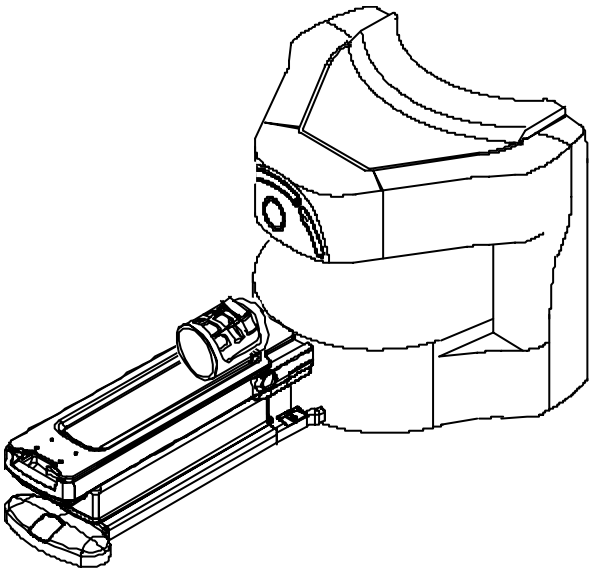
TABLE OF CONTENTS

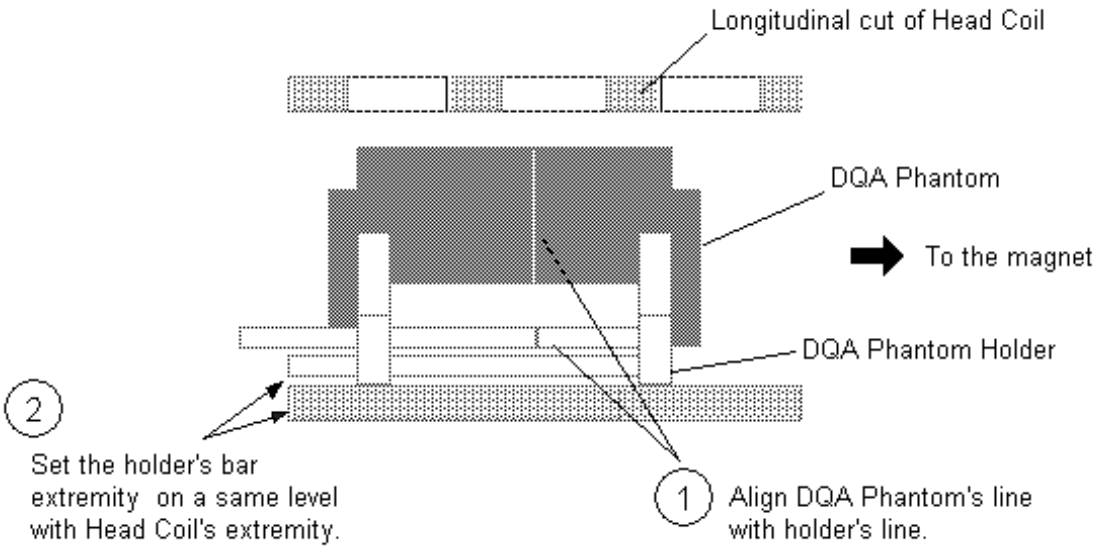
1. Phantom Setting

1. Set the Head Coil on the Cradle.



HEAD COIL POSITIONING
ILLUSTRATION 1

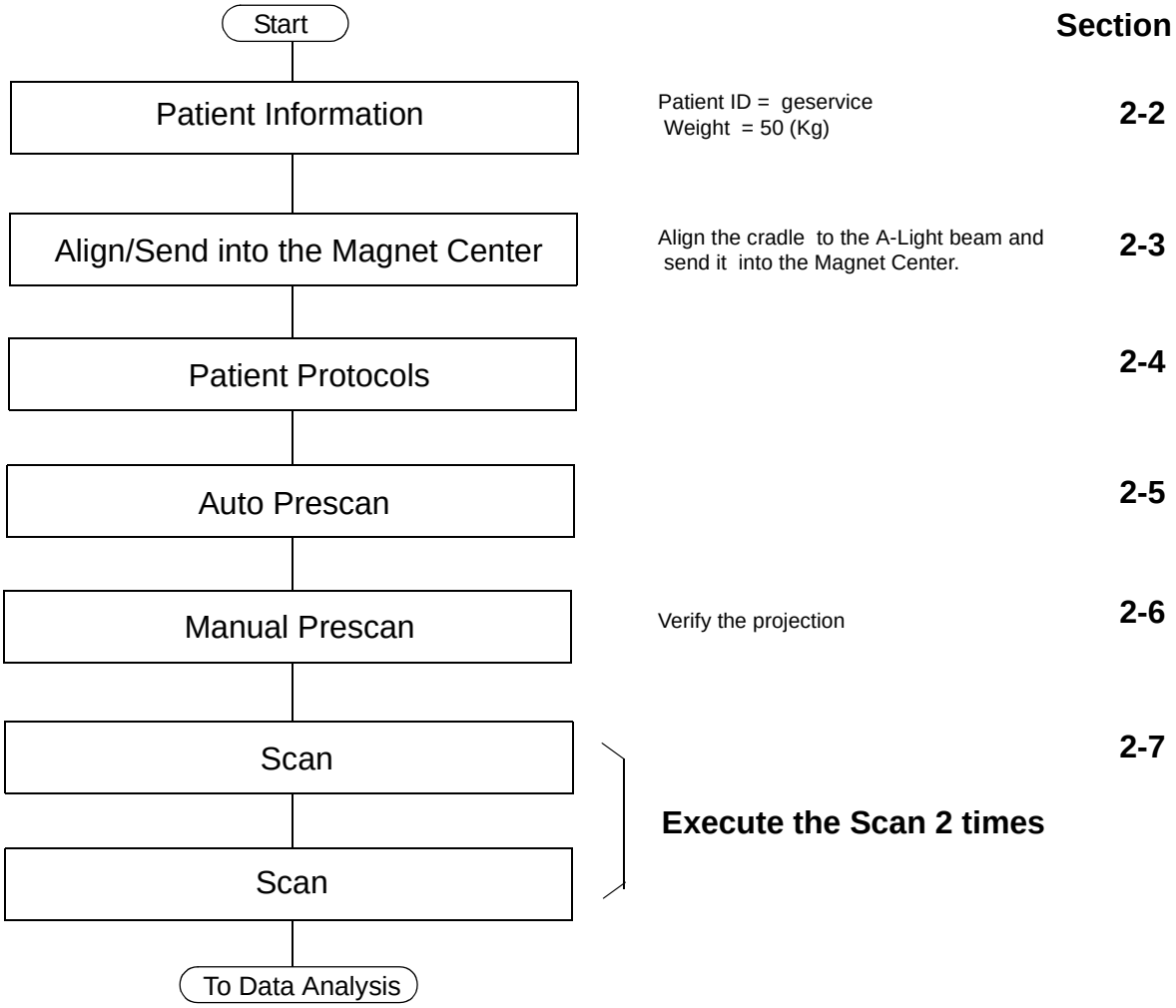
2. Set the DQA phantom and phantom holder according to the following illustration.



DQA PHANTOM SETTING
ILLUSTRATION 1-1

2. SCAN

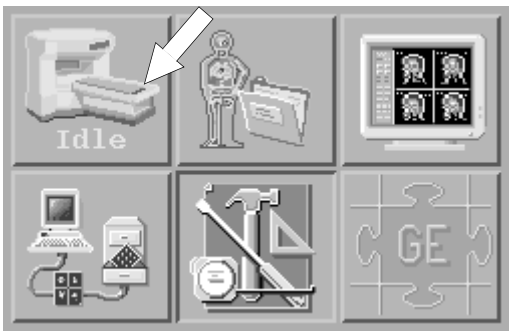
2-1 Flow Chart



SCAN FLOWCHART
ILLUSTRATION 2-1

2-2 Patient Information

1. Select Patient Information and Protocol Icon.

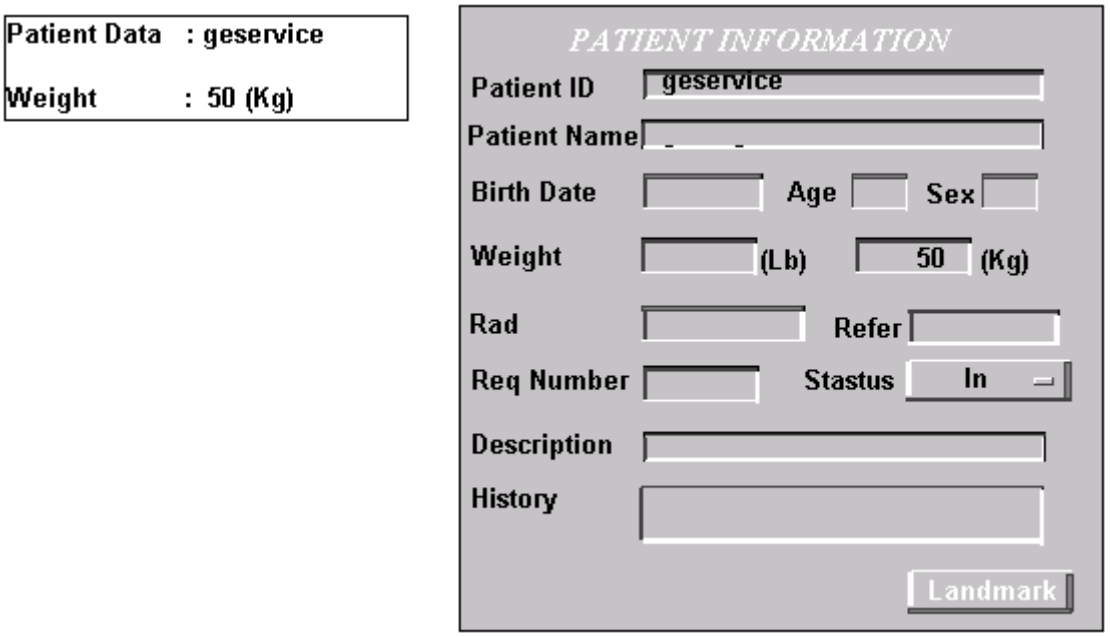


Patient Information and Protocol Icon
ILLUSTRATION 2-1

2. Click [**New Pt**] button in "PATIENT REGISTER".

[**New Pt**] button
ILLUSTRATION 2-2

3. Input the following data on "patient information".

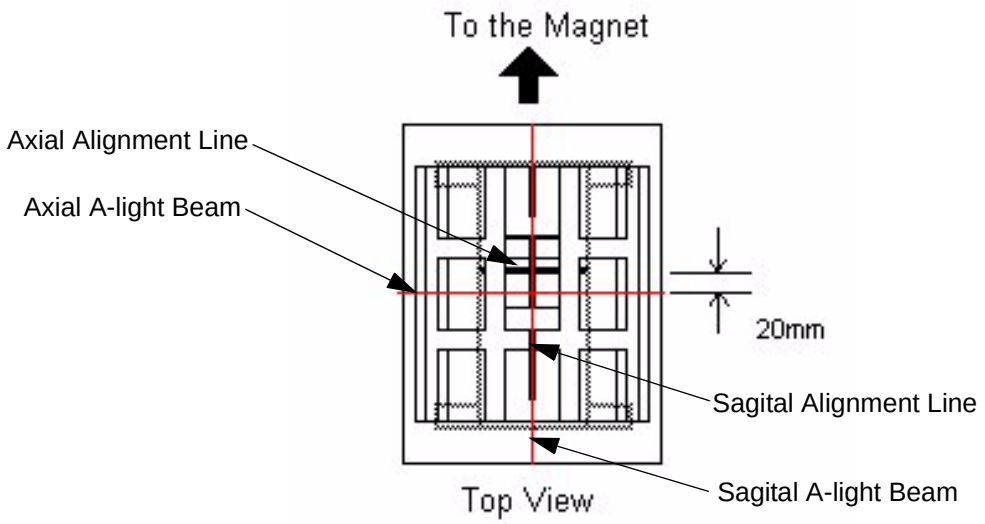


Patient Information Input
ILLUSTRATION 2-3

2-3 Align/Send into the Magnet Center

1. Turn alignment light ON.
2. Advance the cradle to the position where the axial A-light beam hits at 20mm outside from the axial Alignment line of Head Coil. Refer to the illustration.
3. Move the cradle to the position where the sagital A-light beam hits at the sagital Alignment line of Head Coil. Refer to the illustration

.



ALIGNMENT LIGHT
ILLUSTRATION 2

4. Landmark in the sagittal and axial planes.
5. Press **[Adv to Scan]** button to send the phantom into the Magnet center.

2-4 Patient Protocols

1. Click **[Patient Position]**.
2. Enter the following Information.

Table 1:

Item	Value
Patient Position	Supine
Patient Entry	Head First
Coil	Head
Plane	Axial
Mode	2D
Pulse Seq	Spin Echo
Imaging Option	VBw + EDR

3. Enter the protocols according to the following list.

Table 2:

Item	Value
No of Echo	1
TE	25

Table 2:

Item	Value
TR	500
Band Width	10.42
FOV Size	25
Slice Thickness	5
Spacing	0
S/I Start	0
End	0
No of Slice	1
L/R Center	0
Freq	256
Phase	256
Nex	1
Phase FOV	1
Freq Dir	R/L
Auto Centrer Freq	Peak
AutoShim	ON

4. Select **Accept**.
5. Select **Save Series**.

Save Series
ILLUSTRATION 2-1

2-5 Auto Prescan

1. Select **Auto Prescan** button

Auto Prescan

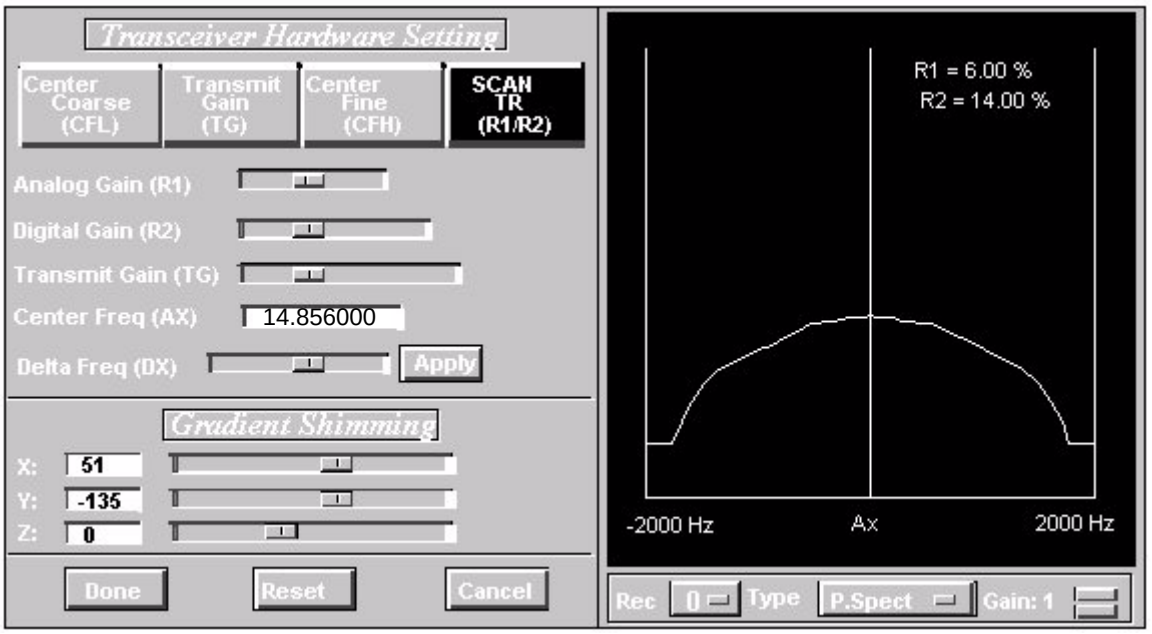
ILLUSTRATION 2-1

2-6 Manual Prescan

1. Select **Manual Prescan** button.

Manual Prescan
ILLUSTRATION 2-1

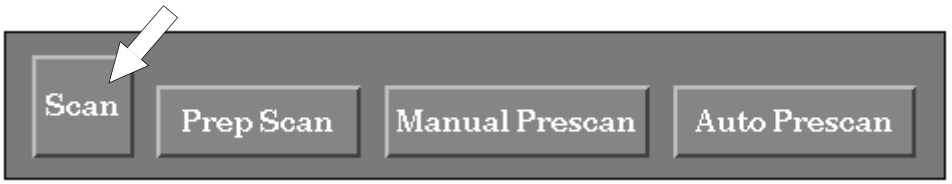
2. Click on "SCAN TR" and check that the projection is displayed.



Projection
ILLUSTRATION 2-2

2-7 Scan

1. Select **Scan** button



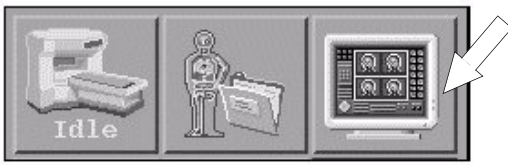
Scan
ILLUSTRATION 2-1

2. Verify that scanning has been started.

3. Data Analysis

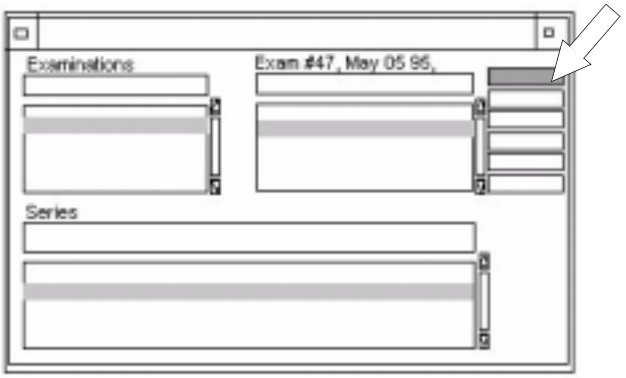
3-1 Subtract Noise Image from Scan Image.

1. Select Advantage Window Icon.



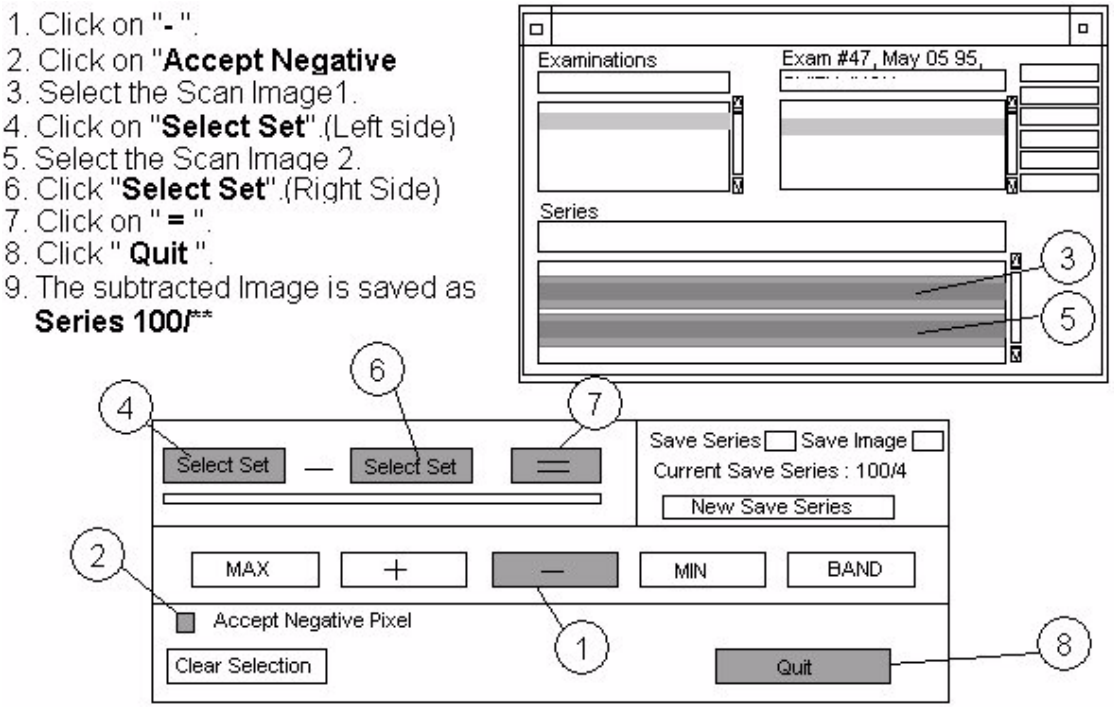
AW Icon
ILLUSTRATION 3-1

2. Click [**Add/Sub**] button.



Add-Sub Button
ILLUSTRATION 3-2

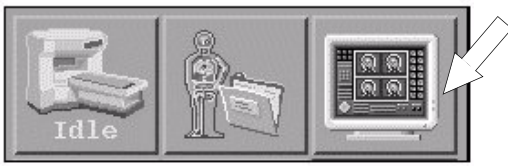
3. Subtract Image
   1st Image - 2nd Image



How to Subtract
ILLUSTRATION 3-3

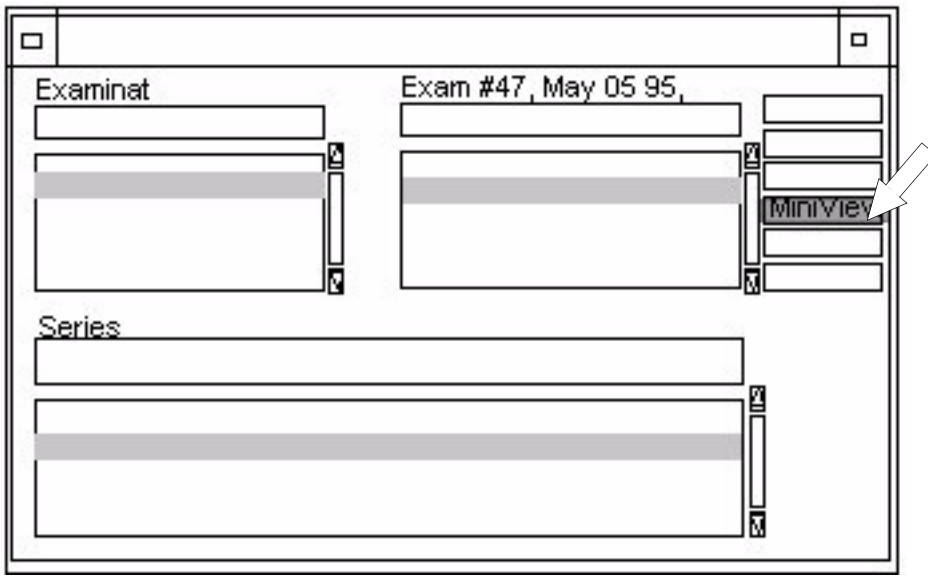
3-2 Measure the Mean and SD of 1st image.

1. Open the 1st Image by using the Miniviewer.
   a. Select Advantage Window Icon.



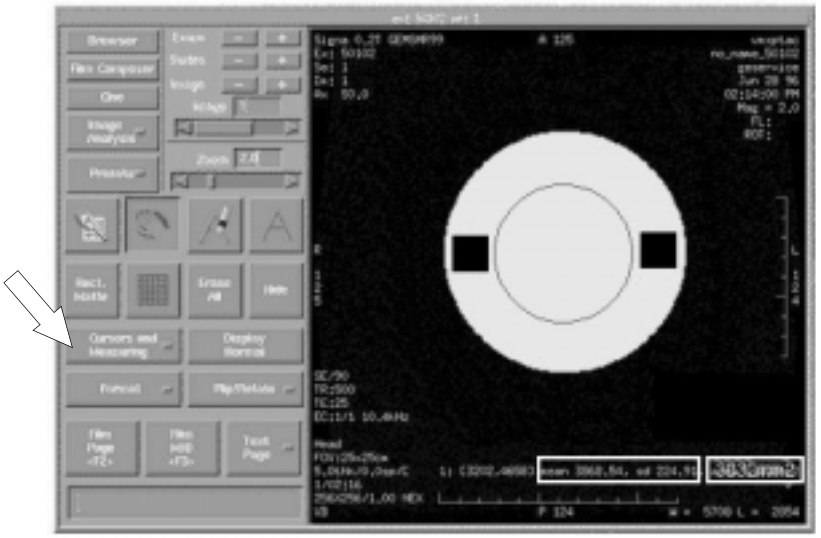
AW Icon
ILLUSTRATION 3-1

b.Select "Exam", "Series", and "Image" from the patient list and then press [MiniViewer].



Miniviewer
ILLUSTRATION 3-2

2. From "Cursors and Measuring", select ellipse and set the area to (3000±100mm2)

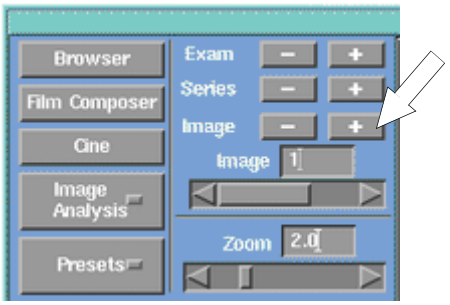


Elliptical Cursor
ILLUSTRATION 3-3

3. Measure the Mean and SD.
4. Record the Data into the Data Sheet.
5. Press the keys at the same time to copy the current elliptical cursor : [**Ctrl + Alt + F6**] or [**Ctrl + c**].

3-3 Measure the Mean and SD of 2nd image.

1. Open the 2nd Image
   a. Click on "Image +" button, and next image will come up.



Next Image
ILLUSTRATION 3-1

2. Press the keys at the same time to paste the elliptical cursor: [**Ctrl + Alt + F8**] or [**Ctrl + v**].
3. Measure the Mean and SD.
4. Record the Data into the Data Sheet.

3-4 Measure the Subtracted Image.

1. Open the Subtracted Image.
   a. Click on "Image +" button, and next image will come up.
2. Measure the Mean and SD of the Subtracted Image.
3. Record the Data into the Data Sheet.

4. Data Sheet

1. Record the Mean and SD values, and calculate the SNR:

   SNR =(M1 x $\sqrt{2}$)/ SD(s)
   where, M1 is the 1st Image Mean Value and SD(s) is the Subtracted Image SD value

TABLE 4-1
MEAN AND SD VALUES

	MEAN	SD
Ist Image		
2nd Image		
Subtracted Image	----------	

TABLE 4-2

SNR VALUE

Calculated SNR	SPEC

I