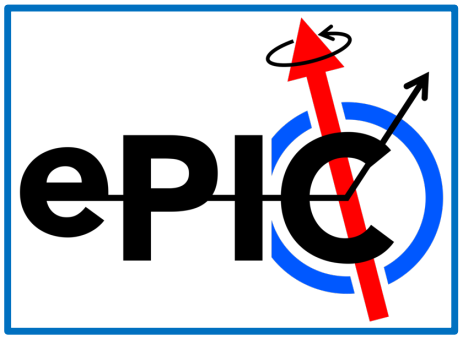
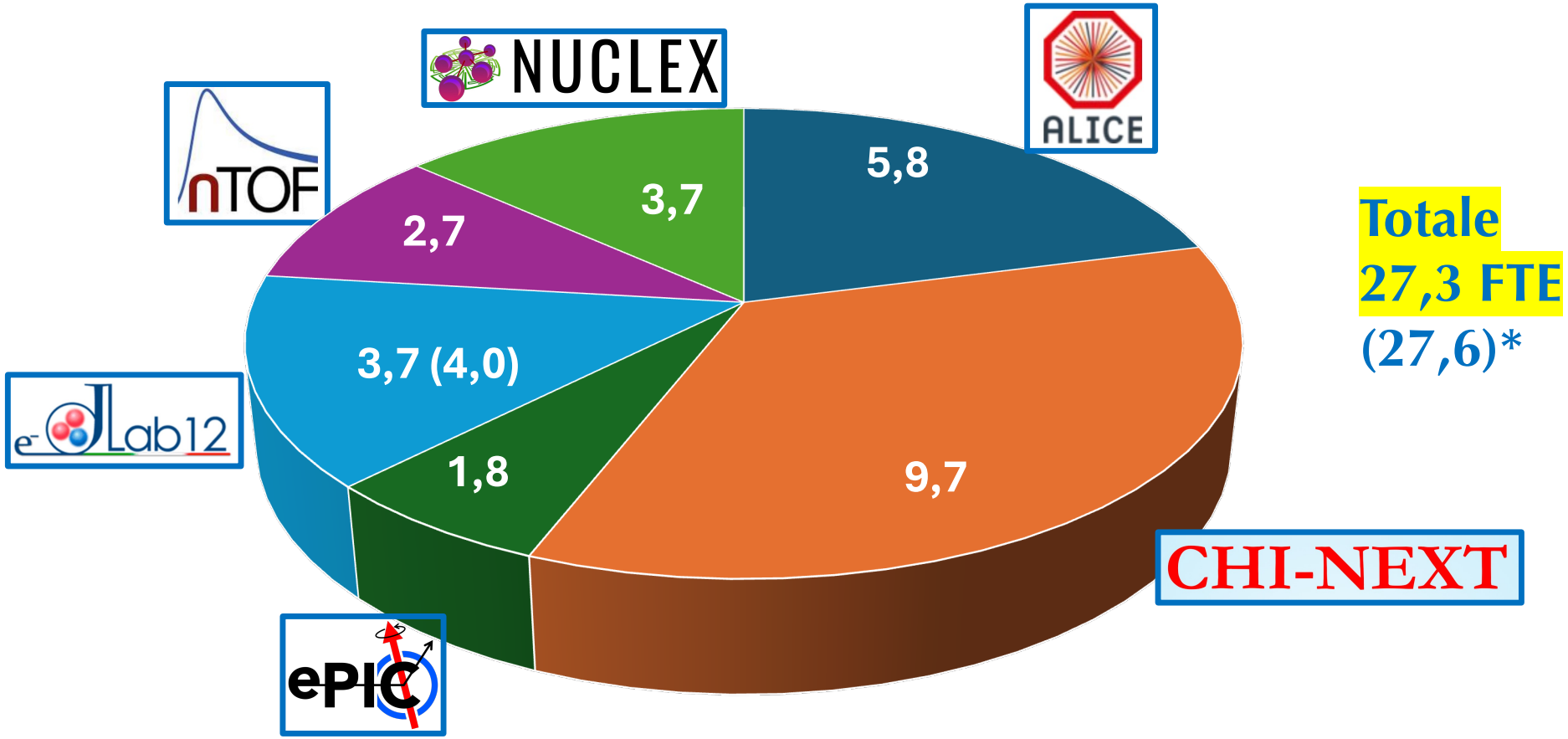
Gr III – Sezione di Catania INFN

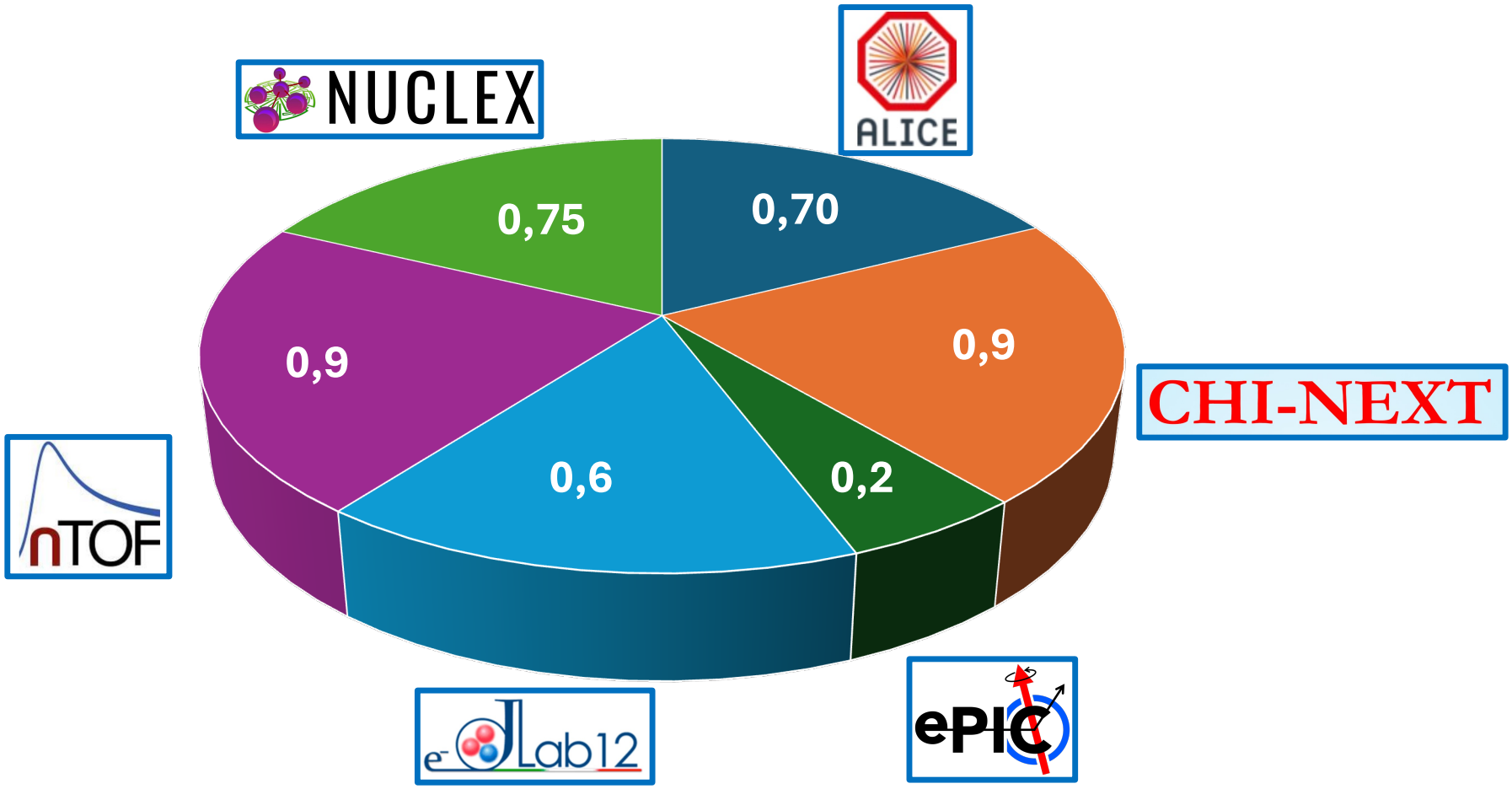


FTE in Gr 3 – Sezione di Catania



Totale
27,3 FTE
(27,6)*

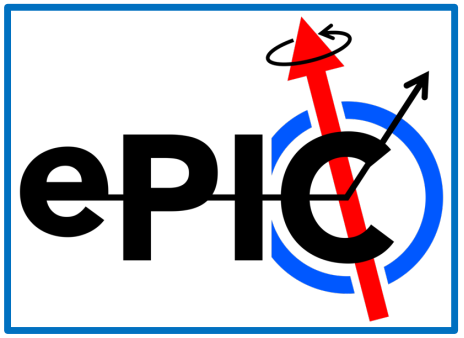
FTE/persona Gr 3 – Sezione di Catania



Gr III – Sezione di Catania INFN

Missioni: 34,0 k€
Inv/Con/App…: 55,5 k€

Missioni: 45,0 k€
Inv/Con/App…: 146,5 k€



Missioni: 26,0 k€

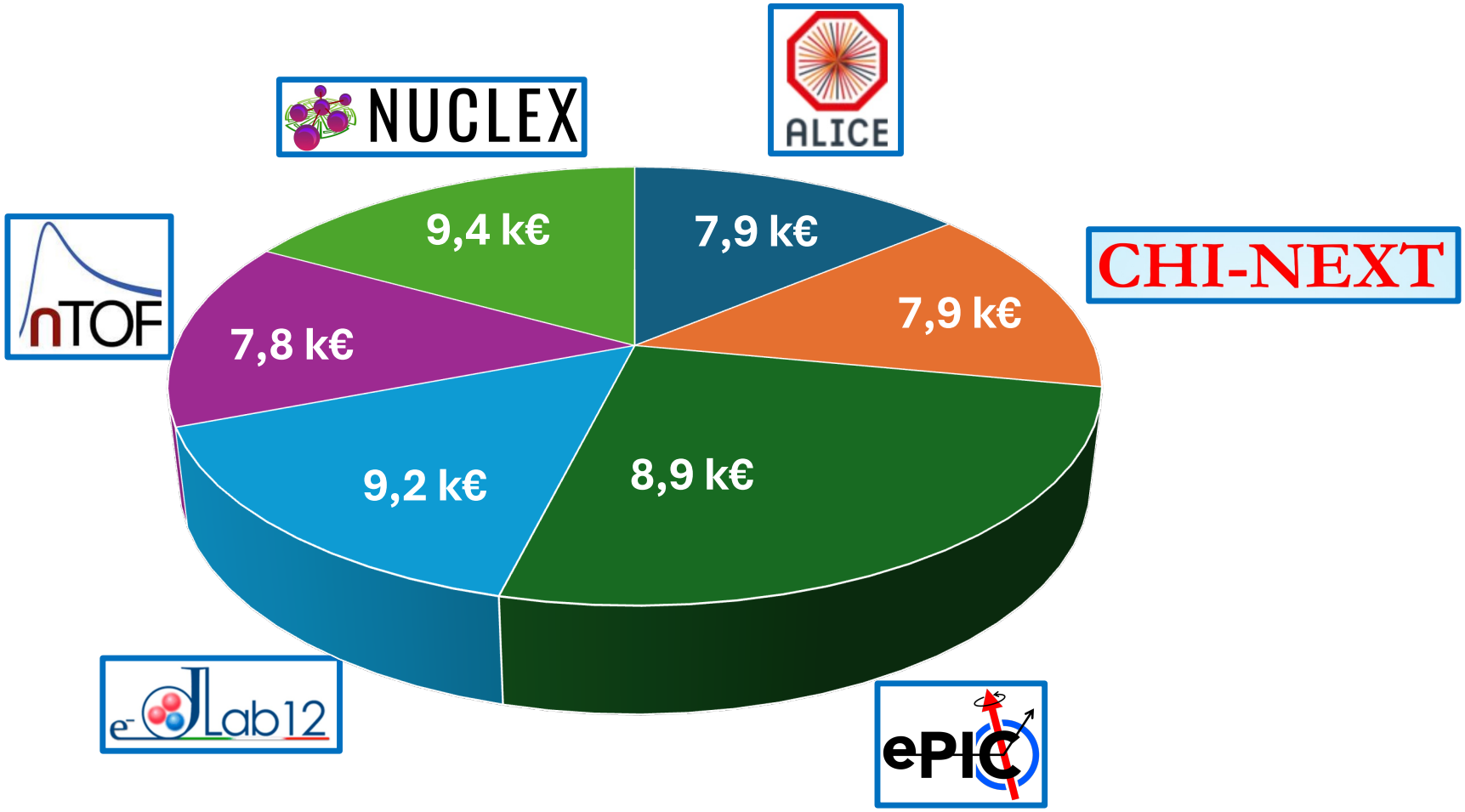
Missioni: 35,2 k€
Inv/Con/App…: 25,0 k€

Missioni: 21,0 k€
Inv/Con/App…: 15,0 k€

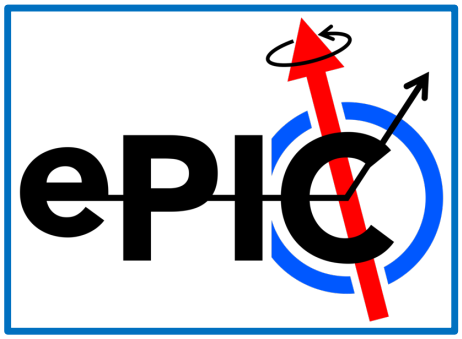
CHI-NEXT

Missioni: 76,5 k€
Inv/Con/App…: 183,5 k€

Rich. Miss/FTE Gr 3 – Sezione di Catania



Gr III – Sezione di Catania INFN



Gr III – Sezione di Catania INFN

Goals of the ALICE experiment

In heavy-ion collisions A-A

- Matter under extreme conditions (early universe)
- Quark Gluon Plasma (QGP) → links to cosmology
  - Thermal and Transport Properties
  - particle production mechanisms

In pp and pA collision systems

- Tests of QCD
- Structure of hadrons and their interactions
- Origin of collectivity
- Origin of antimatter → cosmology and astrophysics

Alice @ INFN-CT

Goals of the ALICE experiment

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In pp and pA collision systems

- Tests of QCD
- Structure of hadrons and their interactions
- Origin of collectivity
- Origin of antimatter → cosmology and astrophysics

Anagrafica @ CT

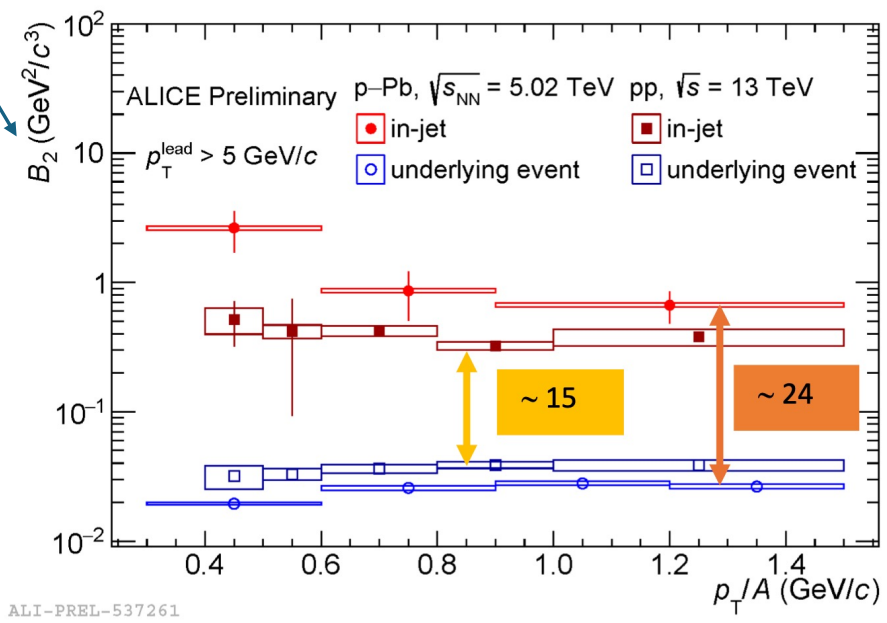
Nome	Contratto	Qualifica	FTE
G. Andronico	Dipendente	Primo Tecnologo INFN	0.2
A. Badalà	Dipendente	Primo Ricercatore INFN	1
G. Gallo	Associato	RTDa PNRR	0
P. La Rocca	Associato	Prof. Associato Univ.	0.8
G. Mandaglio	Associato	Prof. Associato Univ.	0.7
S. Monforte	Dipendente	Primo Tecnologo INFN	0.3
M. Rasà	Associato	Assegnista Univ.	1
F. Riggi	Affiliato	Prof. Ordinario in quiescenza	0
A. Sturniolo	Associato	PhD ME	1
A. Trifirò	Associato	Prof. Associato Univ.	0.7
			5.7

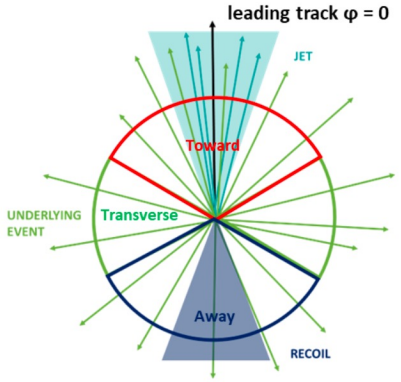
Highlight: Production mechanism for (anti)deuterons

$$B_2 = \left(\frac{3}{2\pi p_{\mathrm{T}}^{\mathrm{d}}}\frac{\mathrm{d}^2N_{\mathrm{d}}}{\mathrm{d}y\mathrm{d}p_{\mathrm{T}}^{\mathrm{d}}}\right) \Big/ \left(\frac{3}{2\pi p_{\mathrm{T}}^{\mathrm{p}}}\frac{\mathrm{d}^2N_{\mathrm{p}}}{\mathrm{d}y\mathrm{d}p_{\mathrm{T}}^{\mathrm{p}}}\right)^2$$

SHM (Statistical Hadronization Model) → thermal and hadro-chemical freeze-out

Coalescence → kinetic freeze-out and correlations in phase-space

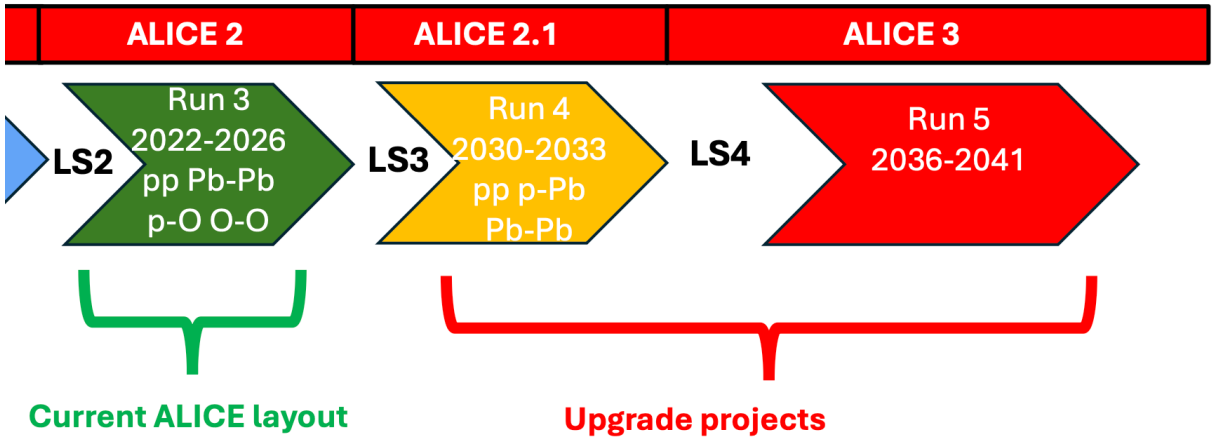




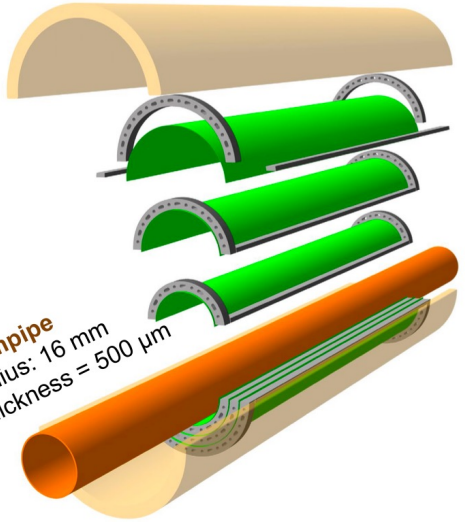
M. Rasà PhD thesis (Dottorato 2025)

- pPb gap > pp gap
- Confirm of coalescence scenario

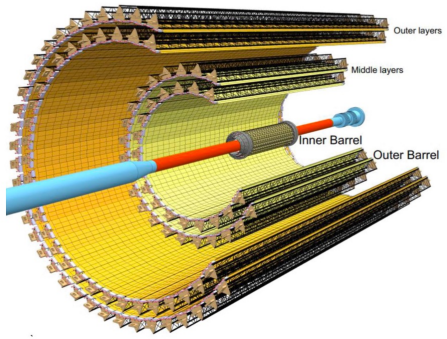
Highlight: Impegni futuri di CT in ALICE



ITS3



ITS2



MAPS : Monolithic Active Pixel Sensors

Important Technology upgrade

- Paola La Rocca – Coord. ITS @ INFN
- Angela – Membro di ALICE CB e ITS B
- Salvo Monforte – Resp. Tier 2

ALICE - Richieste

RICHIESTE	
Missioni	45 k€
Consumo	6,5 k€
Apparati/SPServizi	138 k€
Trasporto	2 k€

SERVIZI	
Elettronica	2 MU (C)
Tec. Avanzate	1 MU (C)
Meccanica	2 MU (NC)
Calcolo	3,6 MU (C*)

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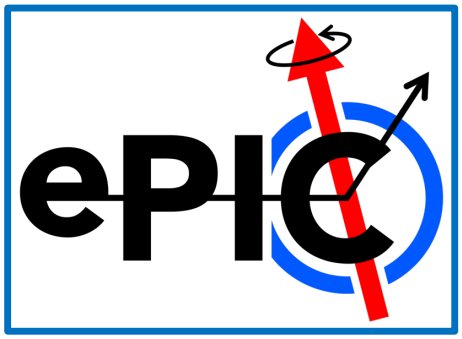
Gr III – Sezione di Catania INFN



CHI-NEXT @ INFN-CT

CHImera– Neutron EXotic Tagging

- LNS CS
  - ✓ Pygmy Dipole Resonances; nuclear clustering with SIBs and RIBs
  - ✓ EoS and Esym
- LNS Tandem
  - ✓ fusion/fission studies; interplays structure/dynamics in CN reactions
  - ✓ γ-decay of Hoyle state in 12C
  - ✓ Tests of NARCOS and SiC detectors
  - ✓ Laser induced reactions of astrophysical interest
- HIL-Varsavia
  - HIC at low energies; 13C neutron decay with NARCOS
- GSI
  - ✓ EoS at suprasaturation density; Hypernuclei
  - ✓ NEULAND construction and experiments
- FRIB
  - ✓ NUSDAF initiative/sinergy w NUCLEX
  - ✓ PDR with radioactive beams

CHI-NEXT

CHI-NEXT @ INFN-CT

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- FRIB
  - ✓ NUSDAF initiative/sinergy w NUCLEX
  - ✓ PDR with radioactive beams

Scientific production and international responsibilities

- 27 Talks at conferences
- 34 publications
- Nature article: P. Mourface et al., Nature Volume 641, pages 339–344 (2025) → Asymmetric fission and shell effects in 238U+Be at E/A= 1 GeV
- Pirrone, Politi, Russotto in SB of R3B collaboration@ GSI

CHI-NEXT

CHI-NEXT @ INFN-CT

Anagrafica @ INFN-CT

Sezione di Catania	9.7 FTE
G. Cardella	1.0
E. De Filippo	1.0
E. Geraci (Ric UNICT)	0.7
B. Gnoffo (Rtd-A PRIN UNICT)	1
M. Papa	0.4
S. Pirrone	0.9
G. Politi (PA UNICT)	1
F. Risitano (AdR PRIN UNIME)	1
M. Trimarchi (PA UNIME)	0.7
R. Cavallaro (Tesista)	1
E. Gambera (PHD UNICT)	1
G. D'Agata (Rtd-A UNICT Sam)	0
N.S. Martorana (Tecn. INFN Sam)	0
A. Barbon (PhD UNICT Sam)	0

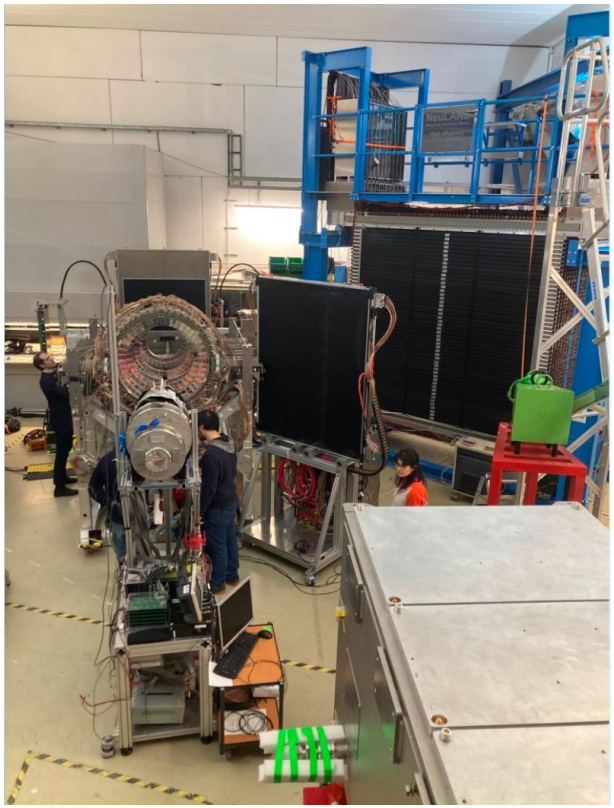
CHI-NEXT

…presso altre divisioni

LNS	5.3 FTE
Sezione di Milano	3.6 FTE
In totale	18.6 FTE

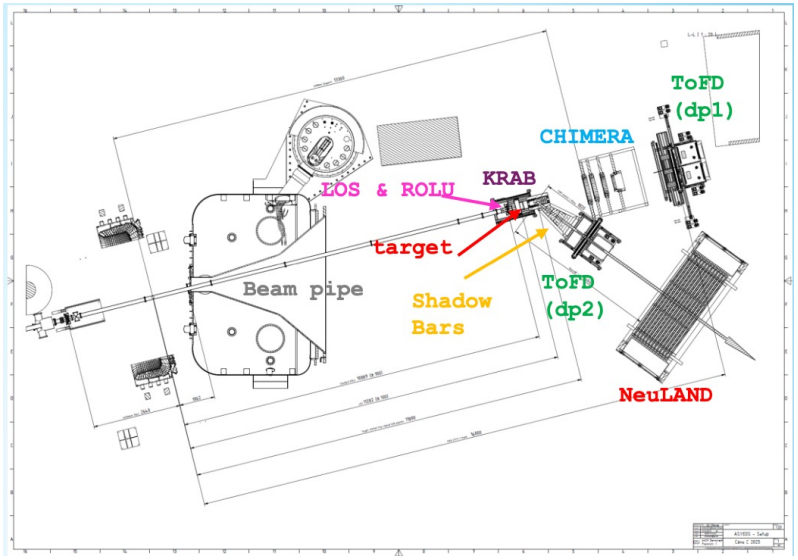
Highlight: GSI Asy-EoS-II experiment

March 2025



^{197}Au+^{197}Au at E/A=250, 400 and 600 MeV

Esym at supra-saturation densities with n/p elliptic and direct flow



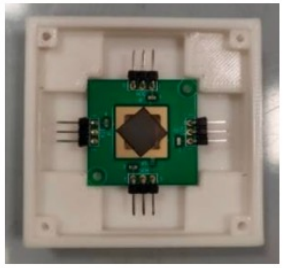
Very successful experiment with high statistics and high quality data

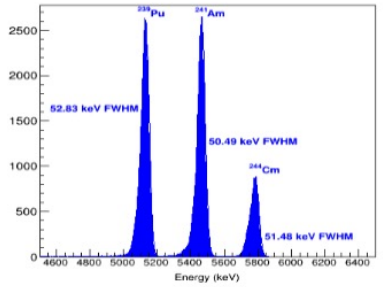
Highlight: SiC detectors

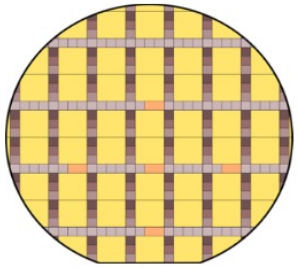
- Test of small chips (160 μm effective thickness) with α source
- Prototypes under design for high intensity beams
  - High time and position resolution (segmentation)
  - ΔE-ToF particle identification

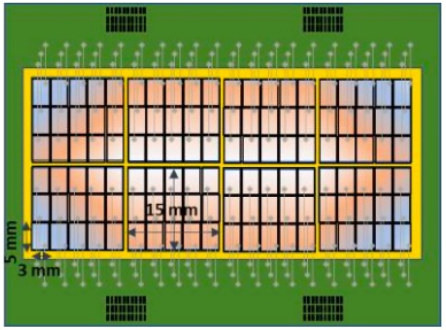
- T-INTENSE experiment @HIL-Warsaw by CHI-NEXT to study time resolution of SiC devices

N. Martorana, E. Geraci in sinergia con SAMOTHRACE e CHI-NEXT



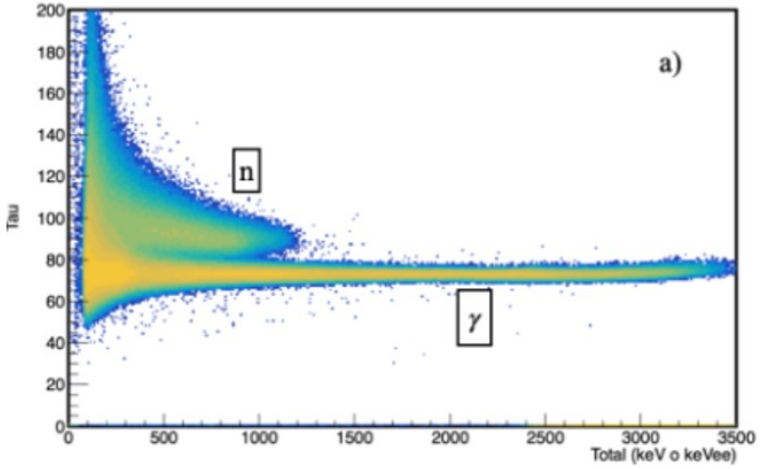


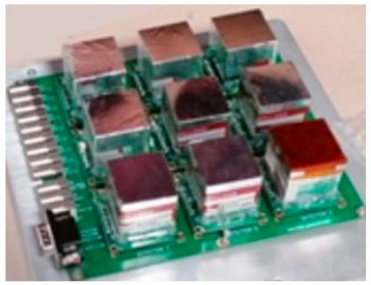


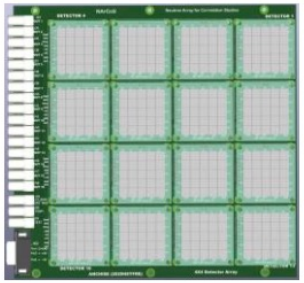


Highlight: NARCOS

- Solid state neutron detectors w n-γ discrimination
- Modular array of plastic scintillators (EJ276-Green) plus SiPM and fully digital acquisition
  - PSD of n/γ/cp
  - n energy measured with ToF
- Prototypes already available and tests expected at HIL-Warsaw
  - B. Gnoffo and E.V. Pagano, MORENA experiment







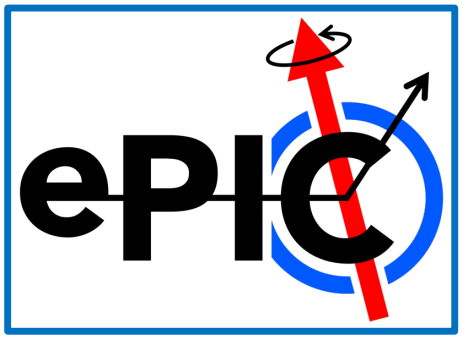
CHI-NEXT: Richieste

RICHIESTE	
Missioni	76,5 k€
Consumo	158 k€
Inventario	25,5 k€

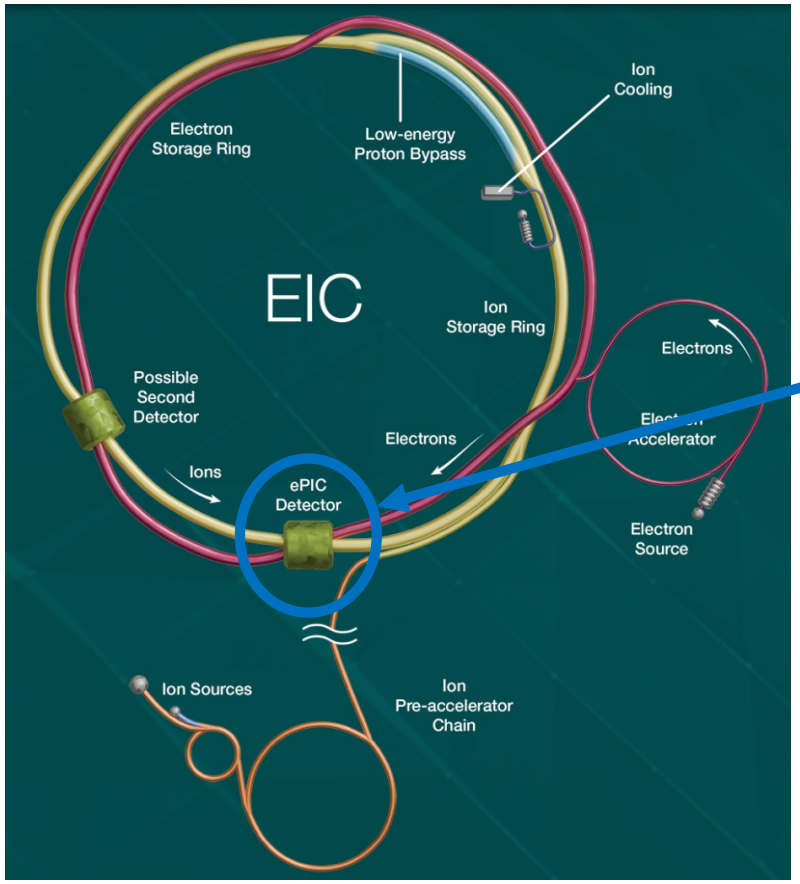
SERVIZI	
Elettronica	9 MU (C)
Tec. Avanzate	3 MU (2 C)
Calcolo	3,6 (C)

CHI-NEXT

Gr III – Sezione di Catania INFN



ePIC @ the Electron-Ion Collider



EIC – Electron-Ion Collider @ USA

Science case

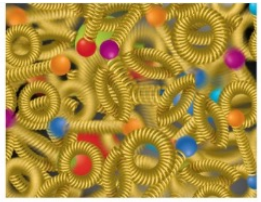
- How do quarks and gluons make up nearly all of the visible matter in the universe?
- 3D imaging of nucleons and nuclei
- Solve the proton spin puzzle
- Saturation and color glass condensate?
- Confinement
- Quark and gluons in nucleons and in nuclei

The EIC will unravel the different contribution from the quarks, gluons and orbital angular momentum

Does the mass of visible matter emerge from quark-gluon interactions?

How can we understand their dynamical origin in QCD?
What is the relation to Confinement

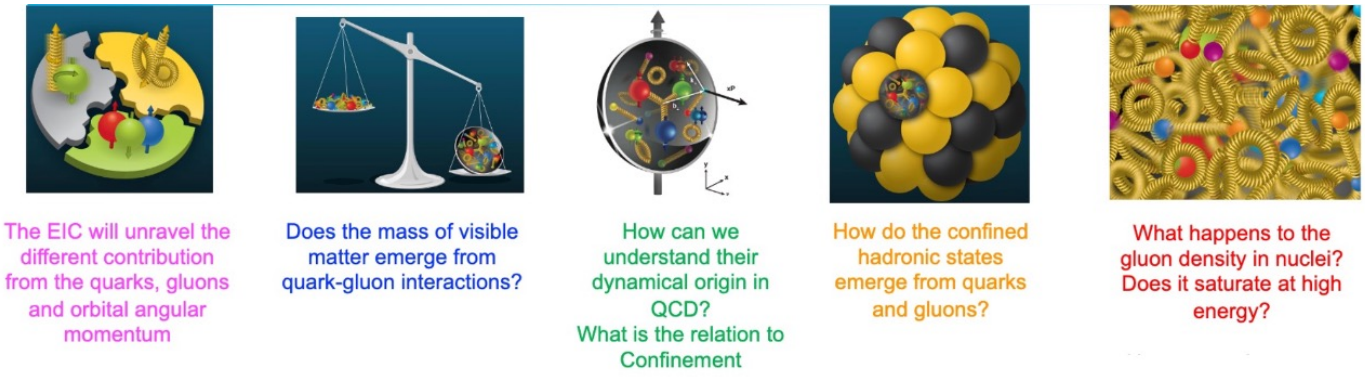
How do the confined hadronic states emerge from quarks and gluons?



What happens to the gluon density in nuclei? Does it saturate at high energy?

ePIC @ INFN e CSN3

- *Progetto di punta per la CSN3 (insieme ad ALICE3*
- *Ampio spazio per giovani: scienza e tecnologia (rouli di responsabilità ancora disponibili)*
- *Sinergie possibili con altre sigle*



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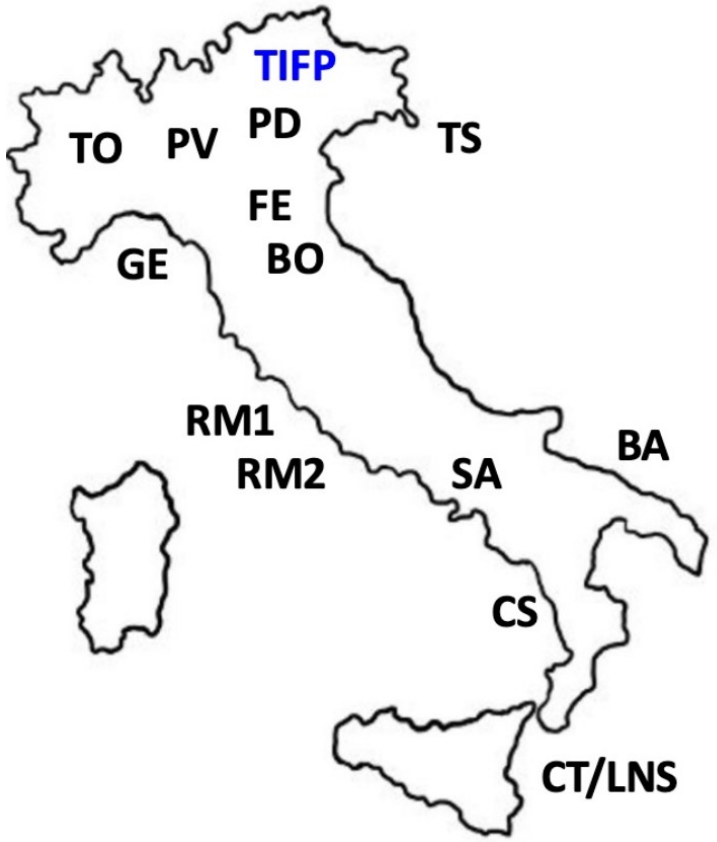
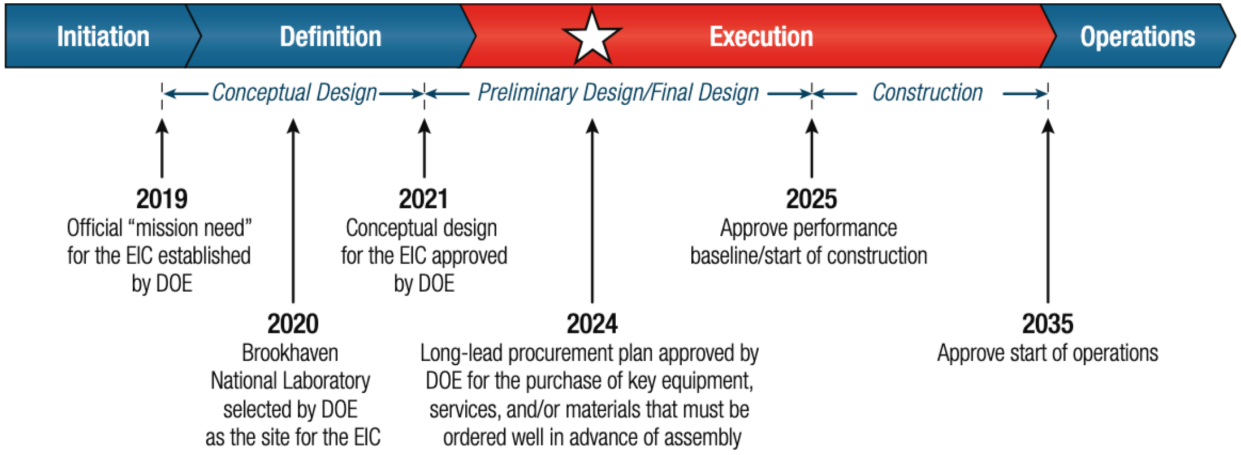
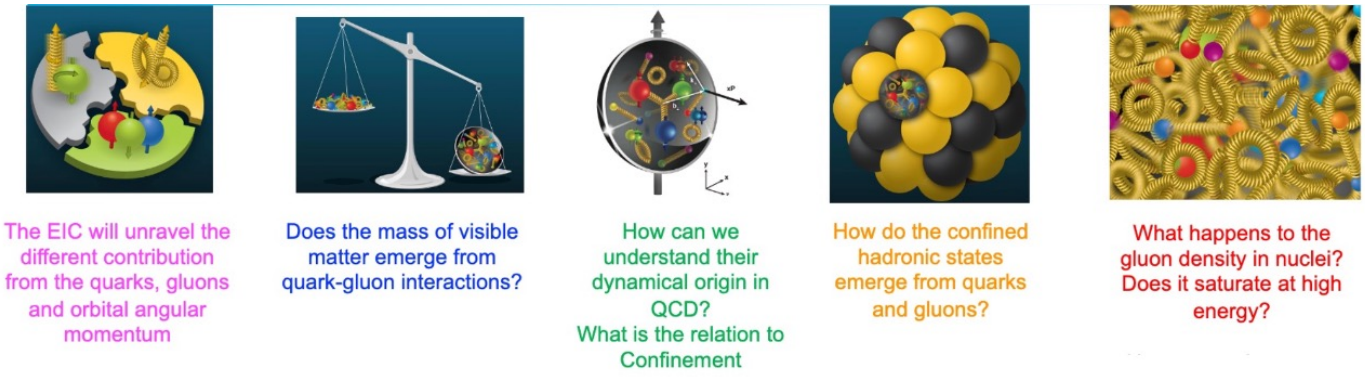


ePIC - Timeline





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ePIC @ INFN-CT

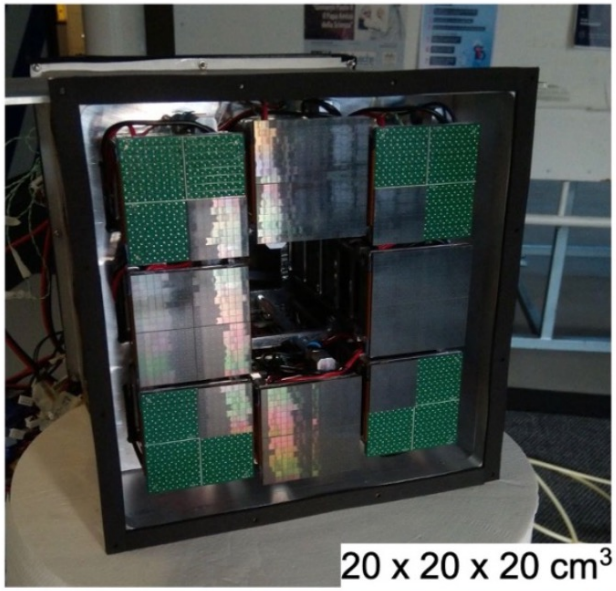
- **2023-2025** partecipazione con poche persone ad attività di test in ambito di sviluppo dRICH ed μRWell (sinergia con JLab) + sinergia con ALICE per Vertex detectors

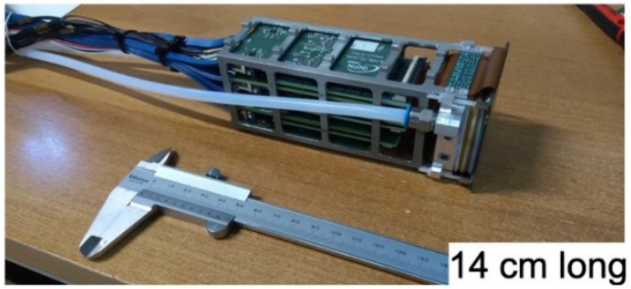
ePIC @ INFN-CT

- **2023-2025** partecipazione con poche persone ad attività di test in ambito di sviluppo dRICH ed μRWell (sinergia con JLab) + sinergia con ALICE per Vertex detectors
- CT impegnata nel ruolo di outreach - evento «Vi presento ePIC» a Catania nel mese di **Aprile 2025** con significativa partecipazione da scuole superiori
- **2025-2026** anno di definizione del ruolo nell'ambito della collaborazione (che si vuol far da grandi?)
  - Contributi al physics case (simulazioni, ecc.)
  - Su quali contributi hardware focalizzarsi? (μRWell? dRICH? Vertex detectors?...)
  - Scambi continui RL-RN per rafforzare la sigla in sede CT
  - Sinergie con JLab ed Alice (e non solo) importanti

dRICH @ ePIC

- SiPM for dRICH detector
  - ~5000 SiPM chips by Hammamatsu (S13 and S14)
  - Partecipazione a test per QA (stazione test @ CT con CS e SA?)
  - Beam tests, irradiation campaigns, energy scan and IV curves after irradiation, tests of first prorotypes at low temperatures
- Possibile attività sinergica in sezione CT (SiPM @ SPB2, JUNO, JLab12, …)





μRWELL e G-μRWELL @ ePIC

Test Beam @CERN-PS T10 - November 2024

5 GeV muons beam

Gas mixture:

- Ar:CO_2:CF_4 45:15:40

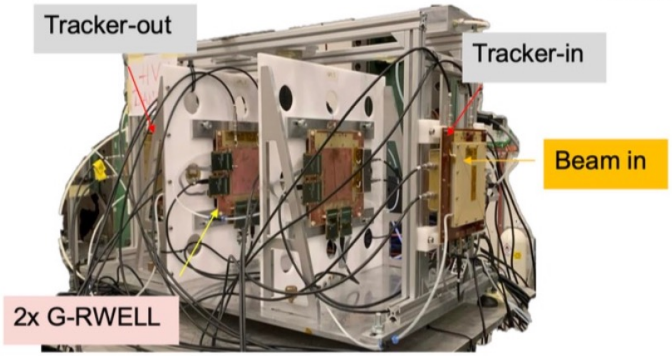
Tracking:

- hybrid G-RWELL with 2D R/O an μ-RWELL with 2D R/O

Detectors Under Test:

- 2 hybrid G-RWELL with 2D R/O

Theta: 0, 15, 30, 45



Strong connection with JLAB12

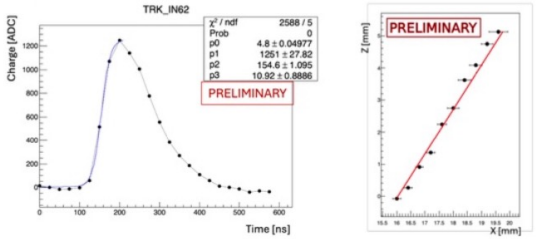
Catania contribution: development data-analysis tools

Spatial resolution study at 30°

- **µTPC:** tracks are reconstructed with the time of arrival of hits and the drift velocity, the cluster's position is the intercept with a plane parallel to the readout

$$t_{hit} = t_0 - t_{FD} \qquad z_{hit} = v_{hit} t_{hit} \qquad x_{\mu TPC} = \frac{z_{rout} - b}{a}$$

Signal sampling for each APV25 channel



*Altro possibile contributo di CT al progetto – 2026 anno di **valutazione***

ePIC – Anagrafica e Richieste

Nome	Contratto	FTE
Tuvè Cristina	Incarico di ricerca	0.5
Andronico Giuseppe	dipendente tecnologo	0.2
Bondí Mariangela	dipendente tecnologo	0.2
Riggio Antonio	dottorando	0.2
Mandaglio Giuseppe	Incarico di ricerca	0.2
Verde Giuseppe	dipendente	0.3
La Rocca Paola	Incarico di ricerca	0.1
Pirrone Sara	dipendente	0.1

Totale **1,8 FTE**

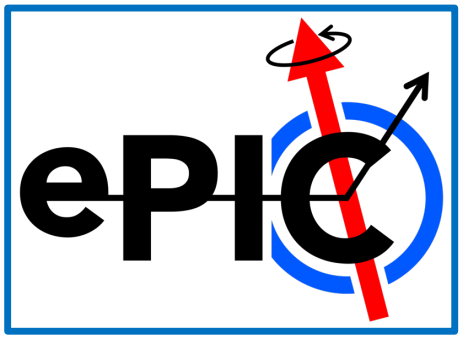
RICHIESTE

Missioni 16 k€ (6 k€ SJ)

SERVIZI

Tec. Avanzate 1 MU (1 C)

Gr III – Sezione di Catania INFN



JLab12 @ INFN-CT

- Nucleon and nuclear structure
- Neutron skin thickness
- Origin of Spin
- Hypernulei and their interactions with nucleons
- Meson and Baryon spectroscopy
- Quark dynamics
- 3D imaging
- Dark Matter search

Courtesy of M. Bondì (INFN-CT)

JLab12 @ INFN-CT

- Nucleon and nuclear structure
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Catania – Messina leadership roles

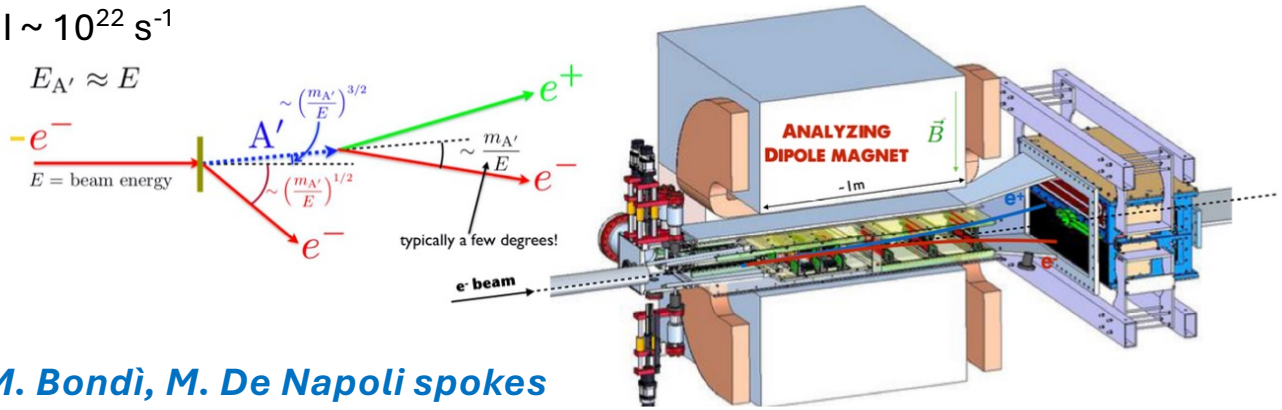
- Double Deeply Virtual Compton Scattering - M.Bondì co-spoke
- Physics case for possible future Jlab upgrade di JLab22: XYZ spectroscopy, secondary beams, … - A. Pilloni et al.
- AiDAPT project: AI and detector unfolding from data . A. Pilloni
- R&D on uRWELL (M. Bondì)
- R&D on SRO (M. Bondì) → joining the NUSDAF initiative with NUCLEX and CHI-NEXT
- BDX: Beam Dump eXperiment: 2 co-spokes (M. Bondì, M. De Napoli) – important activity expected in 2026

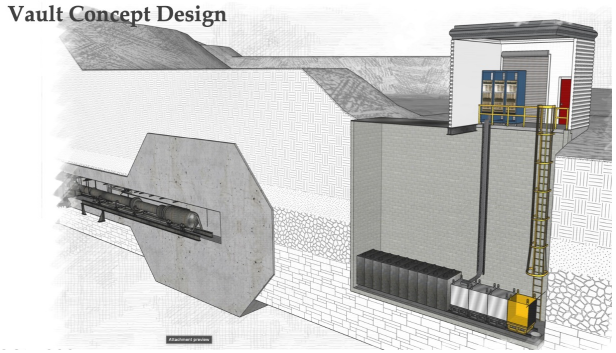
13 Pubblicazioni
5 Invited Talks

BDX – Beam Dump eXperiment

E~11 GeV

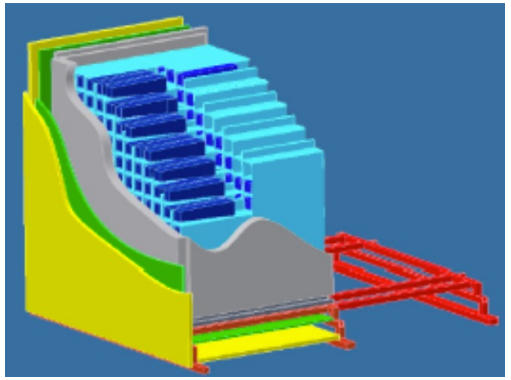
I ~ 10^{22} s^{-1}





M. Bondì, M. De Napoli spokes

- Exp approvato dal PAC nel 2028 – parassita di exp MOLLER
- Progetti per hall e vault in corso a Jlab
- Calorimetro: molti cristalli necessari - 480 BGO da BGOOD @ Bonn + 800 PbWO da PANDA + 1200 PbWO da PRAD exp @ JLAB
- Veto detector: 2 strati attivi di scintillatori + 1 strato passivo Pb



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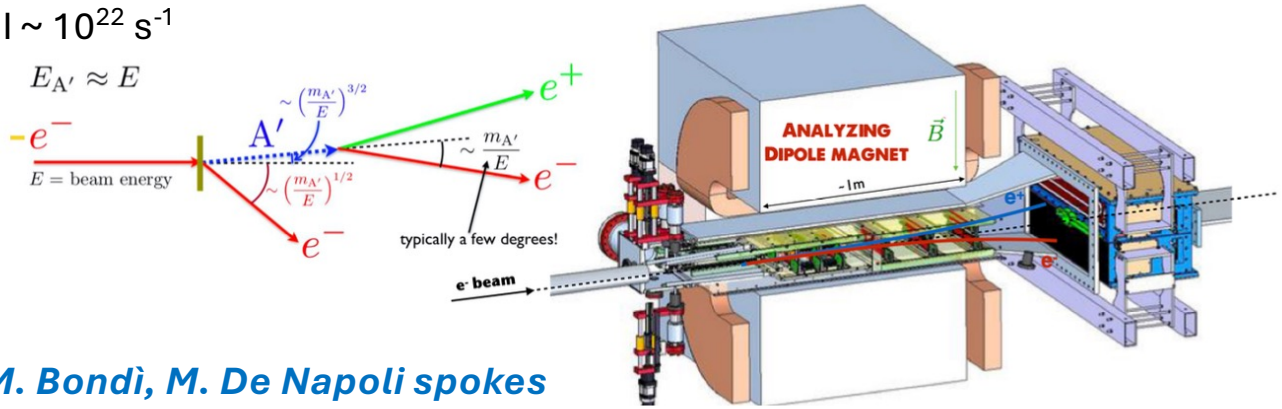

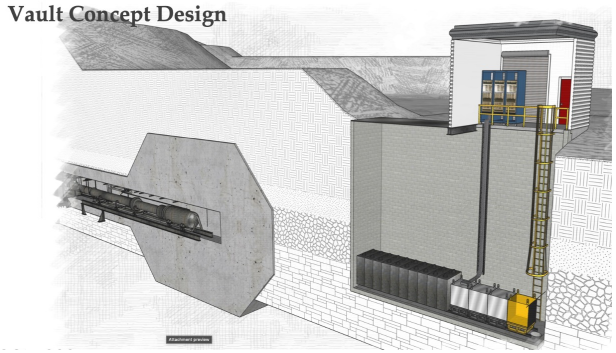

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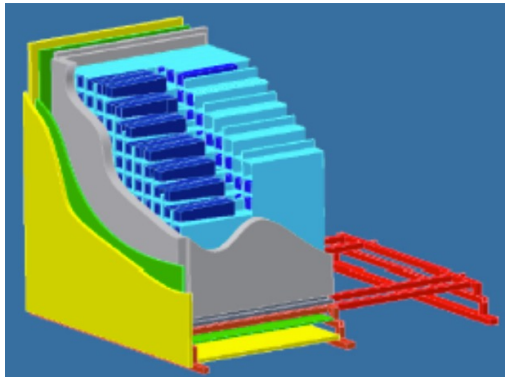

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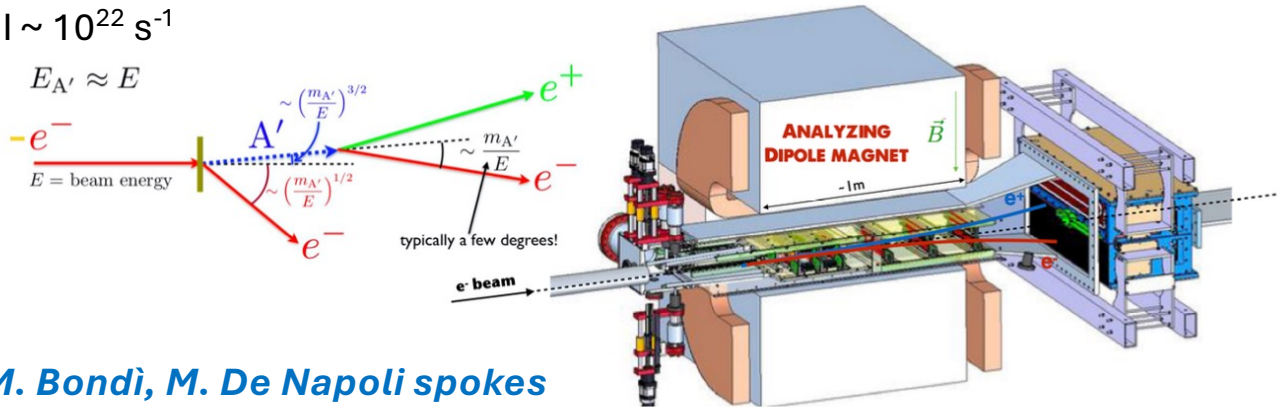
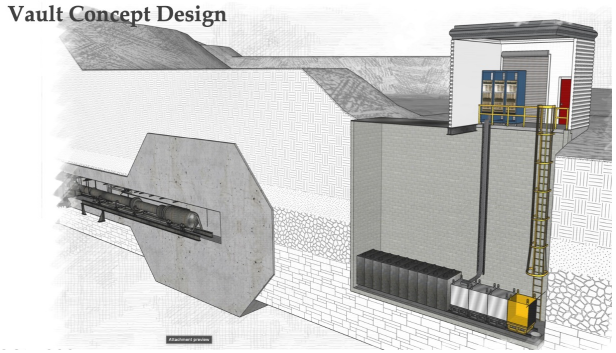
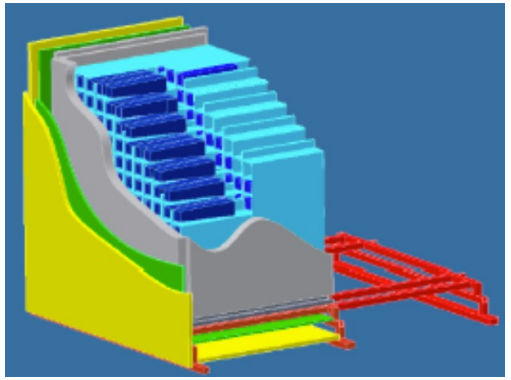




M. Bondì, M. De Napoli spokes



Test di SiPM, FEE ed altro → Spazio laboratorio
(Sinergia con altre sigle in CSN2 e CSN3)

- Veto detector: 2 strati attivi di scintillatori + 1 strato passivo Pb

JLab12 : Anagrafica e Richieste

RICHIESTE	
Missioni	34 k€
Consumo	8,5 k€
Inventario	2 k€
Apparati	45 k€

SERVIZI	
Elettronica	2 MU (C)
Tec. Avanzate	2 MU (C)
Meccanica	2 MU (C)

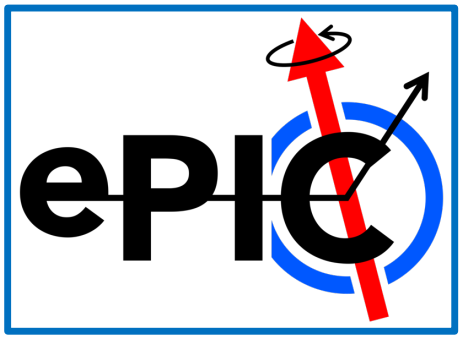
Anagrafica

Nome	Qualifica	FTE
Giorgio Arcadi	Professore Associato	0.5
Mariangela Bondì (RL)	Tecnologo	0.6
Mazio De Napoli	RTDB	0.0* *(effettiva 0.3)*
Giorgio Foti	Dottorando	1.0
Alessandro Pilloni	Professore Associato	0.5
Nunzio Randazzo	Dirigente Tecnologo	0.3
Antonino Riggio	Dottorando	0.8
Cettina Sutera	Associato Senior	0.0**
Vincenzo Bellini	Affiliato	0.0**

FTE ~ 3.70 (4.0)

* Personale in congedo
** Over 70

Gr III – Sezione di Catania INFN



nTOF @ INFN CT

n_TOF is a **spallation** neutron source based on **20 GeV/c protons** from the CERN PS hitting a **Pb block**

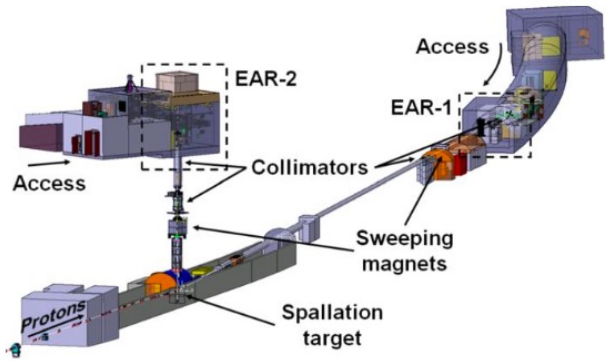
7-8.5 $\cdot 10^{12}$ protons (1.2 s repetition rate)

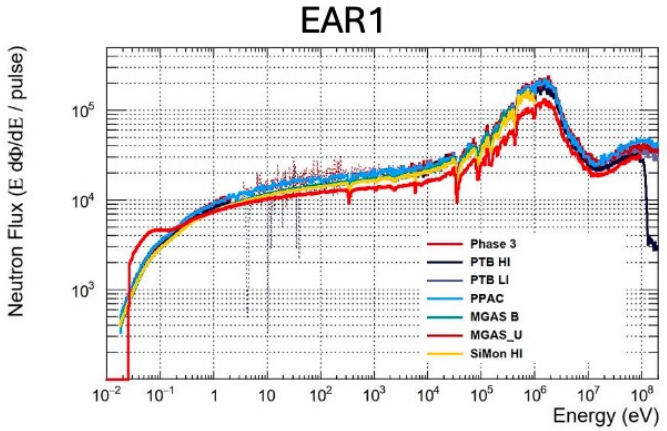
⬇

2 $\cdot 10^{12}$ neutrons

⬇

12 decades: mV to GeV





Sigla storica in CSN3: ~ 23 anni

Research topics

- *Neutron capture reactions* (n,γ), (n,cp) and (n,fission)
- *Nuclear physics and astrophysics* (nuclear structure and nucleosynthesis)
- *Nuclear technology* (e.g. actinides transmutation)

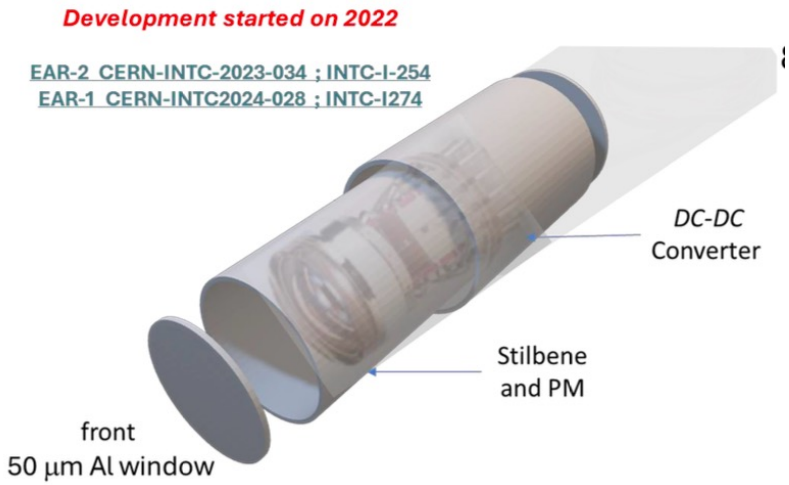
nTOF @ INFN CT

Nome	Qualifica	Associazione	Percentuale
A. Musumarra	Prof. Associato	Inc. Ricerca	100%
M.G. Pellegriti (RL)	1° Ricercatore		70%
D. Papanikolaou	Dottorando UNICT	Ass. Dottorandi	100%
			2.7 FTE

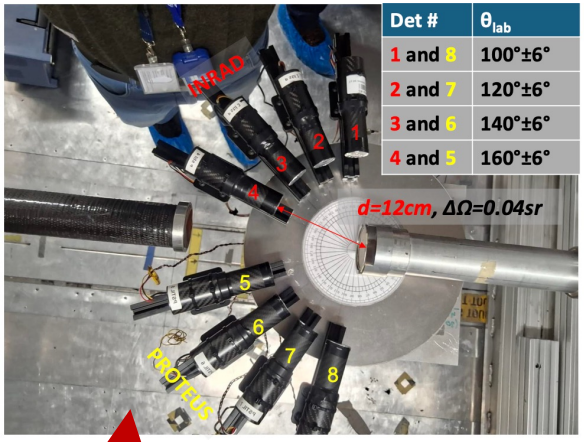
*Altre sezioni: BA, BO, LNF, LNL, LNS, PG, PV, RM1, TO, TS

Highlights sull'attività scientifica

- Sviluppo di un nuovo array di rivelatori allo stilbene
- Cilindro 1" x 1" – piccolo volume → importante per la fisica di nTOF
- Ottima n-gamma discrimination
- 8 moduli già disponibili (INRAD e PROTEUS) + 10 moduli da sviluppare entro il 2025



nTOF @ INFN CT



Det #	θ_{lab}
1 and 8	100°±6°
2 and 7	120°±6°
3 and 6	140°±6°
4 and 5	160°±6°

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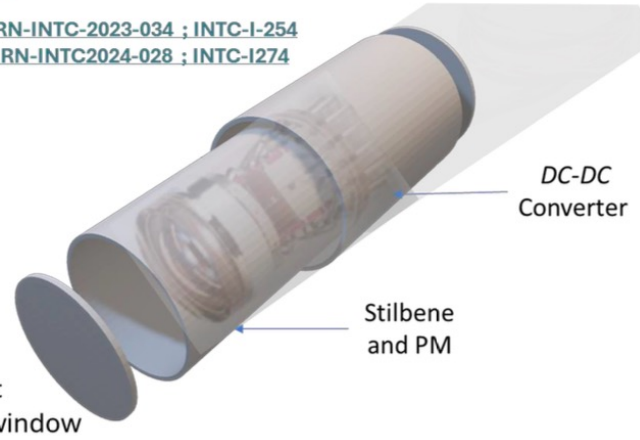
- 8 moduli già disponibili (INRAD e PROTEUS) + 10 moduli da sviluppare entro il 2025

Development started on 2022

EAR-2 CERN-INTC-2023-034 ; INTC-I-254
EAR-1 CERN-INTC2024-028 ; INTC-I274



nTOF : Richieste

2026 INFN –CSN 3- FUNDS REQUEST	
Missions	21 keuro
n. 2 UFD detectors ** fast plastic scintillator (1 deuterated+1 protonated) + n. 2 PMT	12 keuro
Material cost	3 keuro

*** A first prototype is at CERN (to be tested) → EAR 2 - flux monitoring (1-100 MeV) based on n-^{12}C scattering*

Highlights sull'attività scientifica

- Sviluppo di un nuovo array di rivelatori allo stilbene
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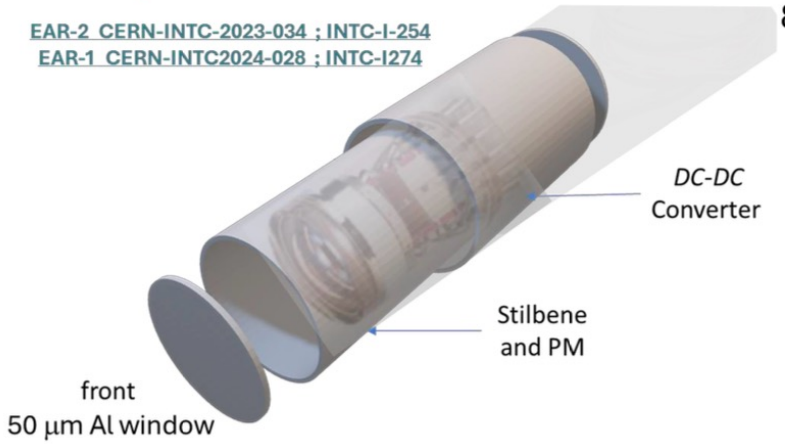
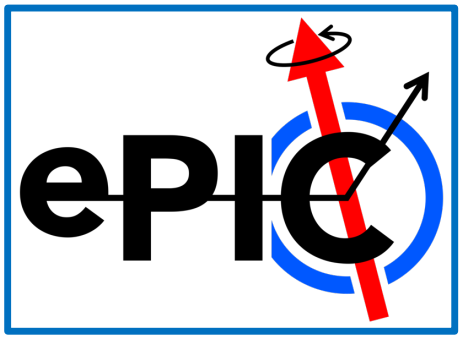


Gr III – Sezione di Catania INFN



NUCLEX @ INFN-CT

Anagrafica (3,7 FTE)

- E. Lanza 0 %
- I. Lombardo 100 %
- M.G. Pellegriti 20 %
- L. Redigolo 100 %
- M. Russo 80 %
- G. Verde 70 %

Altri divisioni coinvolte:

FI, LNL, NA, PD

Physics program

- **Nuclear EoS and Symmetry energy** with FAZIA and other equipment

- **Nuclear structure, dynamics and astrophysics in low energy reactions** with OSCAR, GARFIELD, ACTAR, ATS

15 Articoli su Riviste (solo 2024)
20 Talks a conferenze internazionali (8 invited)

NUCLEX – programma 2026

1. **Isospin transport and Equation of State**
   - Esperimento approvato: INDRA-FAZIA@GANIL: ^{16}O, ^{18}O, ^{20}O + d → ^{6}Li + X, X* - evolution of α-clusters in n-rich nuclei → partecipazione a setup e presa dati
   - FRIB - NUSDAF: continuazione progetto in synergia con CHIRONE* (EoS), NUMEN (DCE and Few-Body systems), JLAB12 (FEE and SRO@FRIB)
   - FRIB - Esperimento approvato: 56Ni+58Ni, 70Ni+64Ni E/A=175 MeV - setup e presa dati

2. **Nuclear structure, dynamics and astrophysics at low energies**
   - ACTAR@GANIL: x-section α(^{8}Li,^{11}B)n – Experiment in 2024 to be finished (→ 2027?)
   - OSCAR@LNL: nuclear structure experiments at small accelerators (AN2000, CN)
   - OSCAR@OCL (Oslo): ^{24}Mg(α, α')^{24}Mg* - C burning in stars (Synergy with ERNA/CSN3 on nuclear astrophysics)

NUSDAF: Nuclear Structure, Dynamics and Astrophysics @ FRIB

Slide x P. Giubellino @ GE

1. SYMEOS: Symmetry energy and EoS
$E_{sym}(\rho)$ at supra-saturation density with HIC
Metodo: flow, femtoscopy, resonance decay
Astrofisica: neutron star matter, GW
Sinergie sigle: Nucl_ex, Chirone

2. RIBDCE: Double-Charge Exchange with RIBs
Nuclear matrix elements in $0\nu\beta\beta$ decay
Metodo: double charge exchange (DCE) with RIBs
Atrofisica: 3-body forces in EoS and $E_{sym}(\rho)$
Sinergie sigle: Numen, Nucl_ex

New additional initiative

5. THEOF: Theoretical Nuclear Physics at FRIB (CSN4)
MONSTRE and NUCSYS initiatioves (N- and few-body physics)
Method: modeling, simulations, algorithms, data analysis
Synergies: Monstre, Nucsys, all CSN3 experiments

6. SYSTERSE: SYnergic Stategy for fuTure ElectRonics and Streaming rEadout solutions)
Method: new FEE and SRO solutions
Synergies: NUCLEX, Chi-Next, JLAB12, ePIC
General need in USA for FRIB-JLAB synergy on FEE and DAQ

3. NUSYC: Nuclesynthesis and Clusters
Explosive nucleosynthesis and r-process, Clusters
Method: indirect methods, THM and ANC w RIBs
Atrophysics: novae, supernovae, neutron stars
Synergies: Asfin, Chirone, Nucl_ex

4. GASPEC: γ and charge particle spectroscoopy and collective excitations
Evolution of shell model, deformations collective excitations towards the drip-lines
Method: γ and charged particle spectroscopy
Atrophysics: EoS and $E_{sym}(\rho)$, nucleosynthesis
Synergies: Gamma, Chirone, Nucl_ex

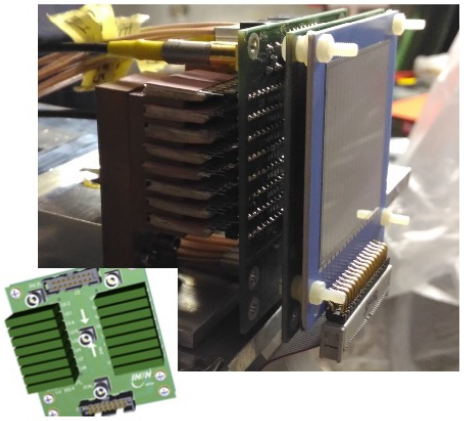
NUSDAF update in breve – ***Sett 2024- Giugno 2025***

- ***Meeting INFN-FRIB*** ad East Lansing: 5 e 6 settembre 2024 (Verde, Giubellino, Bettoni, Ciuchini, Direzione FRIB)
- ***LoI NUSDAF sottomessa al PAC di FRIB*** in ottobre 2024: risposta molto positiva del PAC in Marzo 2025
- ***Draft di MoU*** da parte di G. Verde (INFN) e da A. Gade (FRIB) – inviata a Diego Bettoni
- ***Primo meeting nazionale*** di collaborazione NUSDAF
  - Catania, 22-24 Ottobre 2025 (aperto a tutti)
- ***Primo esperimento (per fisica ed esplorativo)*** previsto ad FRIB in primavera 2026
  - ^{56}Ni+^{58}Ni, ^{70}Ni+^{64}Ni E/A=175 MeV (fasci radioattivi: ^{56}Ni e ^{70}Ni)
  - Studio dell'energia di simmetria nella EoS a densità sopra-saturazione
  - Test di elettronica e rivelatori INFN (stand-alone e DAQ coupling con rivelatori FRIB)
  - Inizio montaggi a settembre/ottobre 2025

NUCLEX-OSCAR @ INFN CT

4 Blocchi da destinare ad LNL per esperimenti con GARFIELD e in standalone alle piccole macchine

OSCAR



- 16 Hamamatsu S-3590 **300 μm silicon pads** (1cmx1cm active area) $\approx$ 0.125 *cm* ceramic frame – readout by 8 Hamamatsu H4083 charge sensitive pre-amplifiers with 22mV/MeV
  1 module 4x4 pads
- **20 μm SSSSD** : 16 vertical strips circa 2mm di larghezza ognuna with pre-amplifiers Net Instruments NPA-16FE (16 chs) with sensitivity 45 mV/MeV

4 articoli nel 2024-2025: piccoli esperimenti con altro profitto

NUCLEX@CT - RIchieste

RICHIESTE FINANZIARIE

- Missioni 35,2 k€ (di cui 12 SJ)
- Consumo ~ 20 k€ (completamente 2 moduli OSCAR, da condividere con NA)
- Trasporto 5 k€ (modulo OSCAR @ FRIB, SJ)

SERVIZI

- **Elettronica:** 3 MU (C)
- **Tecnologie Avanzate:** 1 MU (C)

Physics program

- **Nuclear EoS and Symmetry energy** with FAZIA and other equipment
- **Nuclear structure, dynamics and astrophysics in low energy reactions** with OSCAR, GARFIELD, ACTAR, ATS

15 Articoli su Riviste (solo 2024)
20 Talks a conferenze internazionali (8 invited)

Richieste Dot3 – Metabolismo

Missioni	Consumo	Seminari	Pubblicazioni	Inventario
19	14	3	6	22

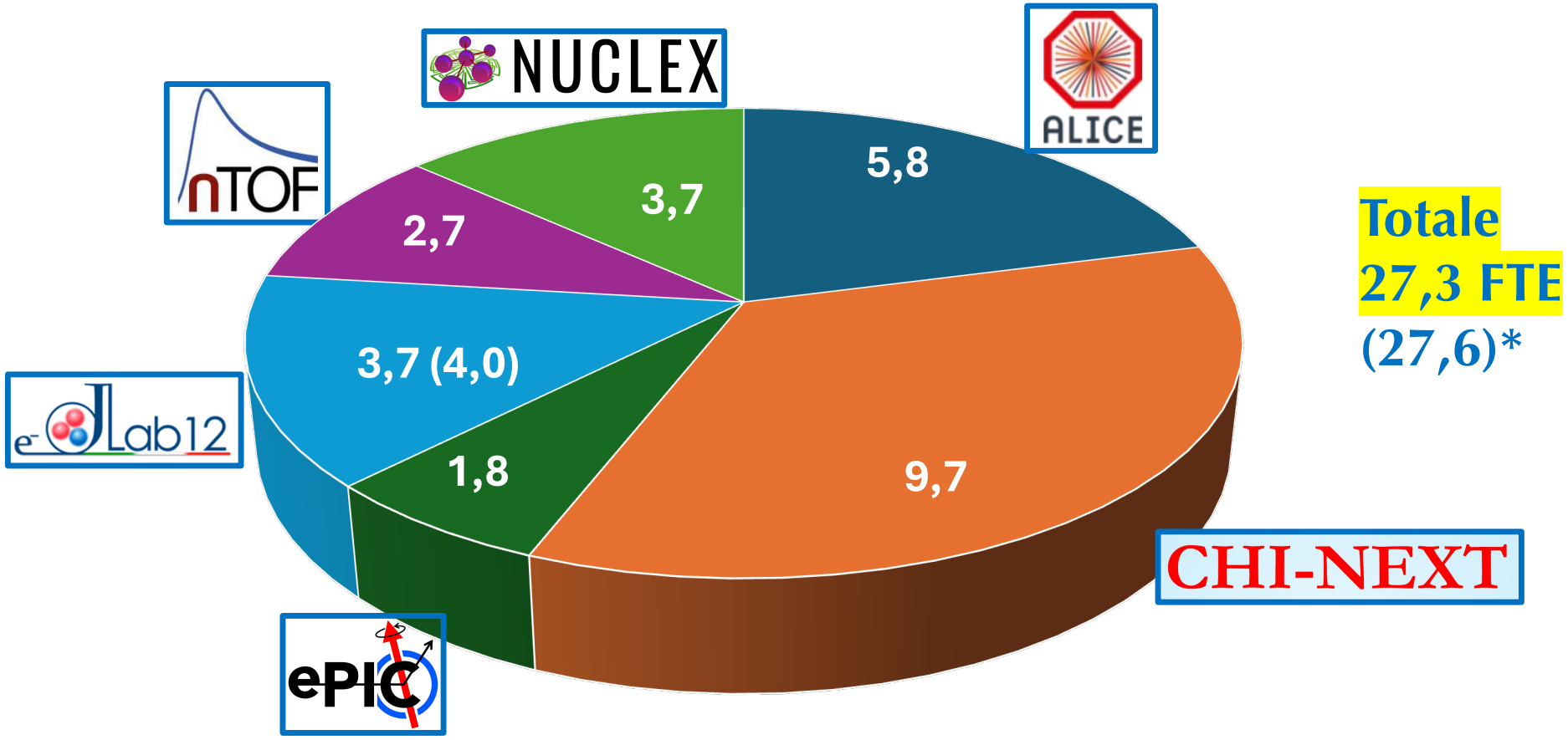
Ruoli speciali

- S. Pirrone
  - consigliere SIF
  - presidente CPO-SIF
  - componente Council EPS
  - Componente Scientific Advisory Committee EPJ
  - referee Calcolo NON-LHC CSN3
- A. Badalà, I. Lombardo: referee esterni
- …fatemi sapere se c'è altro…

Riunione CSN3 Giugno 2026

Catania (probabile 3° sett. Di Giugno)

3 – Sezione di Catania



Totale
27,3 FTE
(27,6)*

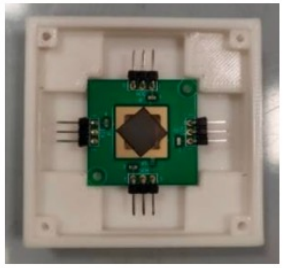
backup

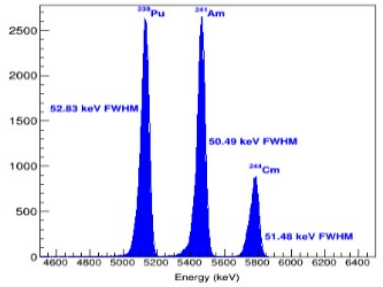
Highlight: SiC detectors

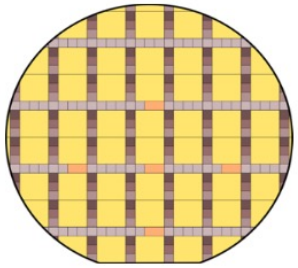
- Test of small chips (160 um effective thickness) with alpha source
- Prototypes under design to sustain high intensity beams
  - High time resolution
  - Position resolution (segmentation)
  - DE-ToF particle identification

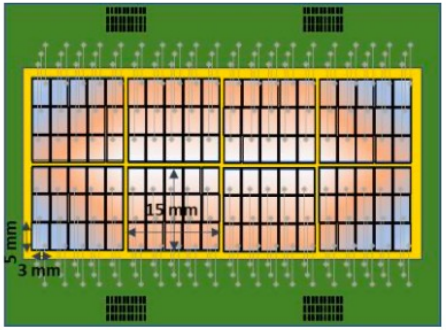
- T-INTENSE experiment @HIL-Warsaw by CHI-NEXT to study time resolution of SiC devices

N. Martorana, E. Geraci in sinergia con SAMOTHRACE e CHI-NEXT









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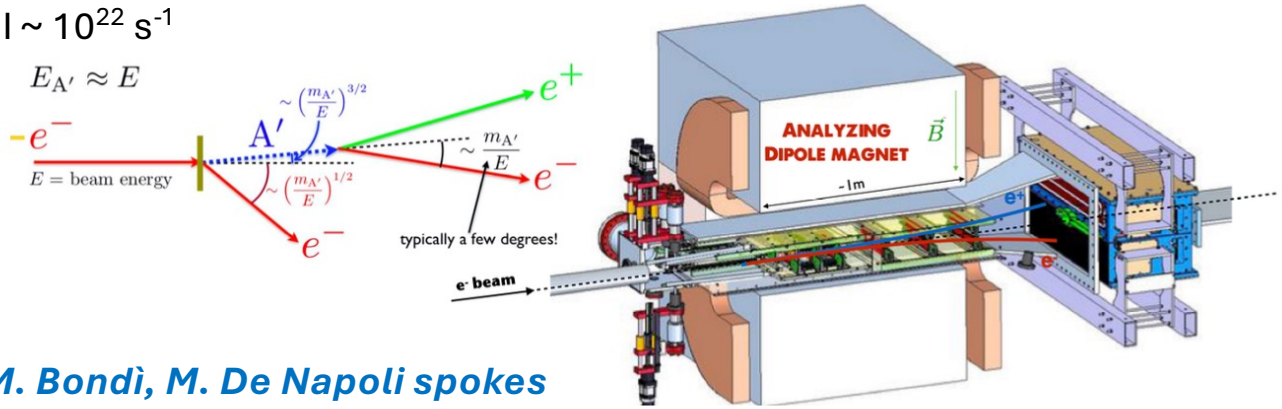
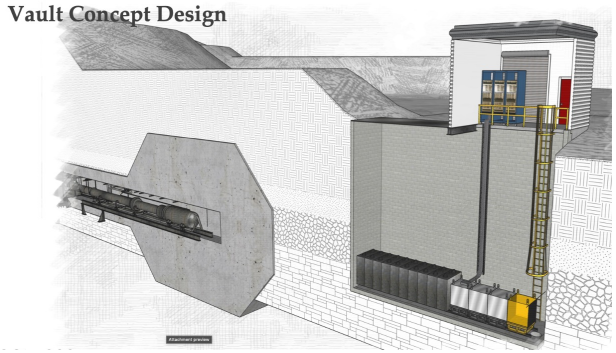
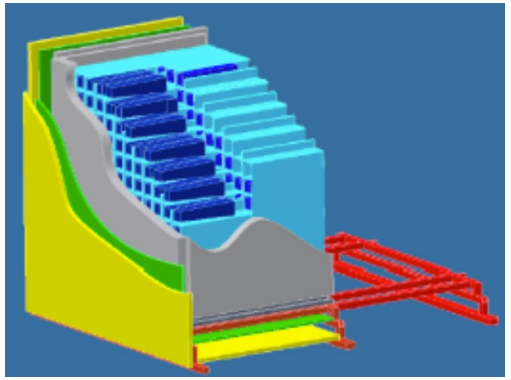




M. Bondì, M. De Napoli spokes



- Simulazioni MC per progettazione, risposta rivelatori e segnali, produzione neutrini, ecc. a carico di CT e ME (Bondì, Pilloni, Arcadi, Fulci)
- Cristalli BGO – autunno 2025 – inizio 2026
- Test SiPM per VETO detector – 2026
- Test FEE e simulazioni…

Molto lavoro in vista presso la Sezione di CT → questione spazi e sinergie

Gr III – Sezione di Catania INFN

NUSDAF : iniziativa sinergica fra diverse sigle di CSN3 e iniziative specifiche di CSN4 Nuclear Structure, Dynamics and Astrophysics at FRIB

NUCLEX

Altri divisioni coinvolte:

FI, LNL, NA, PD

Physics program

- **Nuclear EoS and Symmetry energy** with FAZIA and other equipment
  - ✓ Experiments: GANIL (France), **FRIB** (USA), RAON (South Korea)
- **Nuclear structure, dynamics and astrophysics in low energy reactions** with OSCAR, GARFIELD, ACTAR, ATS
  - ✓ Experiments: LNL (Italy), WMU/FRIB (USA), OCL (Norway), GANIL (France)

15 Articoli su Riviste (solo 2024)
20 Talks a conferenze internazionali (8 invited)

SIGLA	TA Richiesto	TA Approvato	E Richiesto	E Approvato	M Richiesto	M Approvato	C RIchiesto	C Approvato
ALICE	1	1	2	2	2		3,6	3,6
CHI-NEXT	2	2	9	9			3,6	1,8
EPIC	1	1			0		0	
JLAB12	2	2	2	2	2	2	0	
NTOF								
NUCLEX	1	1	3	3				