



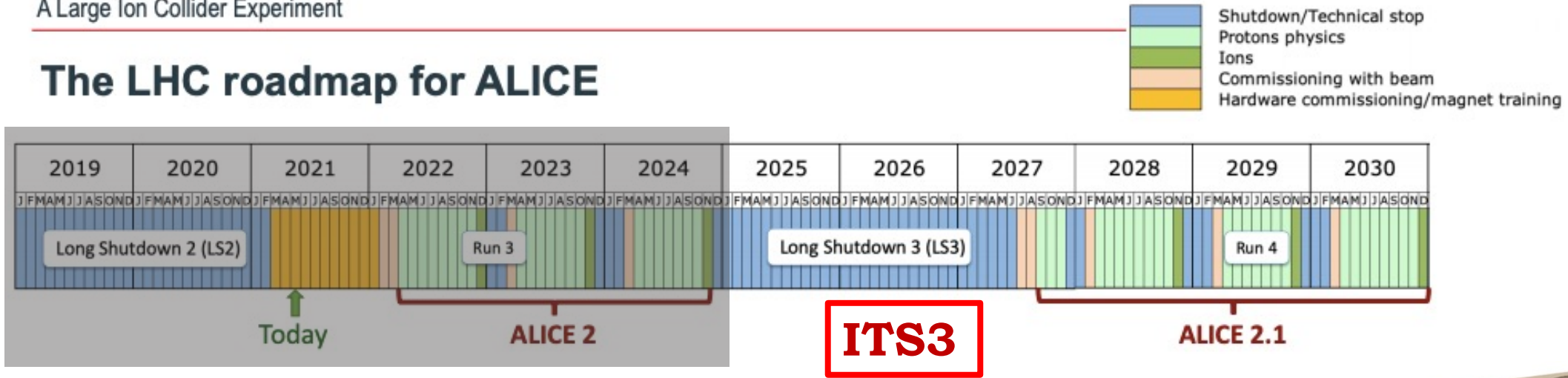
**ALICE**

# Report attività per Preventivi 2023

# ALICE Roadmap

A Large Ion Collider Experiment

## The LHC roadmap for ALICE

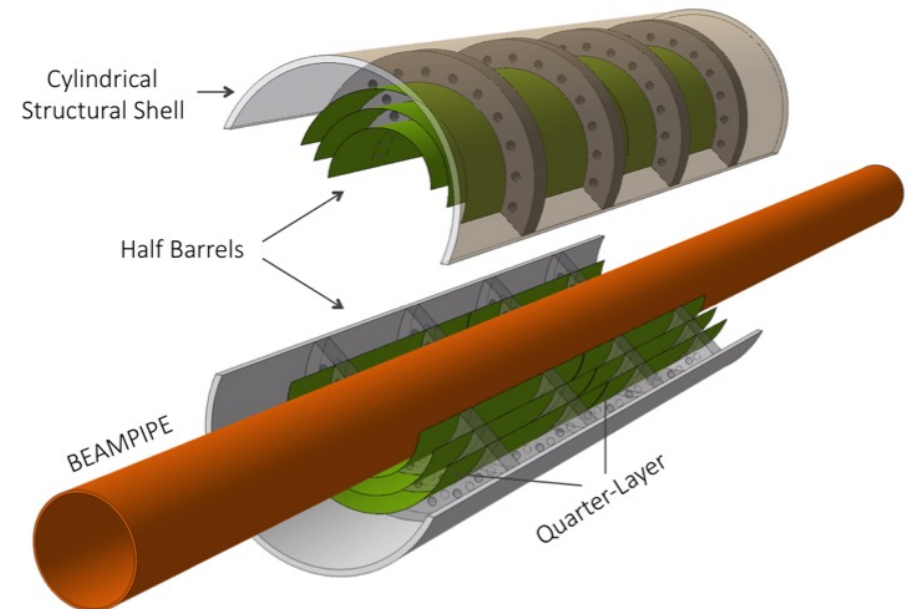


### ITS2 Inner Layer upgrade only ->ITS3

- Removal of water cooling
- Removal circuit board
- Removal mechanical support

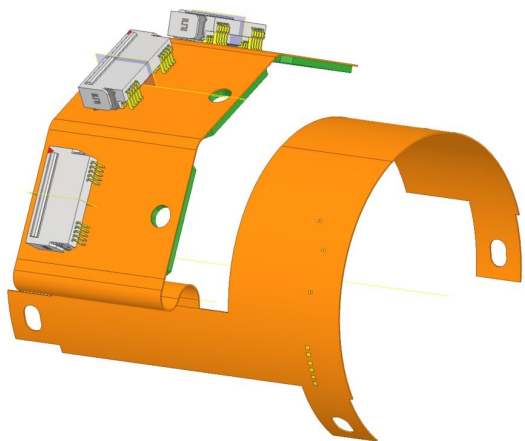


Sostituzione dei 3 layer nell' Inner Layer nel LS3 con 3 layer completamente cilindrici

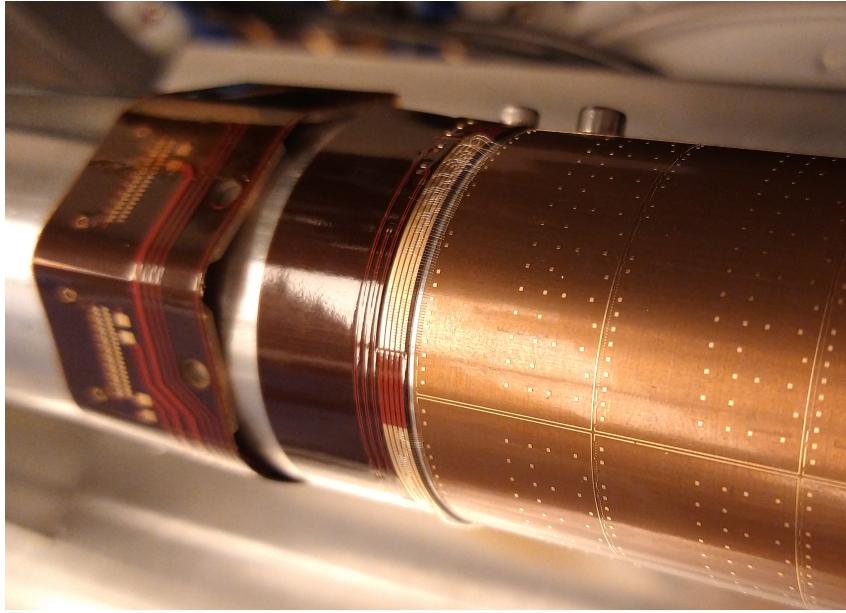


# Attività ITS3

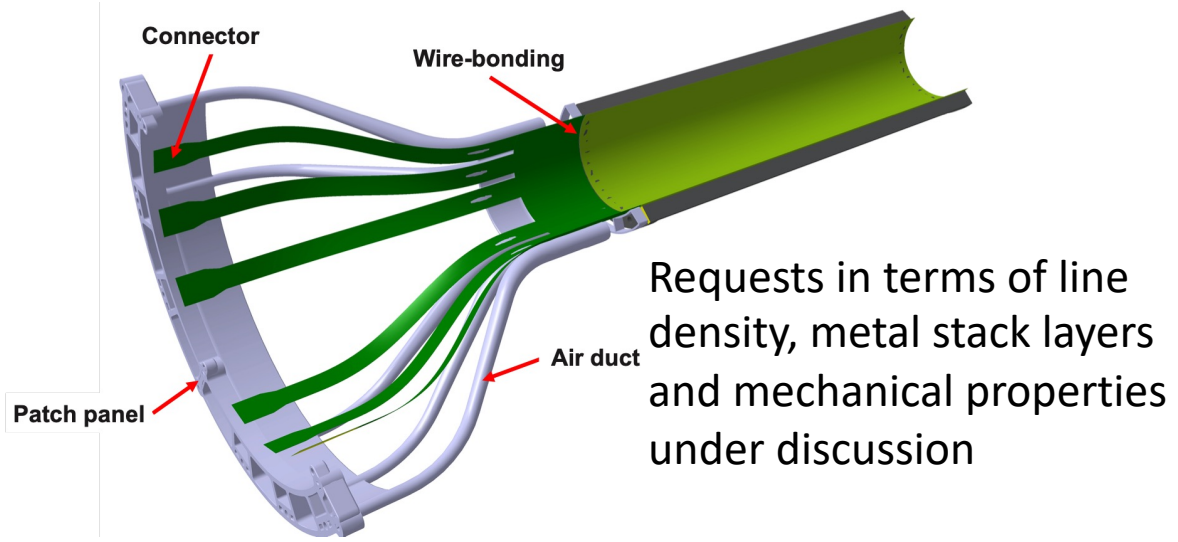
## Edge-FPC for Super-ALPIDE



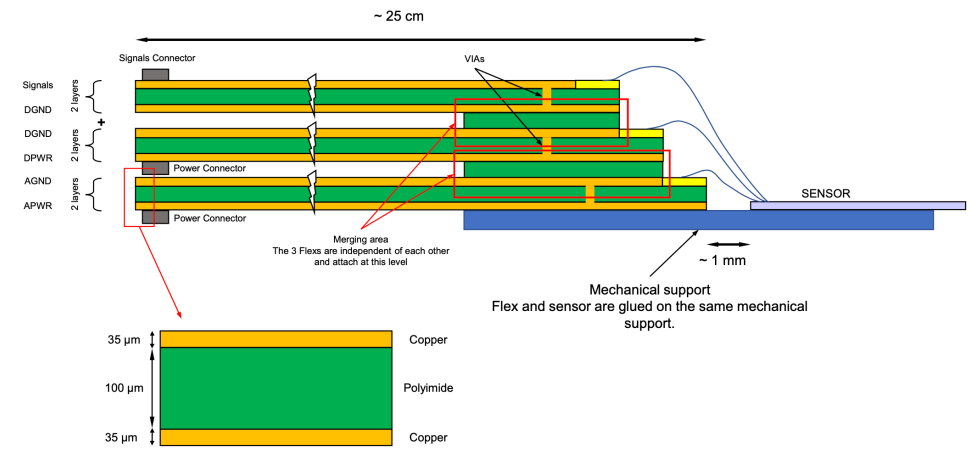
- Designed by G. de Robertis and M. Rizzi
- Prototype to study connection to chip and mechanical behaviour of bent flex



## Edge-FPC for final ITS3 sensor

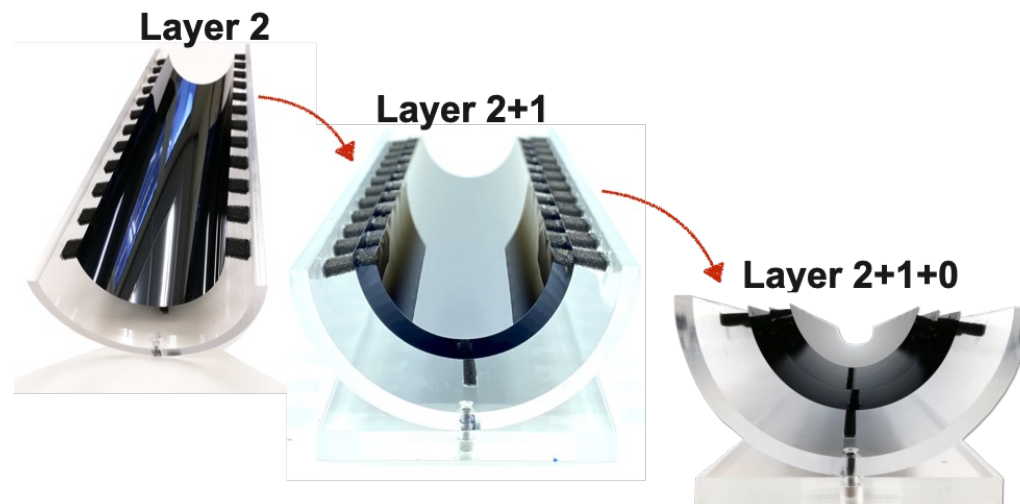
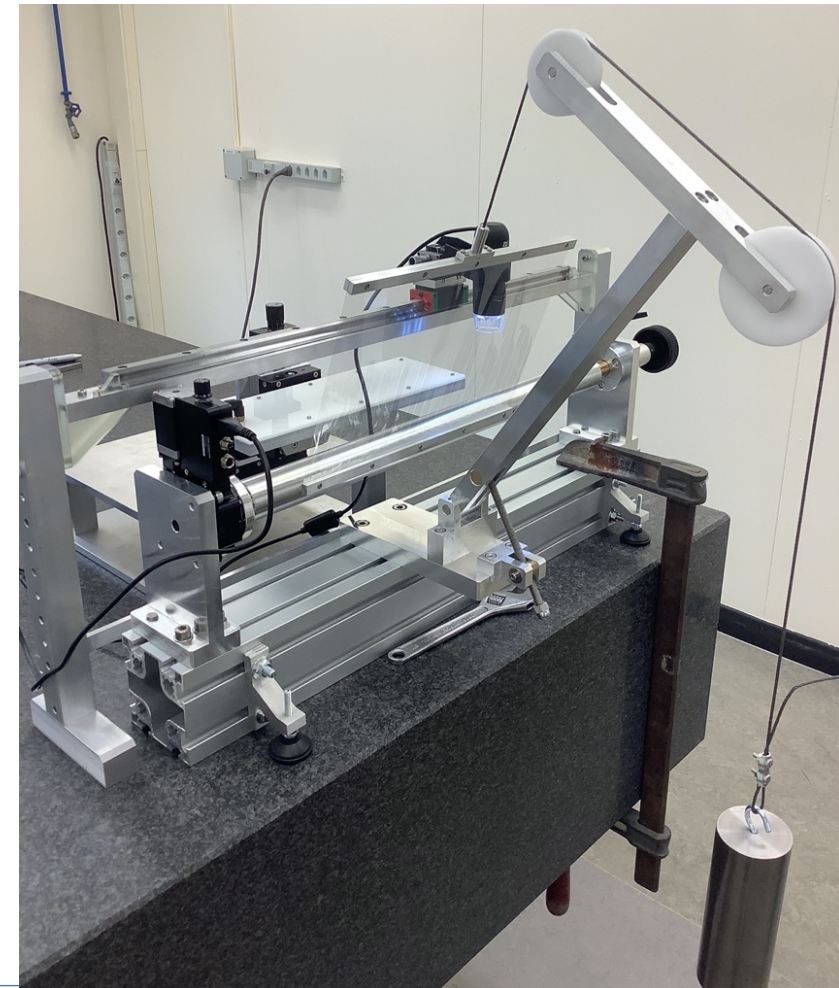


Requests in terms of line density, metal stack layers and mechanical properties under discussion



# Attività ITS3

## Bending/bonding tool for large dimension silicon chips

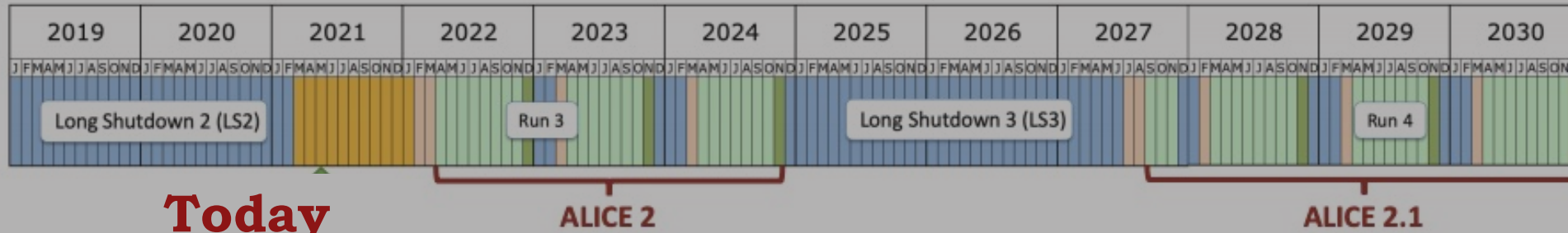
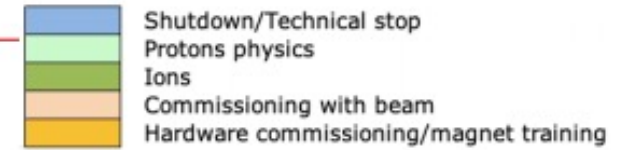


- $R_{\text{Layer}0} = 18 \text{ mm}$
- $R_{\text{Layer}1} = 24 \text{ mm}$
- $R_{\text{Layer}2} = 30 \text{ mm}$

# ALICE Roadmap

A Large Ion Collider Experiment

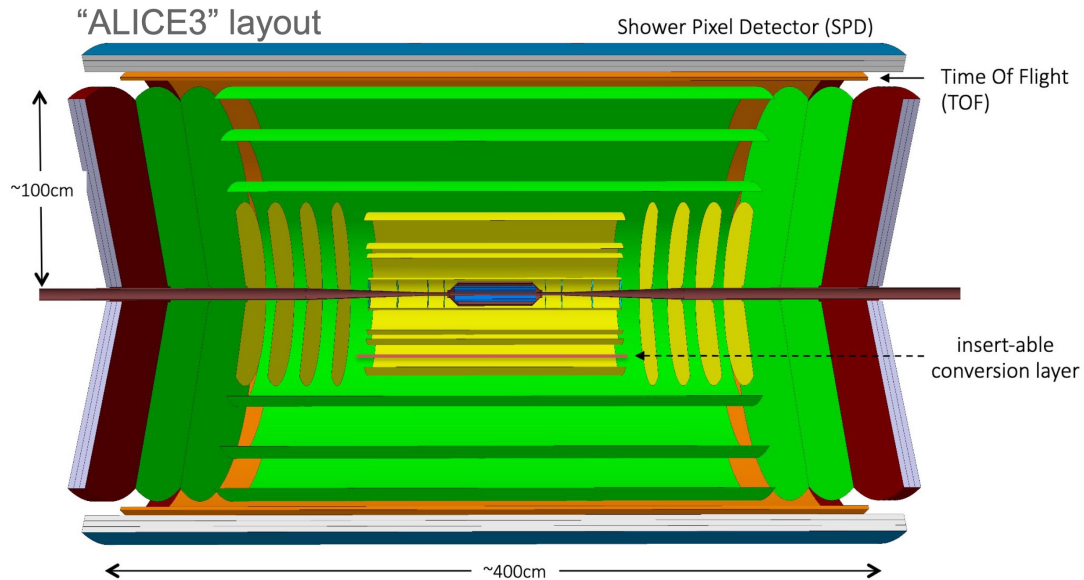
## The LHC roadmap for ALICE



**Today**

**ALICE 2**

**ALICE 2.1**



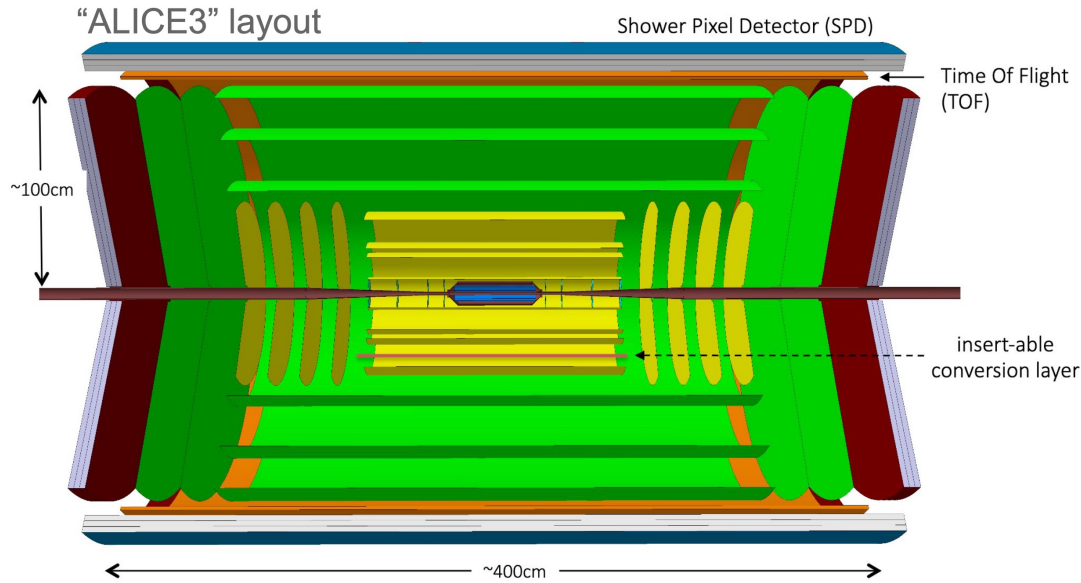
“Ambition to design a new experiment to continue with a rich heavy-ion programme at the HL-LHC”

Update of the European strategy for particle physics



**ALICE 3**

# ALICE Roadmap



## PID:

TOF con LGAD

Possibile rivelatore Cherenkov per PID

- Photon detection: SiPM
- Radiatore : Aereogel

## Attività previste in Sezione a Bari:

- PID: R&D di SiPM e readout
- test beam

In sinergia con EIC\_NET

# Anagrafica 2023

Ricercatori	%2022	%	Sigle Affini
Barile Francesco	70	70	
Bruno Giuseppe Eugenio	90	90	10% STRONG
Colamaria Fabio	<b>90</b>	<b>100</b>	[fine STRONG]
Colella Domenico	70	70	
De Cataldo Giacinto	<b>90</b>	<b>100</b>	[fine STRONG]
Di Bari Domenico	80	80	
Elia Domenico	60	60	10% IbiSCo
Kumar Shyam	<b>90</b>	<b>70</b>	[ 20 -> EIC_NET]
Manzari Vito	80	80	
Marzocca	30	30	
Mastroserio Annalisa	<b>80</b>	<b>70</b>	[10 su EIC_NET]
Nappi Eugenio	70	70	
Palasciano Antonio	100	100	PhD / similmfellow
Sadhu Samrangy	100	100	
Tassielli Gianfranco	70	70	10% RD_FC
Torres Ramos Arianna Grisel	100	100	PhD
Volpe Giacomo	70	70	

Tecnologi	%	Sigle Affini
De Robertis Giuseppe	30	
De Venuto Daniela	60	
Diacono Domenico	20	
Donvito Giacinto	10	10 CIR_ibisco
Licciulli Francesco	20	
Loddo Flavio	20	
Monopoli Vito Giuseppe	60	
Pastore Cosimo	40	
Torresi Marco	50	
Vino Gioacchino	30	

1 FTE in meno

17 Ricercatori 13.3 FTE  
 10 Tecnologi. 3.3 FTE  
 16.6 FTE (in 2022 17.3)

# Richieste

## □ Finanziarie

- MISSIONI : 154k€
  - Coordinamento, Shift, test beams, ITS3-specifiche, SiPM-specifiche, Calcolo
- CONSUMO : 46k€
  - Produzione strumento per piegatura chip ITS3 (3 raggi), FPC ITS3, attrezzature specifiche camera pulita, SiPM

## □ Servizi

- Lavoro previsto è in continuità con le attività in corso. Nel 2023 si prevede un impegno dei servizi molto simile all' impegno nelle attività in svolgimento nel 2022.
- A breve stima finale dai responsabili):
  - Cosimo Pastore (officina meccanica): bending wafers
  - Maurizio Mongelli (progettazione meccanica) : supporto meccanico ITS3
  - Giuseppe De Robertis (elettronica) : FPC + SiPM
  - Gigi Fiore (Camera pulita): prototipi ITS3