

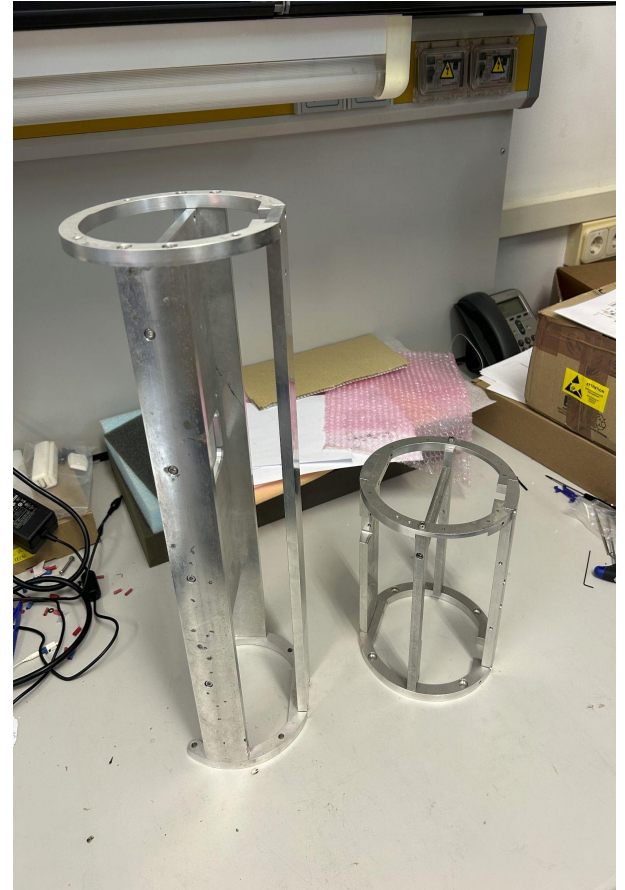
BM 146 type A

# BM 146 type A

The metal structure has been assembled.

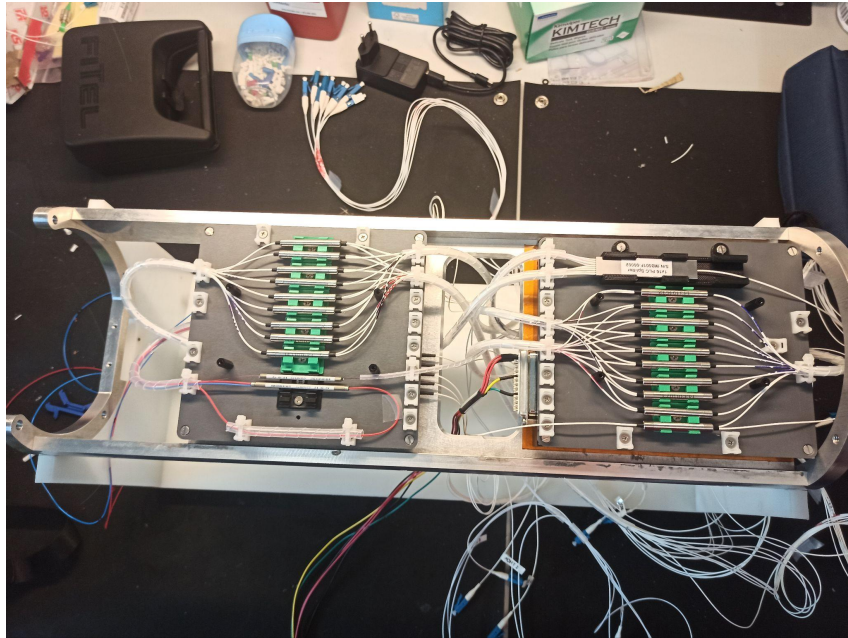
At the beginning of the last week, the missing A&D were received at the IFIC.

We have started painting the A&D of this BM.

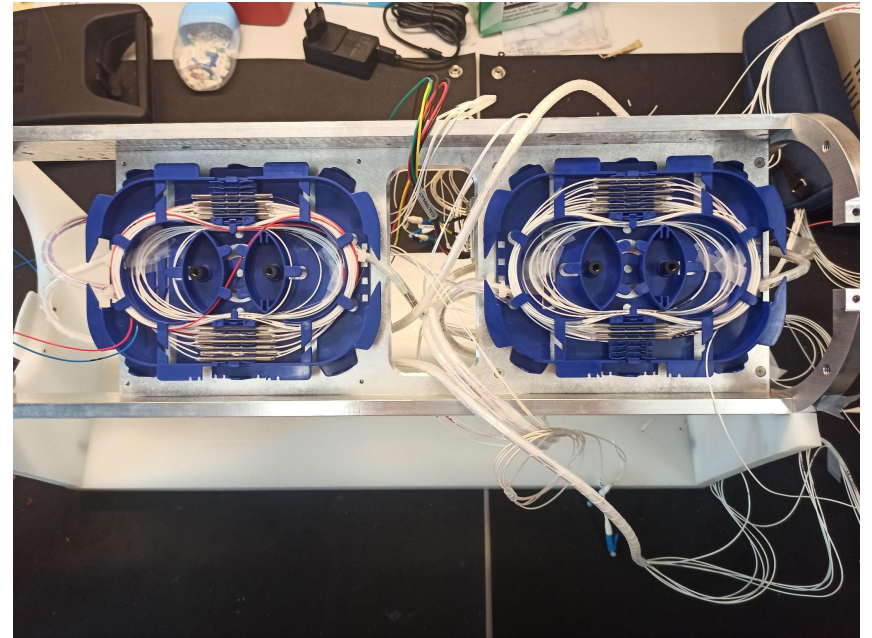


# BM 146 type A

We received the missing components to assemble the interleaver and EDFA plates.



We started with the A&D and Splitters 1 & 2 merges, completing test 1.



# BM 146 type A

The results of the test 1:

SPLITTER 1:16	
TEST 1	
CRITERE £ -15,5dB	
n° Fibre	Att. (dB)
1	-13.2
2	-13.12
3	-12.98
4	-13.26
5	-13.24
6	-13.24
7	-13.15
8	-12.95
9	-12.95
10	-13.25
11	-13.17
12	-13.07
13	-12.84
14	-12.81
15	-13.03
16	-12.9
SPLITTER 50/50	
CRITERE £ -5dB	
17	-3.66
18	-3.49



# BM 146 type A

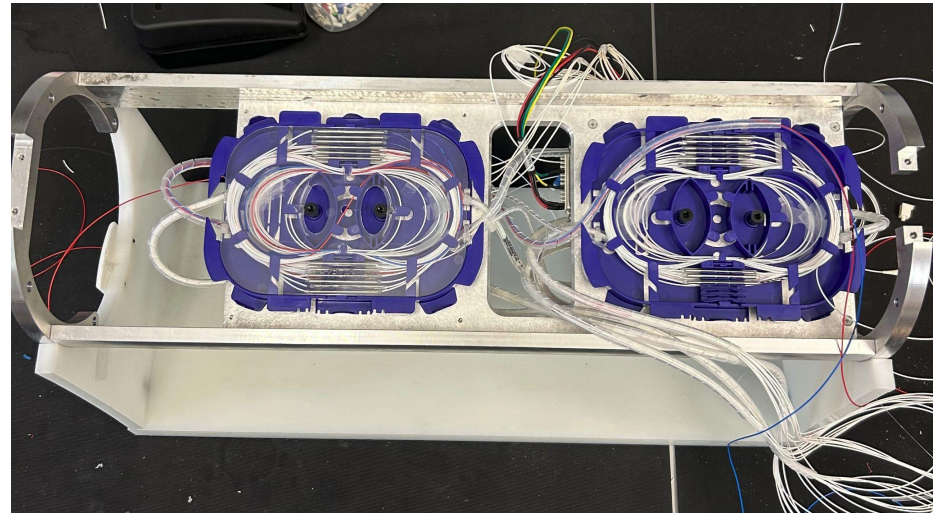
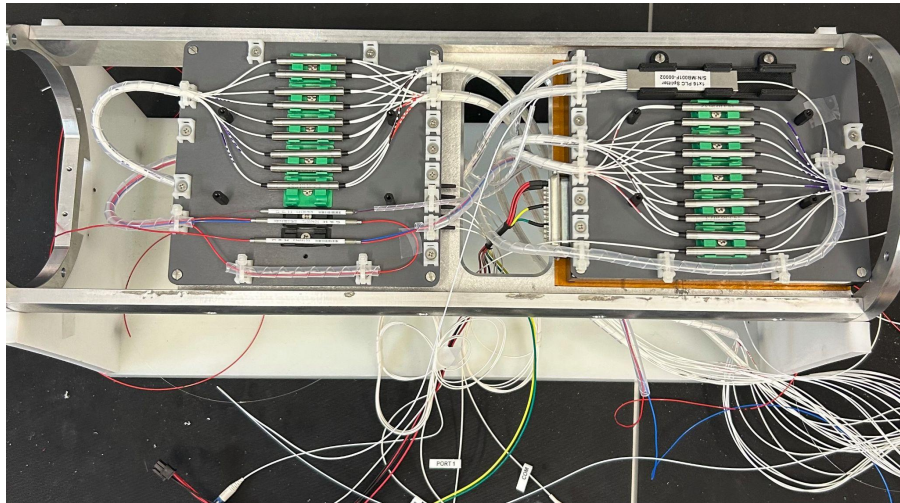
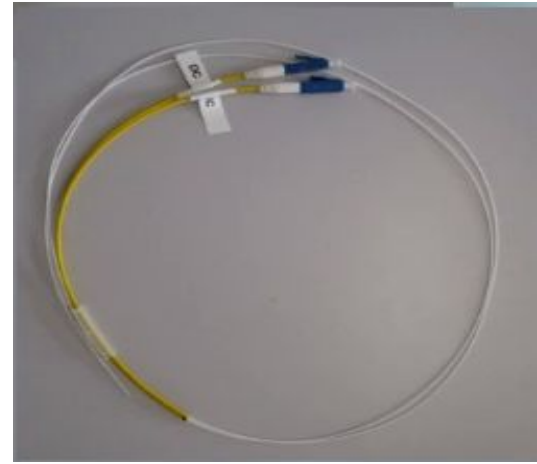
The results of the test 2 & 3:

	SPLITTER 10/90
	TEST 2
	λ =1530,33nm - CRITERE £-14,5dB
DOM ID	Att.(dB)
DOM1	-13.87
DOM2	-13.72
DOM3	-13.69
DOM4	-13.84
DOM5	-13.76
DOM6	-13.82
DOM7	-13.7
DOM8	-13.72
DOM9	-13.58
DOM10	-13.79
DOM11	-13.76
DOM12	-13.86
DOM13	-13.65
DOM14	-13.64
DOM15	-13.86
DOM16	-13.84
DOM17	-13.74
DOM18	-13.57

	EDFA powered
	TEST 3
	λ =1530,33nm - CRITERE £-16dB
DOM ID	Att.(dB)
DOM1	-14.38
DOM2	-14.32
DOM3	-14.28
DOM4	-14.52
DOM5	-14.34
DOM6	-14.39
DOM7	-14.34
DOM8	-14.33
DOM9	-14.16
DOM10	-14.37
DOM11	-14.36
DOM12	-14.37
DOM13	-14.21
DOM14	-14.22
DOM15	-14.34
DOM16	-14.34
DOM17	-14.31
DOM18	-14.11

# BM 146 type A

The first cassette has been completed and closed and we are waiting to receive the Zipcord Patchcord grade B LC-UPC / LC-UPC cables.

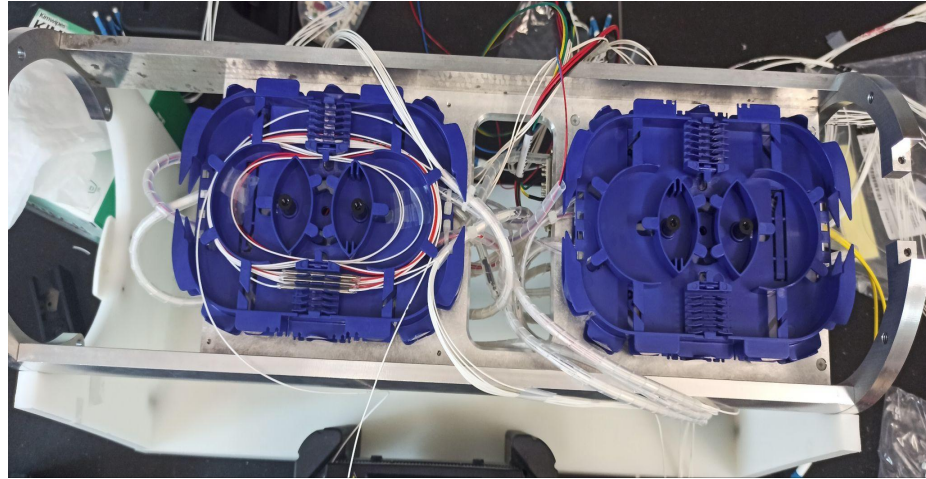
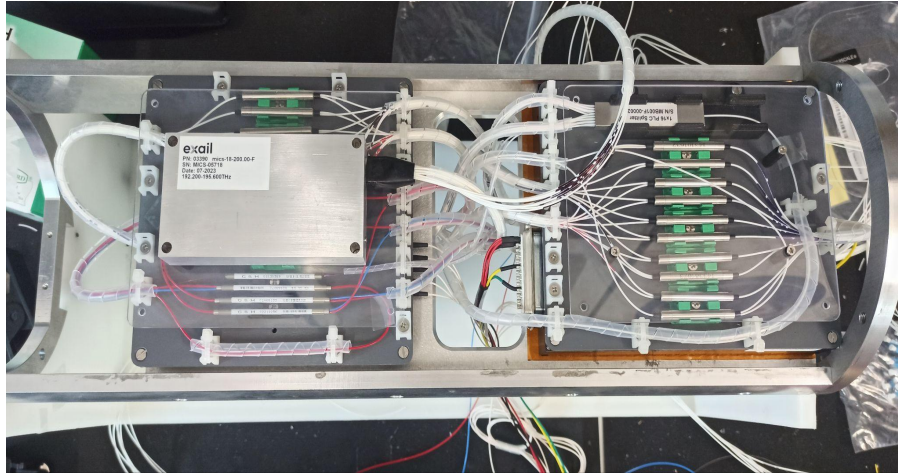


# BM 146 type A

03/10/2024

The Tuesday in the morning we received the material we were waiting for (wires, alcohol and wipes).

The cassette 2.1. has been completed and closed and we started with the last 18 welds. After this we will do the tests 6 and 7.





# BM 146 type A

The results of the test 4 & 5:

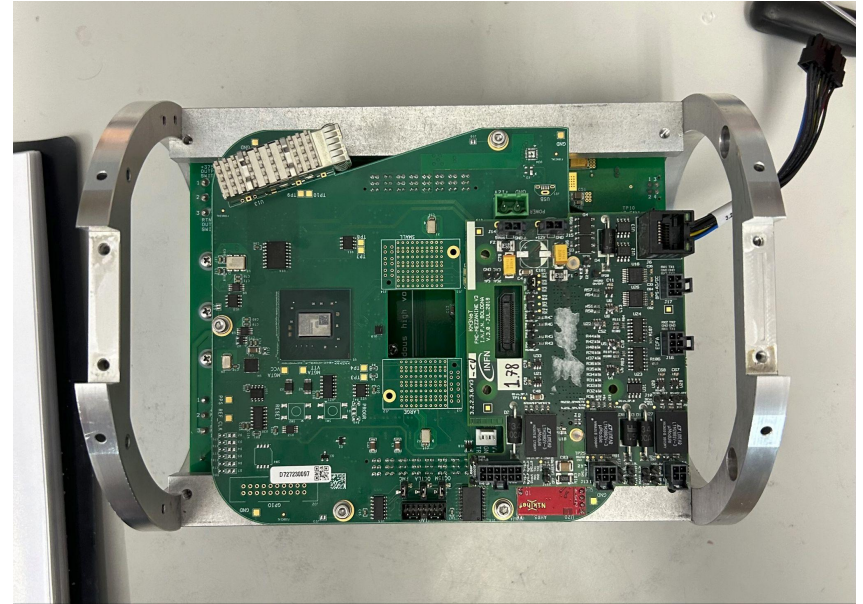
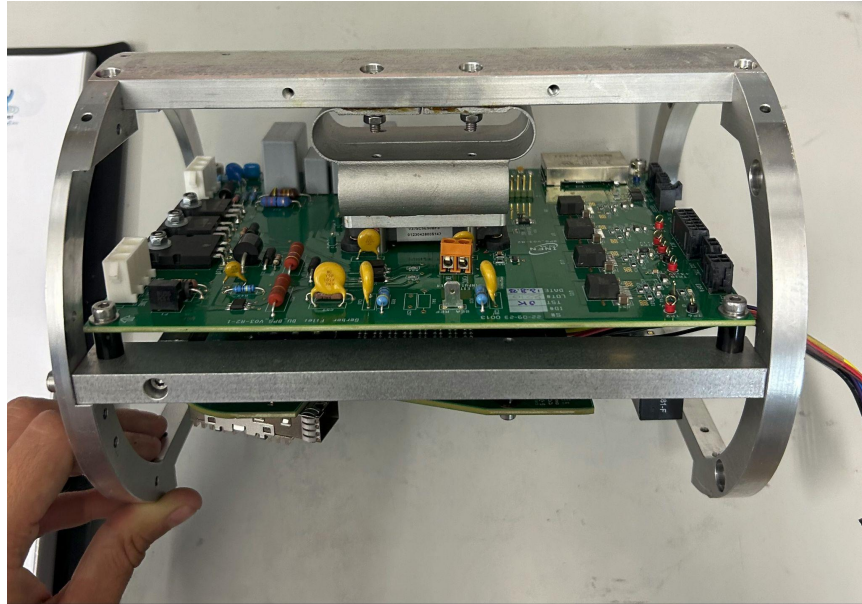
	DU#A	
	Att. (dB)	Critère
Sc	-9.83	≤ -11.5
Dc	-7.46	≤ -9
Ao	-11.86	≤ -12.5
Sc OUT	-1.21	≤ -2

SHORE STATION TO DOM - Test 5	
f = 1530,33nm - CRITERE £-16 dB	
DOM ID	Att. (dB)
DOM1	-14.49
DOM2	-14.42
DOM3	-14.32
DOM4	-14.53
DOM5	-14.41
DOM6	-14.36
DOM7	-14.37
DOM8	-14.41
DOM9	-14.21
DOM10	-14.34
DOM11	-14.39
DOM12	-14.42
DOM13	-14.27
DOM14	-14.27
DOM15	-14.38
DOM16	-14.39
DOM17	-14.35
DOM18	-14.21

# BM 146 type A

03/10/2024

Today we started the electronic part, but it's not completed yet because we are waiting to be sure how exactly how to do it and not repeat the mistake of the last BM.





# BM 146 type A

03/10/2024

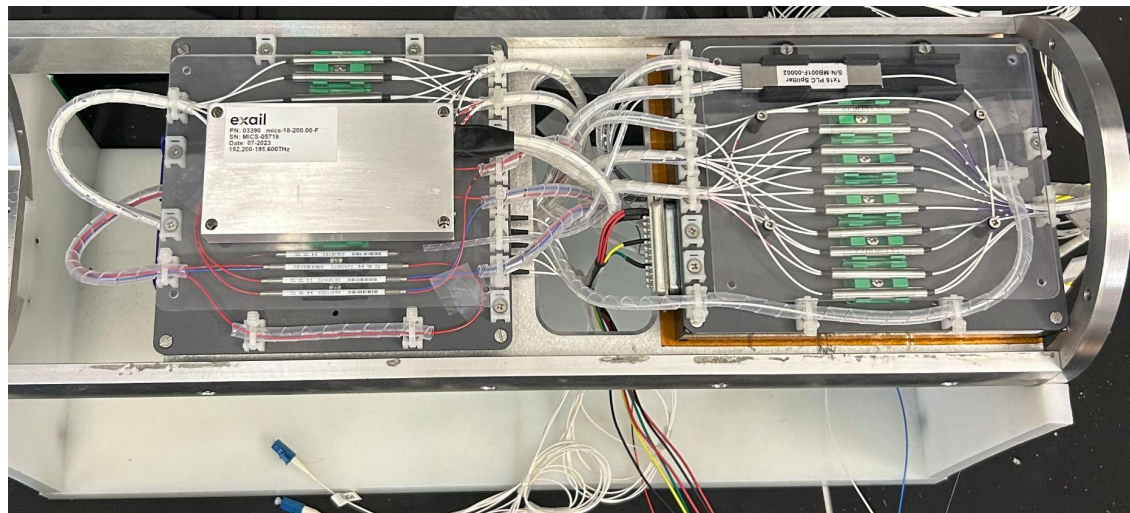
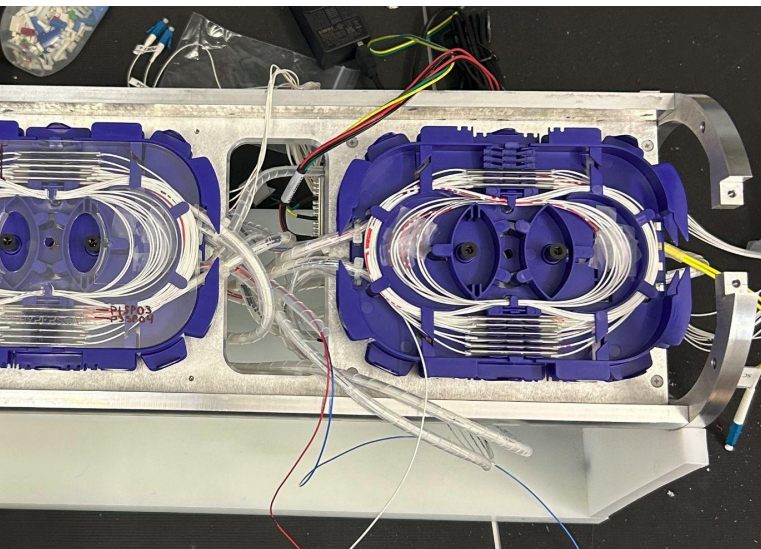
The inspection sheets of the next BM (127 type D) are completed.

[https://drive.google.com/drive/folders/1paWBgxojnxUECYZecLsewrZEAgO-QnqG?usp=drive\\_link](https://drive.google.com/drive/folders/1paWBgxojnxUECYZecLsewrZEAgO-QnqG?usp=drive_link)

# BM 146 type A

08/10/2024

The cassette 2.2. is almost finished, it's only one weld left (the one left to do the test 7).



# BM 146 type A

08/10/2024

The results of the test 6:

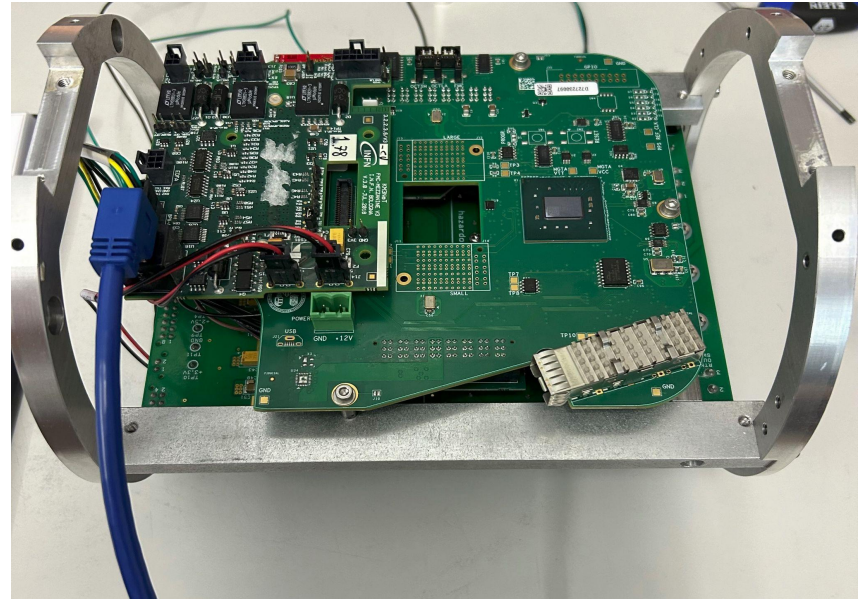
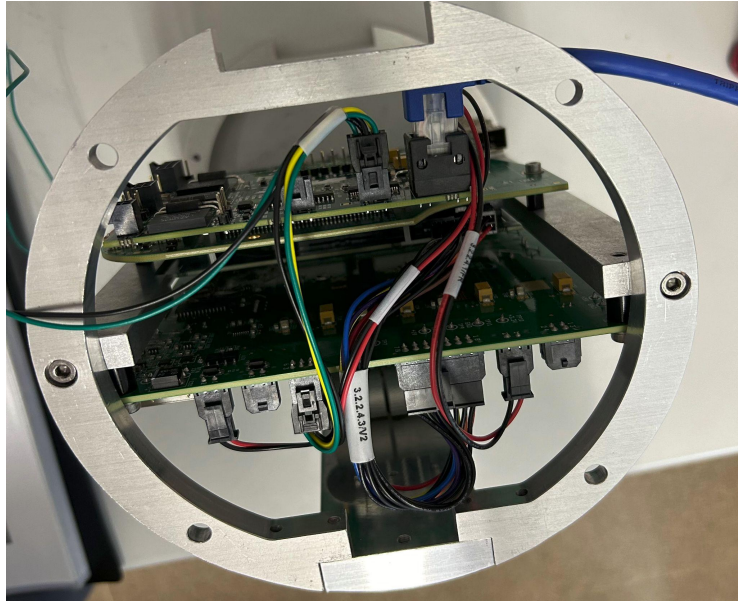
DOM TO SHORE STATION TO DOM - Test 6		
CRITERE £-9,5dB		
DOM ID	l (nm)	Att. (dB)
DOM1	1532.68	-5.28
DOM2	1534.25	-5.48
DOM3	1535.82	-5.7
DOM4	1537.4	-5.72
DOM5	1538.98	-5.93
DOM6	1540.56	-6.23
DOM7	1542.14	-5.93
DOM8	1543.73	-6.17
DOM9	1545.32	-6.39
DOM10	1546.92	-6.27
DOM11	1548.51	-6.43
DOM12	1550.12	-6.51
DOM13	1551.72	-6.05
DOM14	1553.33	-6.12
DOM15	1554.94	-6.41
DOM16	1556.55	-5.85
DOM17	1558.17	-6.12
DOM18	1559.79	-5.88

# BM 146 type A

08/10/2024

We have done the cables of the electric part. The next thing to do is to finish the electrical part and bring together both sides of the BM. After this, finish the adaptance tests and do the thermal tests.

We don't have the thermal pad of the TSFP. Can we use the Kapton or we have buy it? For the others 4 BMs we must to buy.





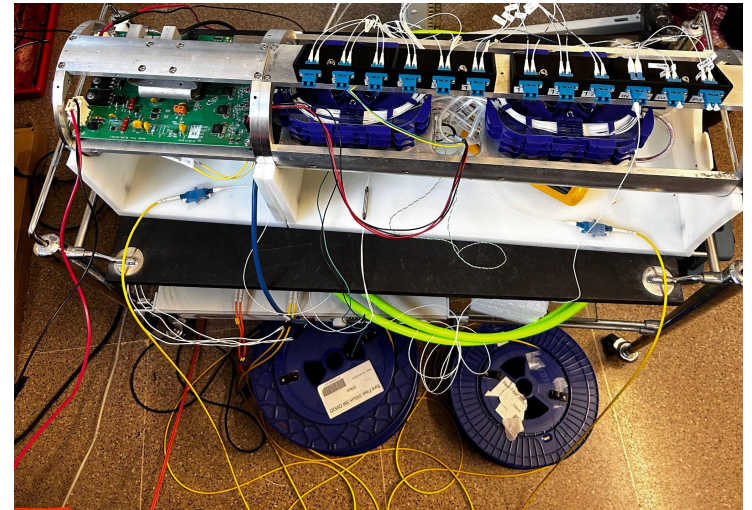
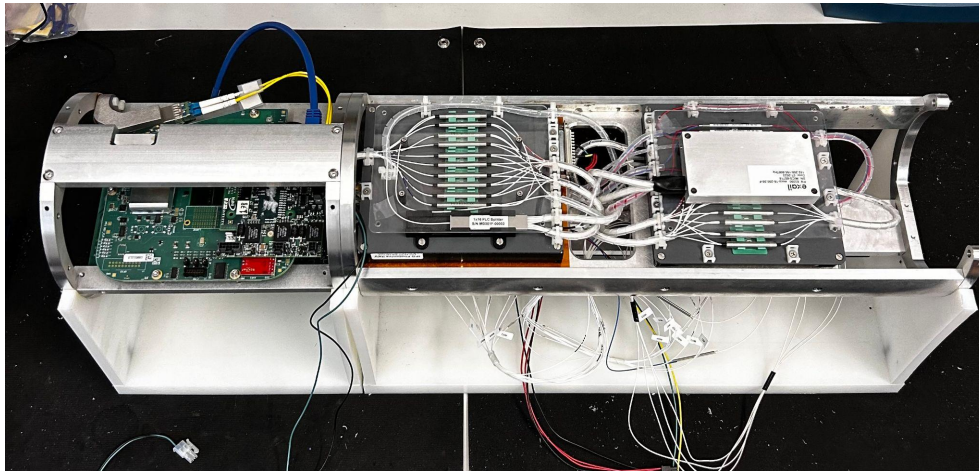
# BM 146 type A

17/10/2024

We are doing the acceptance tests and almost finished them. Today we finished the thermal tests so we expect to finish the power tests tomorrow and end the BM if everything goes ok.

Issues:

- The MAC of the CLB is not on the Database of KM3NeT
- The measurement of the RX and TX in the test 1 SC signal is not like we expected





# BM 146 type A

17/10/2024

We also might need the schematic or 3D model to print the LC support because we now here have 5 BMs and we only have 4 LC supports. We can print it here with the schematic or the 3D model.

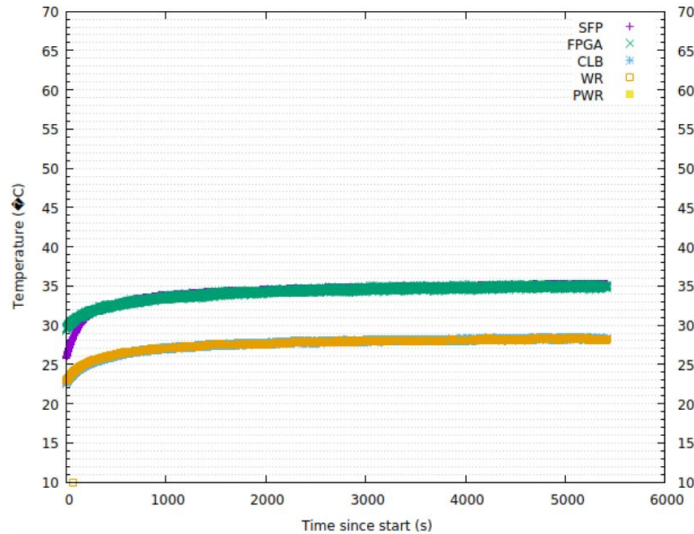


# BM 146 type A

25/10/2024

We have finish all the Acceptance test an all is ok.

We package the BM on his box and is ready to ship, but we can't make the shipment by Ulisse.

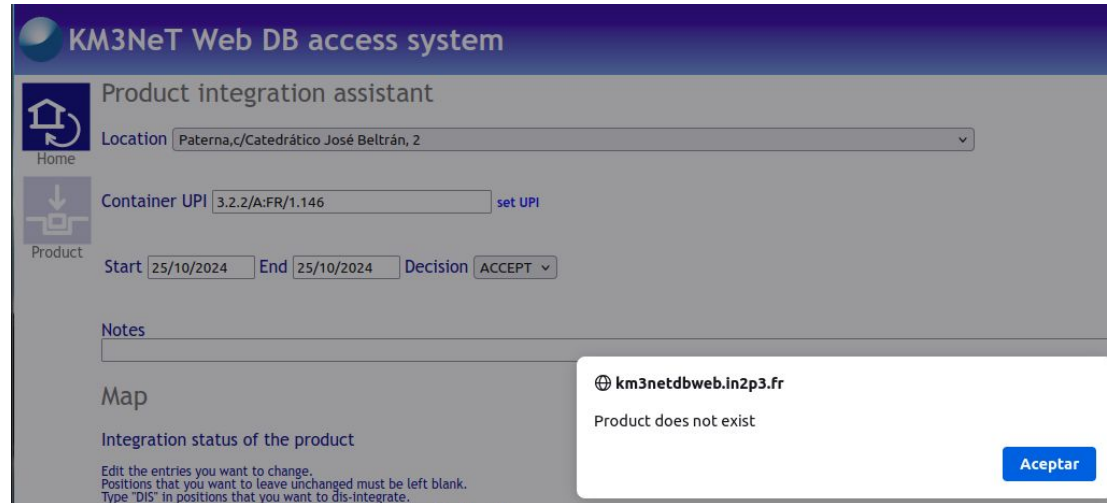


# BM 146 type A

25/10/2024

Sergio don't know how to put the MAC address of the CLB in the database.

We can't put the components of this BM in Database, there is an error that say "This product does not exist"



The screenshot displays the 'KM3NeT Web DB access system' interface. The main heading is 'Product integration assistant'. The form includes a 'Location' dropdown menu set to 'Paterna,c/Catedrático José Beltrán, 2'. Below this is a 'Container UPI' field with the value '3.2.2/A:FR/1.146' and a 'set UPI' button. The 'Start' date is '25/10/2024', the 'End' date is '25/10/2024', and the 'Decision' is set to 'ACCEPT'. A 'Notes' section is present but empty. At the bottom, there is a 'Map' section and a note: 'Integration status of the product. Edit the entries you want to change. Positions that you want to leave unchanged must be left blank. Type 'DIS' in positions that you want to dis-integrate.' An error message box is overlaid on the right side, displaying the URL 'km3netdbweb.in2p3.fr' and the message 'Product does not exist', with an 'Aceptar' button.

BM 127 type D

# BM 127 type D

25/10/2024

We have started with the next BM (127 Type D), but we see that the drills of the Interleaver and EDFA plate are wrong like in the two previous BMs, so the Mechanical people of the IFIC is solving that problem.

In the meantime we are making the Inspections Sheets and painting the fibers of the next BM's.



We have been stopped in the progress of the BM work because there has been severe flooding in Valencia. We couldn't get to work so they recommended teleworking.

And this week Valencia, on Wednesday and Thursday Valencia has been in red alert due to heavy rains, so they closed the IFIC and we couldn't work in person either.

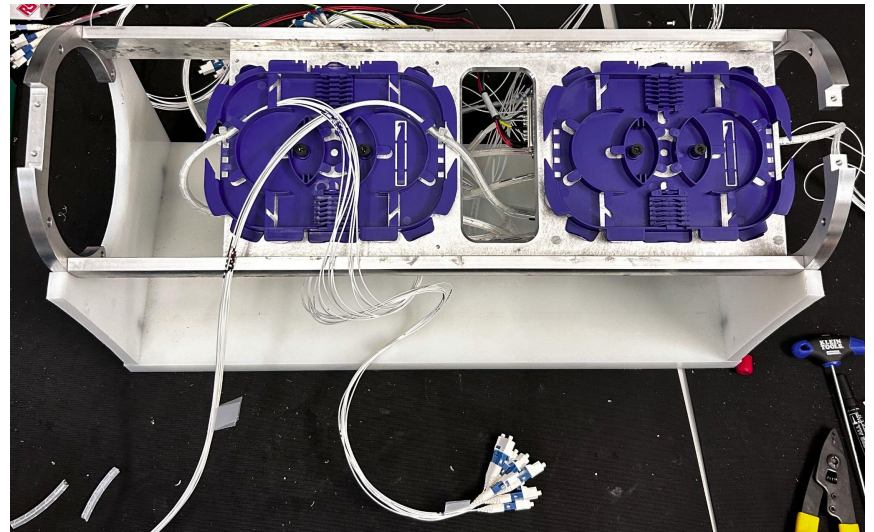
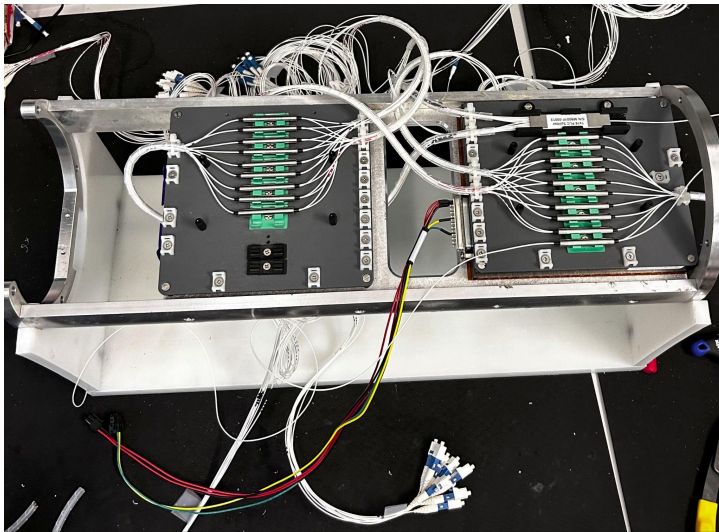
# BM 127 type D

15/11/2024

The days we have been here in the lab, we have made as much progress as we could.

The drill problem of the interleaver and EDFA plates has been solved.

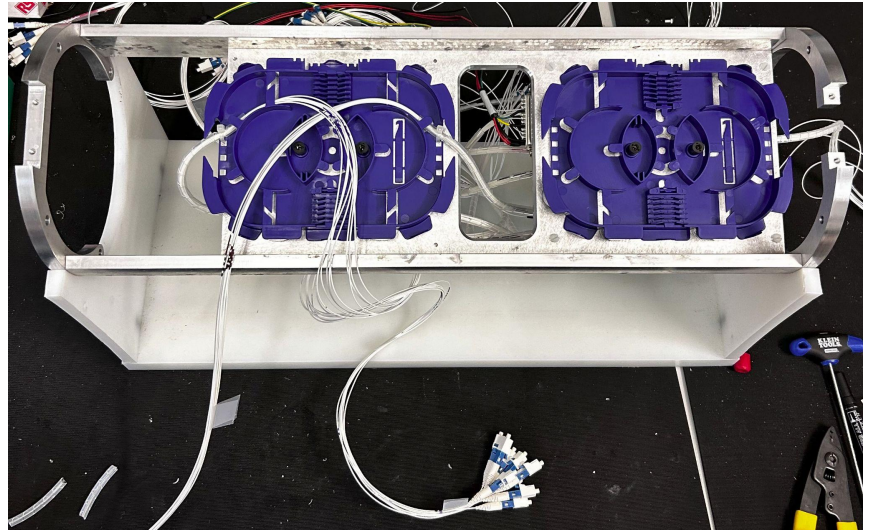
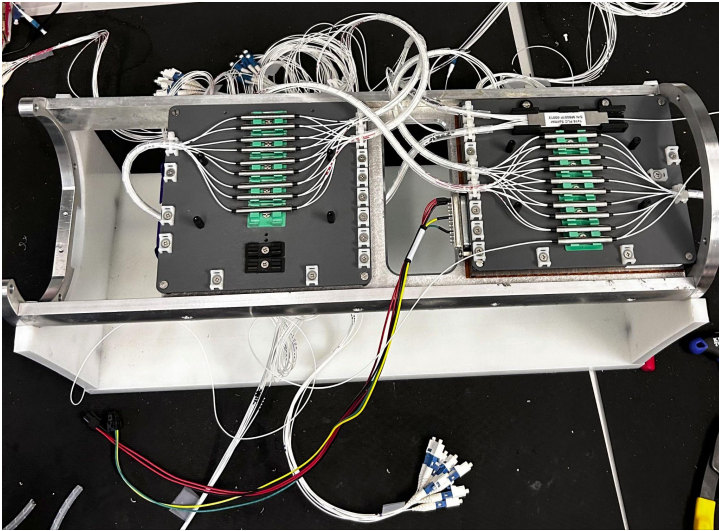
We have made the mechanical part of this BM and mount the interleaver and EDFA plates.



# BM 127 type D

15/11/2024

We have started the optical part and beginning the first cassette to do the first fusions.

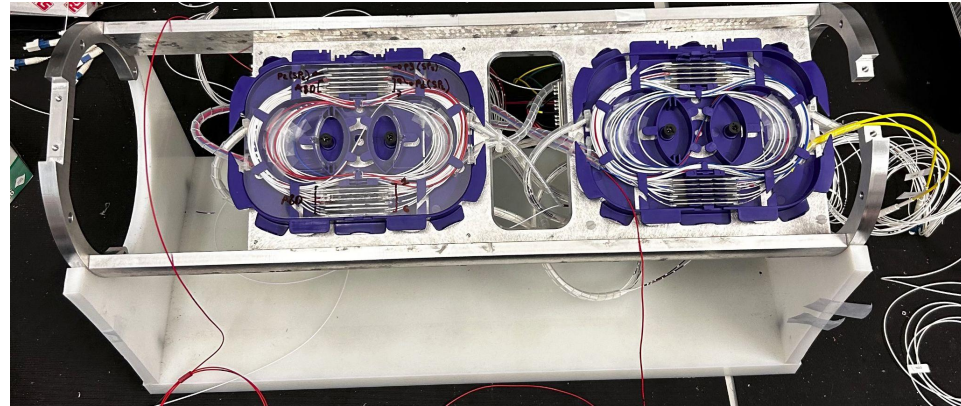
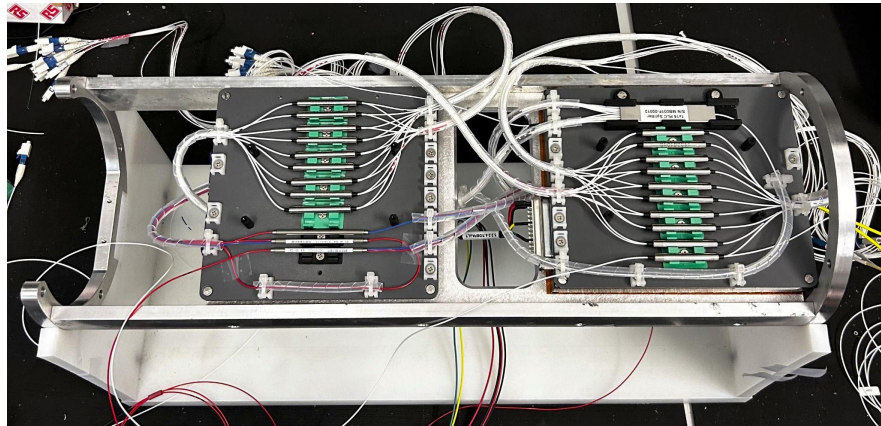




# BM 127 type D

22/11/2024

We have started the fusions and finished the cassette 1.1 with his 12 fusions.  
The cassette 2.1 is almost finished, there is 1 fusion left to finish this cassette and  
begin with the next steps.



# BM 127 type D

22/11/2024

The results of the test 1, 2 and 3:

SPLITTER 1:16	
TEST 1	
CRITERE £ -15,5dB	
n° Fibre	Att. (dB)
1	-13.02
2	-13.11
3	-13.21
4	-13.21
5	-13.14
6	-13.23
7	-13.43
8	-13.11
9	-13.29
10	-13.29
11	-13.21
12	-13.26
13	-13.1
14	-13.19
15	-13.44
16	-13.42
SPLITTER 50/50	
CRITERE £ -5dB	
17	-3.38
18	-3.38

SPLITTER 10/90	
TEST 2	
λ =1530,33nm - CRITERE £-14,5dB	
DOM ID	Att. (dB)
DOM1	-13.57
DOM2	-13.62
DOM3	-13.72
DOM4	-13.73
DOM5	-13.66
DOM6	-13.69
DOM7	-13.95
DOM8	-13.63
DOM9	-13.79
DOM10	-13.81
DOM11	-13.7
DOM12	-13.8
DOM13	-13.61
DOM14	-13.72
DOM15	-13.98
DOM16	-13.99
DOM17	-13.45
DOM18	-13.47

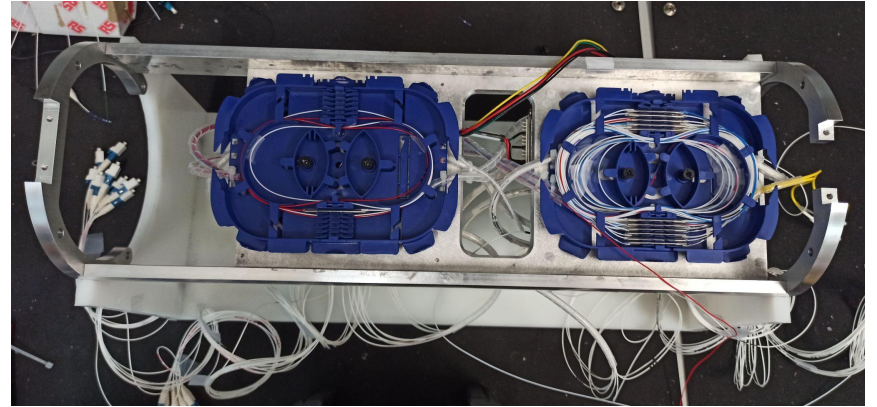
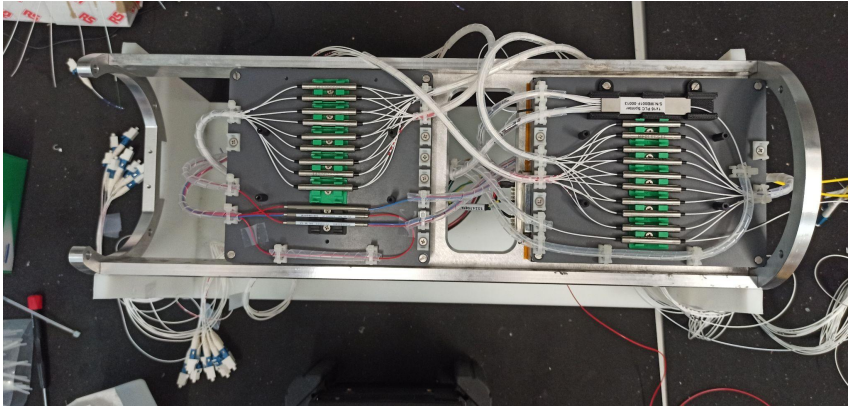
EDFA powered	
TEST 3	
λ =1530,33nm - CRITERE £-16dB	
DOM ID	Att. (dB)
DOM1	-14.7
DOM2	-14.72
DOM3	-14.84
DOM4	-14.84
DOM5	-14.76
DOM6	-14.83
DOM7	-15.1
DOM8	-14.75
DOM9	-14.9
DOM10	-14.93
DOM11	-14.81
DOM12	-14.92
DOM13	-14.75
DOM14	-14.82
DOM15	-15.12
DOM16	-15.12
DOM17	-14.5
DOM18	-14.54



# BM 127 type D

29/11/2024

We have advanced to test 4 and this morning we have sent the material of the BM that Imad needs to the French part of the CERN.



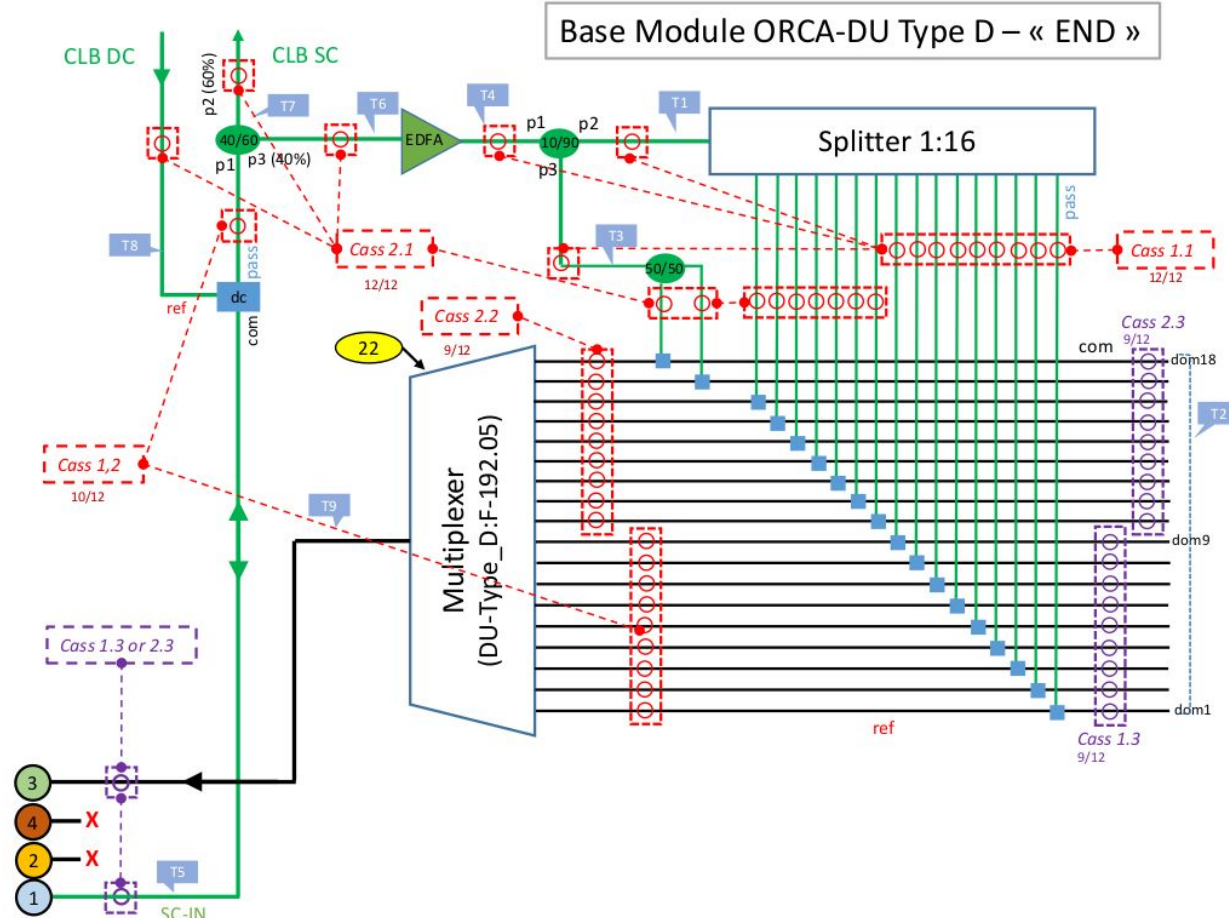
The results of the test 4:

	DU#D	
	Att. (dB)	Critère
Sc	-2.71	≤ -5.5
Dc	-0.18	≤ -3
Ao	-4.69	≤ -6.5
Sc OUT	-	≤ -8

# BM 127 type D

29/11/2024

We don't know how to do the Sc OUT measurement in a BM type D, because we don't have SP04, and the Sc OUT fiber is the P2 of the SP04.



# BM 127 type D

13/12/2024

We have finish the BM 127 type D. The acceptance test are OK.

Link of folder with the Inspection Sheets, photos and acceptance tests of the BM's:  
<https://drive.google.com/drive/folders/1b1WQ3QQsXY99Z-89WGPk6xpj4w8CvrxC?usp=sharing>

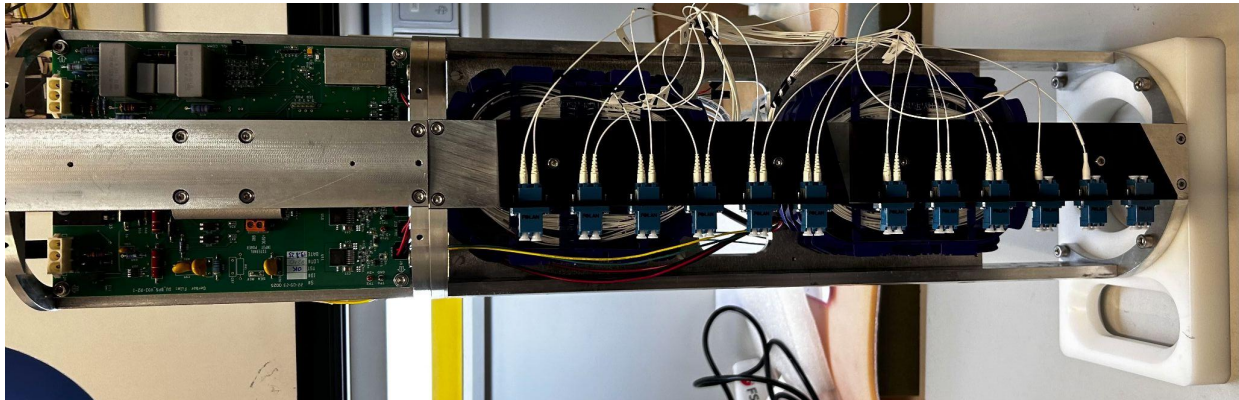
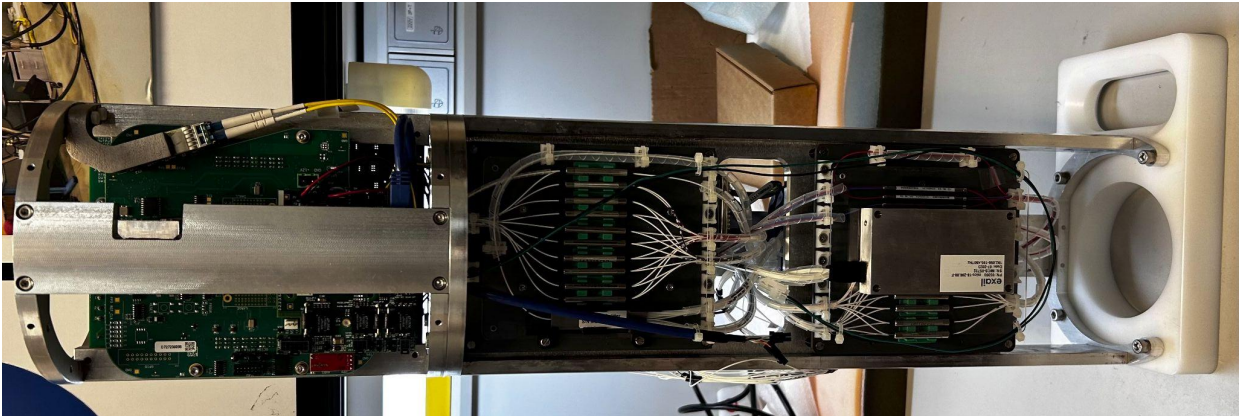
We have registered the 2 BMs in the 'Integration Assistance' and in the 127 of type D we have a problem with the UPI of the FMC, as it only allows us to register it as DU and the one that has been integrated is CU.

We have checked the list of components that you gave us when sending the 4 BMs, and only the FMC selected for the BM 127 is of type CU, the others are DU. We have also checked the following 3 BMs in the 'Integration Assistance' and none of them has the option to integrate the CU.



# BM 127 type D

13/12/2024



BM 147 type B

# BM 147 type B

20/12/2024

The information about the BM 146 and 127 has already been uploaded at the database. With this, these two BMs are totally finished by our side, only shipping is left.

We have started the BM 147 type B, we did all the inspection sheets and the photos. We also finished the mechanical part and the EDFA and Interleaver plates.

# BM 147 type B

20/12/2024

We have started the optical part and beginning the first cassette to do the first fusions.

