

SLICERS ASSEMBLY ON IFU KCWI

		A	B	C	D
Prepared by :	Date : Name : Function : Visa :	31/07/15 Y. QUIN Technician			
Verified by :	Date : Name : Function : Visa :	31/07/15 Y. SALAUN Project manager			
Approved by :	Date : Name : Function : Visa :	31/07/15 Ph;MIRAILLES Quality manager			
Approved by the customer:	Date : Name : Function : Visa :				

Versions	Modifications
A	First issue

Spreading:

WINLIGHT OPTICS: File and QA.
 CALTECH: P. MORRISSEY

TABLE INDEX

1	SUBJECT	3
2	DOCUMENT.....	3
3	TOOLS AND PRODUCTS	3
4	MANUFACTURING TOOLS	3
5	MEASURING TOOLS.....	3
6	ENVIRONMENT.....	3
7	PARTICULAR CAUTION.....	3
8	OPERATIONS.....	4
8.1	REMOVING FROM THE IFU BENCH	4
8.2	INSTALLATION ON THE IFU BENCH.....	12
9	QUALITY ASSURANCE	20

1 SUBJECT

This document describes the procedure to install and remove the Slicers 1, 2, 3 and the camera on the IFU bench.

Important note: Each picture shows a specific action to do. These are just for examples and sometimes they have been taken during the tests before packaging.

2 DOCUMENT

KCWI IFU nomenclature: WO4340-010-NOM1

3 TOOLS AND PRODUCTS

Set of hexagonal screwdriver CHC M1.5 to M8
Ethyl alcohol
Gloves, Mask

4 MANUFACTURING TOOLS

Grey room class 100.000

5 MEASURING TOOLS

None

6 ENVIRONMENT

Temperature : $18^{\circ}\text{C} \leq T^{\circ}\text{C} \leq 22\text{C}$
Relative humidity : $30\% \leq \text{Hr} \leq 70\%$

7 PARTICULAR CAUTION

Use gloves and mask to manipulate the slicers. The slicers don't have to be cleaned but they need to be blown.

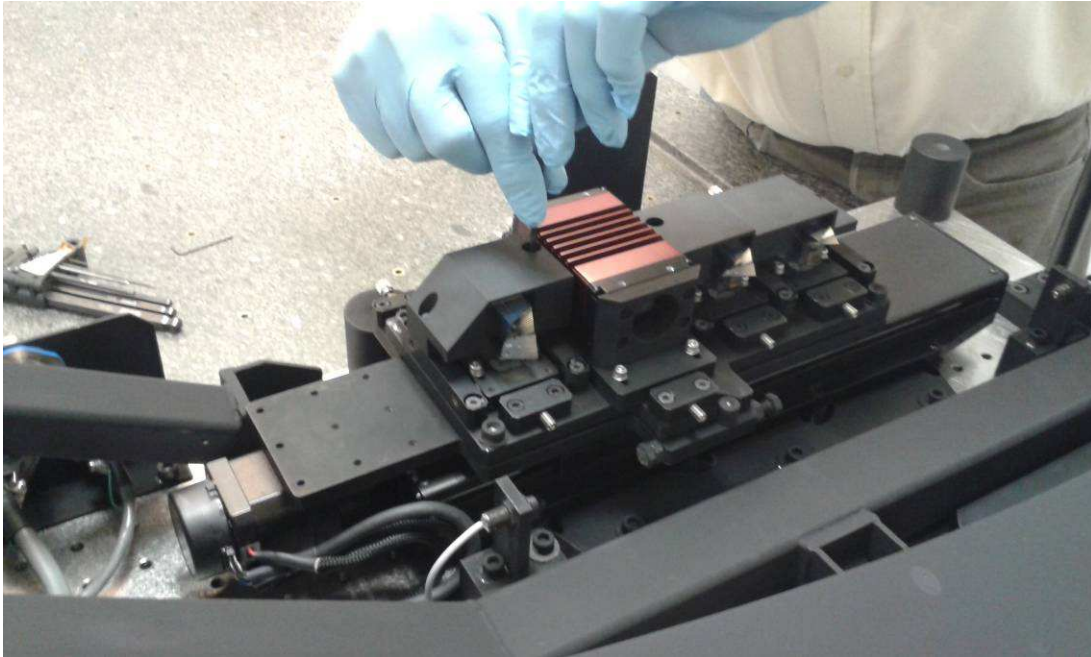
All the slicers are sensitive to the shocks. You must take care to the screwdriver and your hands.

All the manipulations and handling have to be done with at least 2 persons. The first person is working while the second one is watching.

There is leaf spring on the side of each slicer or camera. The spring makes a pressure to press the component on the reference pins.

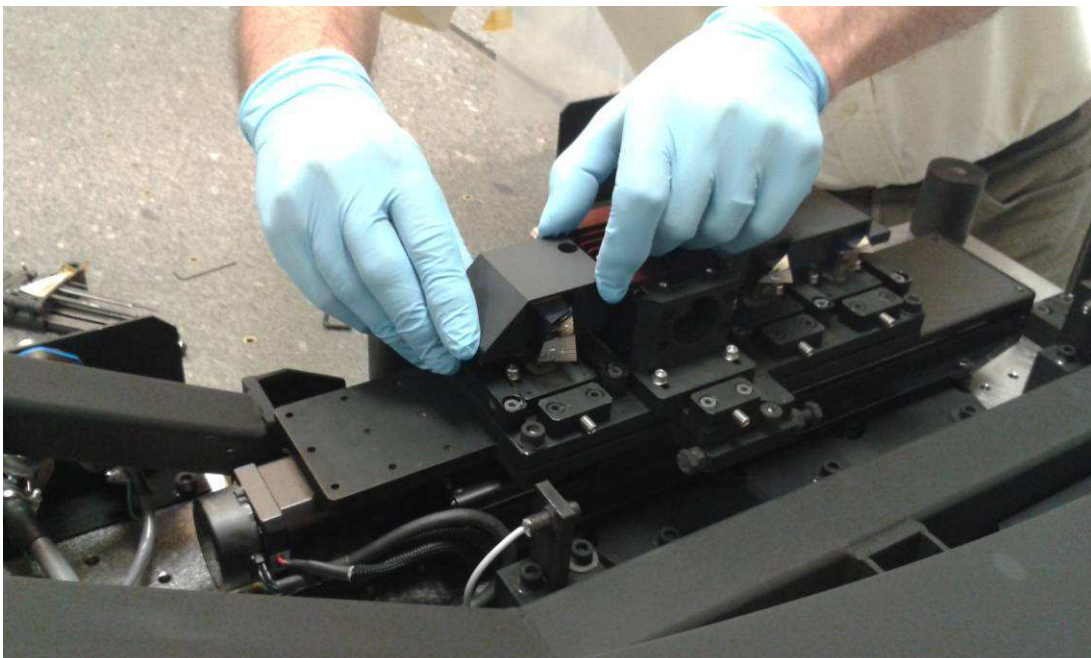
8 OPERATIONS

8.1 REMOVING FROM THE IFU BENCH



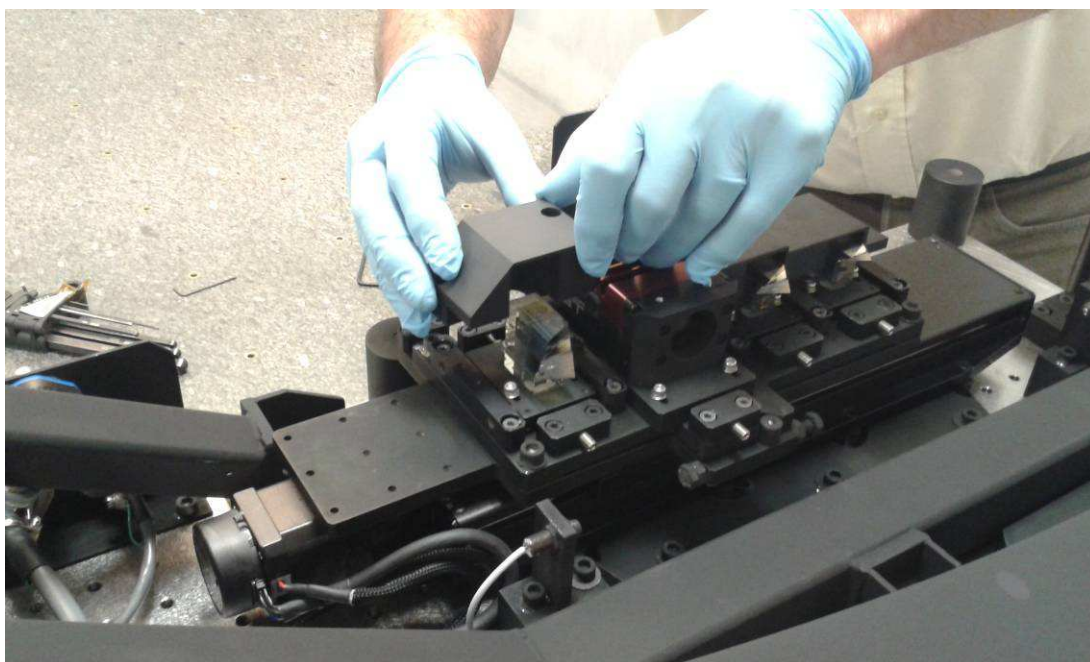
R1

Unscrew the 2 CHC M4 of the cover of the slicer 1
(don't remove the screw from the cover)

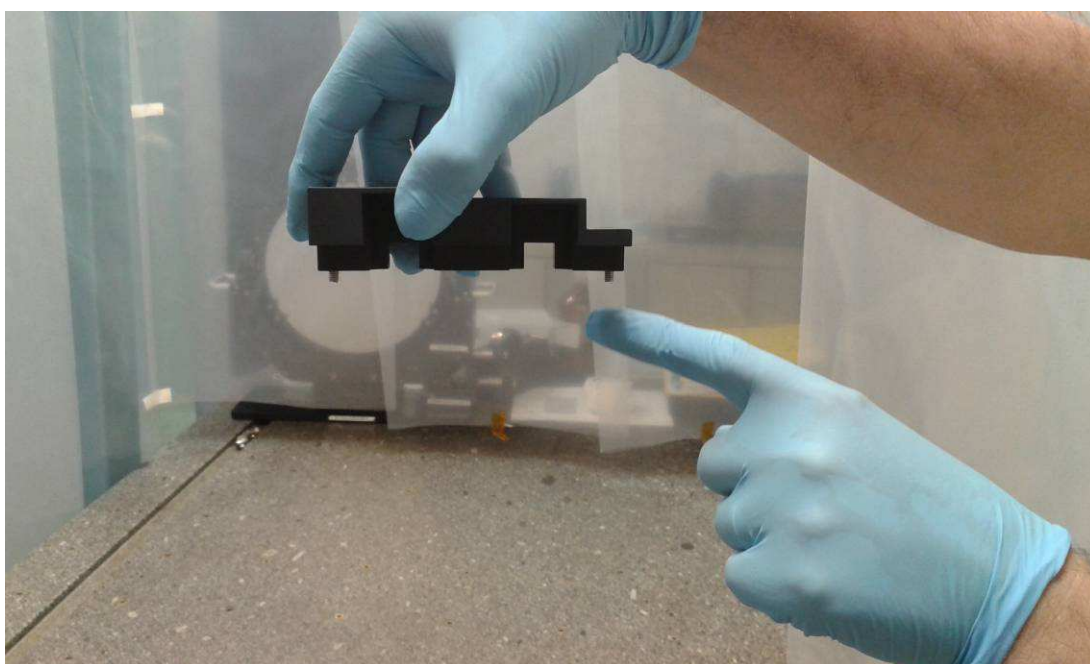


R2

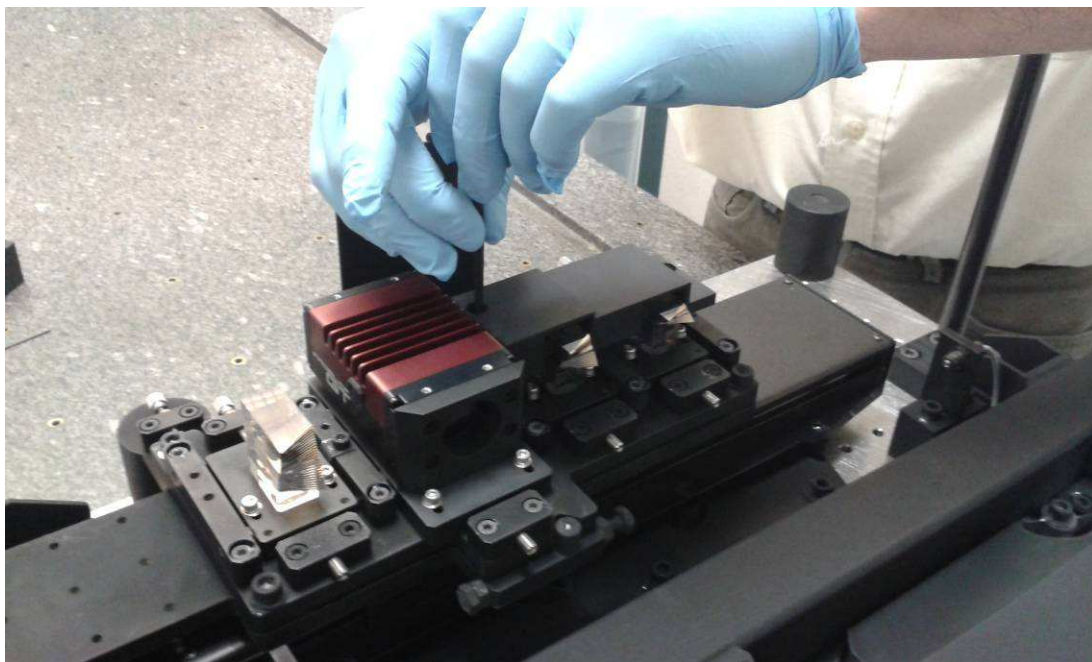
Pull up the cover vertically
(there is no guide, but there is no risk to touch the slicer)



R3
End of cover pulling up

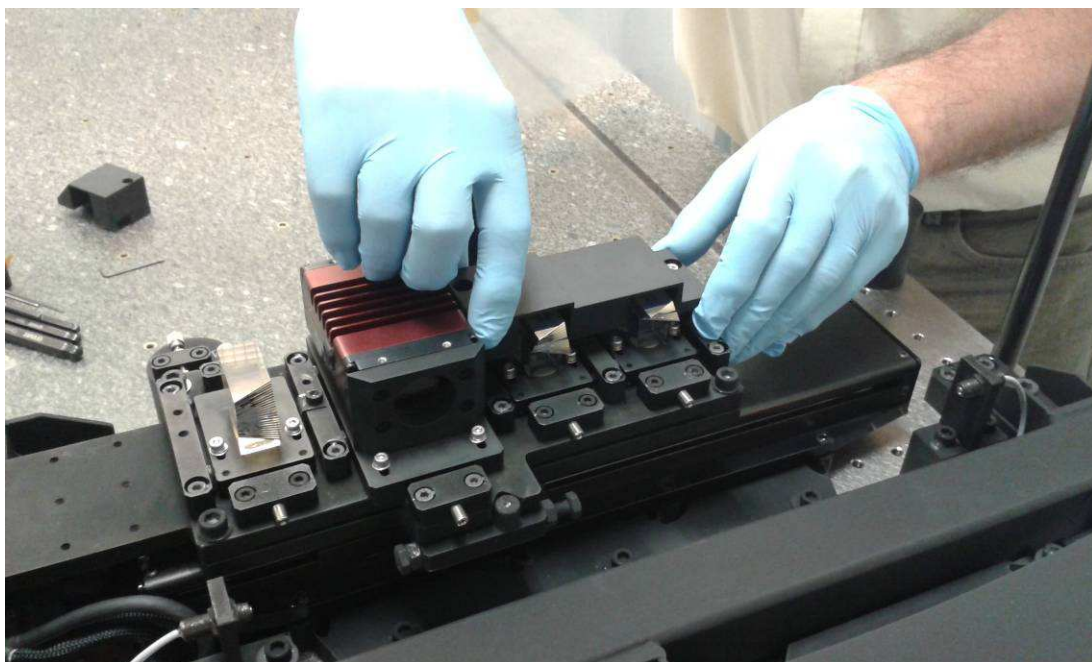


R4
Never reverse the cover to keep the screws in place



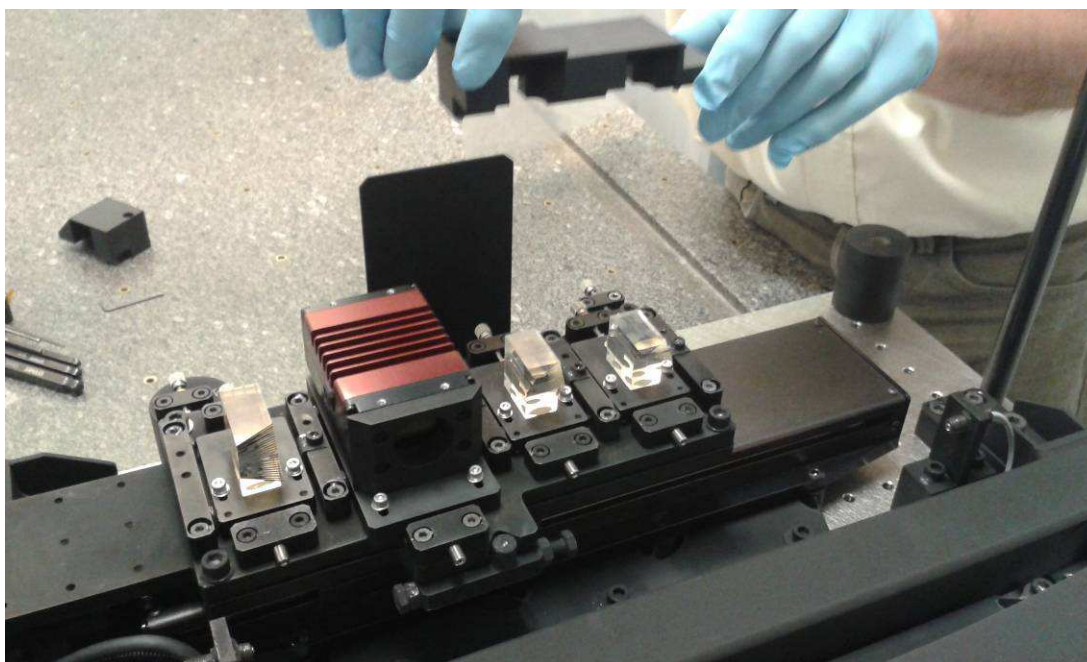
R5

Unscrew the 2 CHC M4 of the cover of the slicer 1
(don't remove the screw from the cover)

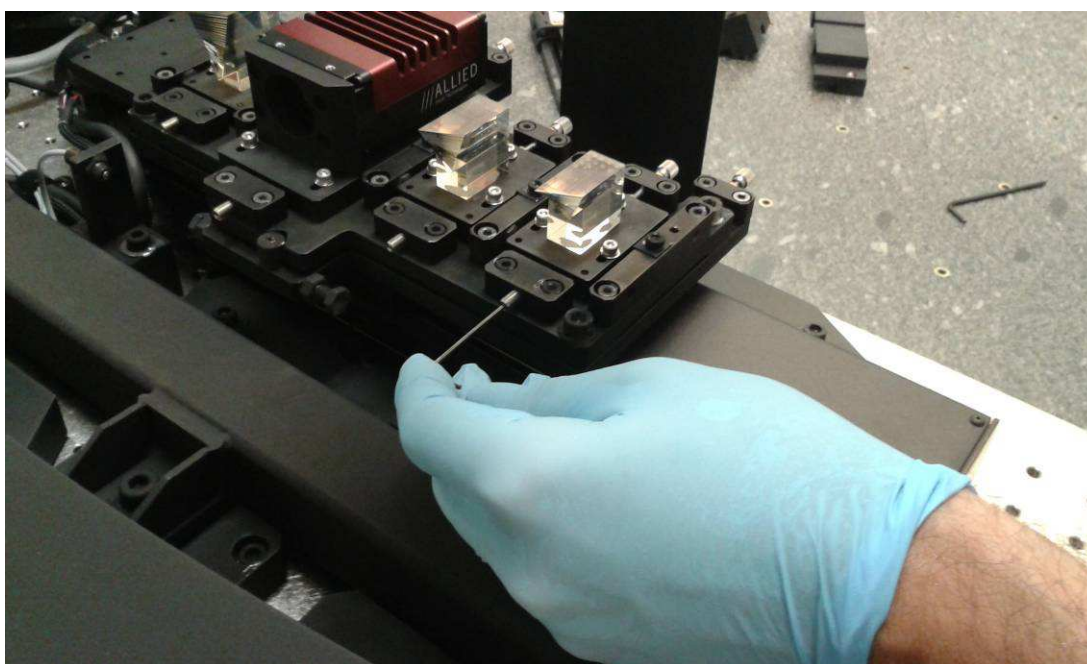


R6

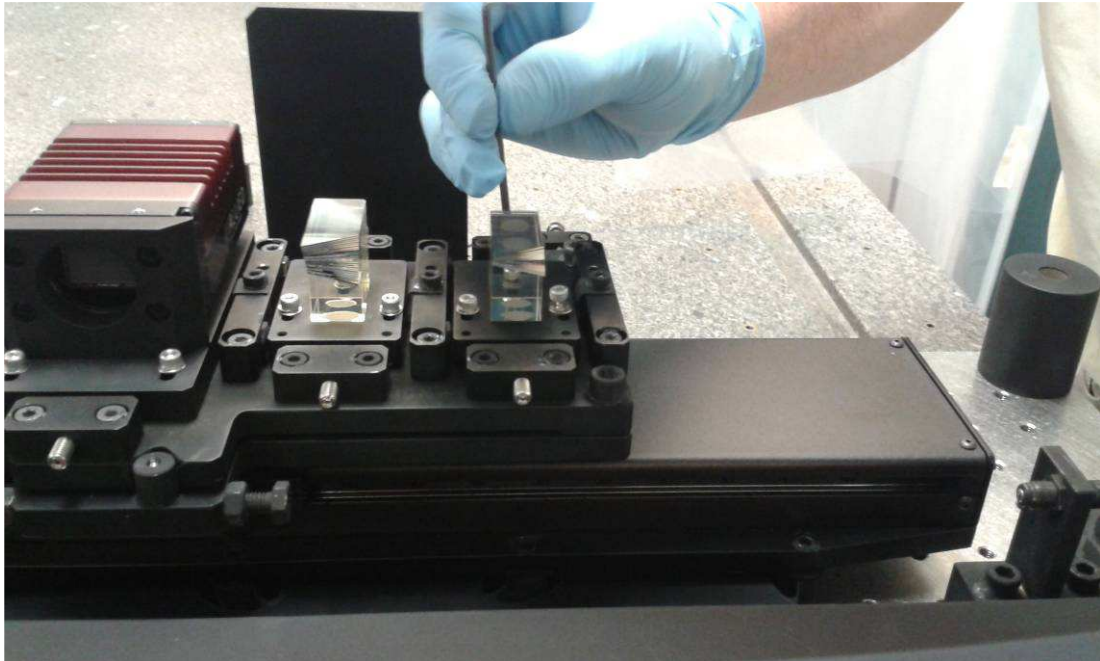
Pull up the cover vertically
(there is no guide, but there is no risk to touch the slicer)



R7
End of cover pulling up



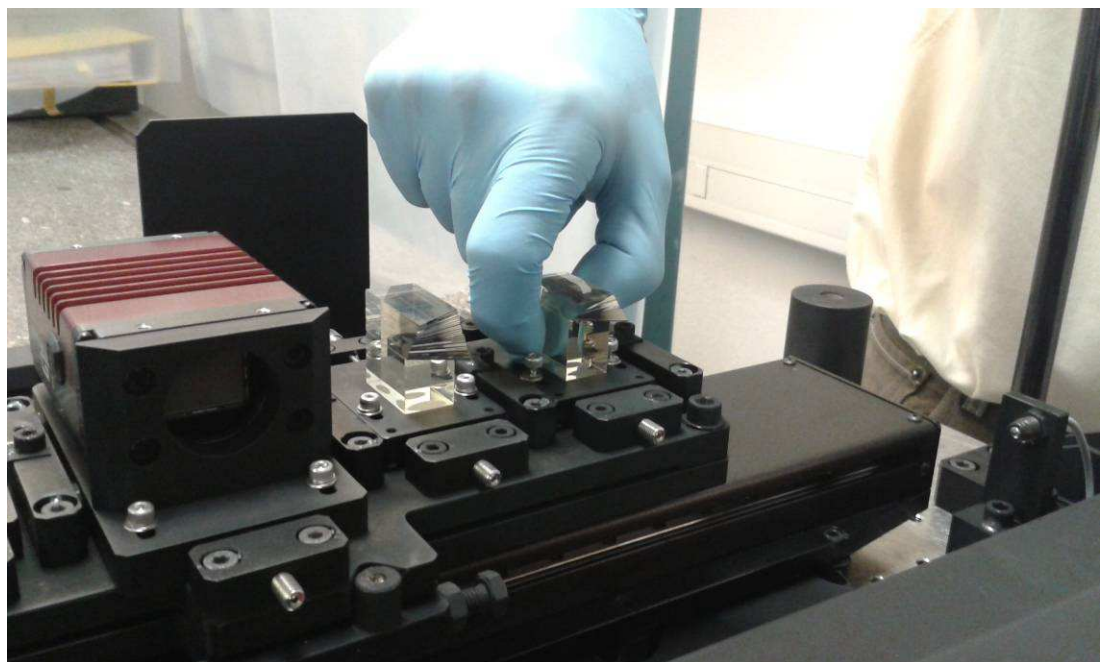
R8
Unscrew the 4 front pusher (hexagonal 1.5mm screwdriver)



R9

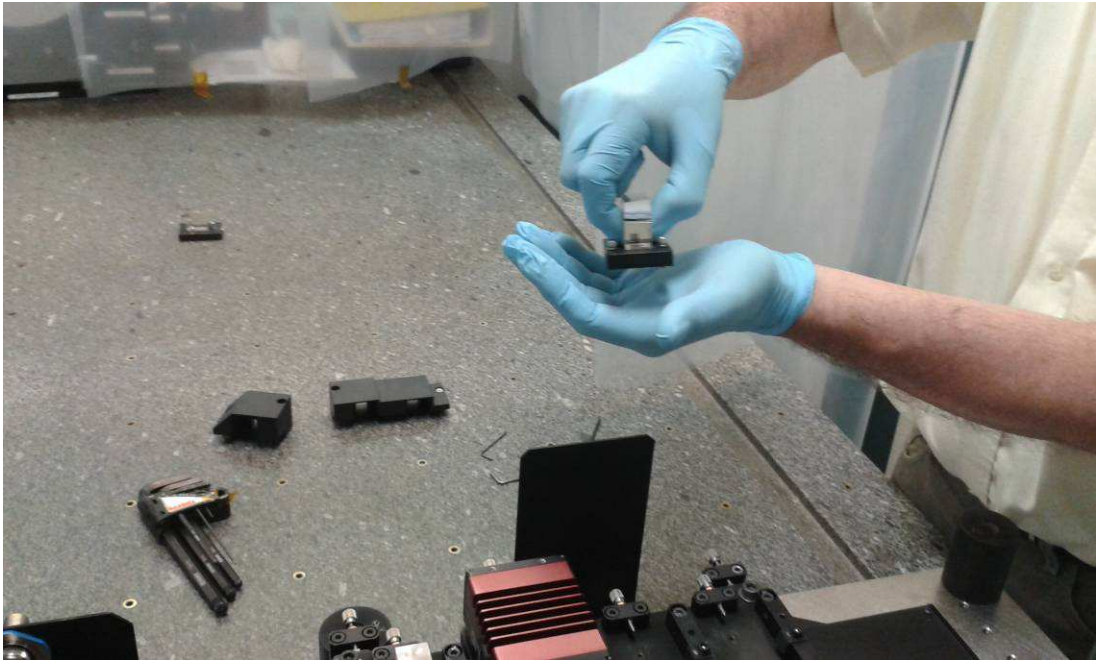
Unscrew the 3 captive CHC M3 of the slicer 3

(There is a captive washer, so you just have to be sure the screw is free before to unscrew the second one,...)



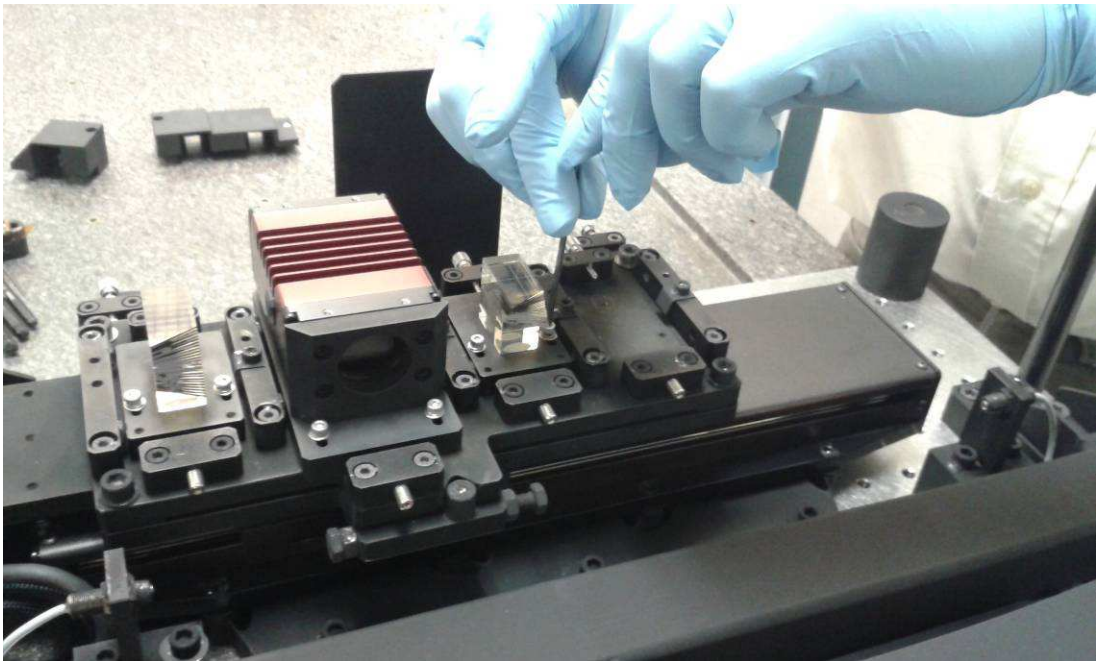
R10

Catch the slicer tightening the spacer only
Toggle the slicer pulling up the front of the slicer



R11

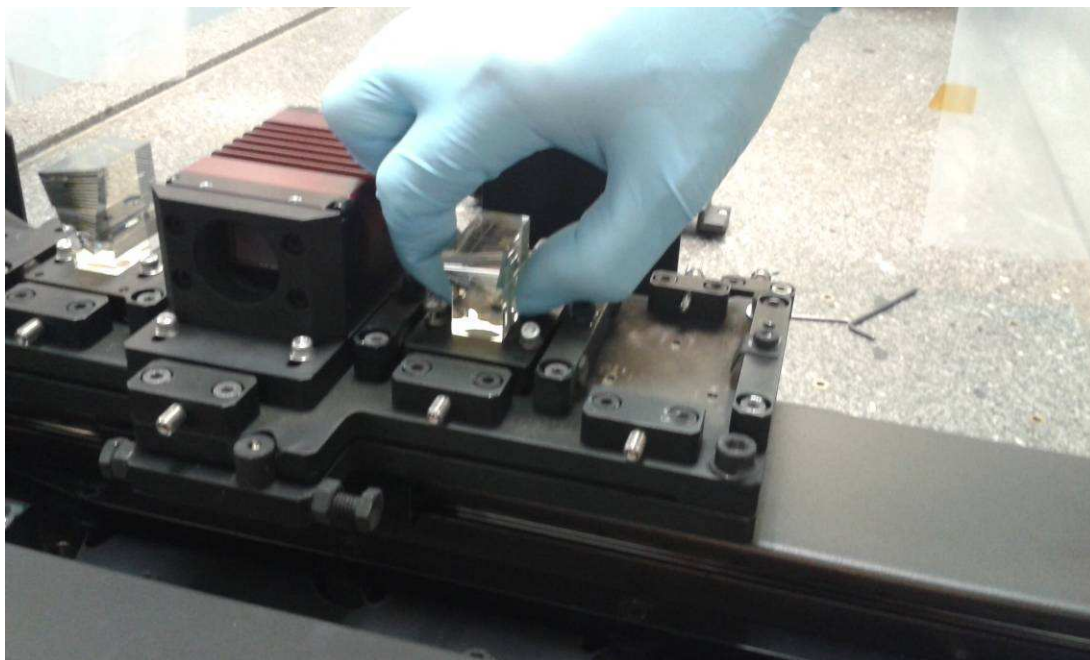
Keep safe the slicer while you are moving it



R12

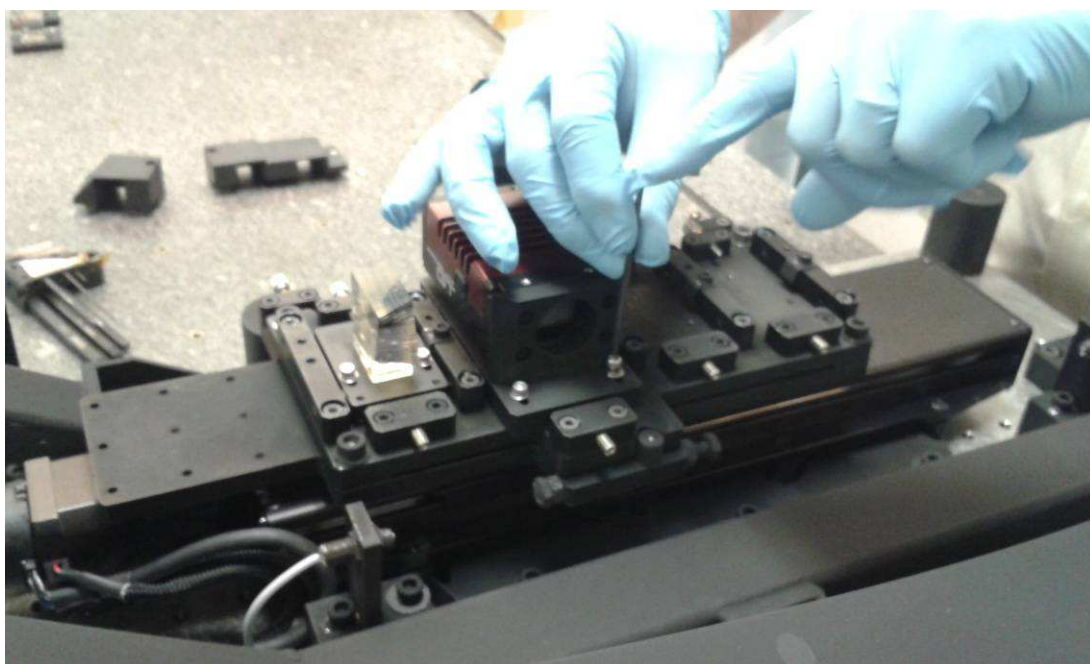
Unscrew the 3 captive CHC M3 of the slicer 2

(There is a captive washer, so you just have to be sure the screw is free before to unscrew the second one,....)



R13

Catch the slicer tightening the spacer only
Toggle the slicer pulling up the front of the slicer



R14

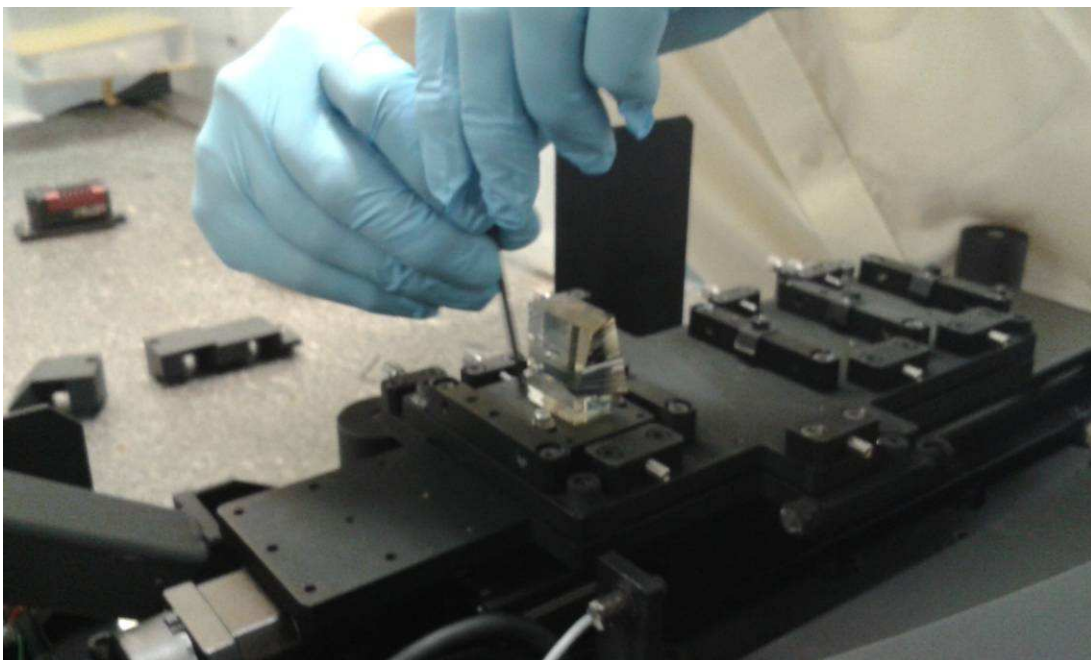
Unscrew the 3 captive CHC M3 of the camera
(There is a captive washer, so you just have to be sure the screw is free before to unscrew the second one,...)



R15

Catch the camera

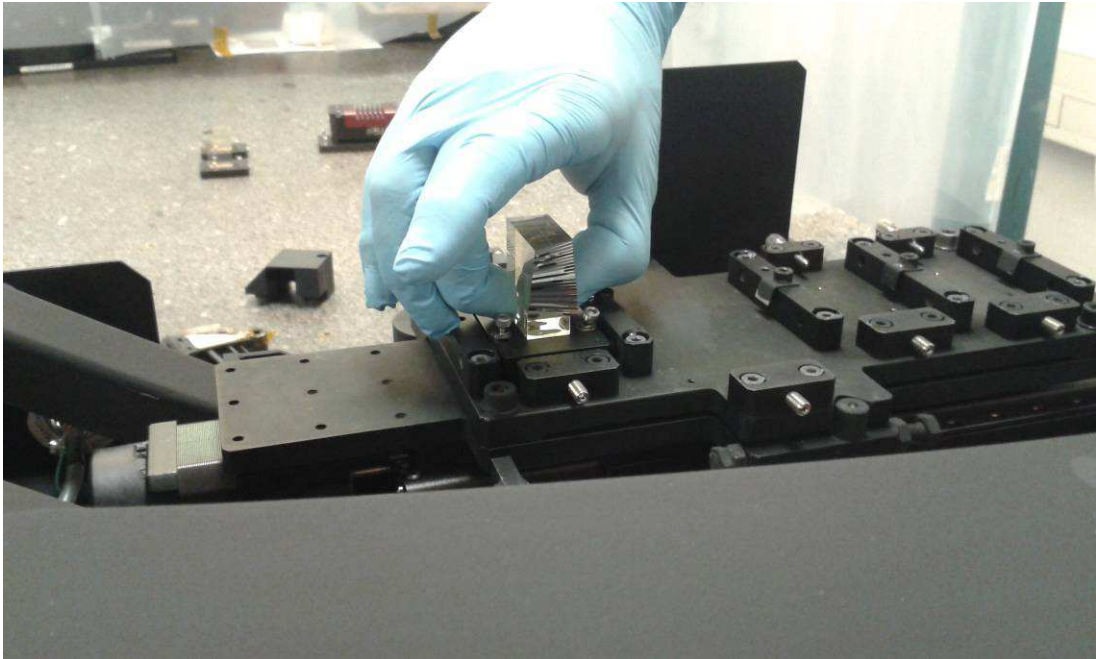
Toggle the camera pulling up the front of the slicer
(Take care because the leaf spring is strong)



R16

Unscrew the 3 captive CHC M3 of the slicer 1

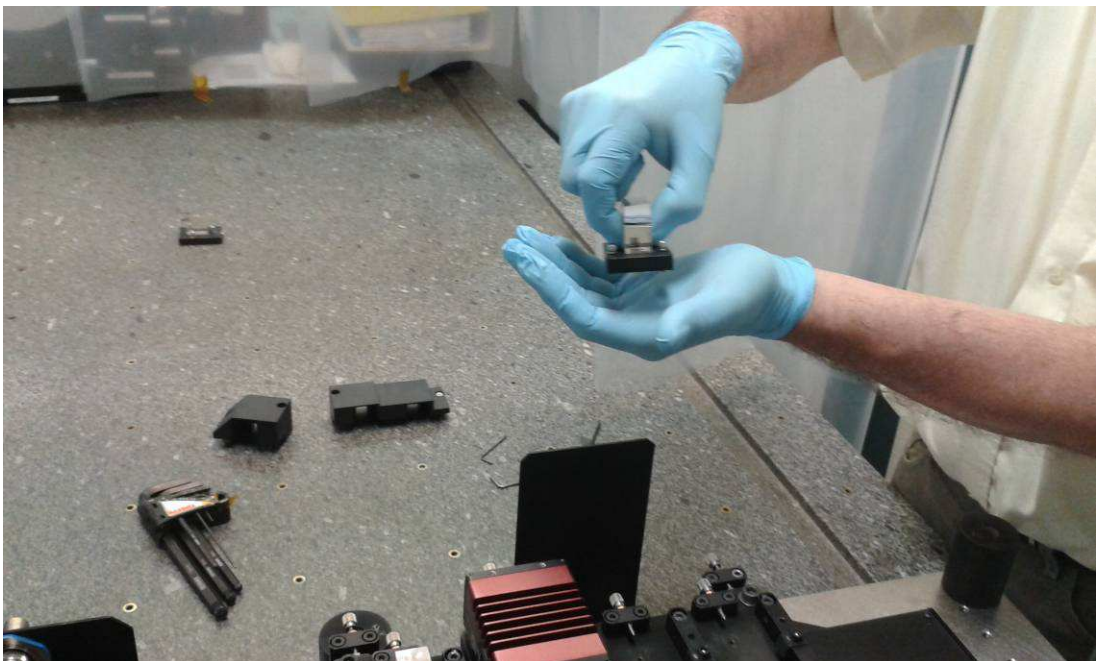
(There is a captive washer, so you just have to be sure the screw is free before to unscrew the second one,....)



R17

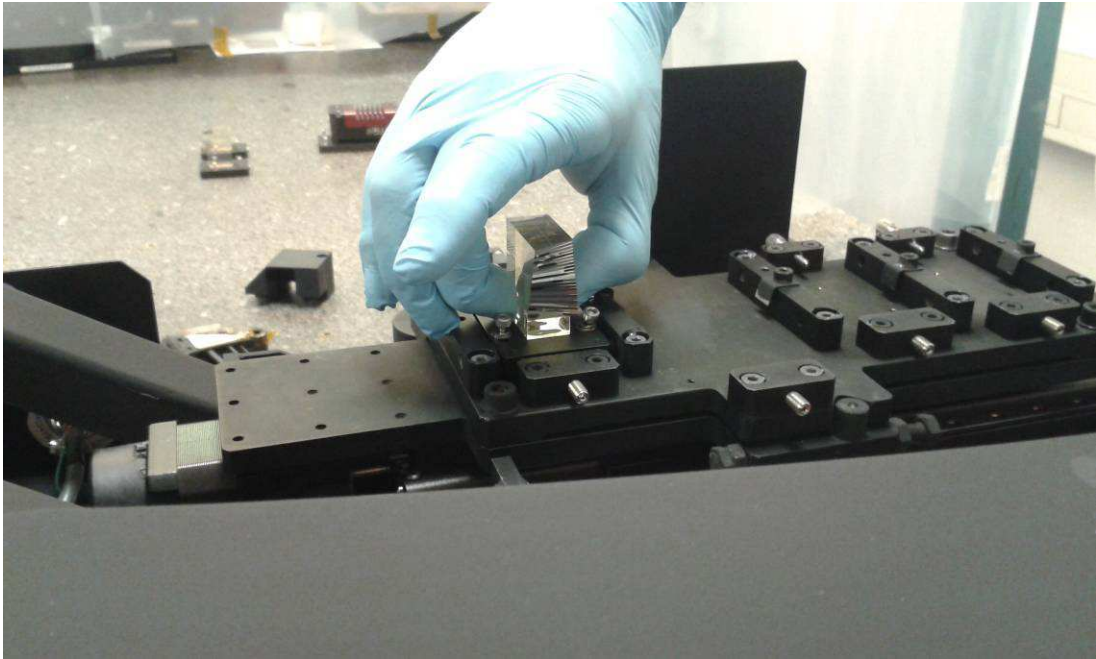
Catch the slicer 1 tightening the spacer only
Toggle the slicer pulling up the front of the slicer

8.2 INSTALLATION ON THE IFU BENCH



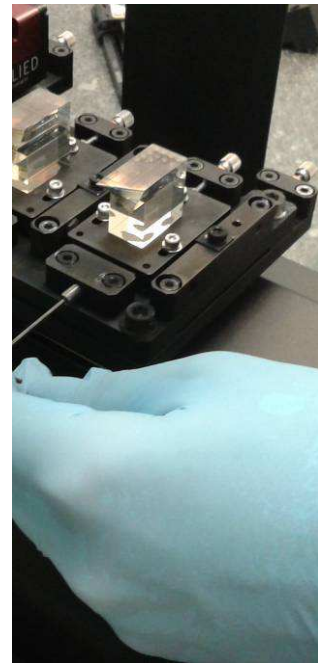
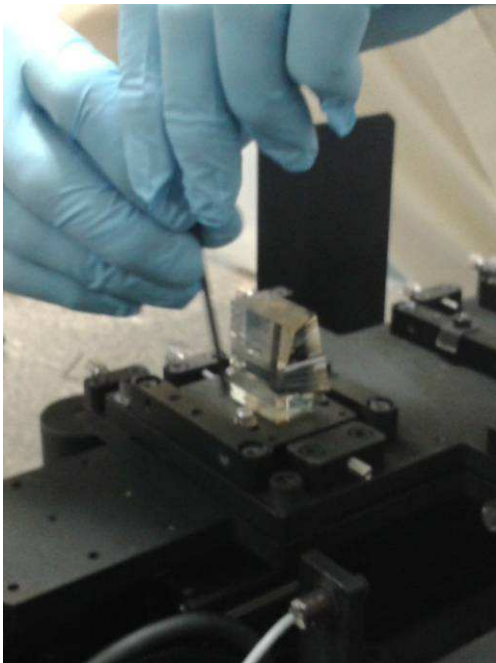
I1

Catch the slicer 1 tightening the spacer only
Keep safe the slicer while you are moving it



I2

Toggle the slicer 1 pushing down the rear surface of the slicer



I3

Move horizontally the slicer 1 to be sure to be on the reference surfaces

Screw the 3 captive CHC M3 of the slicer 1

(There is a captive washer, so you just have to be sure the screw is in the tapered hole before to screw the second one,.....)

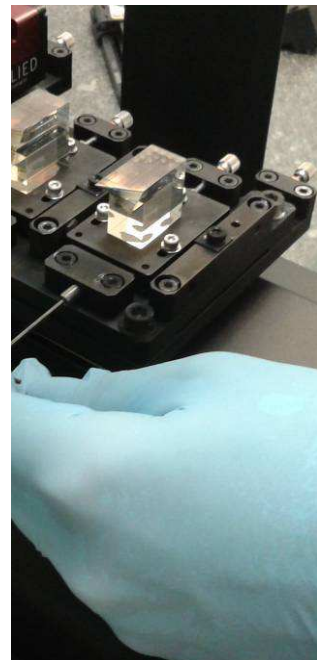
The slicer must not be tighten before the front pusher has been screwed



I4

Catch the camera

Toggle the camera pushing down the rear surface of the camera
(Take care because the leaf spring is strong)



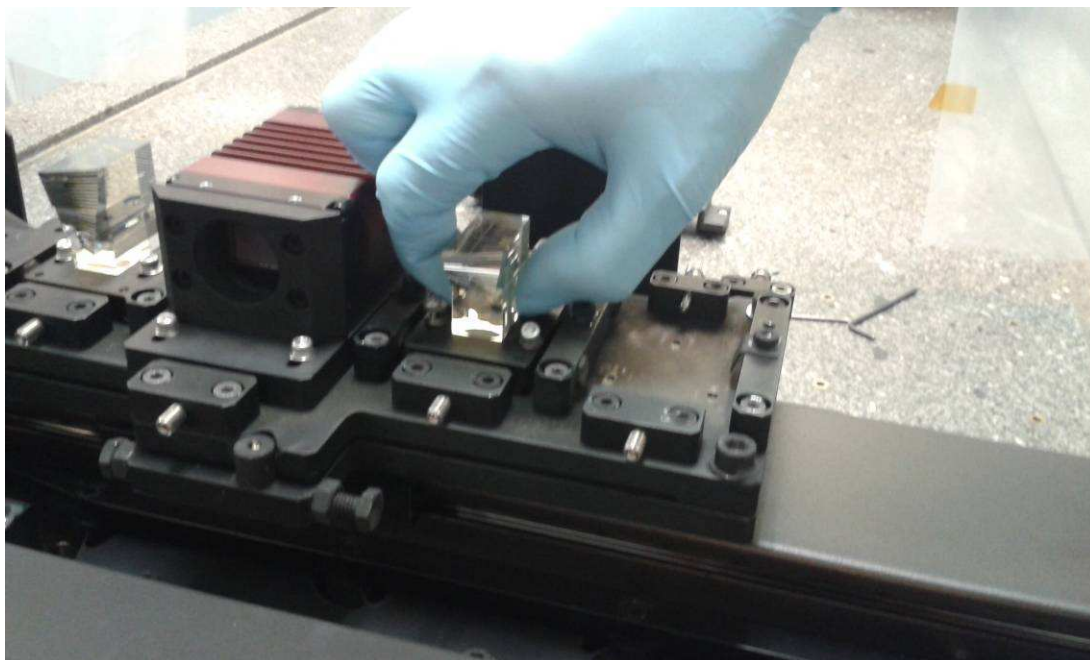
I5

Move horizontally the camera to be sure to be on the reference surfaces

Screw the 3 captive CHC M3 of the camera

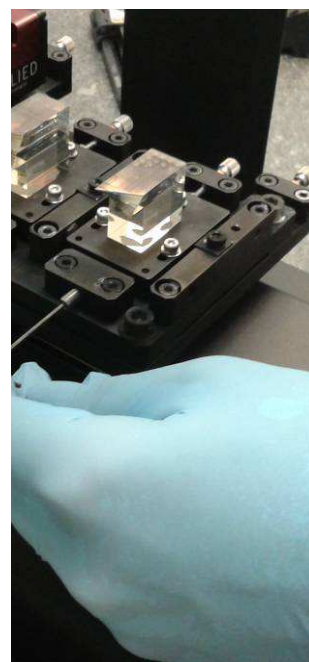
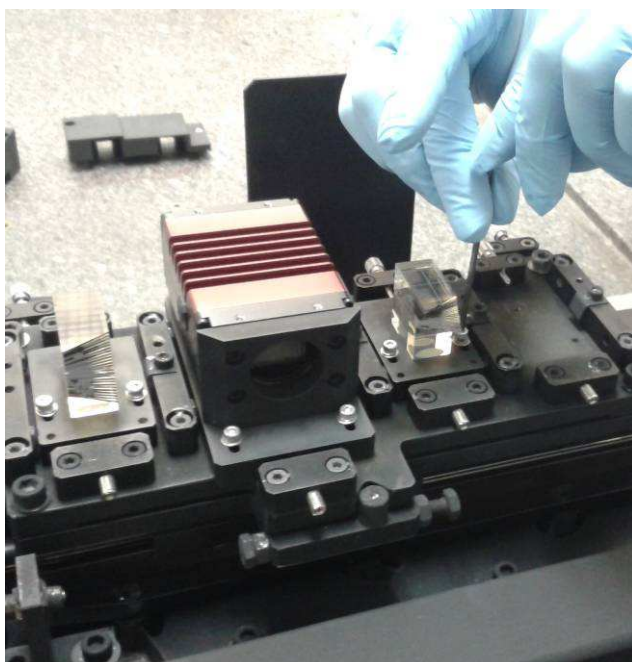
(There is a captive washer, so you just have to be sure the screw is in the tapered hole before to screw the second one,....)

The camera must not be tighten before the front pusher has been screwed



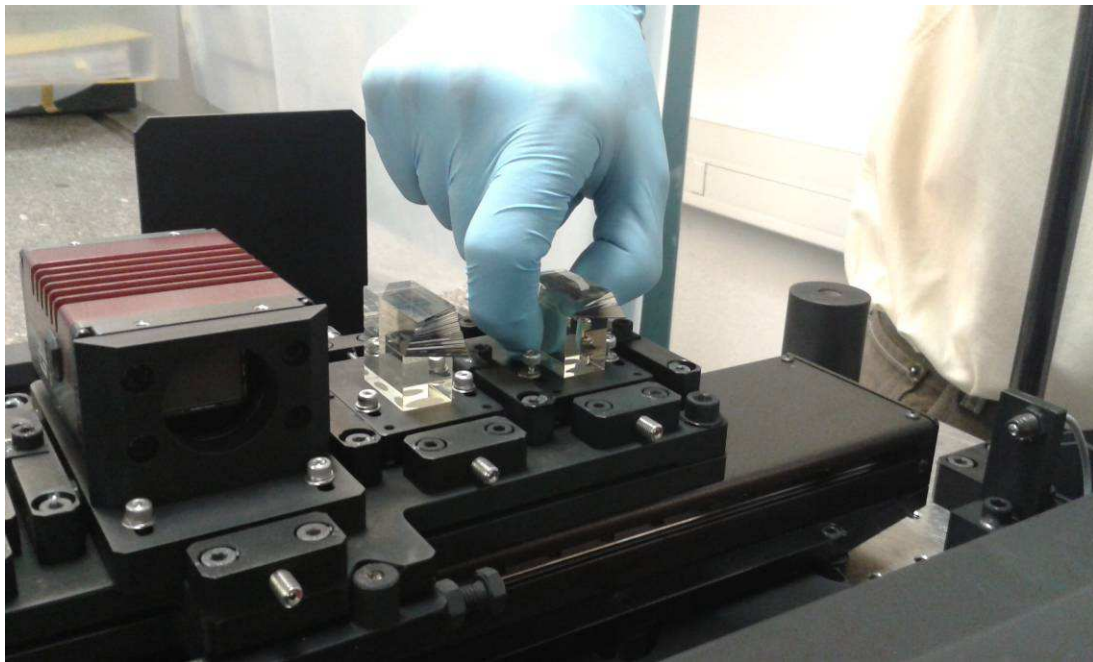
I6

Catch the slicer 2 tightening the spacer only
Keep safe the slicer 2 while you are moving it
Toggle the slicer 2 pushing down the rear surface of the slicer



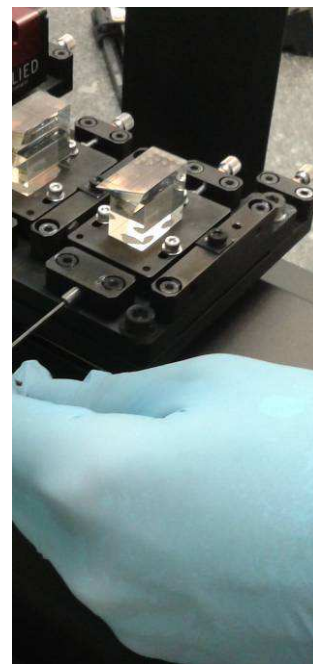
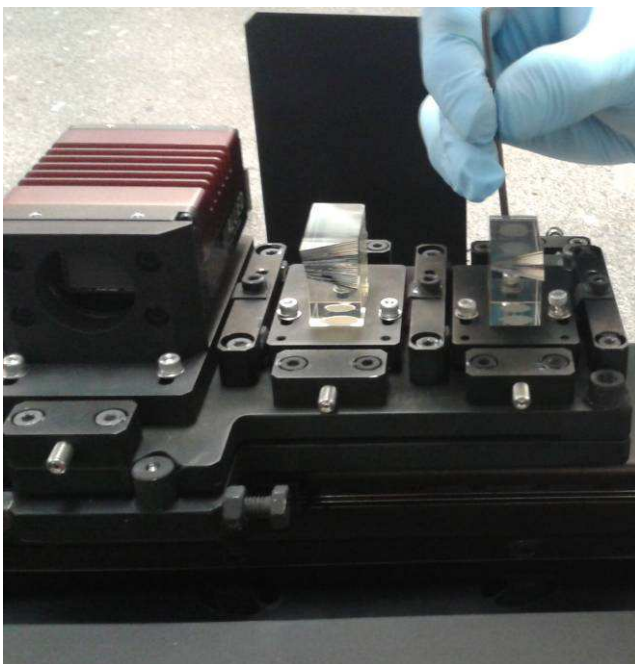
I7

Move horizontally the slicer 2 to be sure to be on the reference surfaces
Screw the 3 captive CHC M3 of the slicer 2
(There is a captive washer, so you just have to be sure the screw is in the tapered hole before to screw the second one,....)
The slicer must not be tighten before the front pusher has been screwed



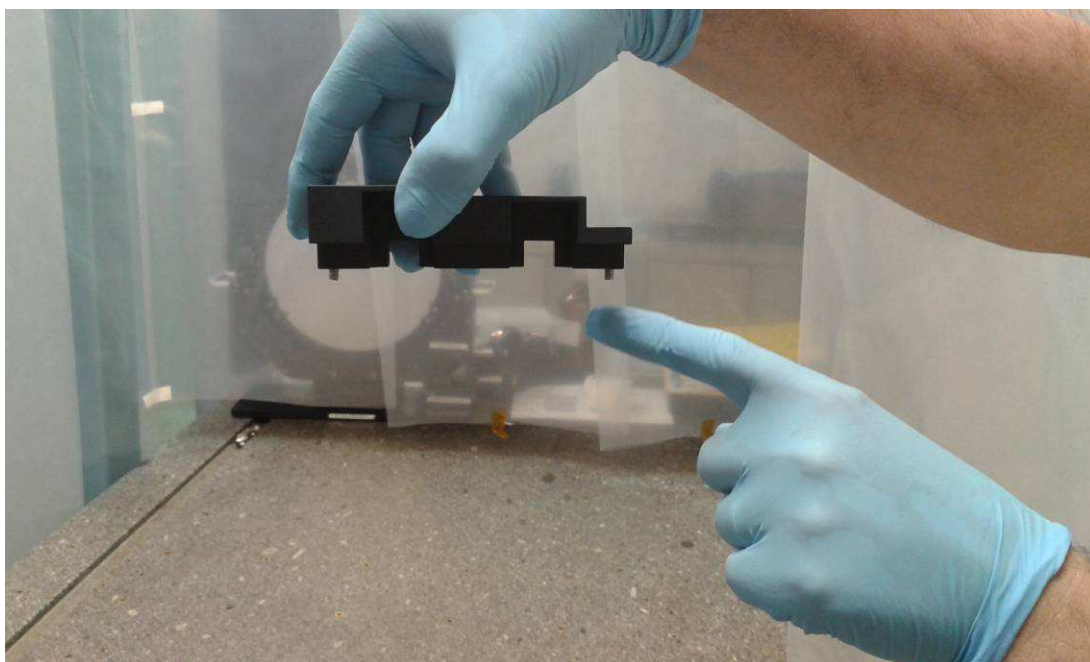
I8

Catch the slicer 3 tightening the spacer only
Keep safe the slicer 3 while you are moving it
Toggle the slicer 3 pushing down the rear surface of the slicer



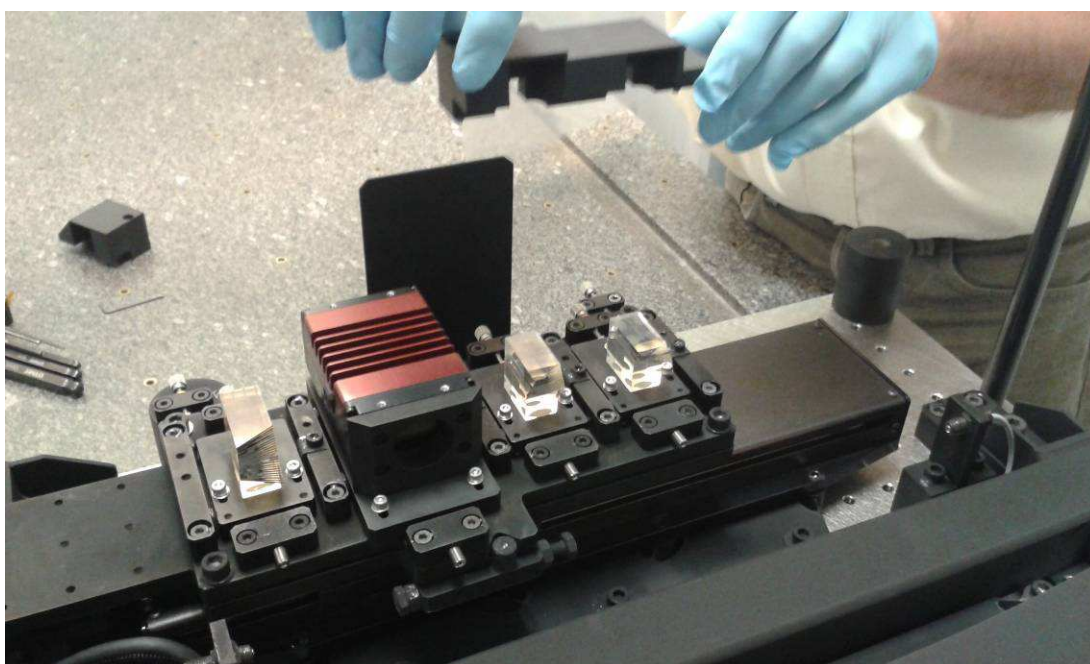
I9

Move horizontally the slicer 3 to be sure to be on the reference surfaces
Screw the 3 captive CHC M3 of the slicer 3
(There is a captive washer, so you just have to be sure the screw is in the tapered hole before to screw the second one,...)
The slicer must not be tighten before the front pusher has been screwed



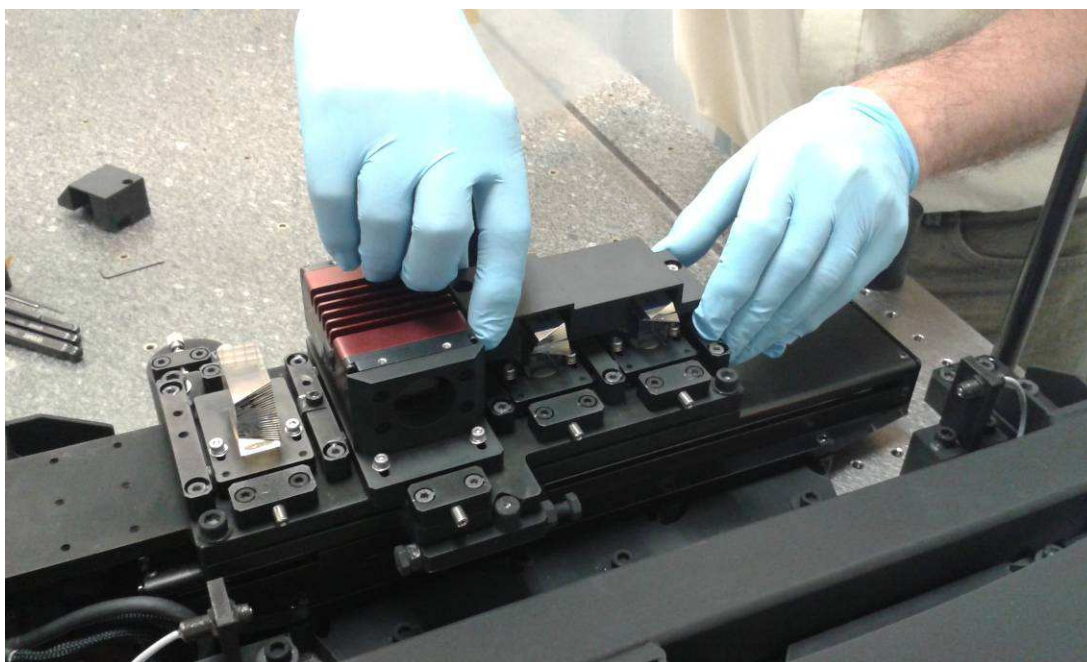
I10

Never reverse the cover to keep the screws in place



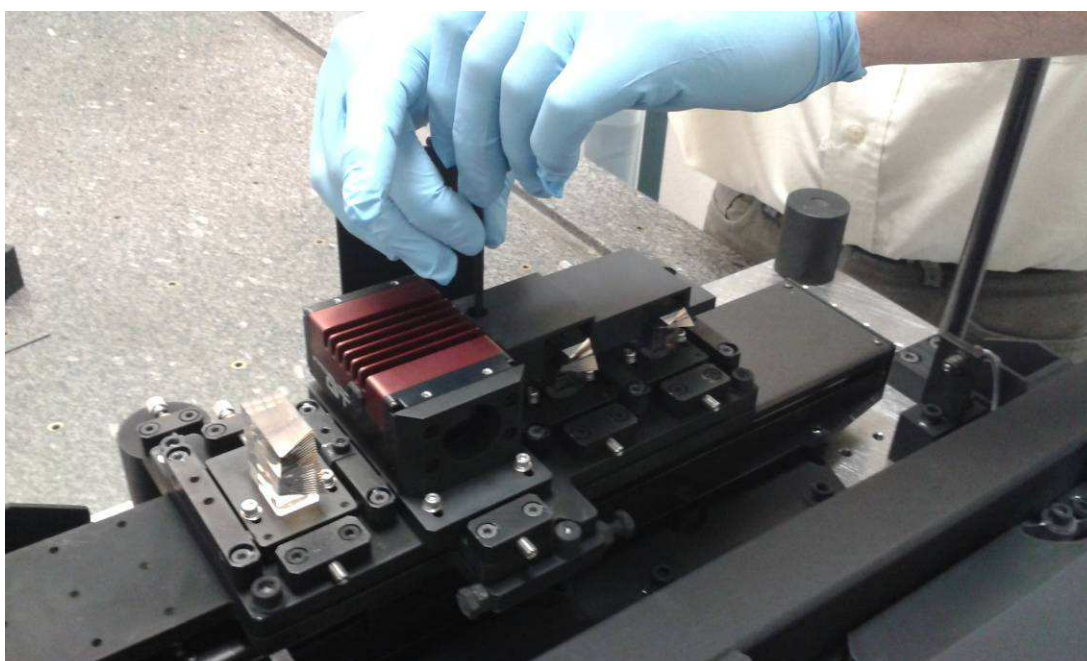
I11

Beginning of cover vertically moving down



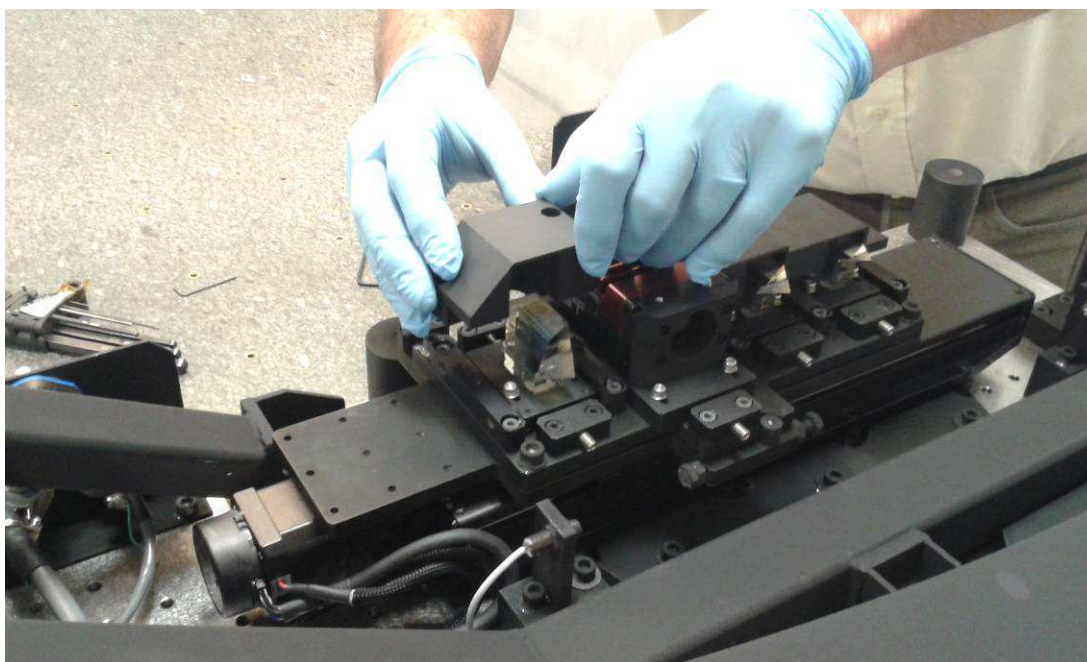
I12

End of the cover moving down
(there is no guide, but there is no risk to touch the slicer)
Have a watch to align the screws with the tapered holes



I13

Screw the 2 CHC M4 of the cover of the slicer 2 and 3



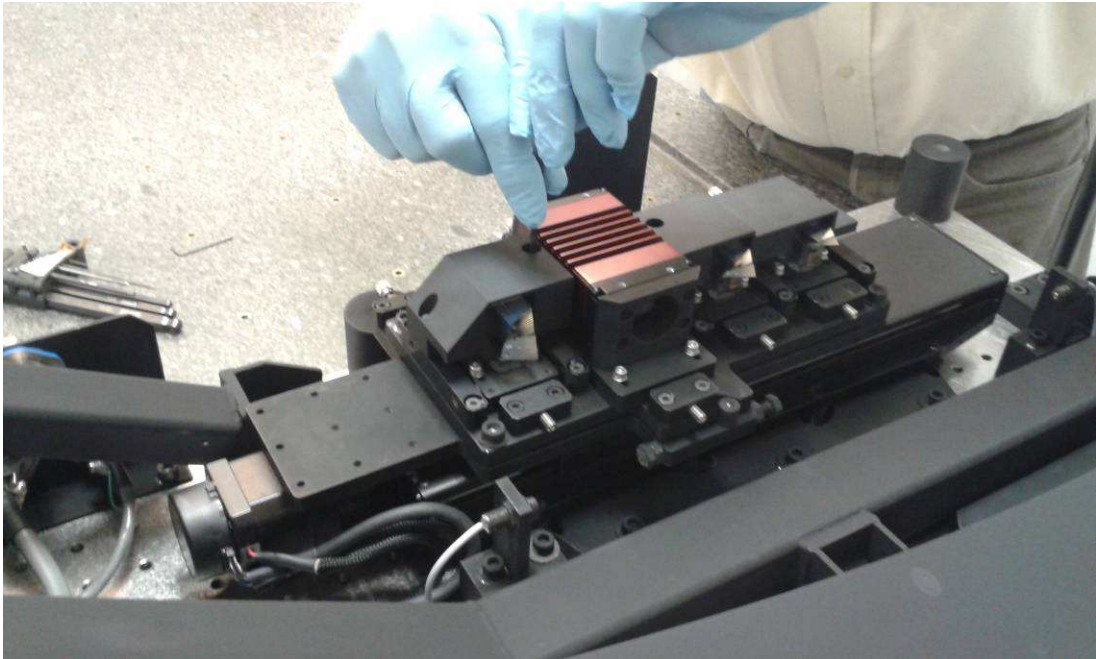
I14

Beginning of cover vertically moving down



I15

End of the cover moving down
(there is no guide, but there is no risk to touch the slicer)
Have a watch to align the screws with the tapered holes



I16

Screw the 2 CHC M4 of the cover of the slicer 2 and 3

9 QUALITY ASSURANCE

The project will be managed according to ISO9001 standard.

As part of the quality control procedures, if a non conformity arises from any moment during the development of the work, the contractor will immediately communicate it to CALTECH or WINLIGH OPTICS.