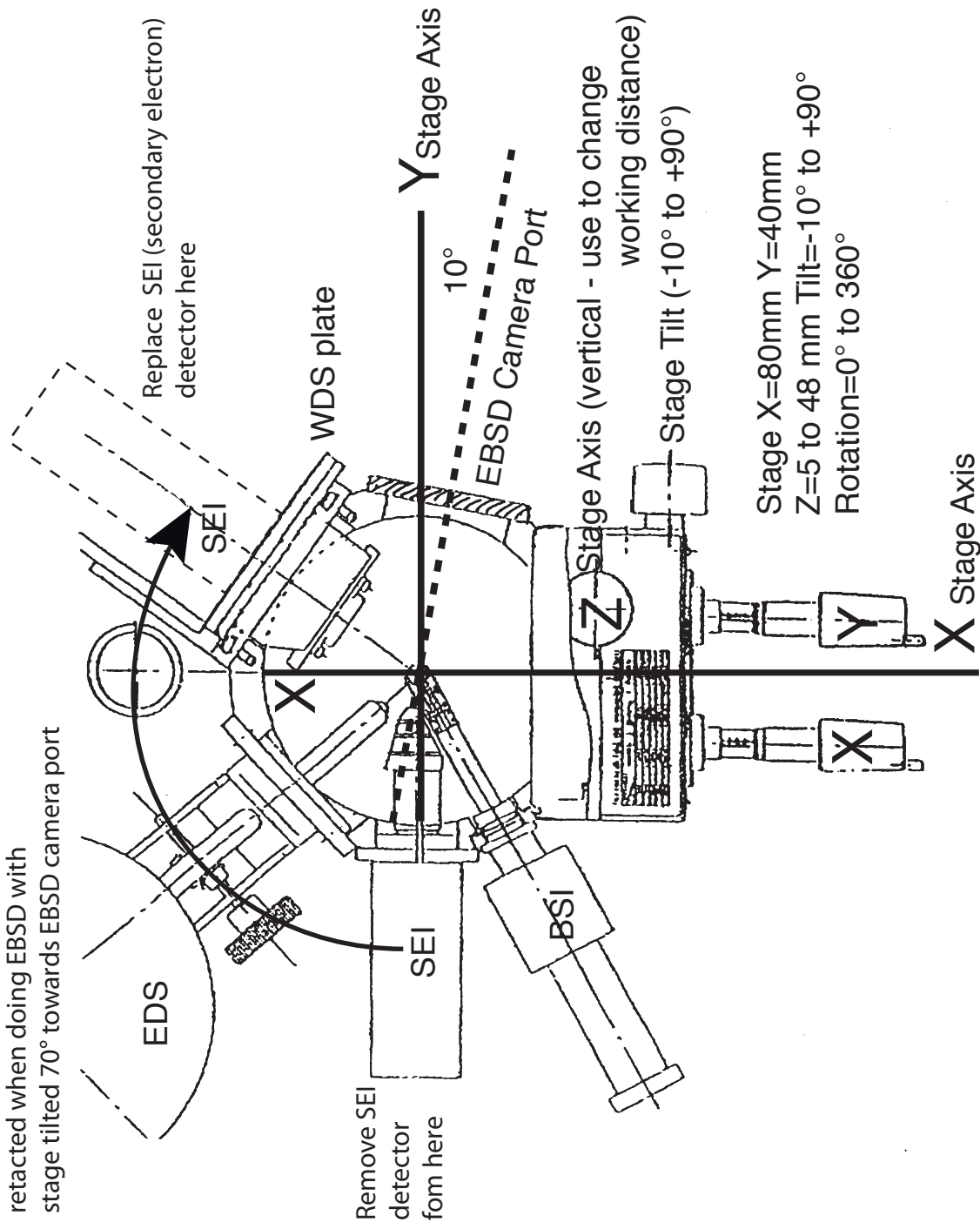


JSM-5600 Chamber

Modifications of SEI detector position to allow the eucentric stage to tilt towards the EBSD camera port and use of eucentric stage to preserve the working distance constant while using X and Y stage displacement for EBSD mapping.

IMPORTANT : EDS detector will have to be retracted when doing EBSD with stage tilted 70° towards EBSD camera port



View with stage horizontal (Stage tilt = 0°)

Note: If the Z stage axis is not motorized this is the only way to keep the working distance constant during EBSD mapping. A change in working distance will result in the loss of the calibration for indexing and poor or no indexing.

Modifications to JEOL 5600 Scanning Electron Microscope to allow EBSD Mapping at constant working distance using X and Y stage axes

By David Mainprice, Geosciences Montpellier, France (May 2008)
E-mail: David.Mainprice@gm.univ-montp2.fr

Contents

Outline of modifications to SEI Detector position required to the allow tilting of the stage towards the EBSD camera.

Photos showing the removal of the stage and tilting towards the EBSD camera.

Port geometry of the JEOL 5600

Detail of the SEI Port

Outline of the WDS plate with position of the hole for SEI dectector

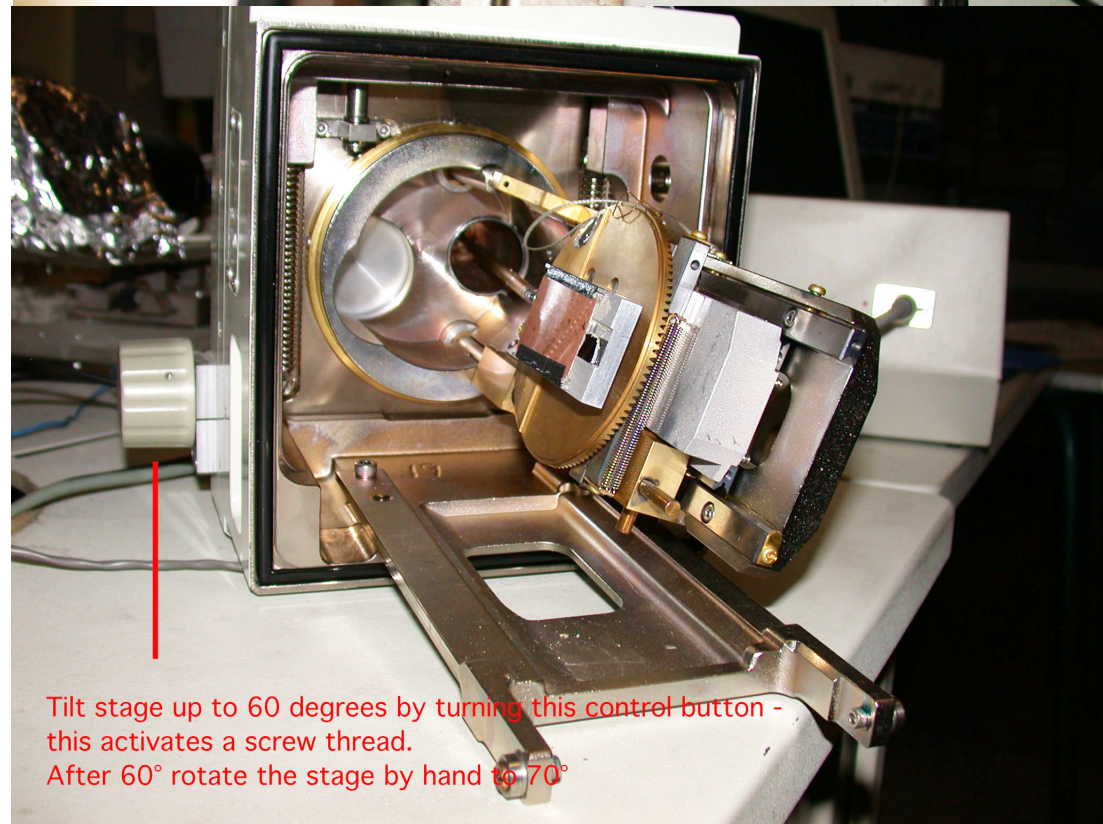
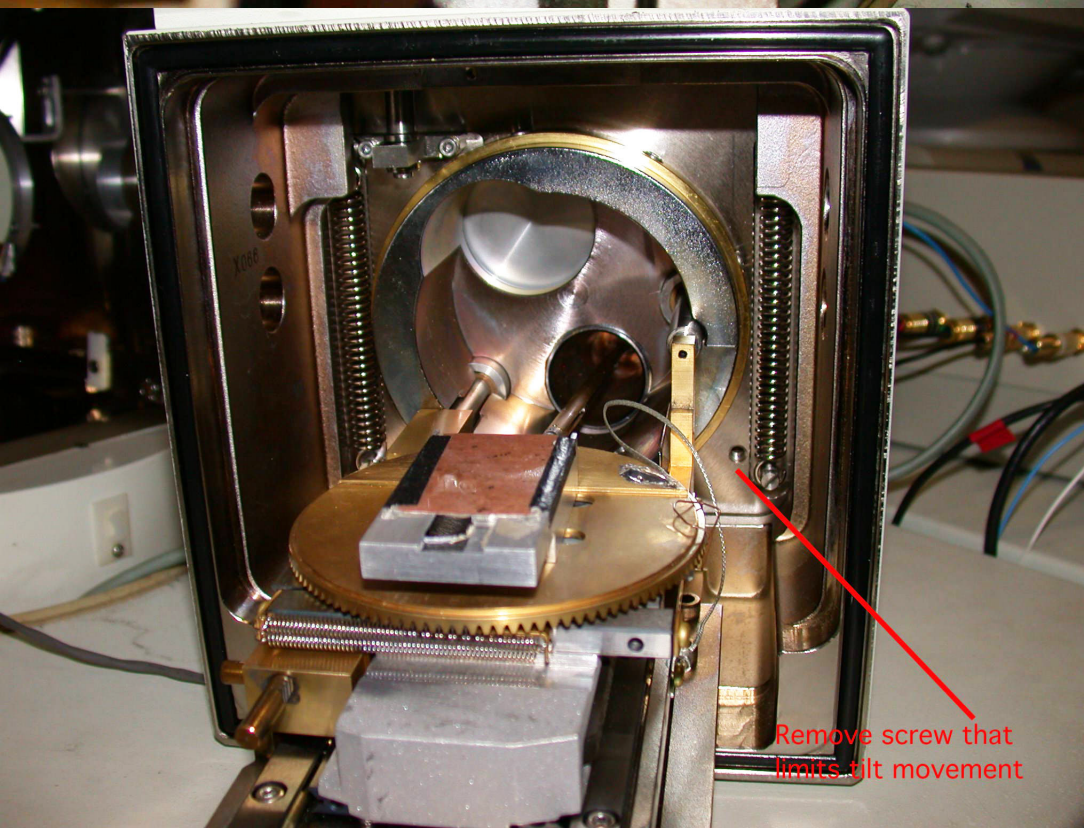
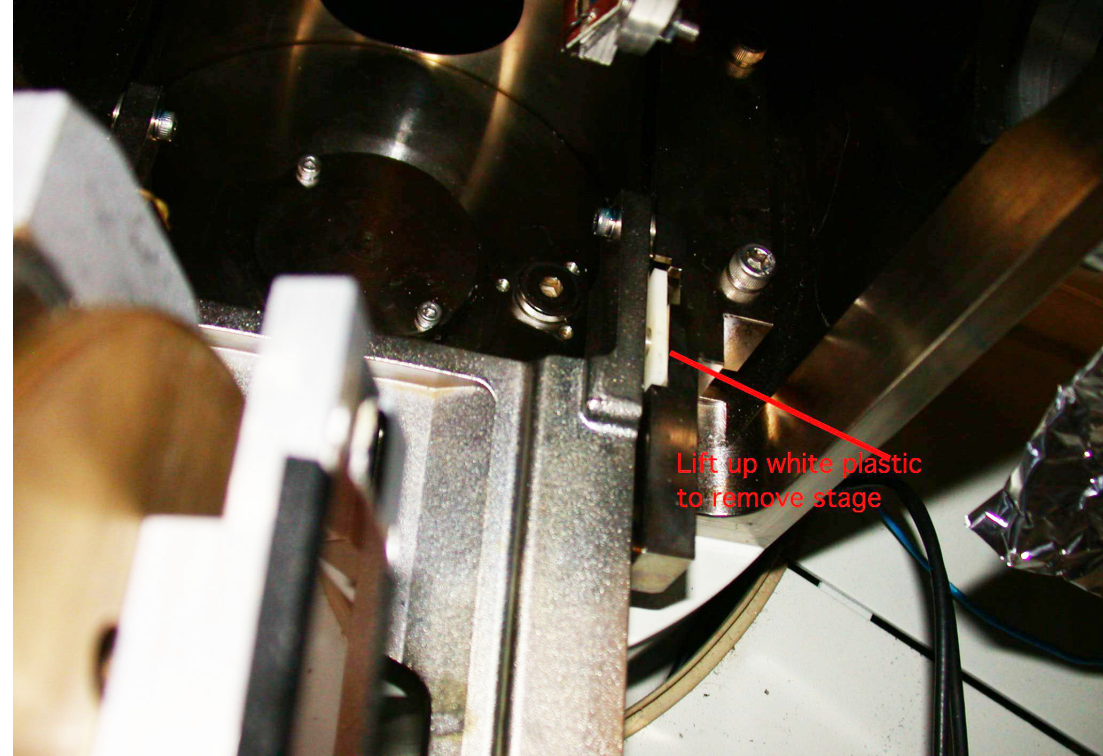
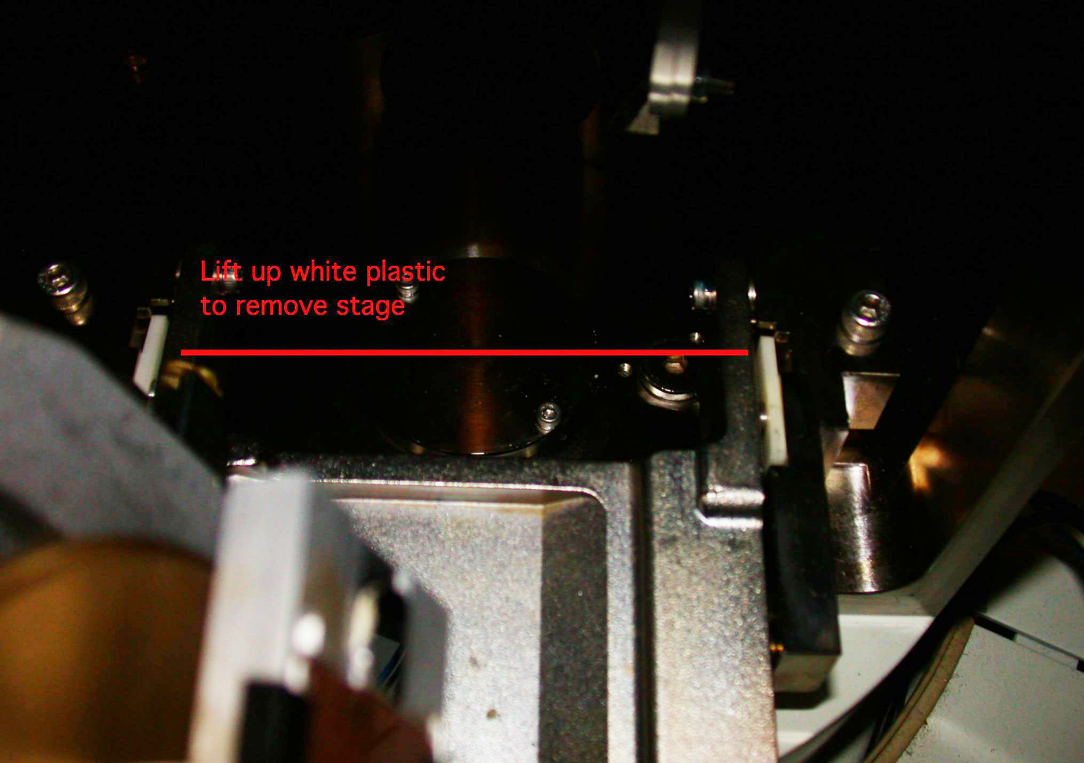
Plan of WDS plate

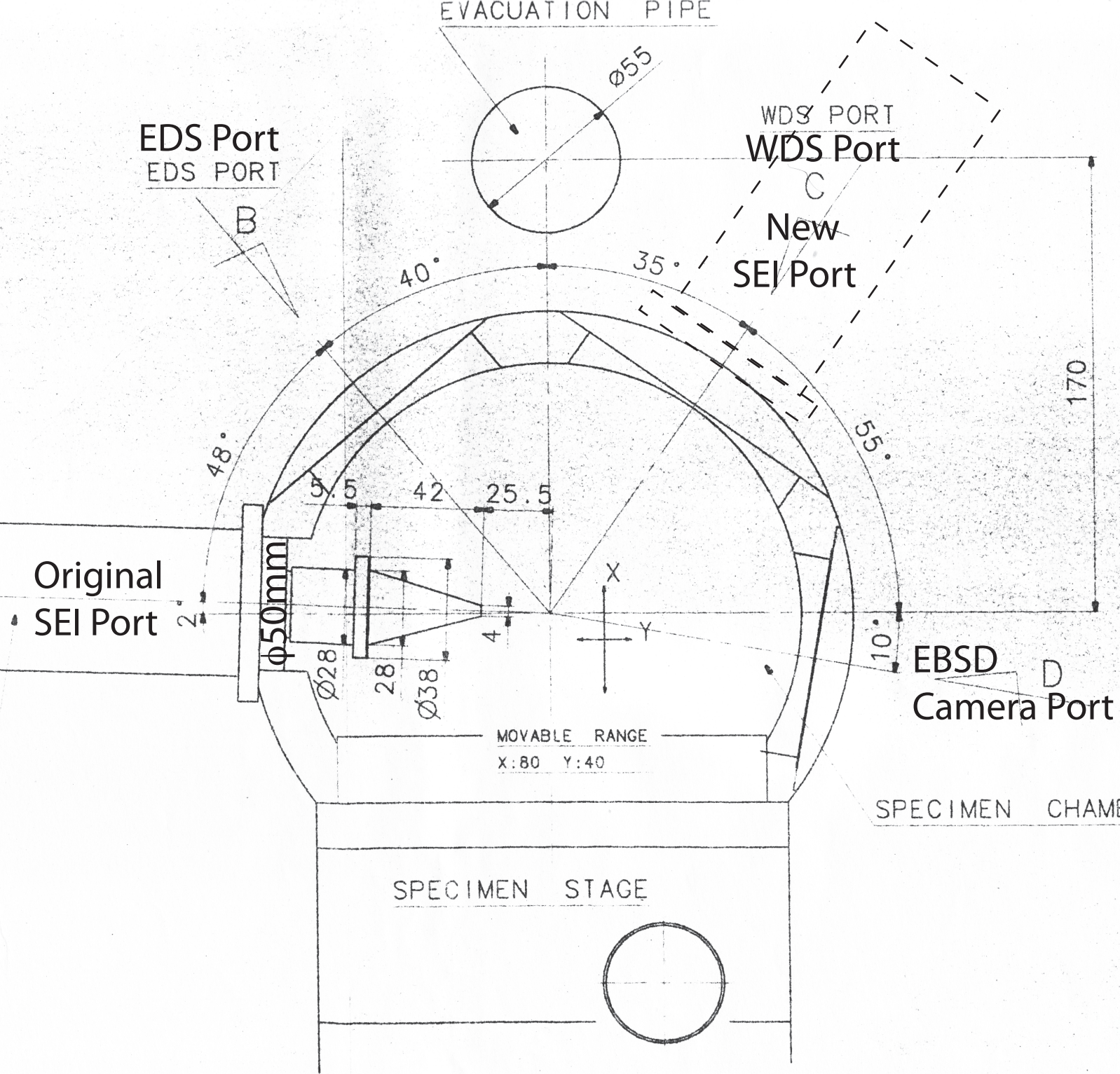
Sideview plane of WDS plate

Photos of SEI mounted on WDS plate

Photos of EBSD sample holder

Plans of EBSD sample holder





Ø36上等分2×2-M3深7

Ø44

102

基準面より214±0.2
2ヶ所、同寸法同加工

Ø31±0.08

22

7

R0.5

△

D

Ø64上等分4-M4深7

(4.5)

0.4

6
4.5

108.5

5°

55°

30°

2°

27°

50°

中心O

111.5

Original
SEI Port

Ø50^{+0.01}₀

Ø75

Ø58

45°

基準面より100

△ Ø26H8^{+0.033}₀

△ Ø50

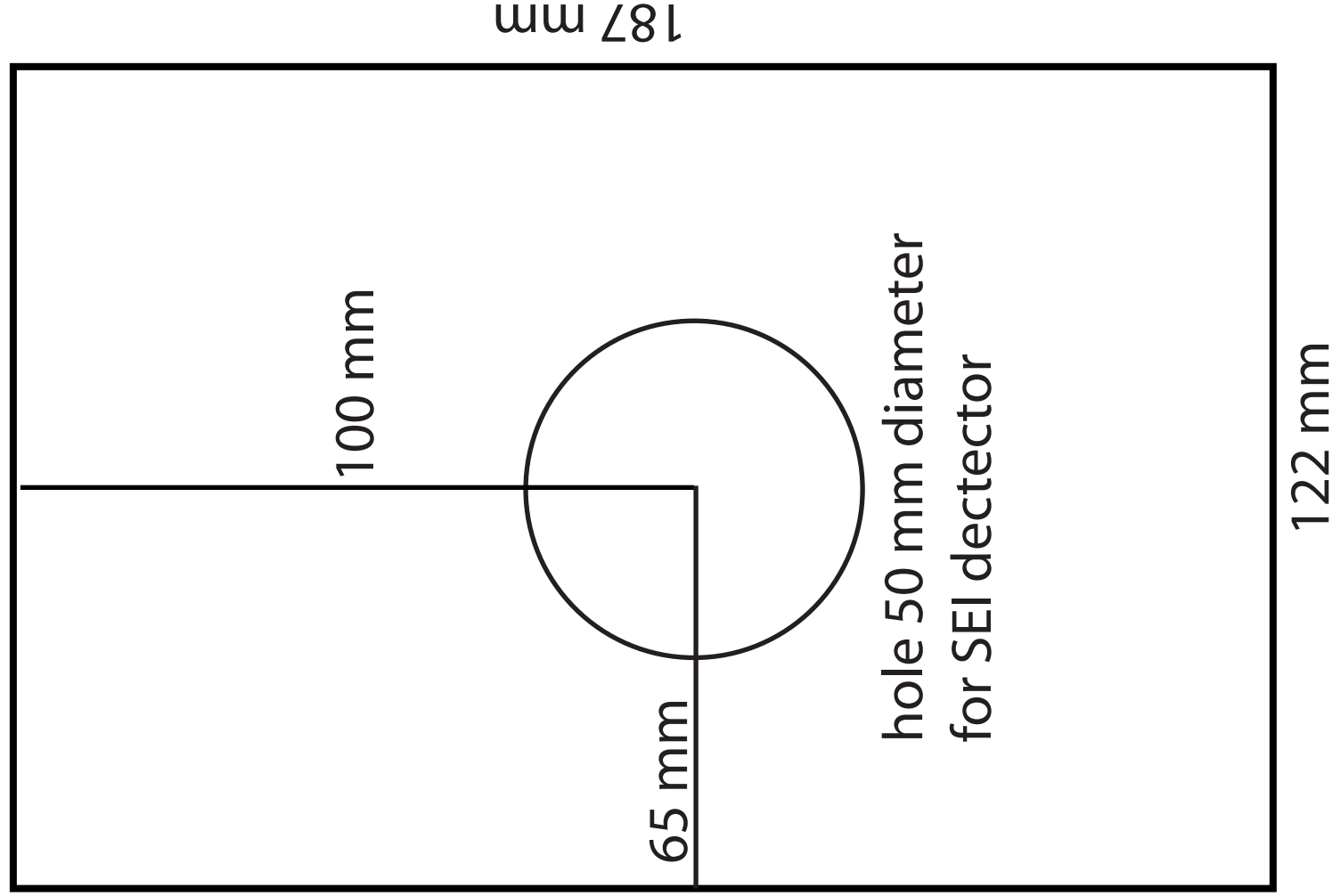
12

3

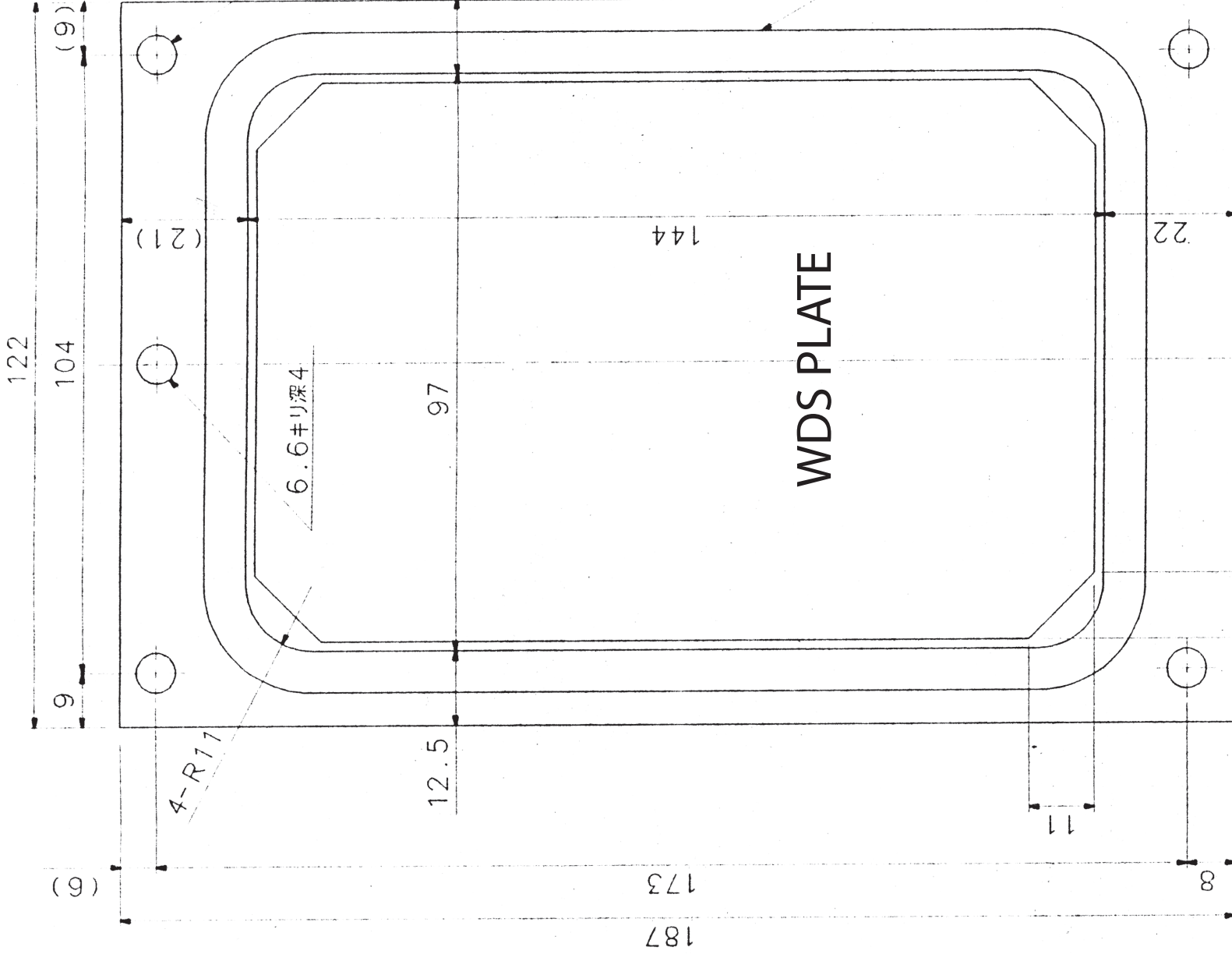
C1

A

Top of chamber



WDS Plate - view from outside Chamber



122

9 104 (9)

(6)

(21)

4-R11

4-6.6キリ通し

6.6キリ深4

12.5 (12.5)

97

187 173

144

WDS PLATE

OR7深4.6±0
両側面
6.35
VVV

14 11 94 (14)

WDS PLATE

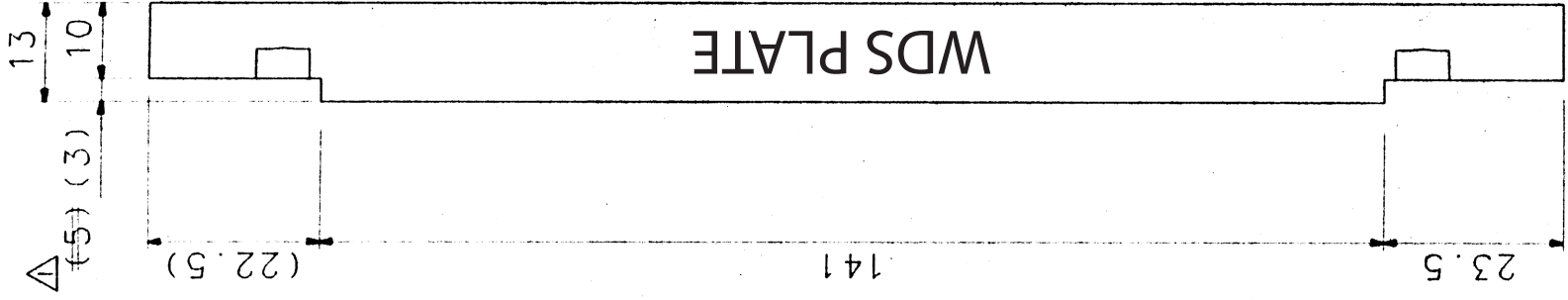
U120262-1
U120243-1

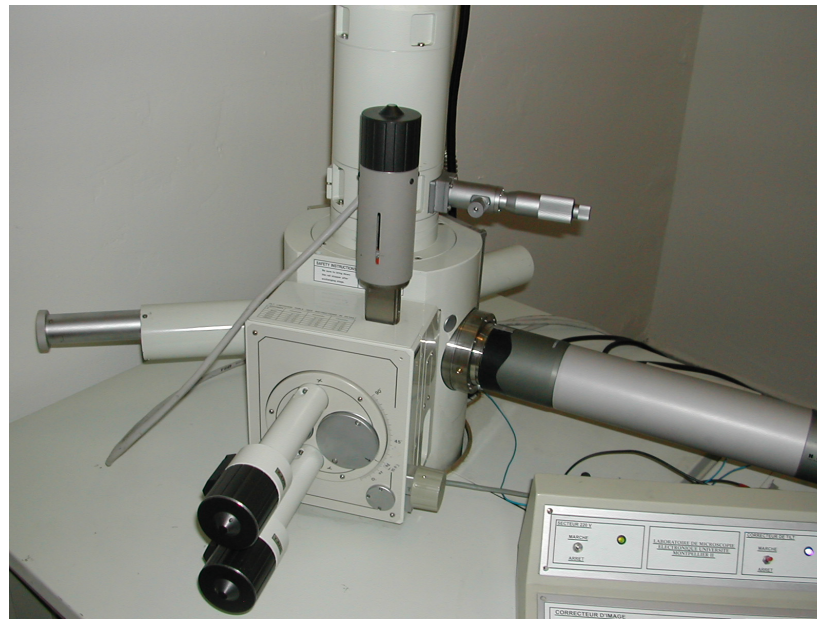
適用組立図番

部止対候 97.9.22
コウズ

正

製造社名	
呼び寸法	1
長さ	182 x 50
幅	50 x 200
重量	200 x 1000
角	1000 x 2500
丸欠の取位置	
留意以外の取位置	

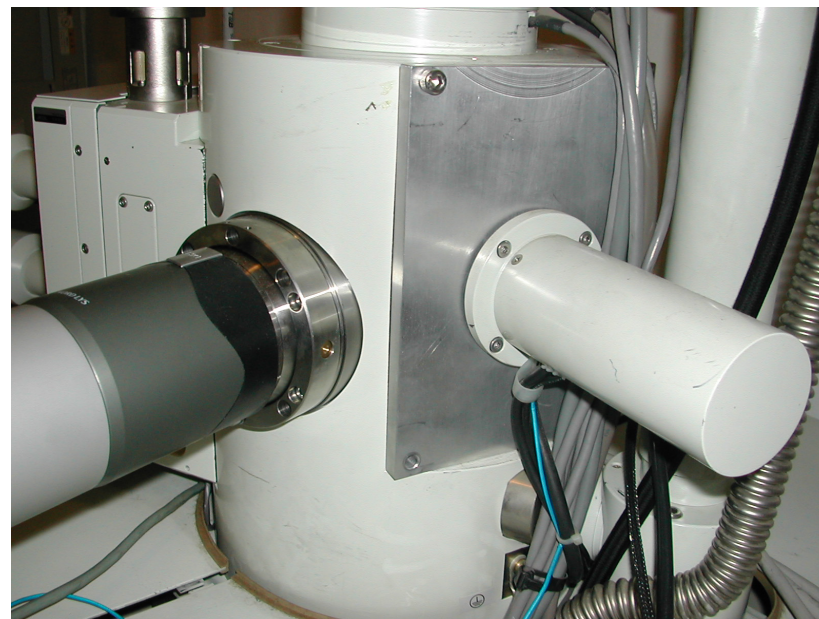




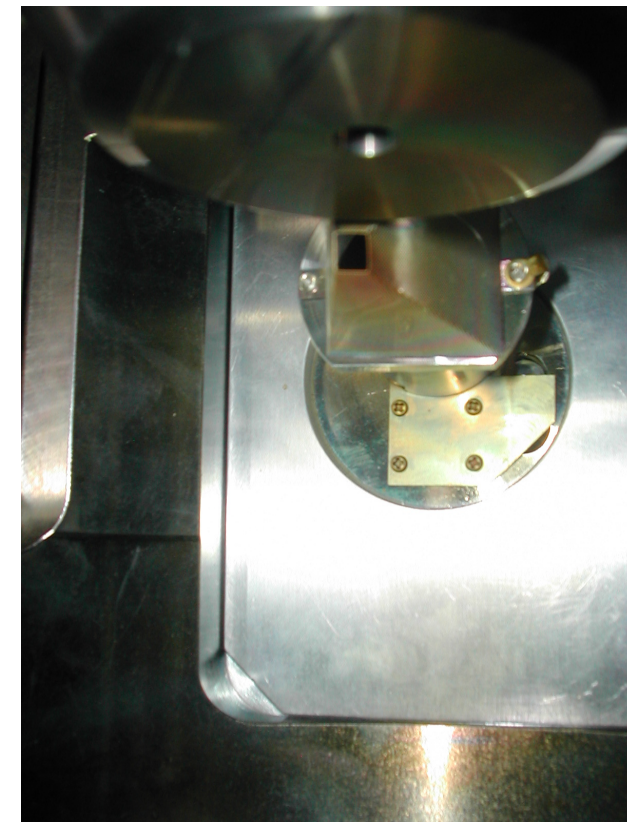
Overview of JEOL 5600 with stage tilted at 70° and SEI mounted on WDS plate



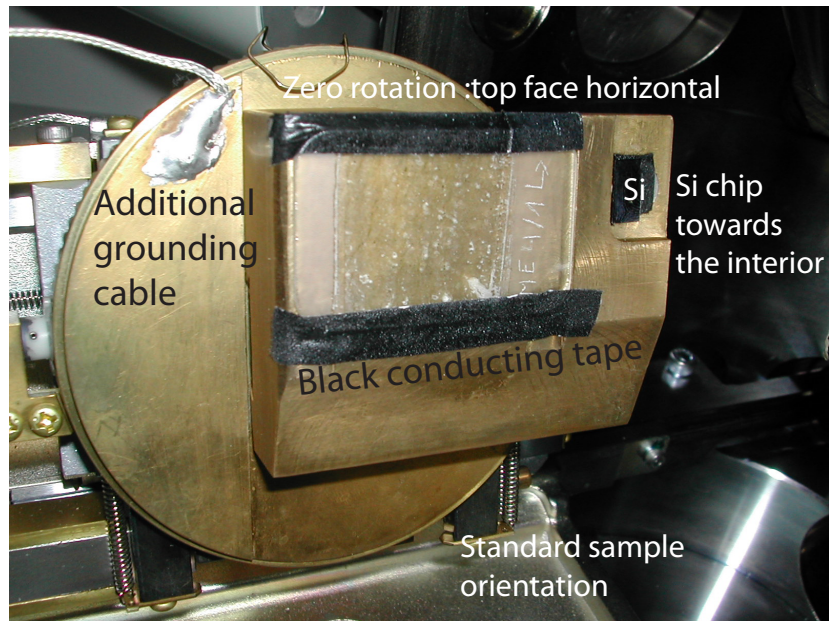
Original SEI port with blank plate



SEI mounted on WDS plate (exterior view)



SEI mounted on WDS plate (interior view)



Sample holder in SEM - Si calibration chip on the right



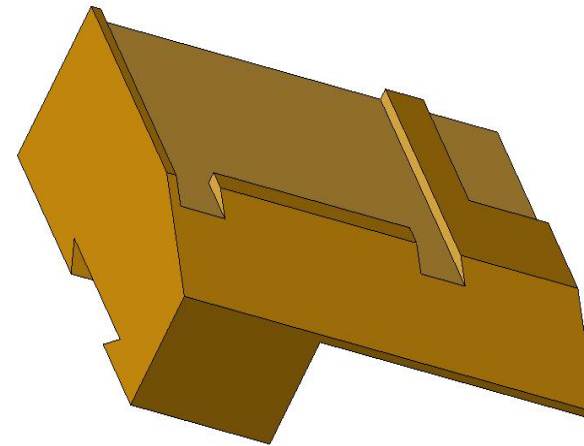
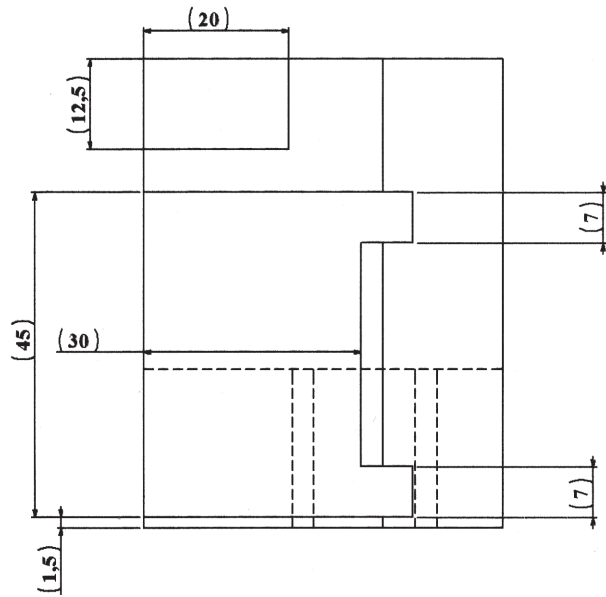
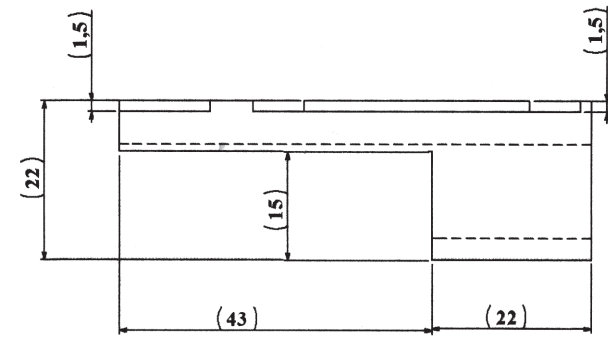
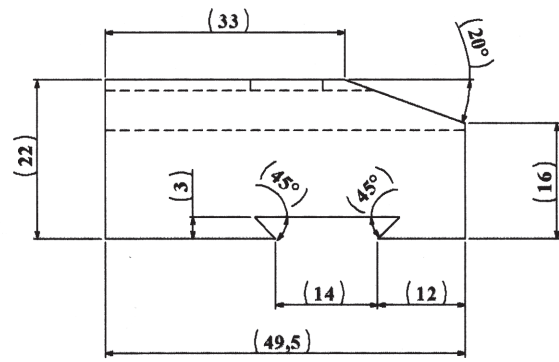
Note - Rotation must be kept at zero to maintain orientation reference frame constant for mapping



Sample holder



Sample holder



EBSD Sample Holder for JEOL 5600 at Montpellier (designed by Pierre Azis)