



# Catania DOM integration site activities

9 12 2020

DOM Integration meeting

Emanuele Leonora

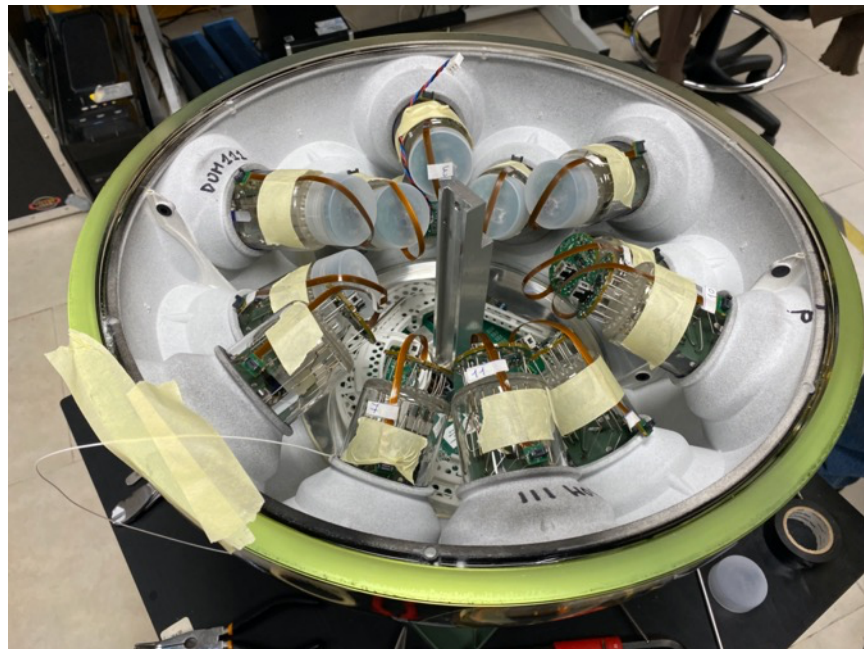
INFN, sezione di Catania

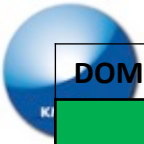


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- Required maximum care
- Long and flexible tools to operate with PMTs mounted on TOP
- Safe and stable positions for inner cable before actions
- Main difficult with optical fiber treatment
- Thanks to Giusi La Rosa (LNS) for supporting the action on fibers
- Functional test was good, and we are going ahead with closure
- Shipment to DU integration foreseen for this Friday



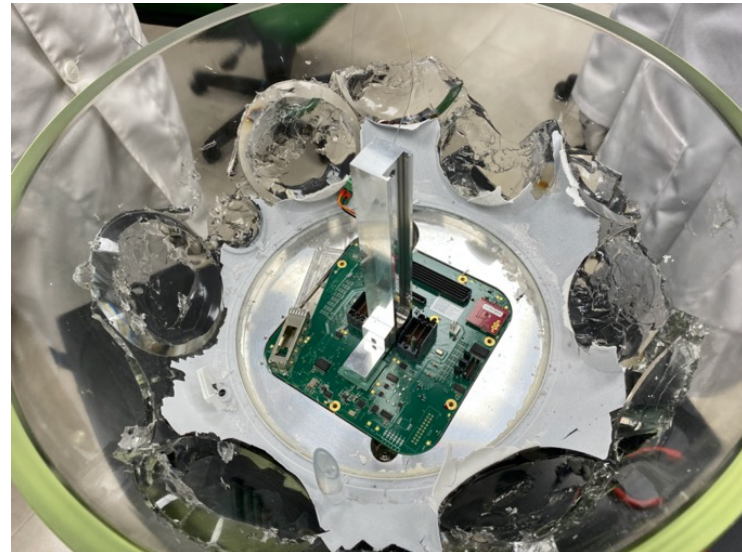


| DOM integration                              | INFN Catania |       | KM3NeT |       | DU line D |       |       |       |       |  | Date 09/12/20 |  |  |  |  |  |  |
|--|--------------|-------|--------|-------|-----------|-------|-------|-------|-------|--|---------------|--|--|--|--|--|--|
| DOM  | 522          | 524   | 525    | 526   | 527       | 528   | 529   | 530   | 531   |  |               |  |  |  |  |  |  |
| SFP  | CH20H        | CH22H | CH24H  | CH26H | CH28H     | CH30H | CH32H | CH34H | CH36H |  |               |  |  |  |  |  |  |
| Bending of deflect. rings                    | OK           | OK    | OK     | OK    | OK        | OK    | OK    | OK    | OK    |  |               |  |  |  |  |  |  |
| Painting of the PMT structurters (TOP & BOT) | OK           | OK    | OK     | OK    | OK        | OK    | OK    | OK    | OK    |  |               |  |  |  |  |  |  |
| Gluing of P. gauge and NanoBeacon on TOP     | OK           | OK    | OK     | OK    | OK        | OK    | OK    | OK    | OK    |  |               |  |  |  |  |  |  |
| Piezo glued on BOTTOM                        | OK           | OK    | OK     | OK    | OK        | OK    | OK    | OK    | OK    |  |               |  |  |  |  |  |  |
| Mushroom glued on TOP                        | OK           | OK    | OK     | OK    | OK        | OK    | OK    | OK    | OK    |  |               |  |  |  |  |  |  |
| Electronics in TOP                           | OK*          | OK*   | OK     | OK    | OK        | OK    | OK    | OK    |       |  |               |  |  |  |  |  |  |
| Penetrator on TOP                            | OK           | OK    | OK     | OK    | OK        | OK    | OK    |       |       |  |               |  |  |  |  |  |  |
| Helium test                                  | OK           | OK    | OK     | OK    | OK        | OK    | OK    |       |       |  |               |  |  |  |  |  |  |
| A&D filter routed on fiber tray              | OK           | OK    | OK     | OK    | OK        | OK    | OK    | OK    | OK    |  |               |  |  |  |  |  |  |
| optical splice and test                      | OK           | OK    | OK     | OK    | OK        | OK    |       |       |       |  |               |  |  |  |  |  |  |
| PMTs in TOP structure                        | OK           | OK    | OK     | OK    | OK        | OK    | OK    | OK    | OK    |  |               |  |  |  |  |  |  |
| PMTs in BOTTOM structure                     | OK           | OK    | OK     | OK    | OK        | OK    | OK    | OK    | OK    |  |               |  |  |  |  |  |  |
| BOTTOM instrumentation                       | OK           | OK    | OK     | OK    | OK        | OK    | OK    | OK    | OK    |  |               |  |  |  |  |  |  |
| Functionality test                           | OK           | OK    | OK     | OK    | OK        | OK    |       |       |       |  |               |  |  |  |  |  |  |
| Gluing of the TOP structure on mushroom      | OK           | OK    | OK     | OK    | OK        | OK    |       |       |       |  |               |  |  |  |  |  |  |
| Gel pouring on TOP                           | OK           | OK    | OK     | OK    | OK        | OK    |       |       |       |  |               |  |  |  |  |  |  |
| Gel pouring on BOTTOM                        | OK           | OK    | OK     | OK    | OK        | OK    |       |       |       |  |               |  |  |  |  |  |  |
| Closure and sealing with collar              | OK           | OK    | OK     | OK    | OK        | OK    |       |       |       |  |               |  |  |  |  |  |  |
| Acceptance test                              | OK*          | OK*   | OK     | OK    | OK        | OK    |       |       |       |  |               |  |  |  |  |  |  |

| DOM  | 544   | 545   | 546   | 547   | 548   | 549   |  |  |  |  |  |  |  |  |  |  |  | 559   | 560   | 561   |
|--|-------|-------|-------|-------|-------|-------|--|--|--|--|--|--|--|--|--|--|--|-------|-------|-------|
| SFP  | CH50C | CH54C | CH52C | CH50C | CH48C | CH46C |  |  |  |  |  |  |  |  |  |  |  | CH26C | CH24C | CH22C |
| Bending of deflect. rings                    | OK    | OK    | OK    | OK    | OK    | OK    |  |  |  |  |  |  |  |  |  |  |  | OK    | OK    | OK    |
| Painting of the PMT structurters (TOP & BOT) | OK    | OK    | OK    | OK    | OK    | OK    |  |  |  |  |  |  |  |  |  |  |  | OK    | OK    | OK    |
| Gluing of P. gauge and NanoBeacon on TOP     | OK    | OK    | OK    | OK    | OK    | OK    |  |  |  |  |  |  |  |  |  |  |  | OK    | OK    | OK    |
| Piezo glued on BOTTOM                        | OK    | OK    | OK    | OK    | OK    | OK    |  |  |  |  |  |  |  |  |  |  |  | OK    | OK    | OK    |
| Mushroom glued on TOP                        | OK    | OK    | OK    | OK    | OK    | OK    |  |  |  |  |  |  |  |  |  |  |  | OK    | OK    | OK    |
| Electronics in TOP                           | OK*   | OK*   |       |       |       |       |  |  |  |  |  |  |  |  |  |  |  |       |       |       |
| Penetrator on TOP                            | OK    | OK    |       |       |       |       |  |  |  |  |  |  |  |  |  |  |  |       |       |       |
| Helium test                                  | OK    | OK    |       |       |       |       |  |  |  |  |  |  |  |  |  |  |  |       |       |       |
| A&D filter routed on fiber tray              | OK    | OK    | OK    | OK    | OK    | OK    |  |  |  |  |  |  |  |  |  |  |  | OK    | OK    | OK    |
| optical splice and test                      | OK    | OK    |       |       |       |       |  |  |  |  |  |  |  |  |  |  |  |       |       |       |
| PMTs in TOP structure                        | OK    | OK    | OK    | OK    | OK    | OK    |  |  |  |  |  |  |  |  |  |  |  | OK    | OK    | OK    |
| PMTs in BOTTOM structure                     | OK    | OK    | OK    | OK    | OK    | OK    |  |  |  |  |  |  |  |  |  |  |  | OK    | OK    | OK    |
| BOTTOM instrumentation                       | OK    | OK    | OK    | OK    | OK    | OK    |  |  |  |  |  |  |  |  |  |  |  | OK    | OK    | OK    |
| Functionality test                           | OK    | OK    |       |       |       |       |  |  |  |  |  |  |  |  |  |  |  |       |       |       |
| Gluing of the TOP structure on mushroom      | OK    | OK    |       |       |       |       |  |  |  |  |  |  |  |  |  |  |  |       |       |       |
| Gel pouring on TOP                           | OK    | OK    |       |       |       |       |  |  |  |  |  |  |  |  |  |  |  |       |       |       |
| Gel pouring on BOTTOM                        | OK    | OK    |       |       |       |       |  |  |  |  |  |  |  |  |  |  |  |       |       |       |
| Closure and sealing with collar              | OK    | OK    |       |       |       |       |  |  |  |  |  |  |  |  |  |  |  |       |       |       |
| Acceptance test                              | OK*   | OK*   |       |       |       |       |  |  |  |  |  |  |  |  |  |  |  |       |       |       |

DOM 4.544 has been sent to GENOVA in JUN 2020





- ✓ Replacement of Penetrator type P from one DOM = currently on-going.
- ❑ After the shipment and inspection of 36 DOMs we have several NCR to be open...
- ❑ Re-building of the TOP of the DOM 9 form ARCA DU 39. CLB and PB have been removed for not functionality. They will be sent to Valencia for inspection
- ❑ Going ahead with DOM production
- ❑ White Rabbit Switch implementation for the DAQ system (new guy in the group)
- ❑ Upgrading the softwares needed for DOM test and analisys ( new guy in the group)