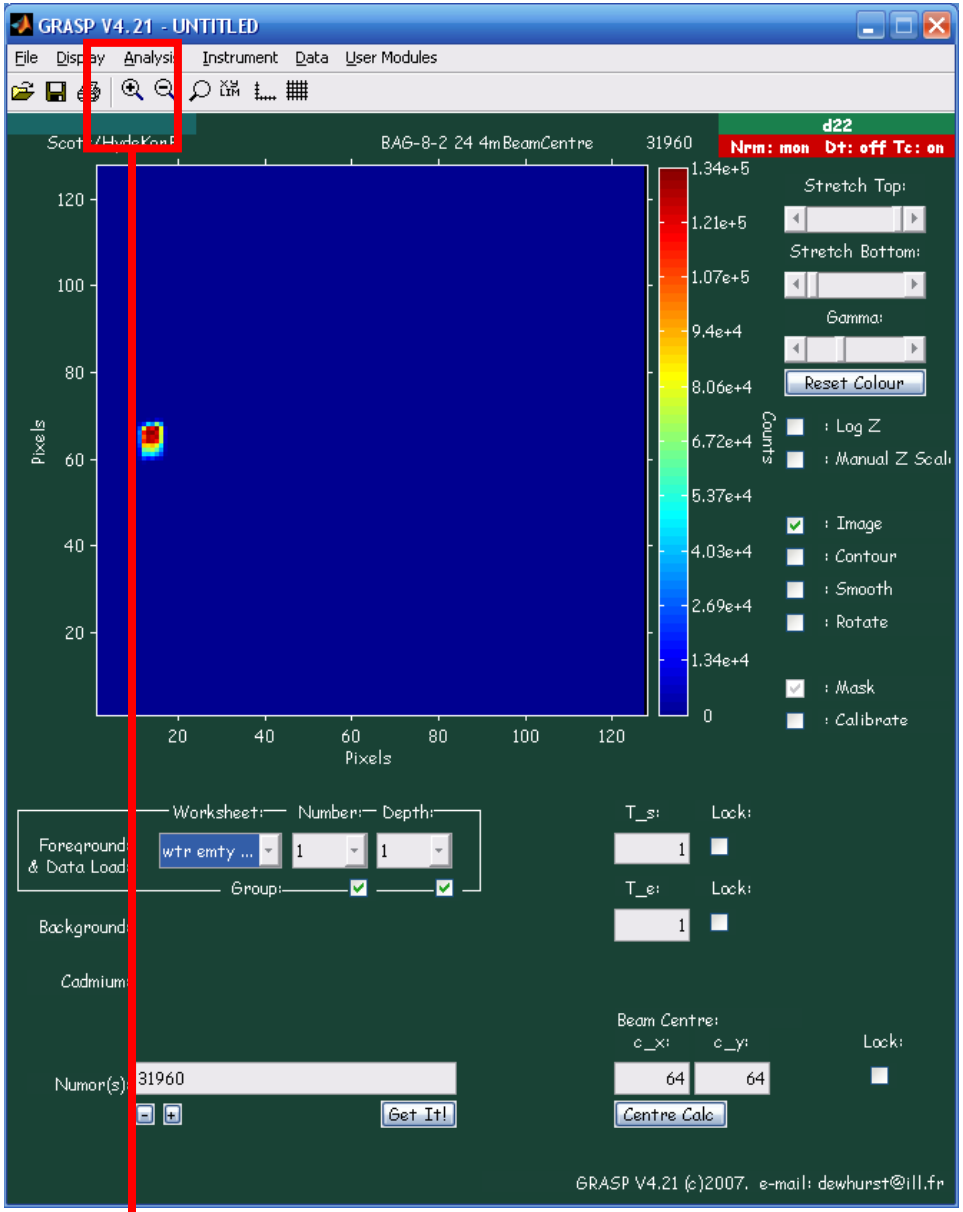

GRASP V4.21 - UNTITLED
File Display Analysis Instrument Data User Modules
Scott/HydeKorB
BAG-8-2 24 EmptyCell
31945
d22
Nrm: mon Dt: off Tc: on
Pixels
Counts \ Std mon
794
715
636
556
477
397
318
238
159
79.4
0
Stretch Top:
Stretch Bottom:
Gamma:
Reset Colour
: Log Z
: Manual Z Scal
: Image
: Contour
: Smooth
: Rotate
: Mask
: Calibrate
Worksheet: Number: Depth:
Foreground: & Data Load:
water back
1
sum
Group:
Background:
water
Cadmium:
water cad
T_s:
Lock:
T_e:
Beam Centre:
c_x:
c_y:
64
Numor(s):
31945
Get It!
Centre Calc
GRASP V4.21 (c)2007. e-mail: dewhurst@ill.fr

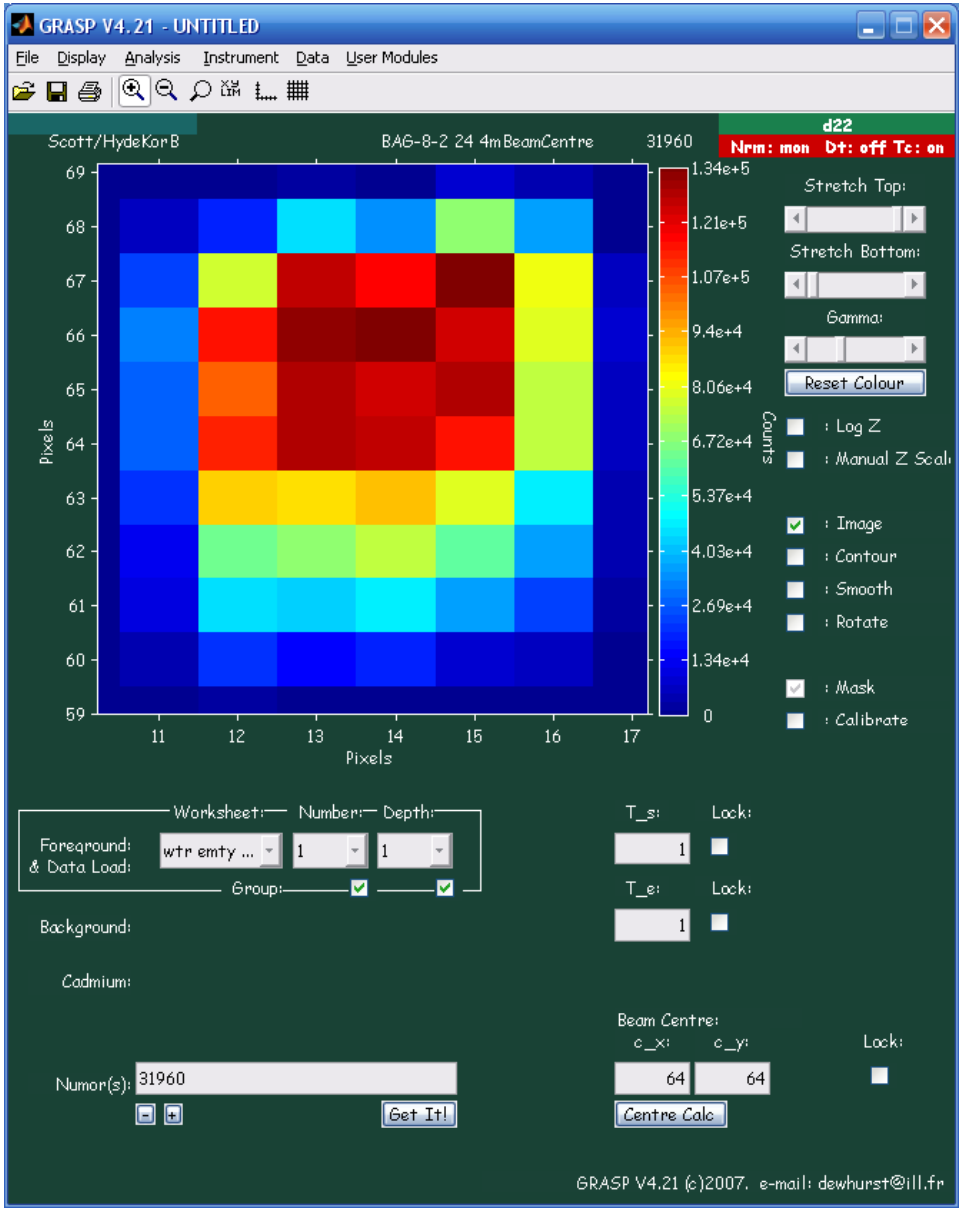

GRASP V4.21 - UNTITLED
File Display Analysis Instrument Data User Modules
Scott/HydeKorB
BAG-8-2 24 B4C
31944
d22
Nrm: mon Dt: off Tc: on
Pixels
Counts \ Std mon
Stretch Top:
Stretch Bottom:
Gamma:
Reset Colour
: Log Z
: Manual Z Scal
: Image
: Contour
: Smooth
: Rotate
: Mask
: Calibrate
Worksheet: Number: Depth:
Foreground: & Data Load:
water cad
Group:
Background:
water back
Cadmium:
water cad
T_s: Lock:
T_e: Lock:
Beam Centre:
c_x: c_y: Lock:
64
64
Centre Calc
Numor(s): 31944
Get It!
GRASP V4.21 (c)2007. e-mail: dewhurst@ill.fr


GRASP V4.21 - UNTITLED
File Display Analysis Instrument Data User Modules
Scott/HydeKorB
BAG-8-2 24 4mBeamCentre
31960
d22
Nrm: mon Dt: off Tc: on
Stretch Top:
Stretch Bottom:
Gamma:
Reset Colour
: Log Z
: Manual Z Scal
: Image
: Contour
: Smooth
: Rotate
: Mask
: Calibrate
Counts
1.34e+5
1.21e+5
1.07e+5
9.4e+4
8.06e+4
6.72e+4
5.37e+4
4.03e+4
2.69e+4
1.34e+4
0
Pixels
Pixels
Worksheet:
Number:
Depth:
Foreqround:
& Data Load:
wtr emty ...
Group:
Background:
Cadmium:
T_s:
Lock:
T_e:
Lock:
Beam Centre:
c_x:
c_y:
Lock:
Numor(s):
31960
Get It!
Centre Calc
GRASP V4.21 (c)2007. e-mail: dewhurst@ill.fr

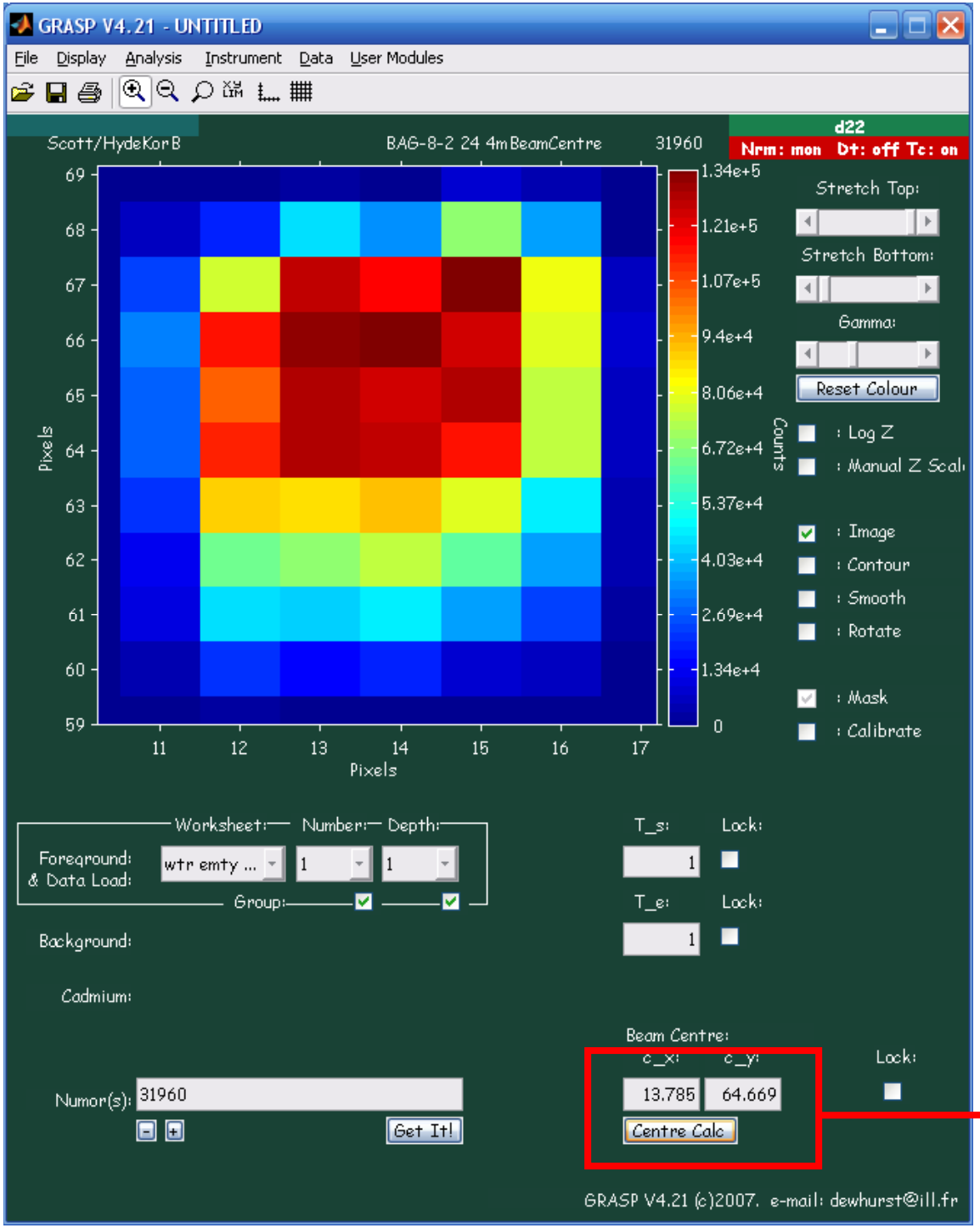

GRASP V4.21 - UNTITLED
File Display Analysis Instrument Data User Modules
Scott/HydeKorB
BAG-8-2 24 H2O
31939
d22
Nrm: mon Dt: off Tc: on
Pixels
Counts
Stretch Top:
Stretch Bottom:
Gamma:
Reset Colour
: Log Z
: Manual Z Scal
: Image
: Contour
: Smooth
: Rotate
: Mask
: Calibrate
Worksheet: Number: Depth:
Foreground: & Data Load:
wtr trans
Group:
Background:
wtr trans...
Cadmium:
T_s: Lock:
Ts Calc
T_e: Lock:
Te Calc
Beam Centre:
c_x: c_y: Lock:
Numor(s): 31939
Get It!
Centre Calc
GRASP V4.21 (c)2007. e-mail: dewhurst@ill.fr


GRASP V4.21 - UNTITLED
File Display Analysis Instrument Data User Modules
Scott/HydeKorB
BAG-8-2 24 EmptyCell
31938
d22
Nrm: mon Dt: off Tc: on
Pixels
Counts
Stretch Top:
Stretch Bottom:
Gamma:
Reset Colour
: Log Z
: Manual Z Scal
: Image
: Contour
: Smooth
: Rotate
: Mask
: Calibrate
Worksheet: Number: Depth:
Foreground: & Data Load:
wtr trans...
Group:
Background:
wtr emty ...
Cadmium:
T_s: Lock:
Ts Calc
T_e: Lock:
Te Calc
Beam Centre:
c_x: c_y: Lock:
Numor(s): 31938
Get It!
Centre Calc
GRASP V4.21 (c)2007. e-mail: dewhurst@ill.fr

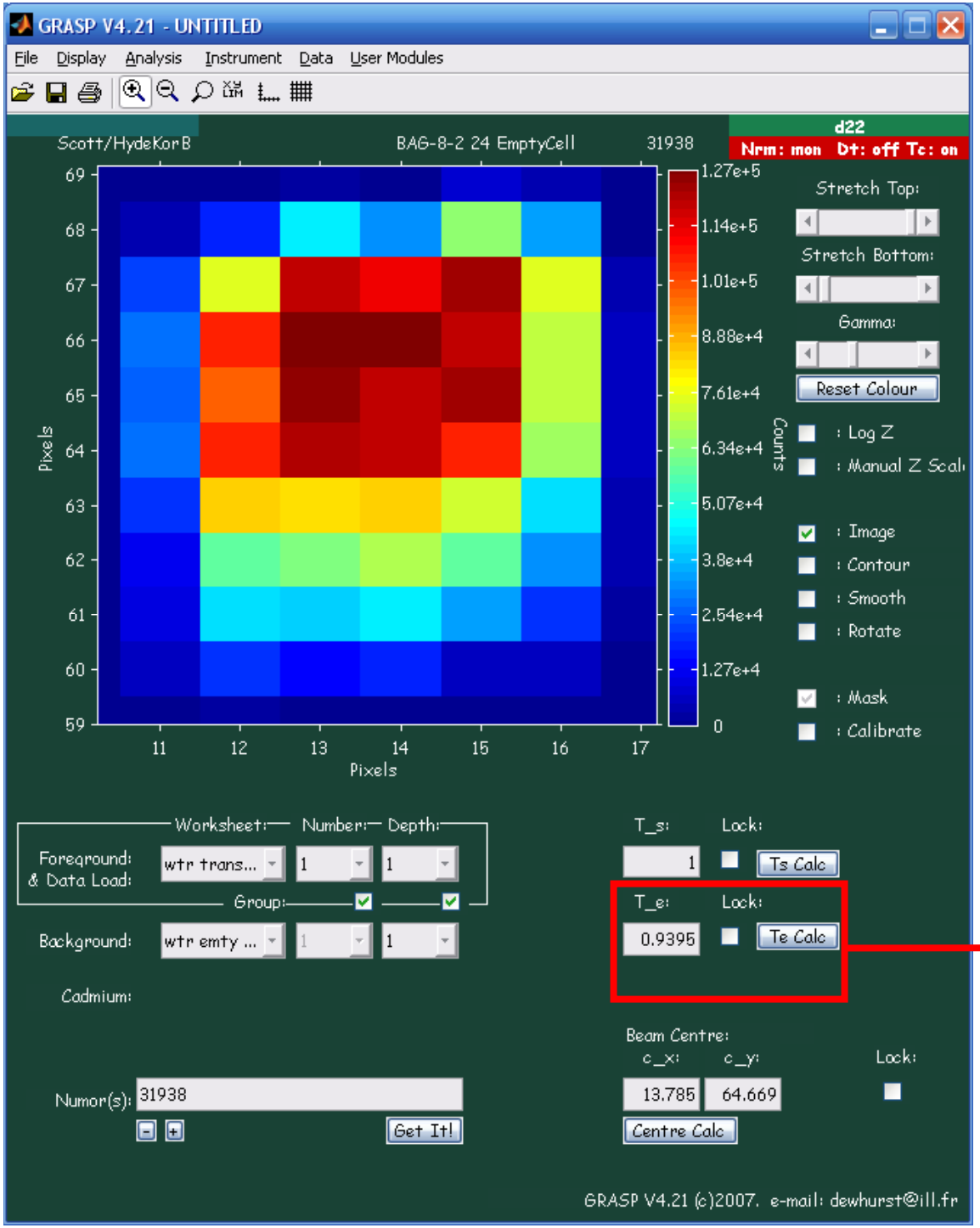




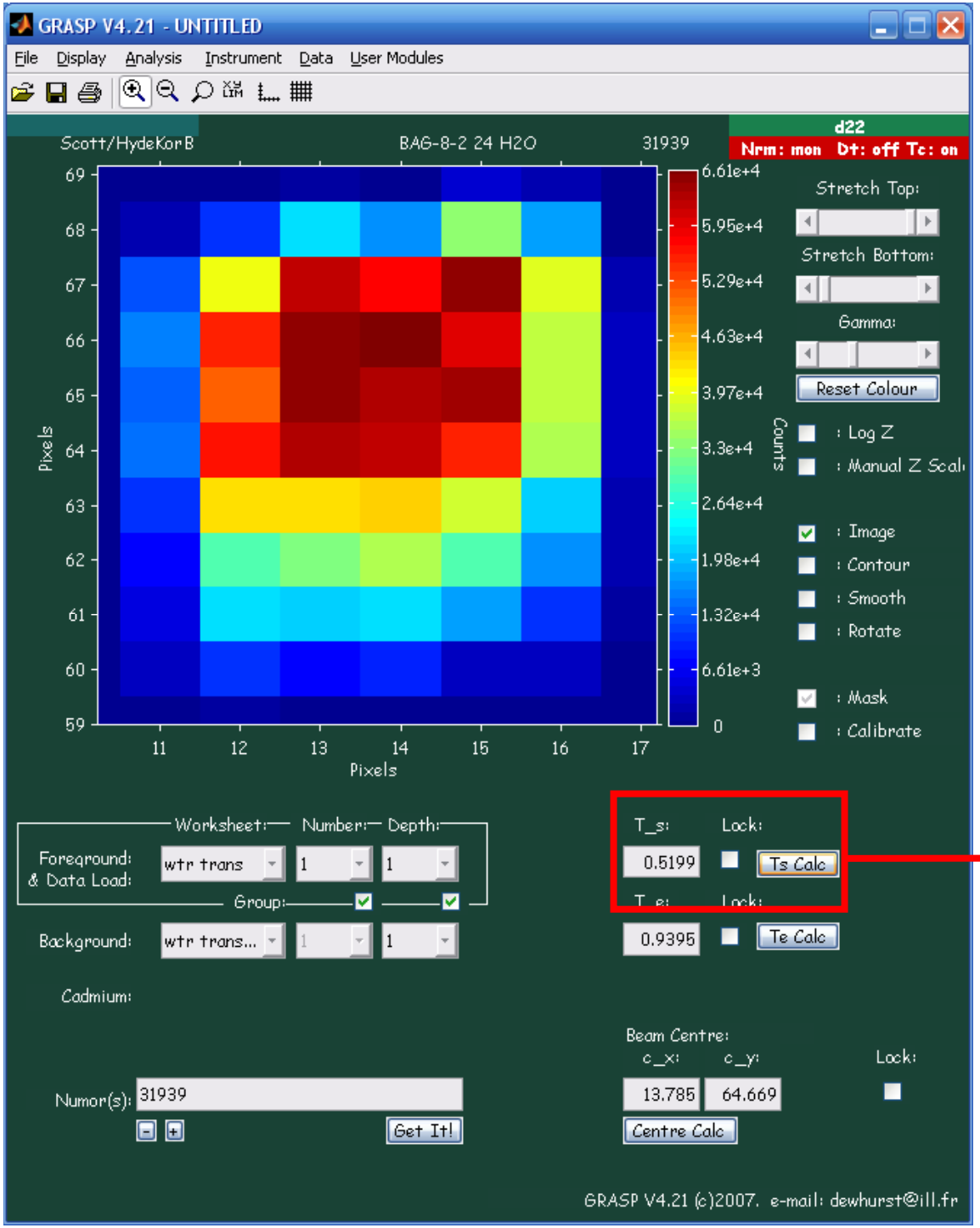
Zoom in around beam transmission
Press this icon and drag around beam



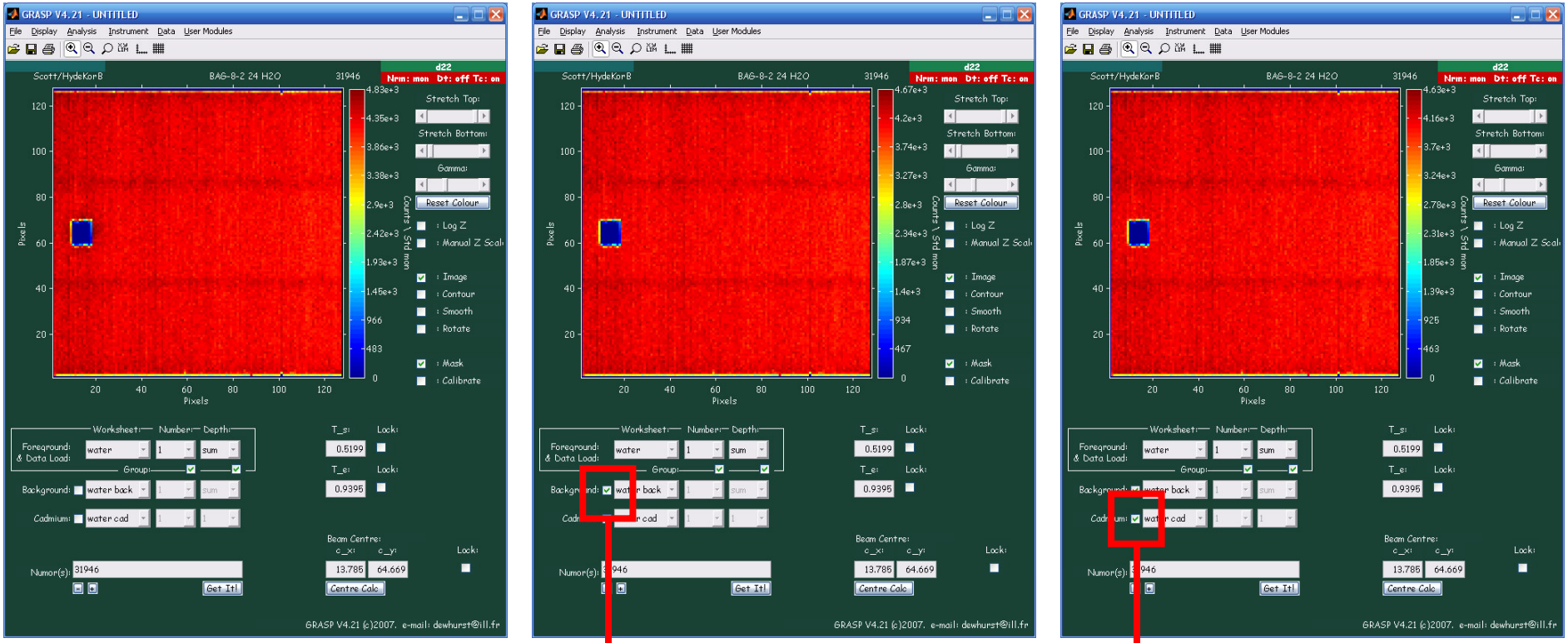
Press Centre Calc Defines Beam Centre Coordinates

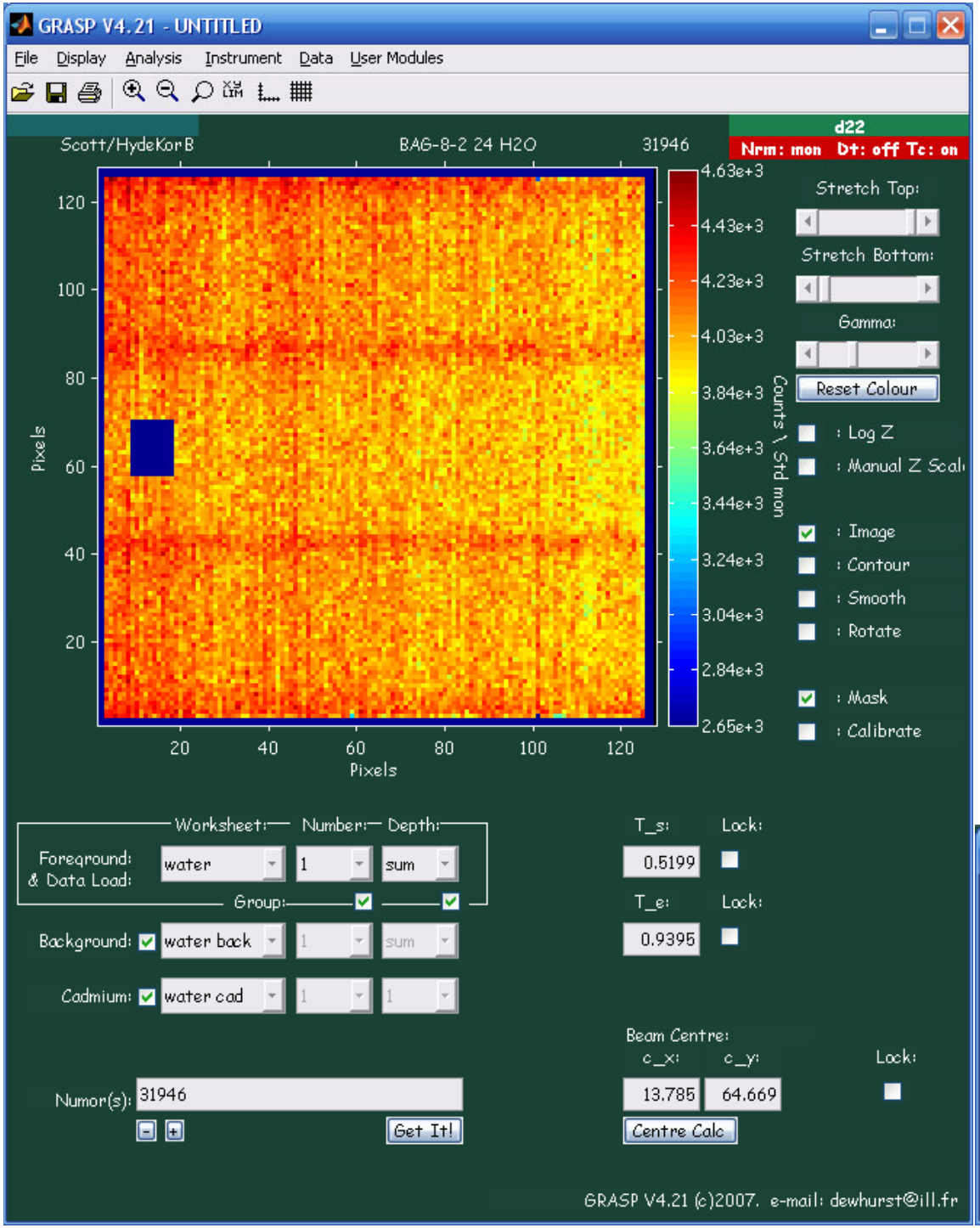


Press Te Calc
Corrects for absorbance

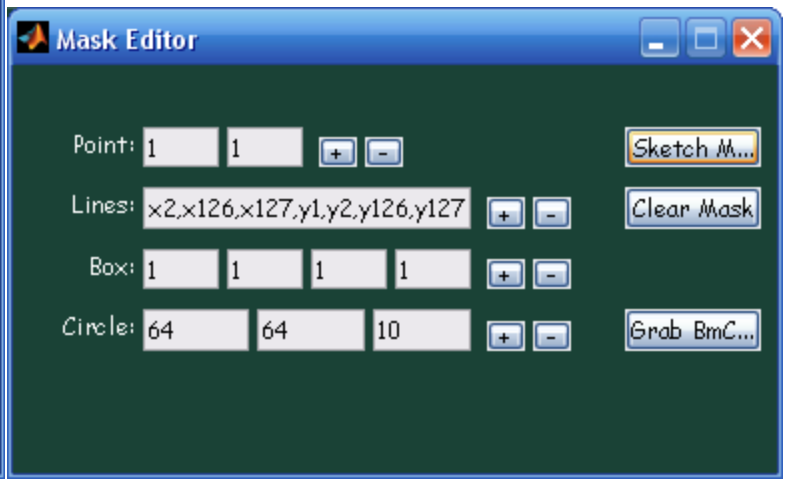


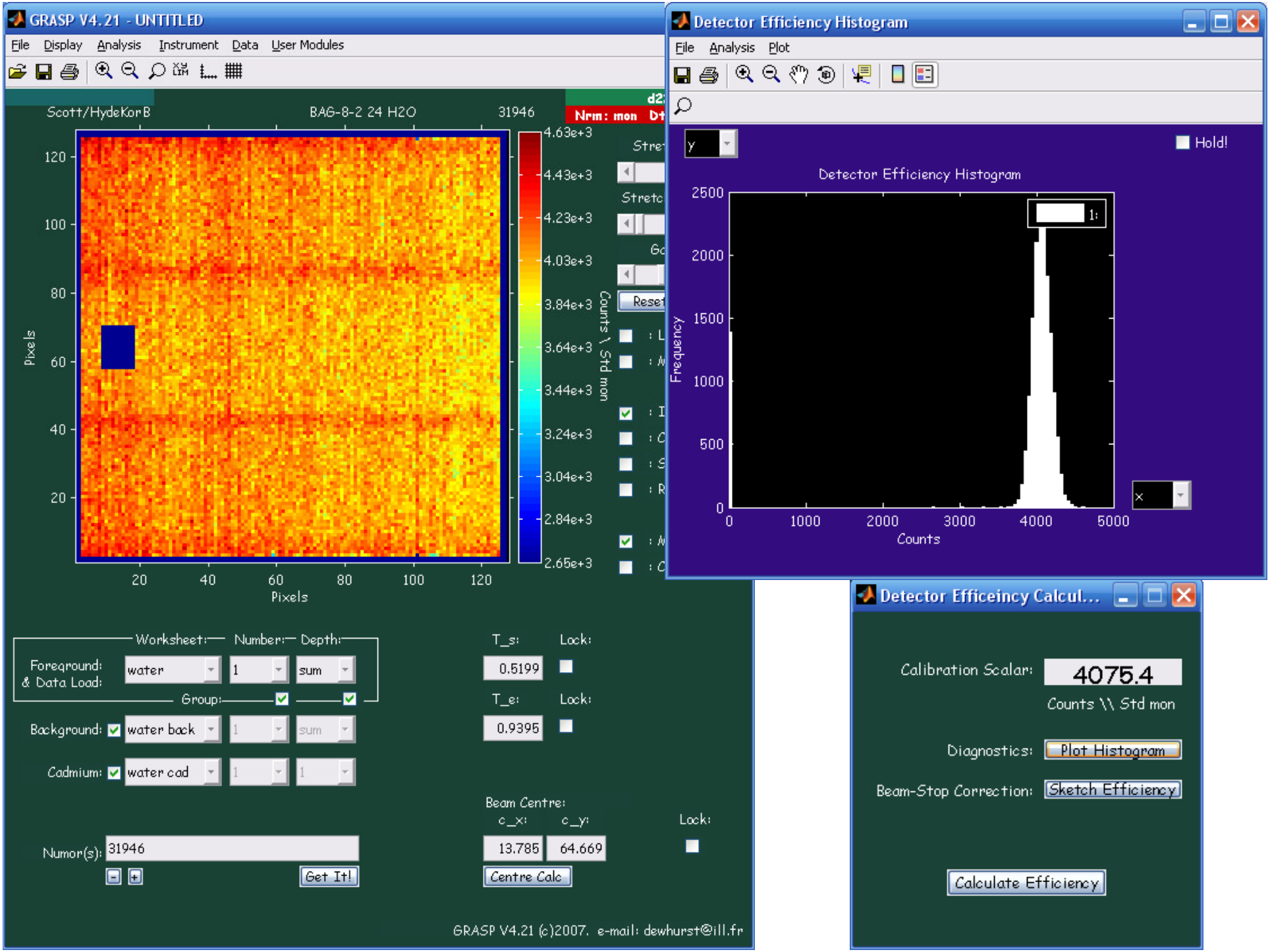
Press Ts Calc
Corrects for absorbance

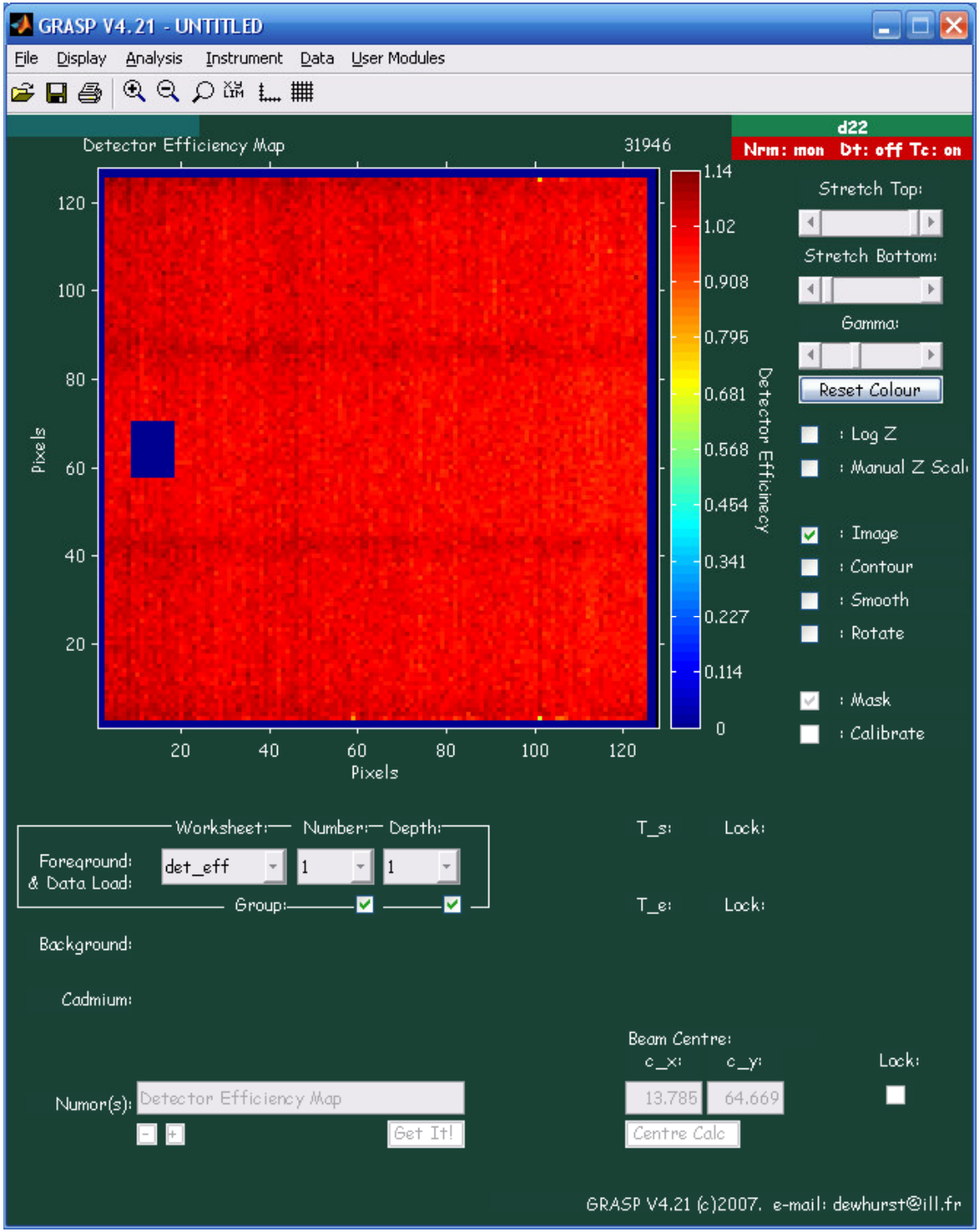

GRASP V4.21 - UNTITLED
File Display Analysis Instrument Data User Modules
Scott/HydeKorB
BAG-8-2 24 H2O
31946
d22
Nrm: mon Dt: off Tc: on
Stretch Top:
Stretch Bottom:
Gamma:
Reset Colour
: Log Z
: Manual Z Scal
: Image
: Contour
: Smooth
: Rotate
: Mask
: Calibrate
Pixels
Counts \ Std mon
Worksheet: Number: Depth:
Foreground: & Data Load:
water
1
sum
Group:
Background:
water back
Cadmium:
water cad
T_s:
0.5199
Lock:
T_e:
0.9395
Beam Centre:
c_x:
c_y:
13.786
64.669
Centre Calc
Numor(s):
31946
Get It!
GRASP V4.21 (c)2007. e-mail: dewhurst@ill.fr
Check box to subtract empty cell
Check box to subtract cadmium

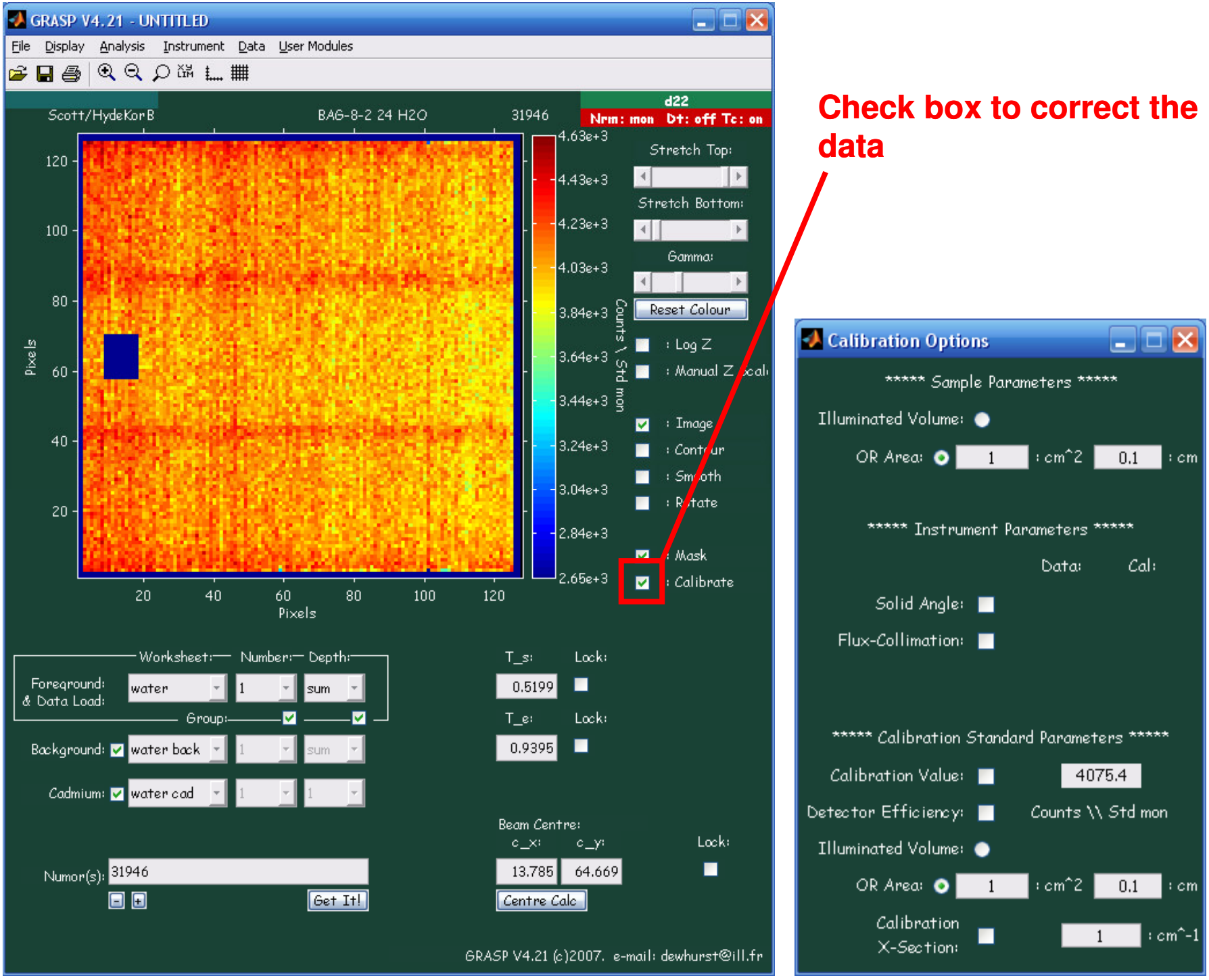


Mask edge of the detector and region behind the beam stop

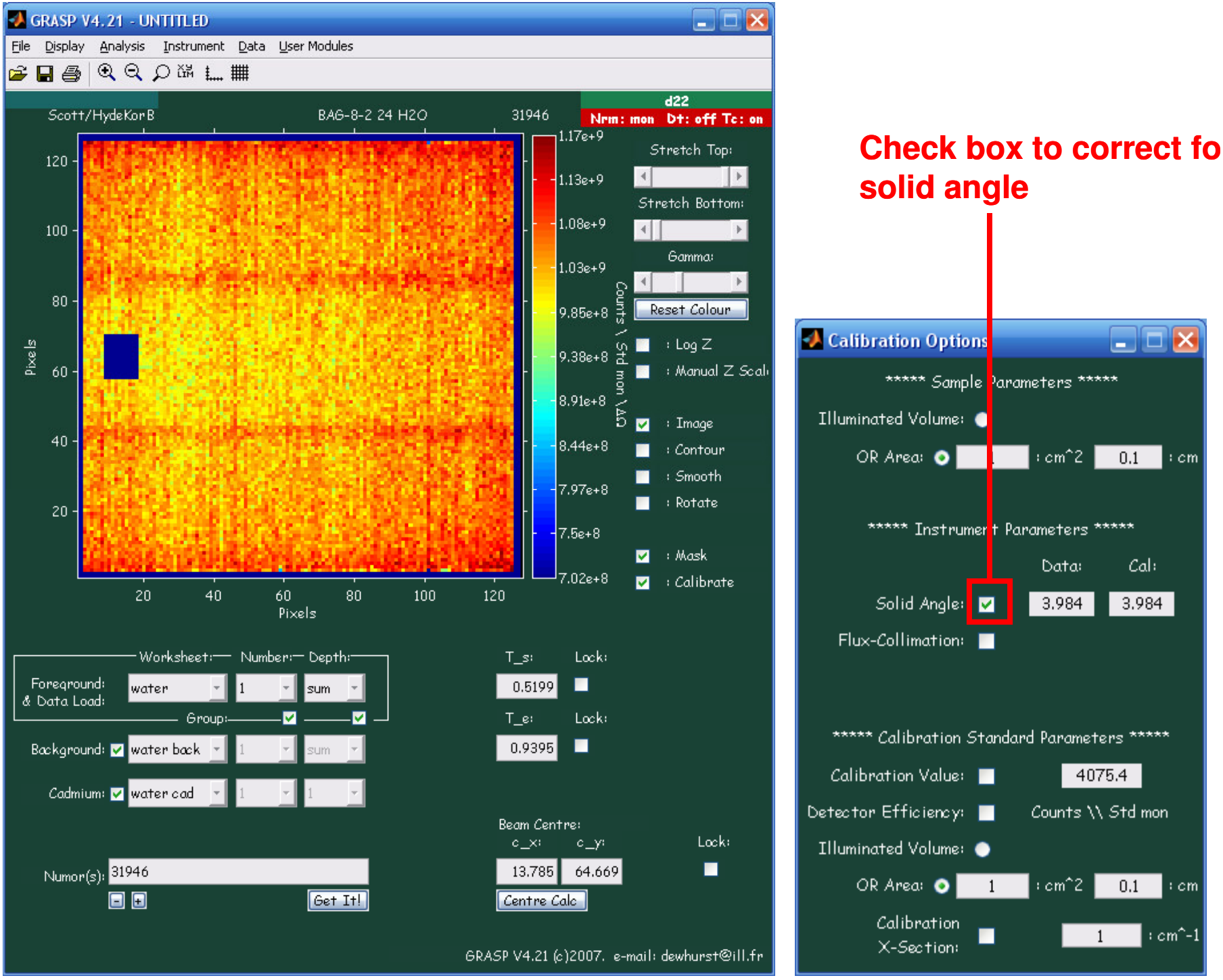



GRASP V4.21 - UNTITLED
File Display Analysis Instrument Data User Modules
Scott/HydeKorB
BAG-8-2 24 H2O
31946
Nrm: mon
Pixels
Counts \ Std mon
Worksheet: Number: Depth:
Foreground: & Data Load:
water
1
sum
Group:
Background:
water back
Cadmium:
water cad
Numor(s):
31946
Get It!
T_s:
0.5199
Lock:
T_e:
0.9395
Beam Centre:
c_x:
c_y:
13.785
64.669
Centre Calc
GRASP V4.21 (c)2007. e-mail: dewhurst@ill.fr
Detector Efficiency Histogram
File Analysis Plot
Hold!
Detector Efficiency Histogram
Frequency
Counts
Detector Efficeincy Calcul...
Calibration Scalar:
4075.4
Counts \\ Std mon
Diagnostics:
Plot Histogram
Beam-Stop Correction:
Sketch Efficiency
Calculate Efficiency

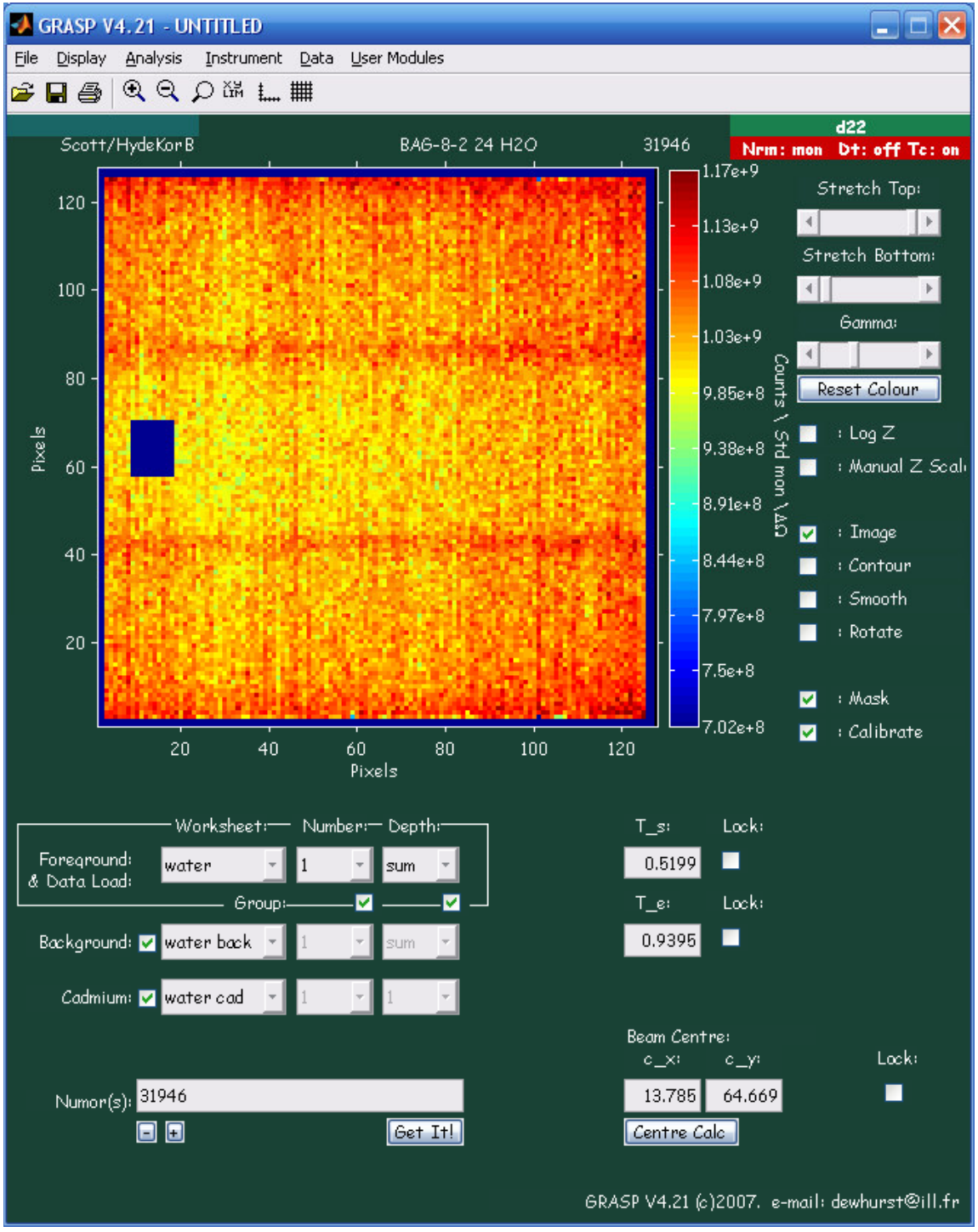

GRASP V4.21 - UNTITLED
File Display Analysis Instrument Data User Modules
Detector Efficiency Map
31946
d22
Nrm: mon Dt: off Tc: on
Stretch Top:
Stretch Bottom:
Gamma:
Reset Colour
: Log Z
: Manual Z Scal
: Image
: Contour
: Smooth
: Rotate
: Mask
: Calibrate
Pixels
Detector Efficiency
Worksheet: Number: Depth:
Foreground: & Data Load:
det_eff
Group:
T_s: Lock:
T_e: Lock:
Background:
Cadmium:
Beam Centre:
c_x: c_y: Lock:
Numor(s): Detector Efficiency Map
Get It!
13.785
64.669
Centre Calc
GRASP V4.21 (c)2007. e-mail: dewhurst@ill.fr



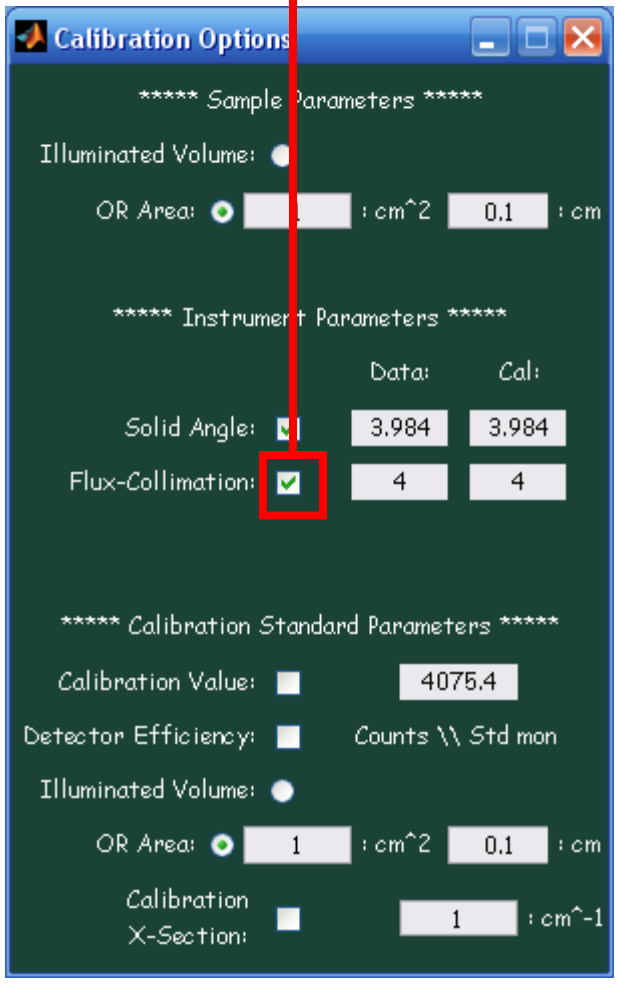
Check box to correct the data

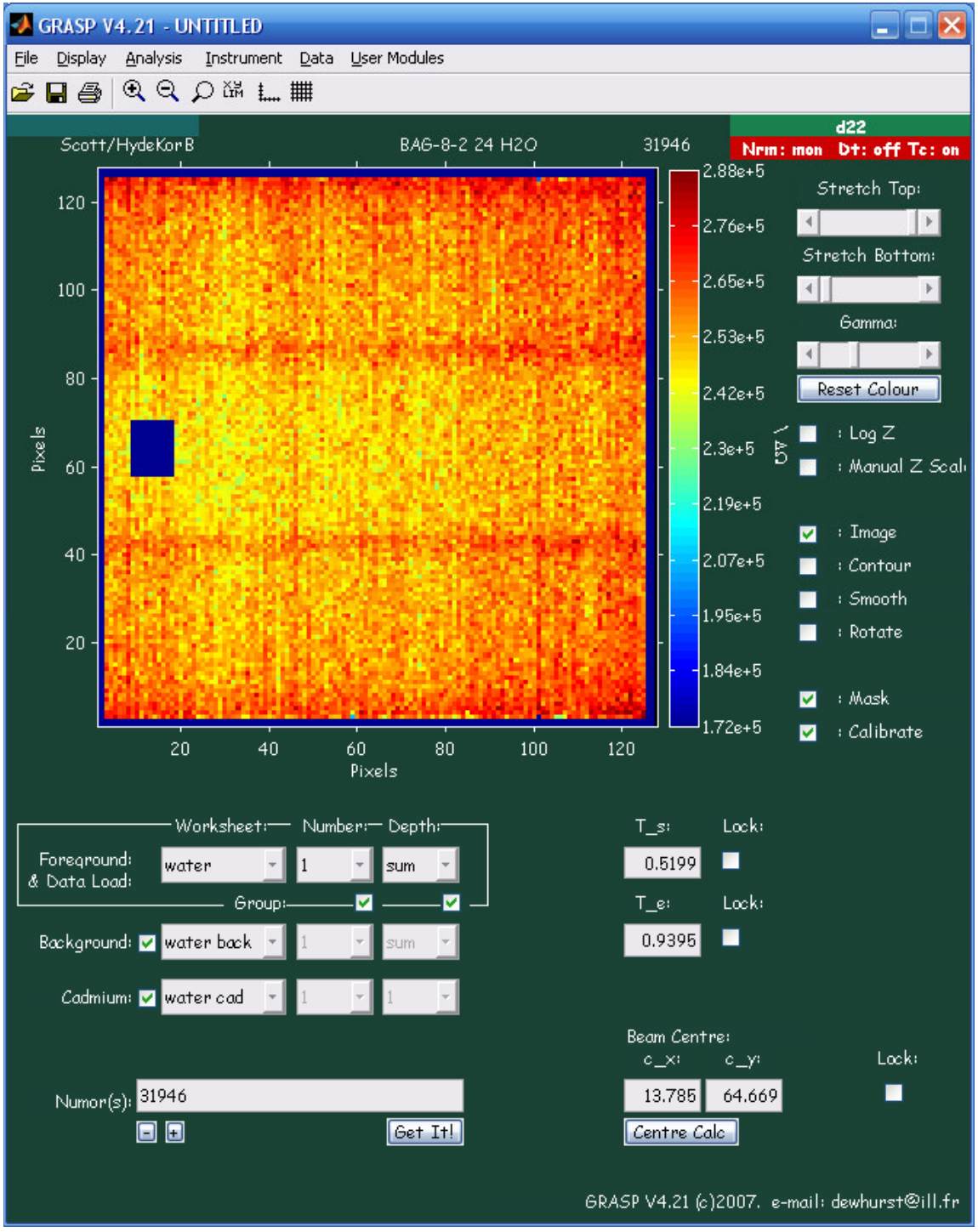


Check box to correct for solid angle

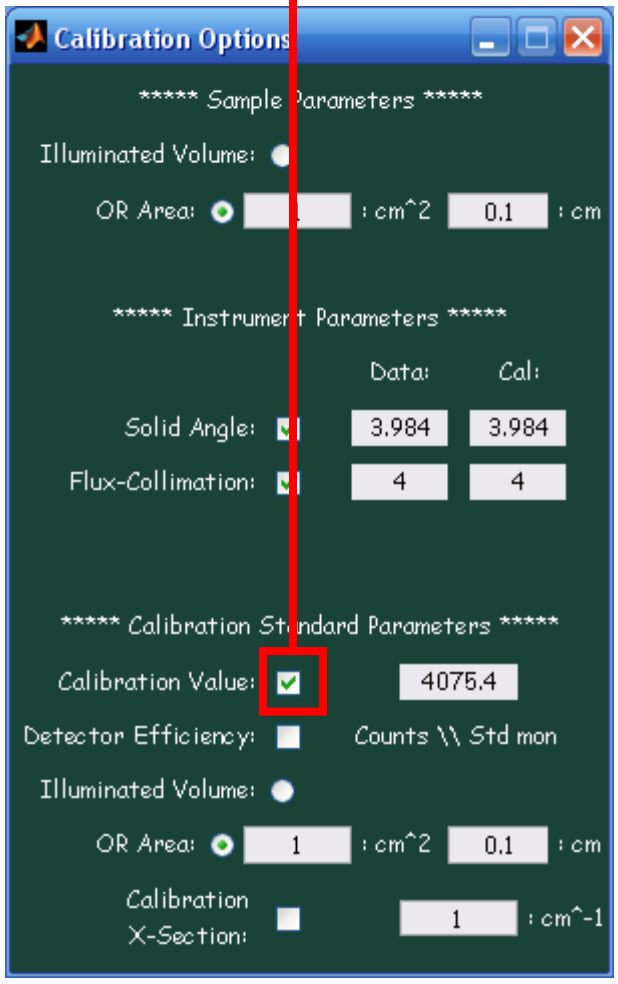


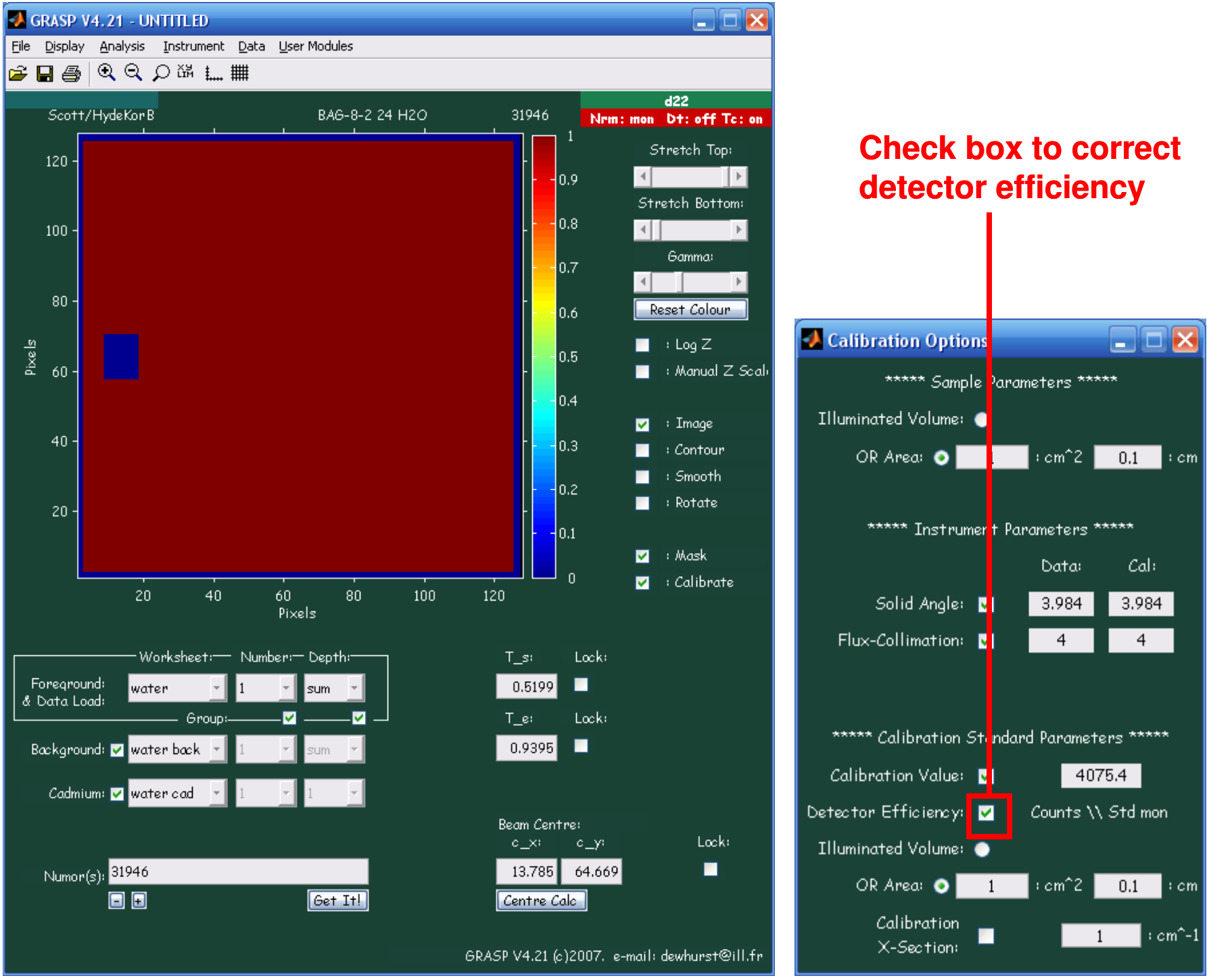
Check box to correct for instrument setup



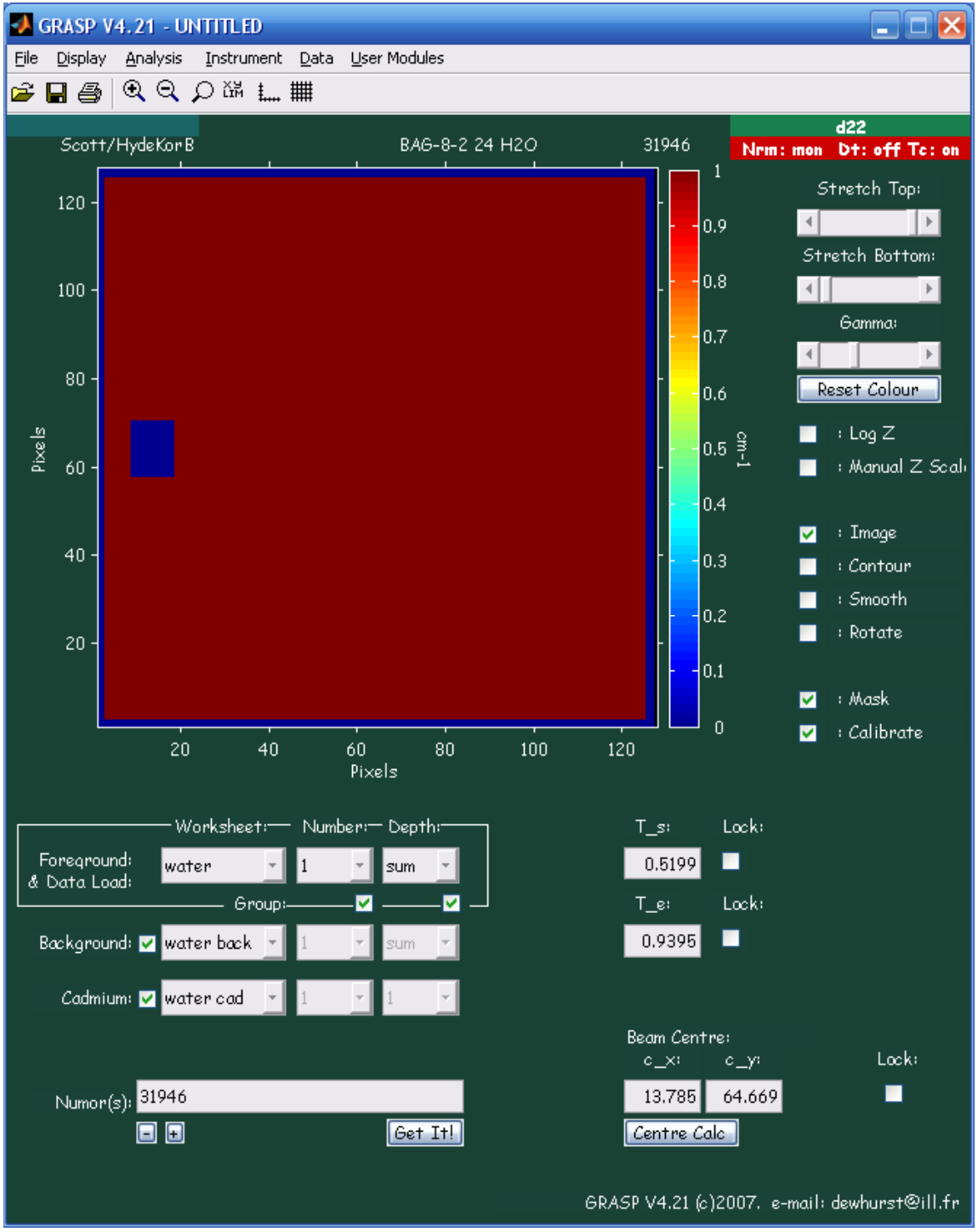


Calibrates data to water scattering intensity

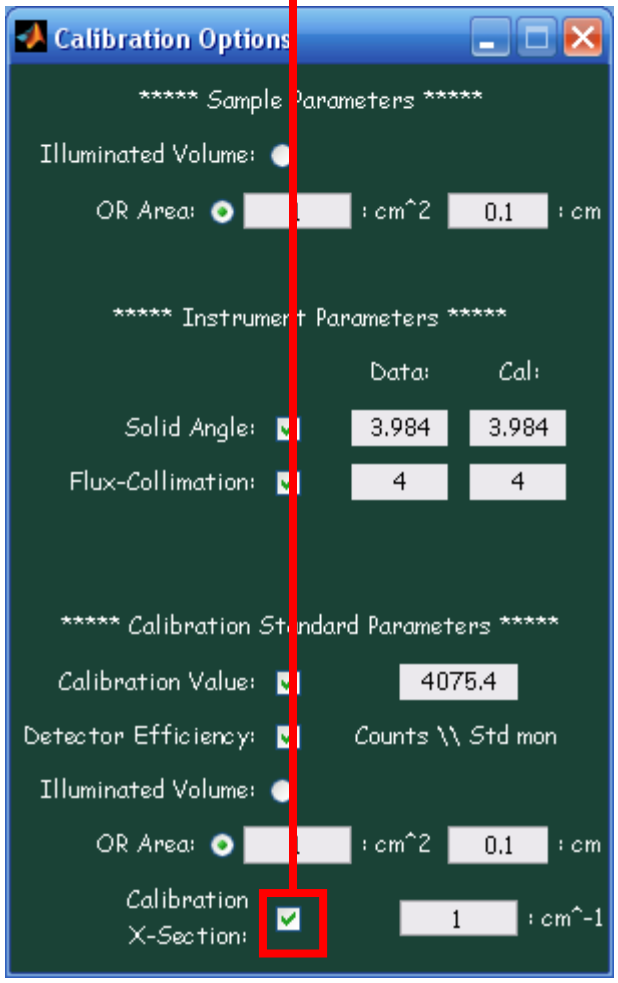


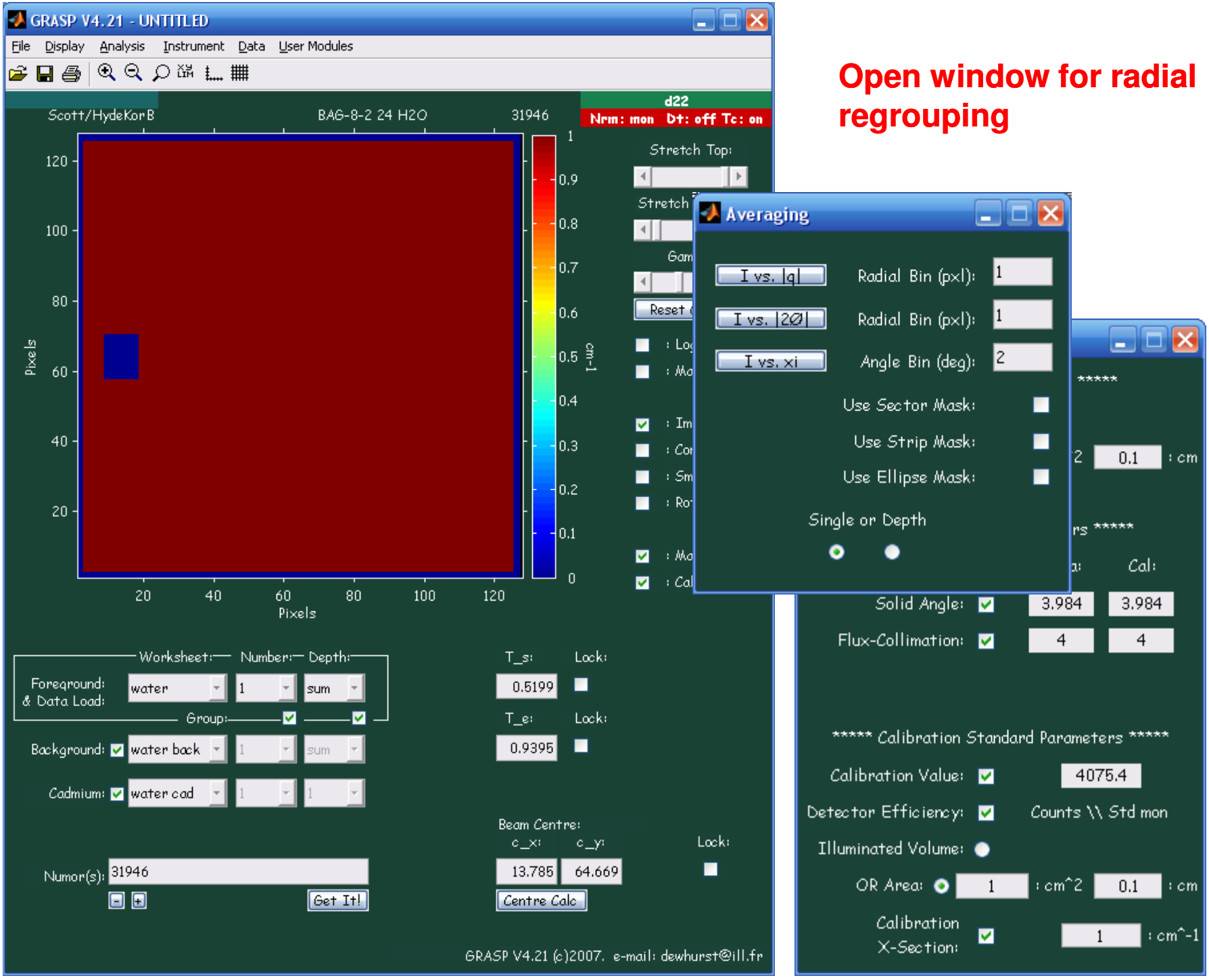


Check box to correct detector efficiency

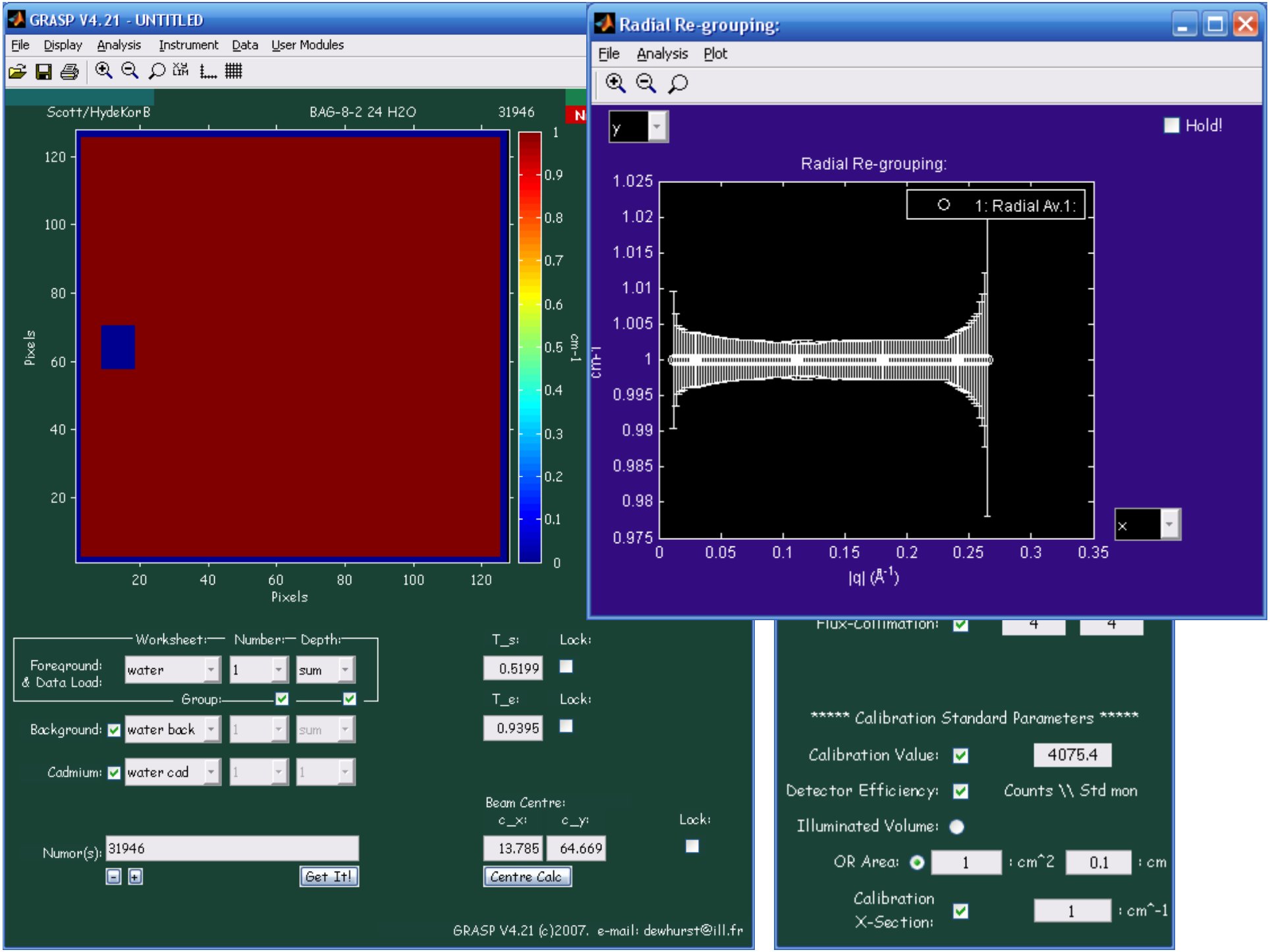


Converts data absolute units



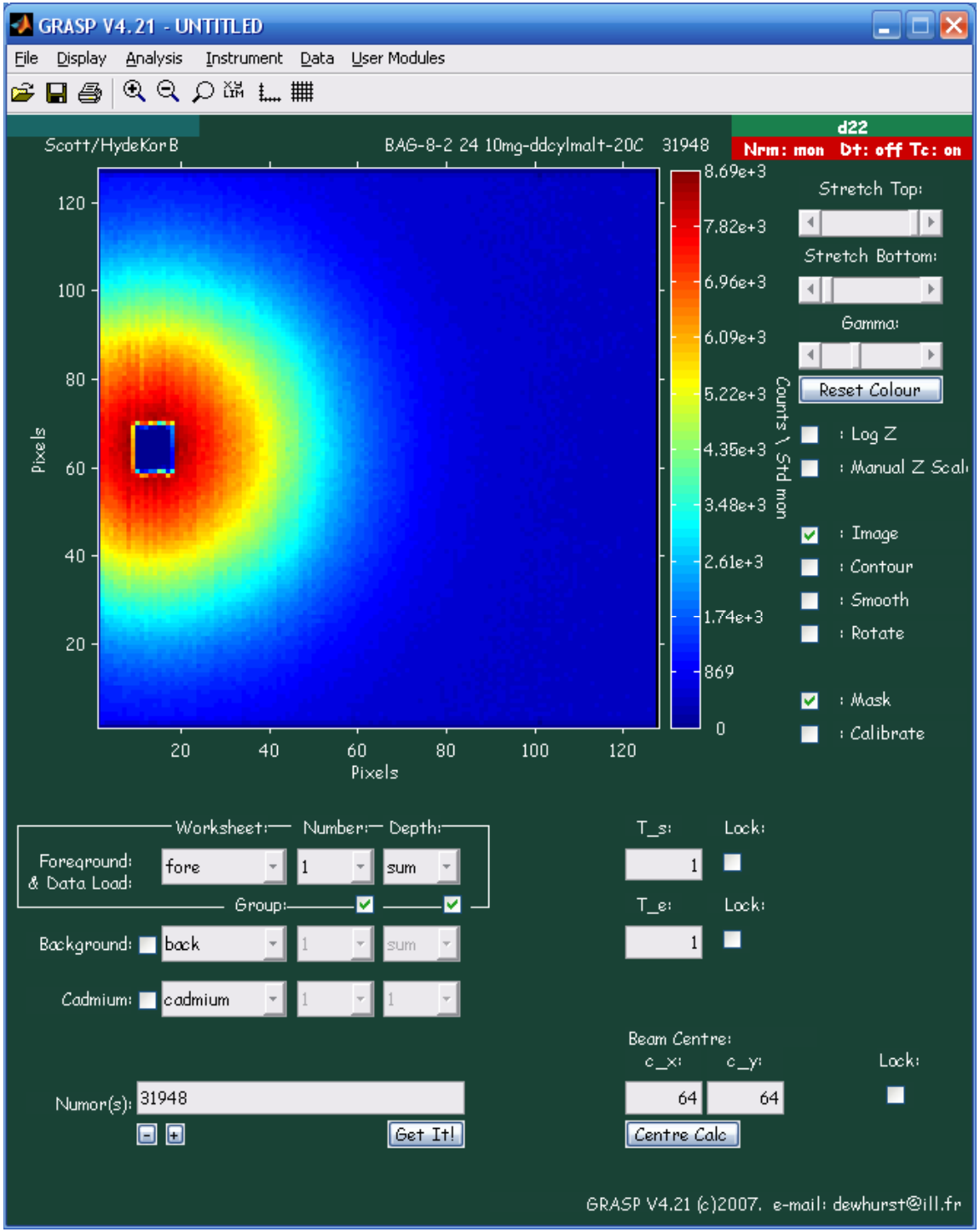


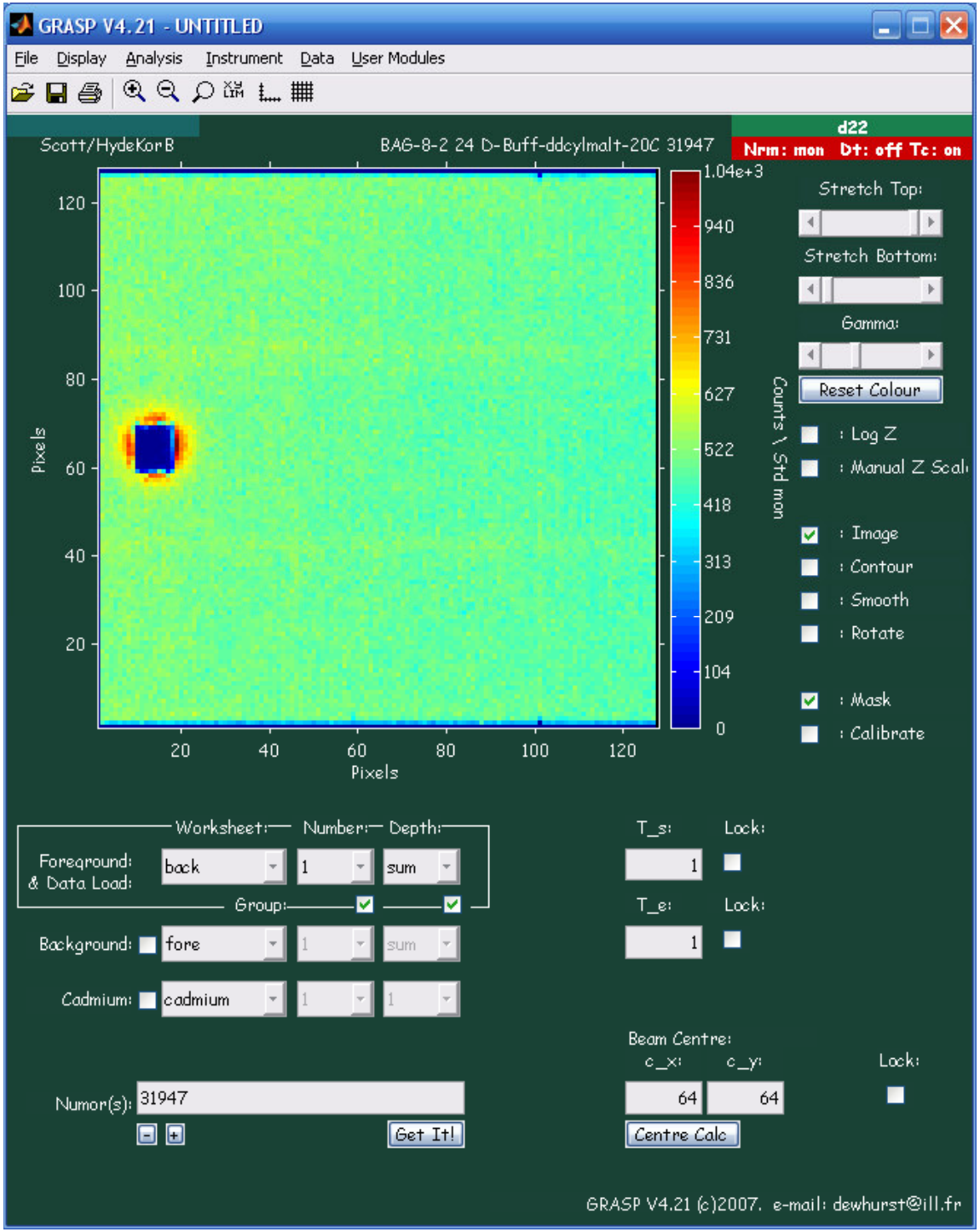
Open window for radial regrouping

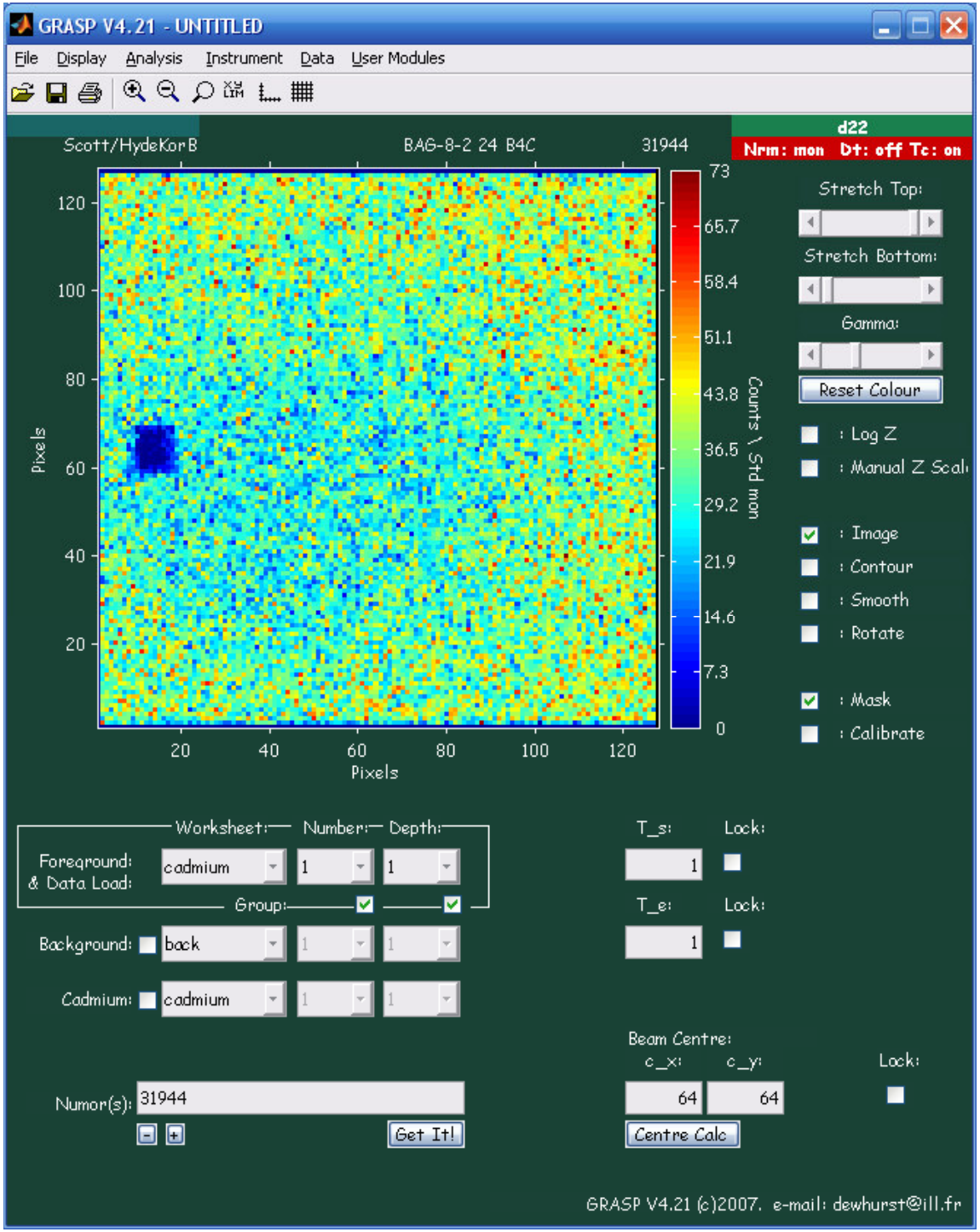

GRASP V4.21 - UNTITLED
File Display Analysis Instrument Data User Modules
Scott/HydeKorB
BAG-8-2 24 H2O
31946
Pixels
Pixels
cm-1
Radial Re-grouping:
File Analysis Plot
Hold!
Radial Re-grouping:
1: Radial Av.1:
I(q)
|q| (Å-1)
Worksheet: Number: Depth:
Foreground: & Data Load:
water
1
sum
Group:
Background:
water back
Cadmium:
water cad
T_s:
0.5199
Lock:
T_e:
0.9395
Beam Centre:
c_x:
c_y:
13.785
64.669
Numor(s):
31946
Get It!
Centre Calc
GRASP V4.21 (c)2007. e-mail: dewhurst@ill.fr
Flux-Collimation:
***** Calibration Standard Parameters *****
Calibration Value:
4075.4
Detector Efficiency:
Counts \\ Std mon
Illuminated Volume:
OR Area:
1
: cm^2
0.1
: cm
Calibration X-Section:
1
: cm^-1

Second part of SANS data treatment –

Subtract buffers and correct for absorbance and detector efficiency


GRASP V4.21 - UNTITLED
File Display Analysis Instrument Data User Modules
Scott/HydeKorB
BAG-8-2 24 10mg-ddcylmalt-20C 31948
d22
Nrm: mon Dt: off Tc: on
Pixels
Counts \ Std mon
8.69e+3
7.82e+3
6.96e+3
6.09e+3
5.22e+3
4.35e+3
3.48e+3
2.61e+3
1.74e+3
869
0
Stretch Top:
Stretch Bottom:
Gamma:
Reset Colour
: Log Z
: Manual Z Scal
: Image
: Contour
: Smooth
: Rotate
: Mask
: Calibrate
Worksheet: Number: Depth:
Foreground: & Data Load:
fore
1
sum
Group:
Background:
back
Cadmium:
cadmium
T_s:
Lock:
T_e:
Beam Centre:
c_x:
c_y:
64
Numor(s):
31948
Get It!
Centre Calc
GRASP V4.21 (c)2007. e-mail: dewhurst@ill.fr


GRASP V4.21 - UNTITLED
File Display Analysis Instrument Data User Modules
Scott/HydeKorB
BAG-8-2 24 D-Buff-ddcylmalt-20C 31947
d22
Nrm: mon Dt: off Tc: on
Pixels
Pixels
Counts \ Std mon
1.04e+3
940
836
731
627
522
418
313
209
104
0
Stretch Top:
Stretch Bottom:
Gamma:
Reset Colour
: Log Z
: Manual Z Scal
: Image
: Contour
: Smooth
: Rotate
: Mask
: Calibrate
Worksheet: Number: Depth:
Foreground: & Data Load:
back
1
sum
Group:
Background:
fore
Cadmium:
cadmium
T_s:
Lock:
T_e:
Beam Centre:
c_x:
c_y:
64
64
Numor(s):
31947
Get It!
Centre Calc
GRASP V4.21 (c)2007. e-mail: dewhurst@ill.fr


GRASP V4.21 - UNTITLED
File Display Analysis Instrument Data User Modules
Scott/HydeKorB
BAG-8-2 24 B4C
31944
d22
Nrm: mon Dt: off Tc: on
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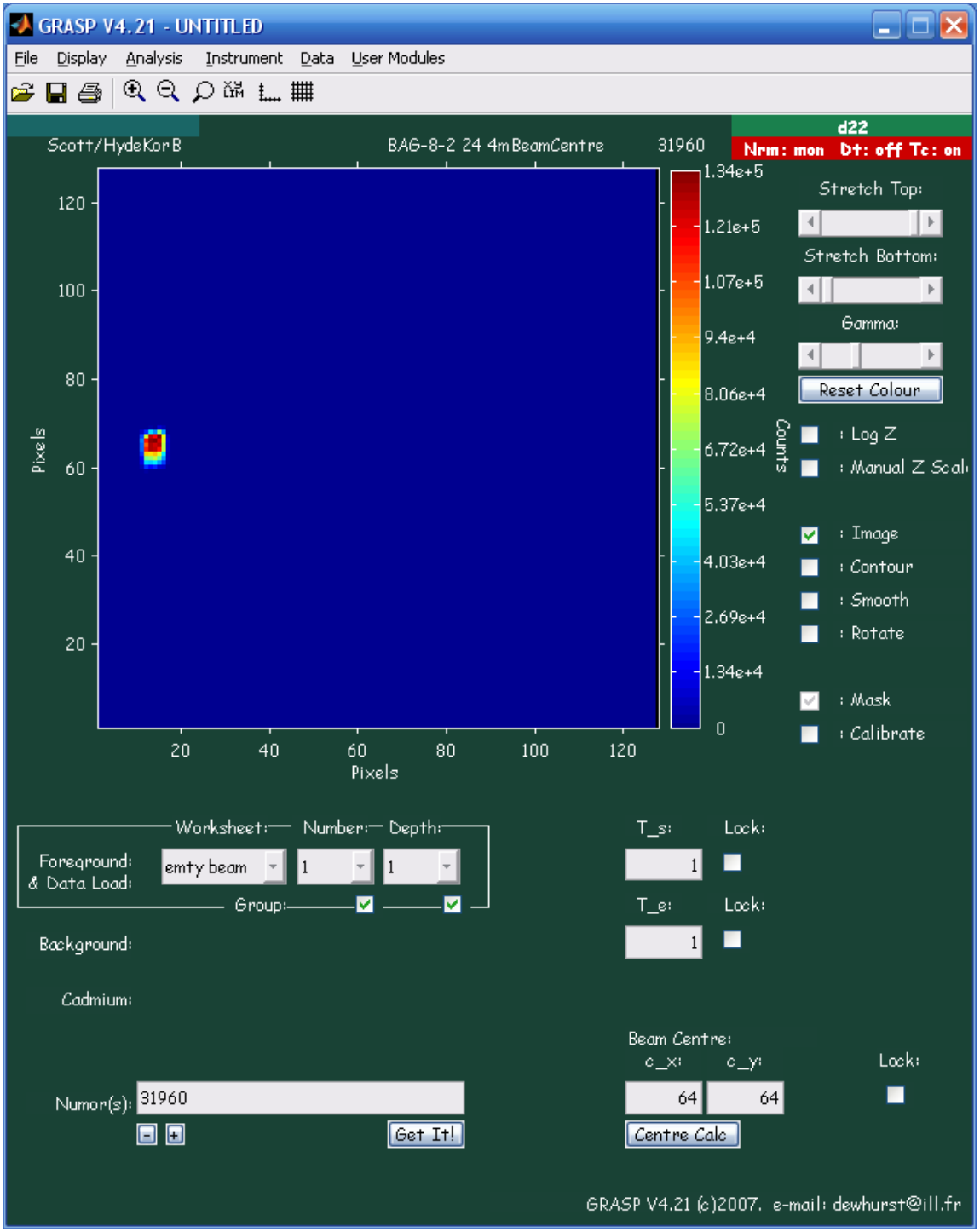
Numor(s):
31944
Get It!
Centre Calc
GRASP V4.21 (c)2007. e-mail: dewhurst@ill.fr


GRASP V4.21 - UNTITLED
File Display Analysis Instrument Data User Modules
Scott/HydeKorB
BAG-8-2 24 4mBeamCentre
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Nrm: mon Dt: off Tc: on
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1.07e+5
9.4e+4
8.06e+4
6.72e+4
5.37e+4
4.03e+4
2.69e+4
1.34e+4
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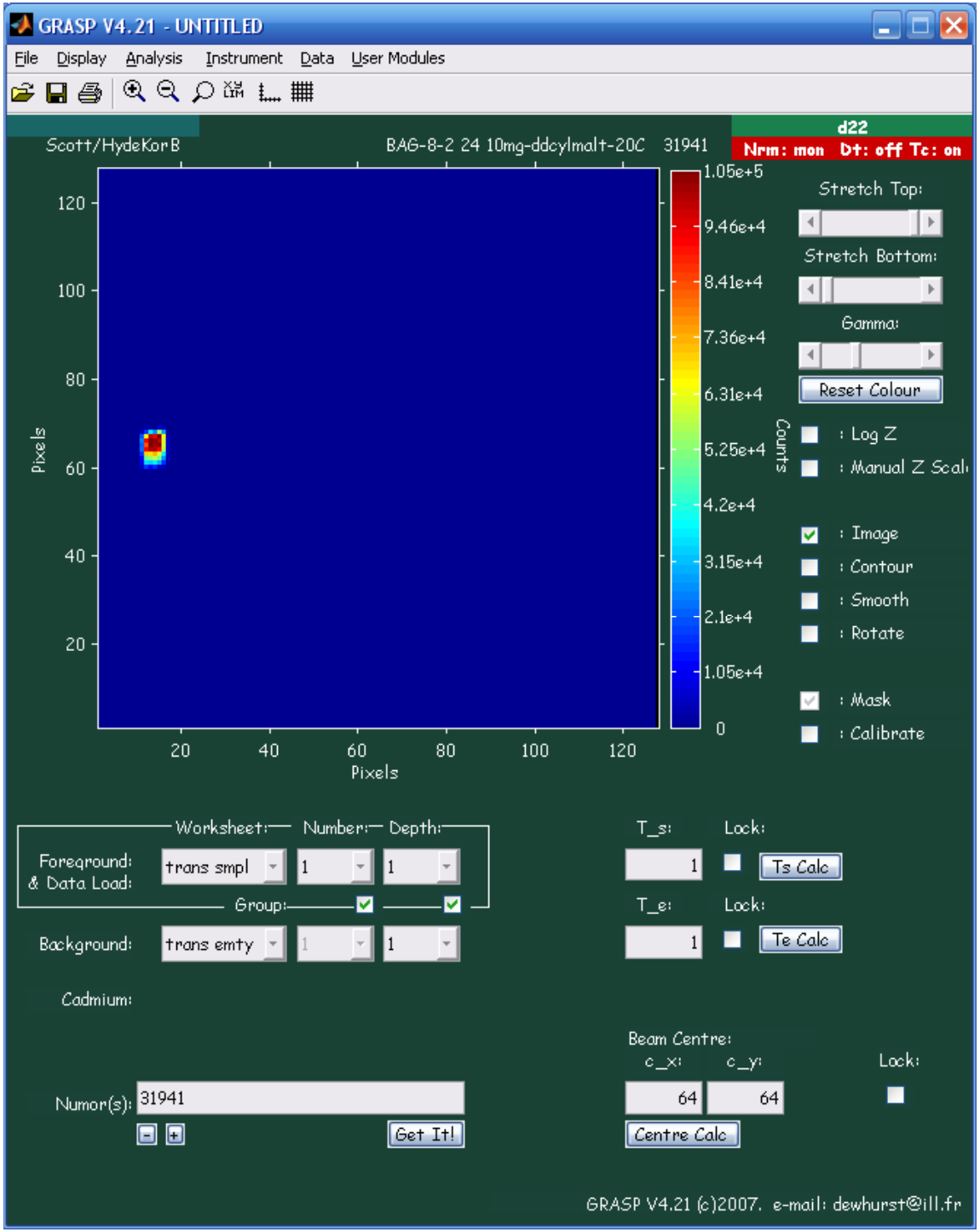
31960
Get It!
GRASP V4.21 (c)2007. e-mail: dewhurst@ill.fr


GRASP V4.21 - UNTITLED
File Display Analysis Instrument Data User Modules
Scott/HydeKorB
BAG-8-2 24 10mg-ddcylmalt-20C 31941
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Nrm: mon Dt: off Tc: on
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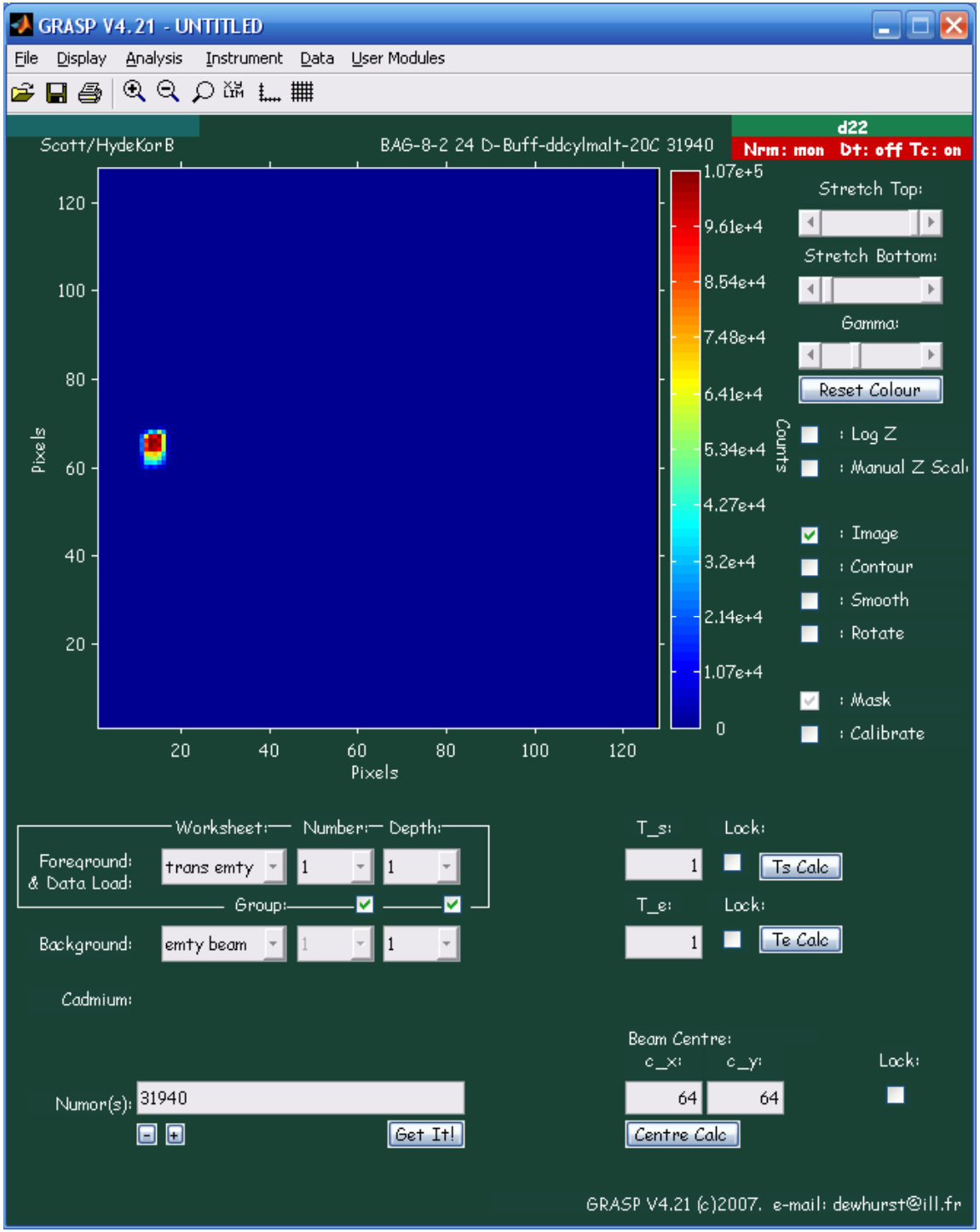
Get It!
Centre Calc
GRASP V4.21 (c)2007. e-mail: dewhurst@ill.fr


GRASP V4.21 - UNTITLED
File Display Analysis Instrument Data User Modules
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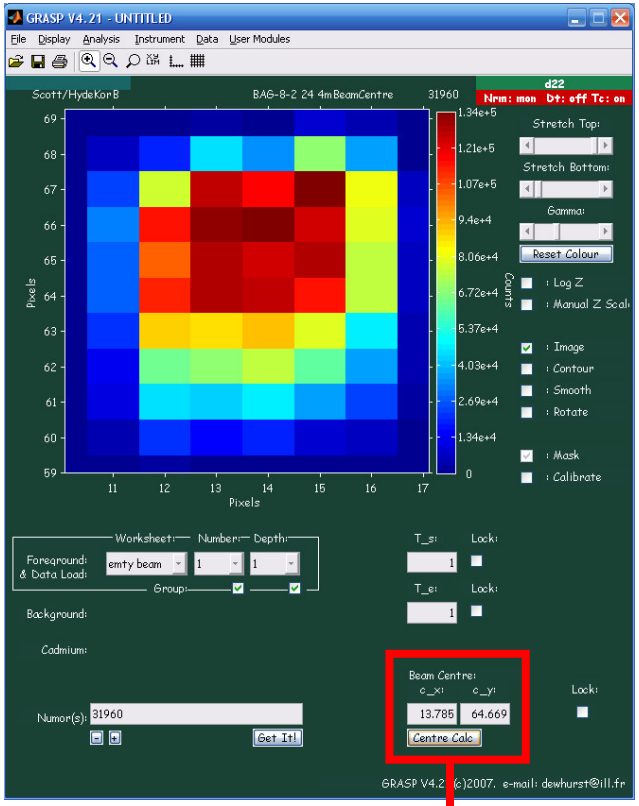
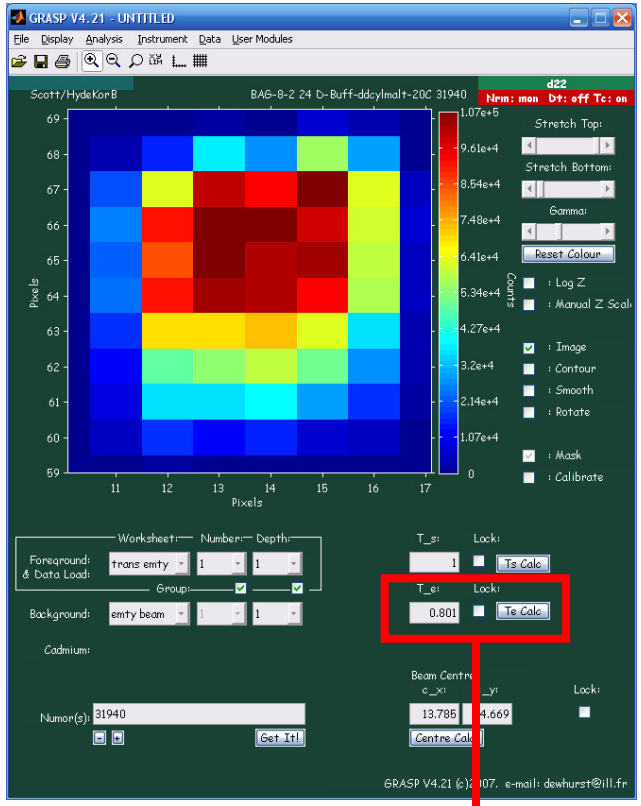
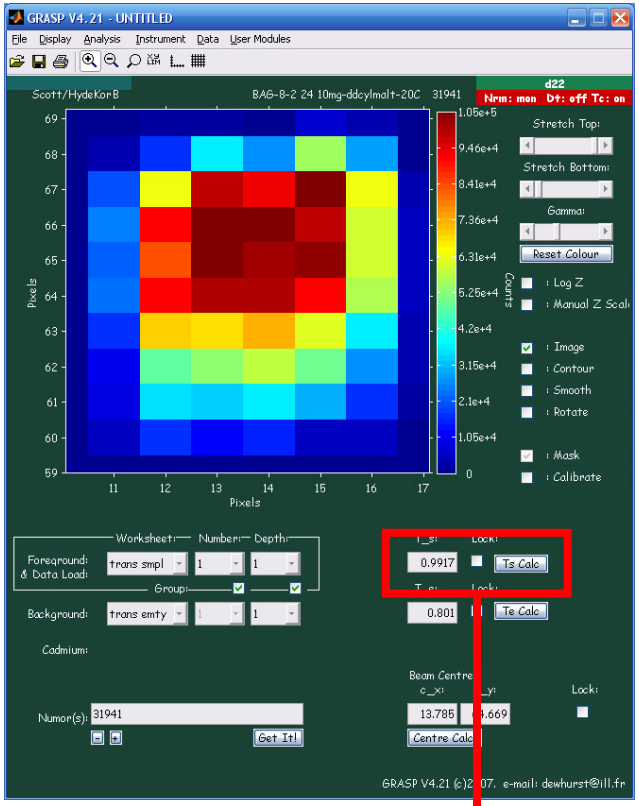
Get It!
Centre Calc
GRASP V4.21 (c)2007. e-mail: dewhurst@ill.fr



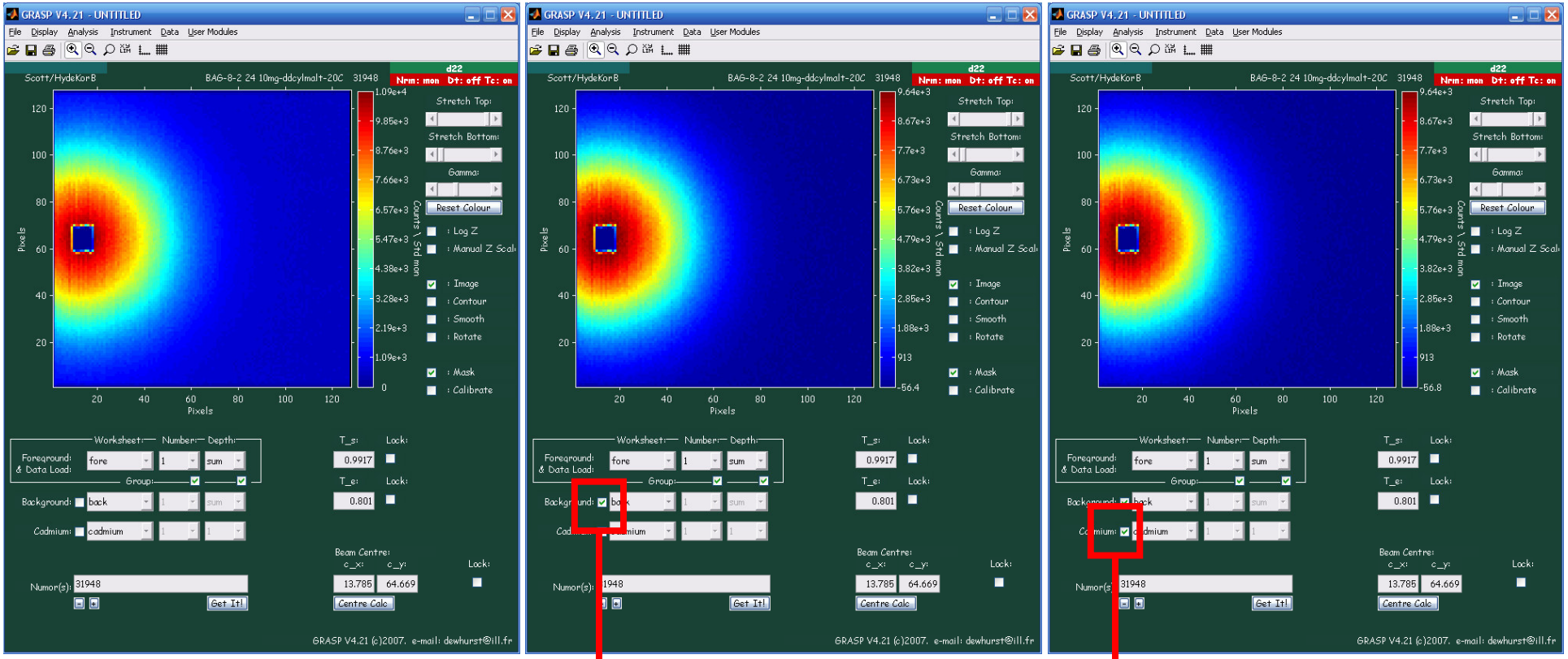




Calculate beam centre for sample data

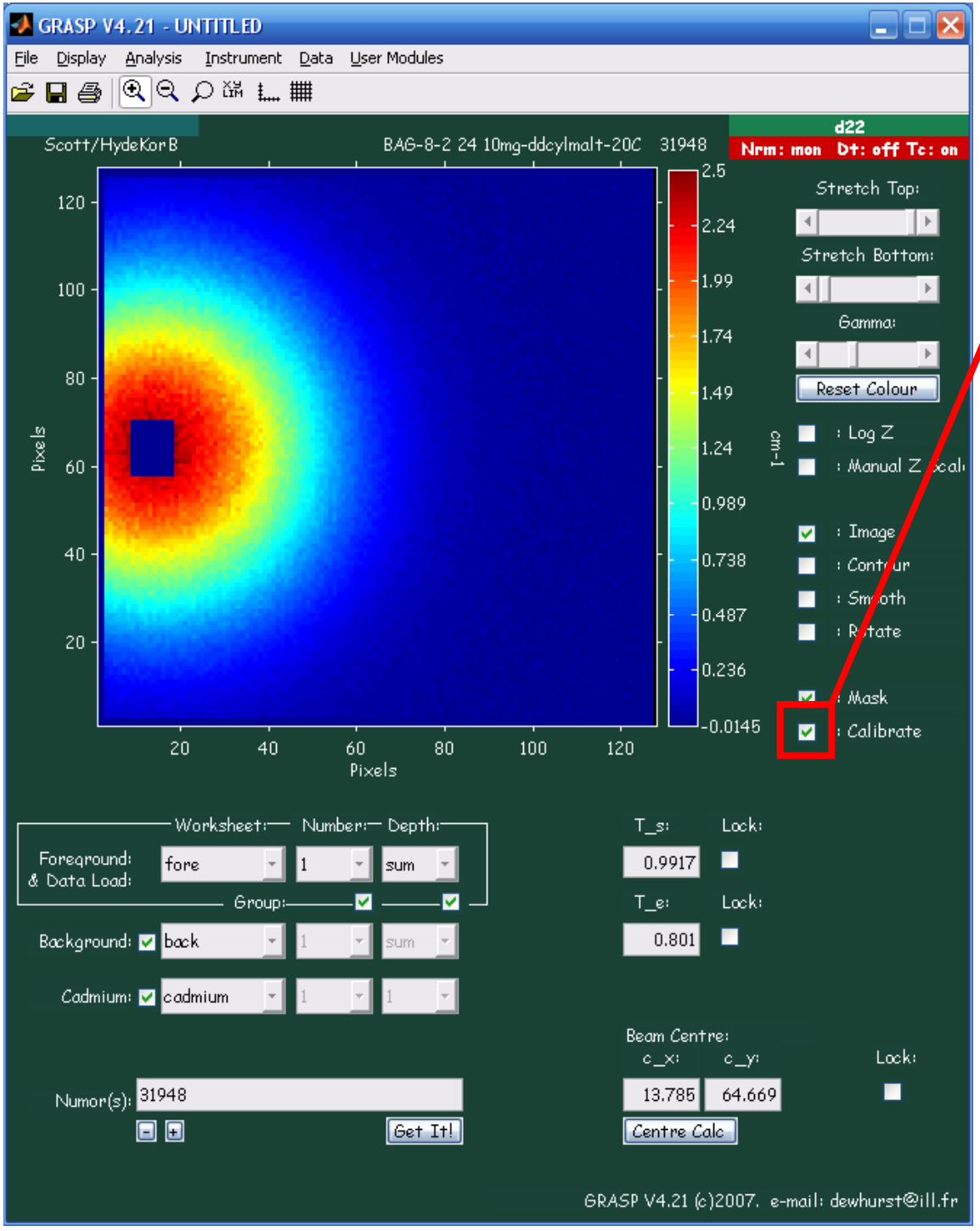
Transmission of buffer

Transmission of sample

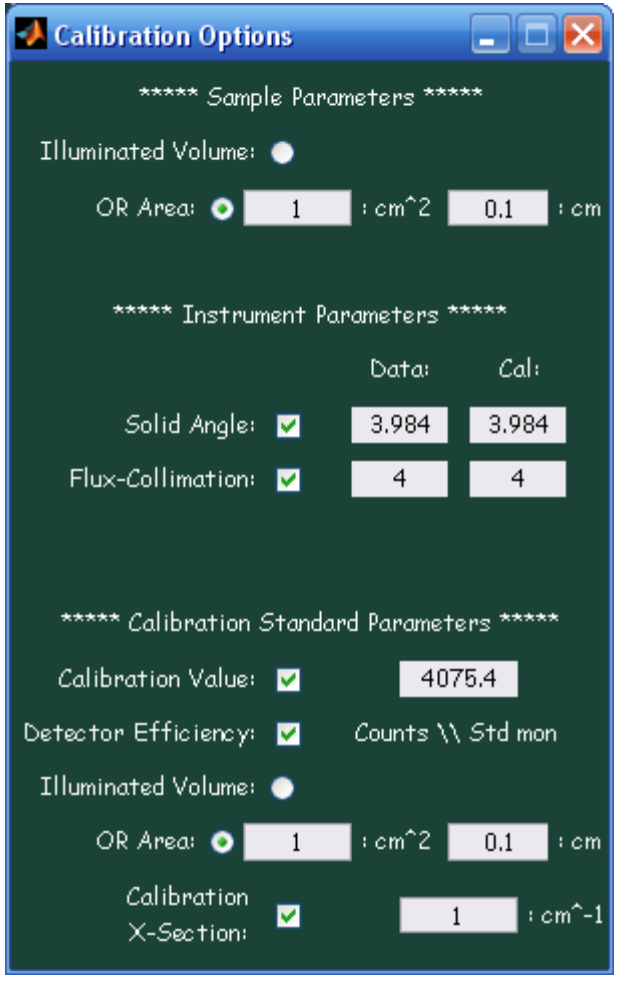


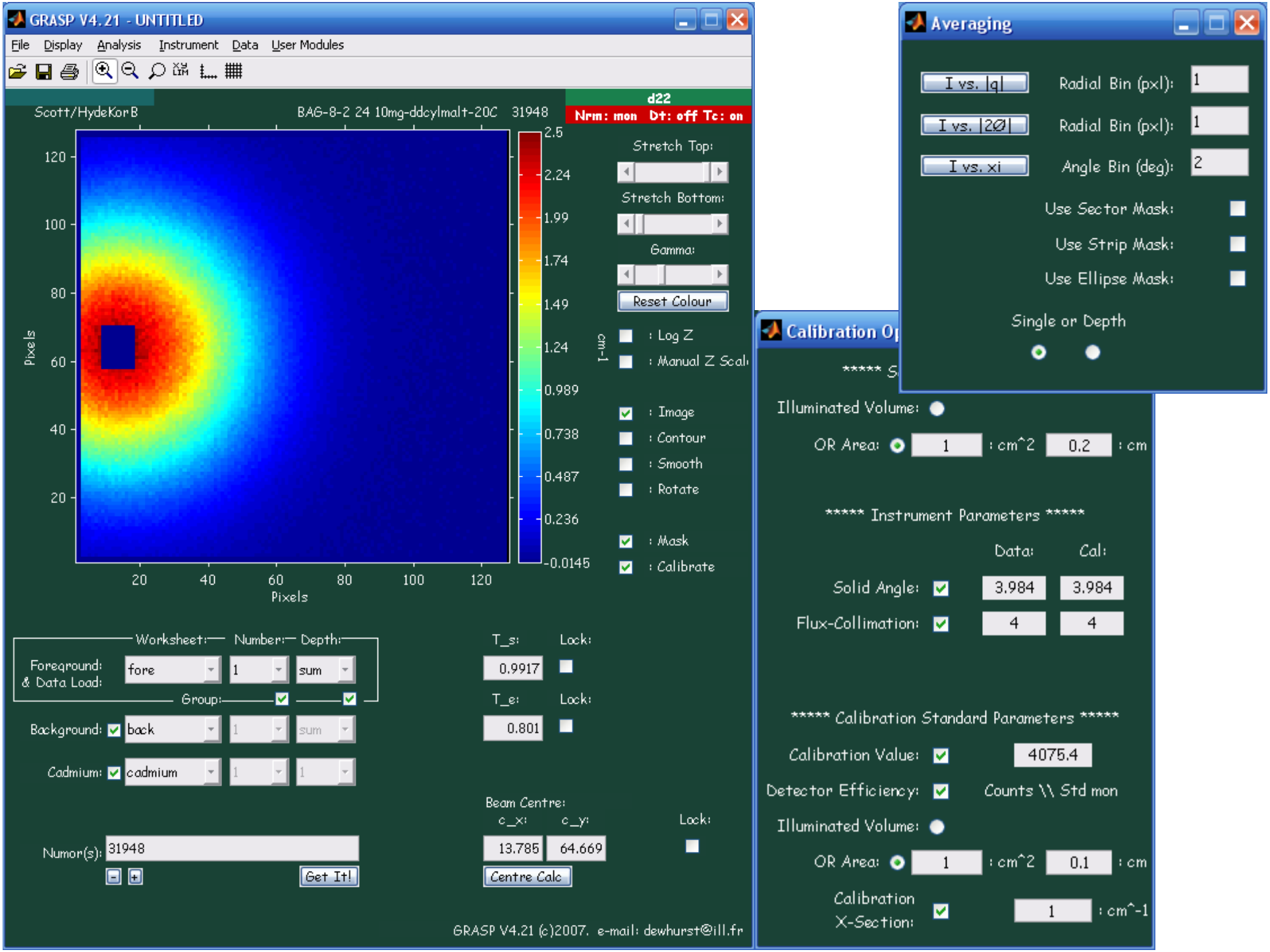
Check box to subtract Buffer

Check box to subtract cadmium



Check box to correct the data




GRASP V4.21 - UNTITLED
File Display Analysis Instrument Data User Modules
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31948
Get It!
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Averaging
I vs. |q|
I vs. |2Ø|
I vs. xi
Radial Bin (pxl):
Angle Bin (deg):
Use Sector Mask:
Use Strip Mask:
Use Ellipse Mask:
Single or Depth
Calibration Op
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OR Area:
: cm^2
: cm
***** Instrument Parameters *****
Data:
Cal:
Solid Angle:
Flux-Collimation:
***** Calibration Standard Parameters *****
Calibration Value:
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Counts \\ Std mon
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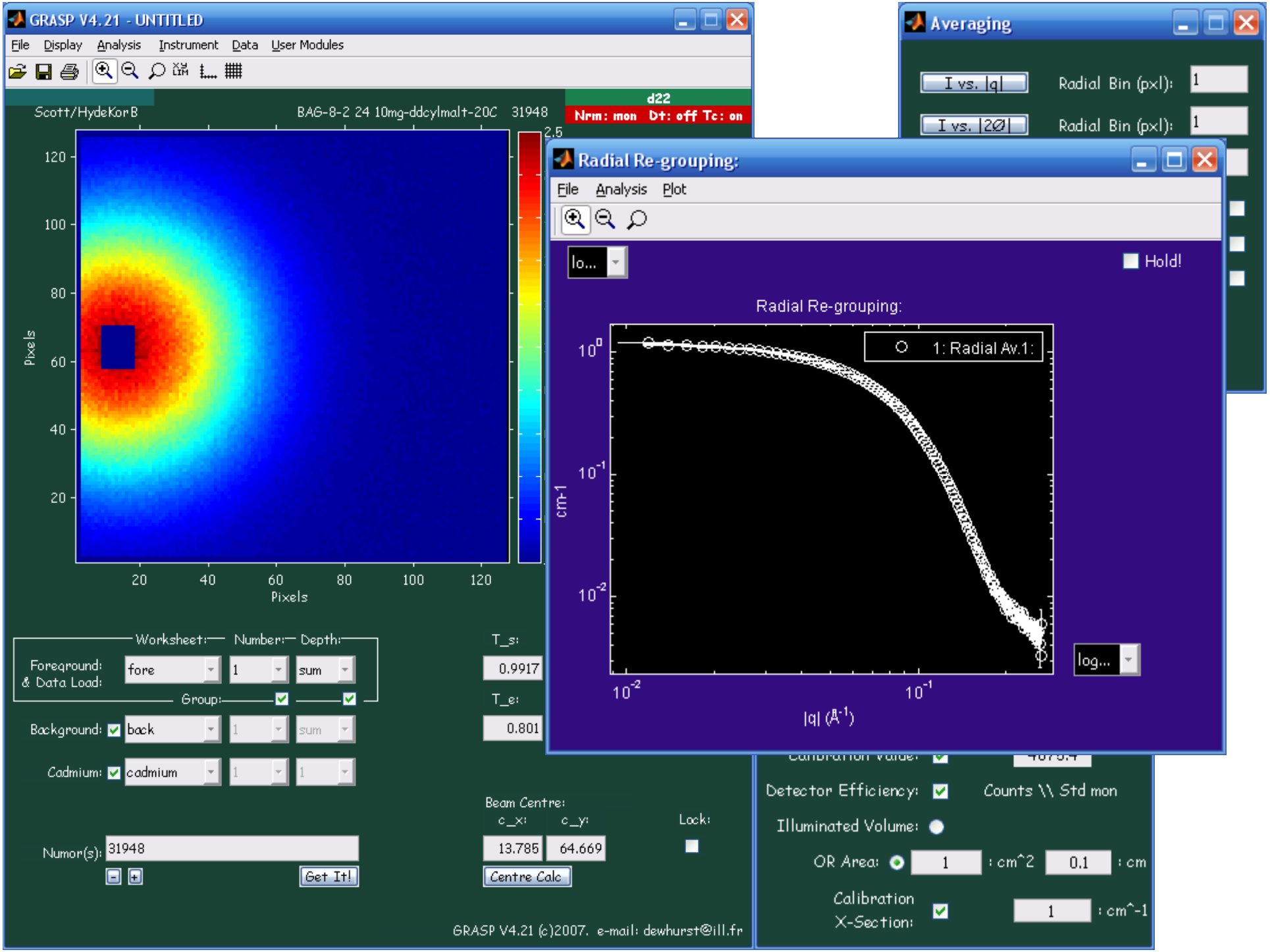
: cm^-1


GRASP V4.21 - UNTITLED
File Display Analysis Instrument Data User Modules
Scott/HydeKorB
BAG-8-2 24 10mg-ddcylmalt-20C 31948
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GRASP V4.21 (c)2007. e-mail: dewhurst@ill.fr
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: cm
Calibration X-Section:
: cm^-1