

IFD2015

INFN Workshop on Future Detectors

16-18 December 2015 - Torino - Italy



why?



AULA MAGNA CAVALLERIZZA REALE

- UNIVERSITÀ DEGLI STUDI DI TORINO

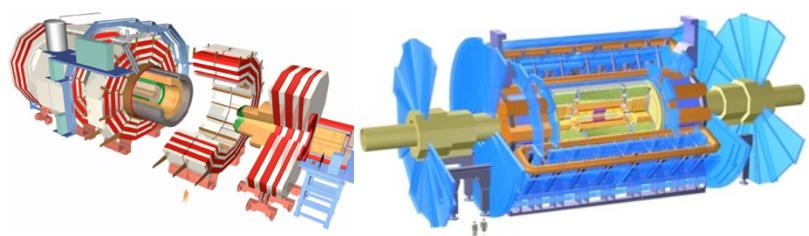
LHC experiments (not only)

common R&D

Nadia Pastrone

CSN1 – Roma, June 4 2013

- Upgrades Fase2 → Premiali 2013
- Horizon 2020
- Open LHCC (RD39, RD42, RD50, RD51 + 2 LoI → RD53)
- USA @ 2013: Snowmass on the Mississippi
- HL-LHC Experiment ECFA Workshop, Aix-les-Bains Oct 2013 & 2014
- **Workshop INFN** Nov 2013 → Mar 2014
- Call CSN5



IFD2014

INFN Workshop on Future Detectors for HL-LHC

Trento, March 11-13, 2014



FONDAZIONE
BRUNO KESSLER



UNIVERSITY
OF TRENTO - Italy

Department of Industrial Engineering



7-8 April 2014
Angelicum - Roma

L'INFN si interroga alla vigilia di importanti input sperimentali (LHC14, 1-ton DM), test-chiave nella decennale ricerca di una fisica nuova, oltre il Modello Standard, alla scala di energia del TeV



1-2 April 2015

LNF INFN

Mid Term



What's Next in Detector Technology ?

Francesco Forti, INFN and University of Pisa

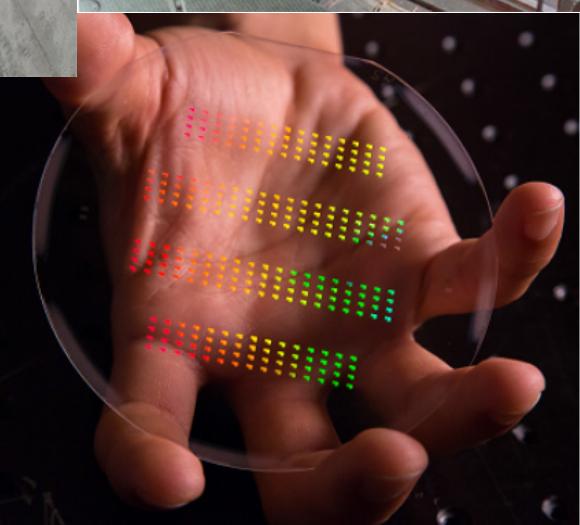
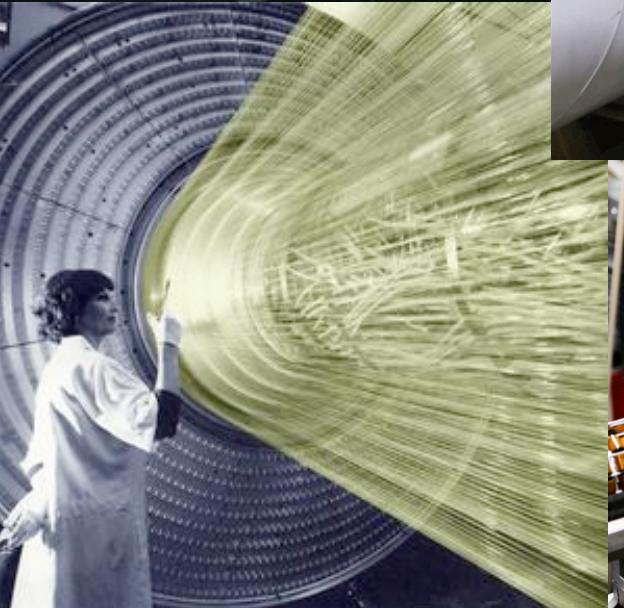
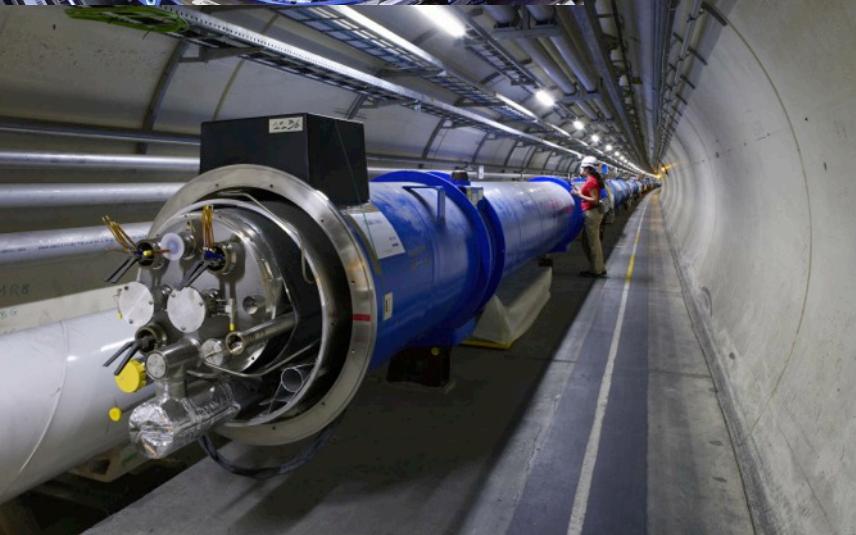
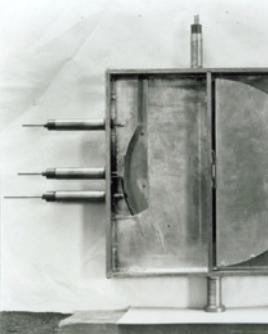
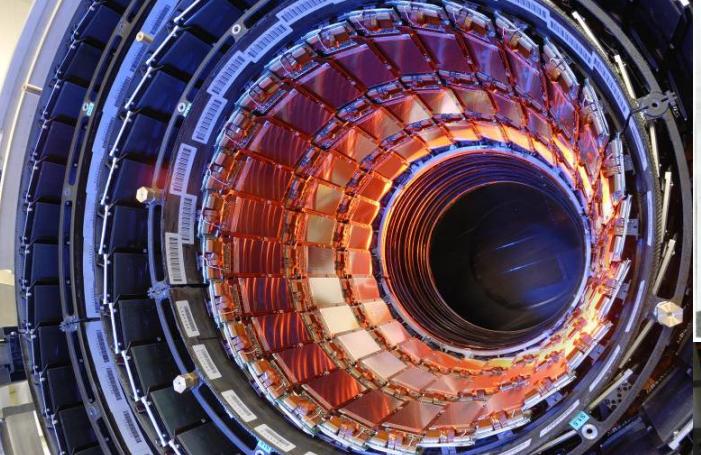
on behalf of the

“New Technologies Thematic Area Task Force”

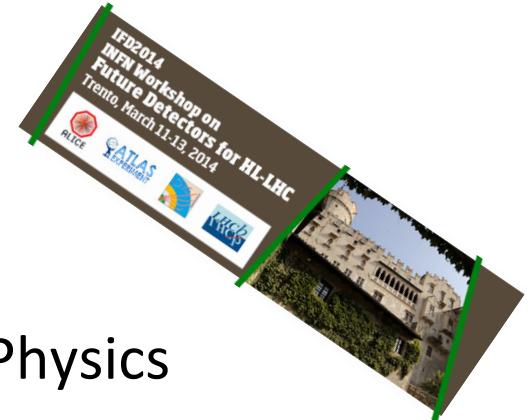
V. Bonvicini, L. Calabretta, G. Carugno,
A. Facco, M. Ferrario, F. Forti, G. Maron,
M. Paganoni, E. Previtali, M. Ripani



pochi
esempi



INFN & HL-LHC



- ✓ **Italy** has been a **key player** in the effort awarded the 2013 Nobel Prize for Physics
- ✓ **highly recognized technological contributions** to the LHC experiments and data handling
- ✓ **top priority** of the recent **European Strategy for Particle Physics** to the **exploitation of the full potential of the LHC** including high-luminosity upgrade of the machine and detectors

L'INFN come pianifica di partecipare a HL-LHC per continuare ad avere un ruolo chiave??

R&D towards HL-LHC

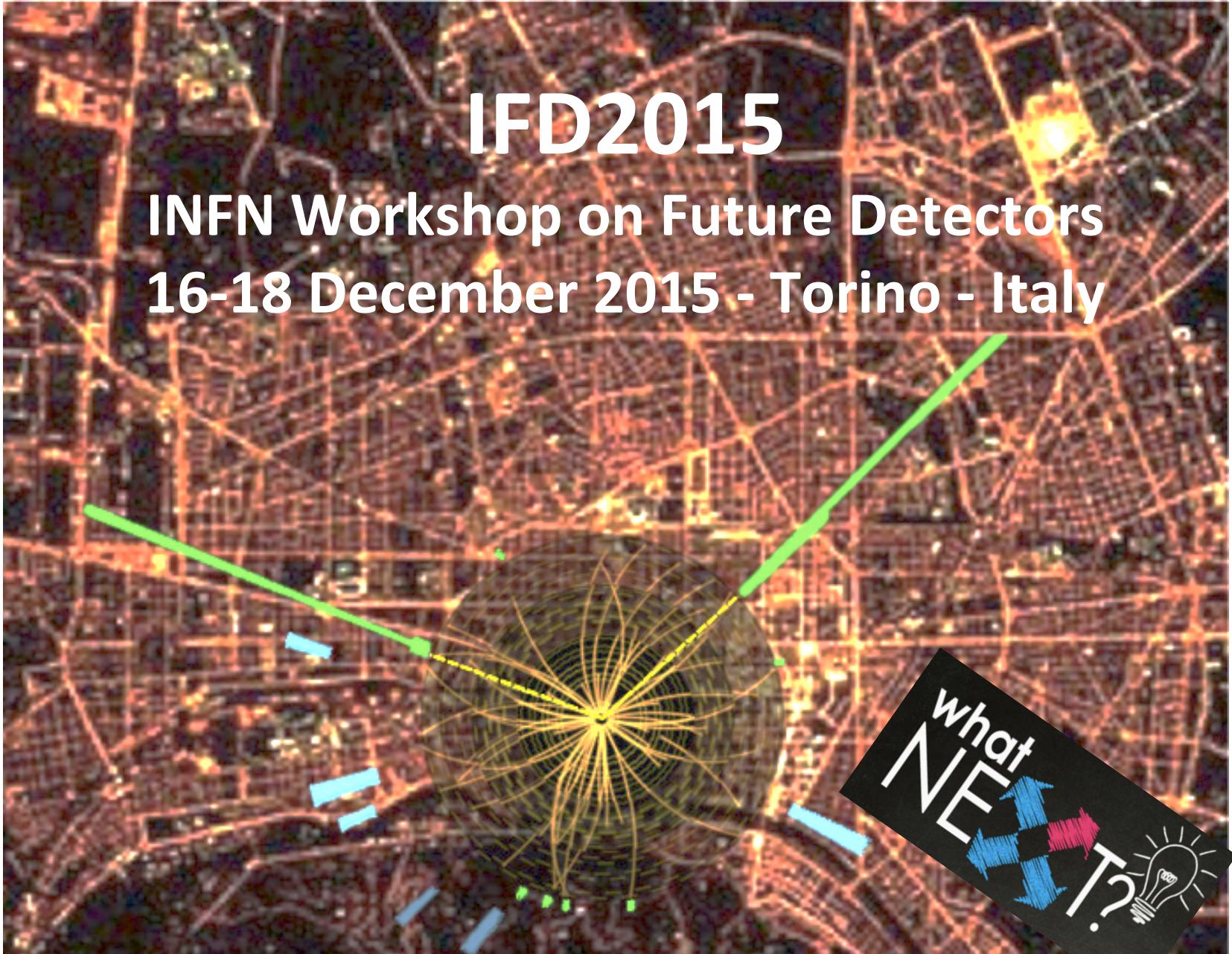


- ✓ **tracking, calorimetry and muon systems**
with associated **front-end and read-out electronics**

- ✓ **trigger, data acquisition and computing**

- ✓ **IFD14: a common LHC experiments' framework** to work
on **new R&D ideas** with constructive interaction with:
 - national industries → **TT & spinoff**
 - research centers and facilities → **FBK + ???****to prepare for Horizon2020 + any other external fundings call**

*L'INFN come puo' sfruttare al meglio gli R&D
e gli sviluppi tecnologici stimolati dalla sfida e
dalla prospettiva di HL-LHC??*



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Nadia Pastrone (INFN Torino) - *chair*
Simona Bortot (INFN Torino) - *secretary*

- over 200 people in Torino to work together
- quite interesting discussion to prepare the agenda
- short proceedings to collect new ideas



- highlight and perspectives as a summary
- a round table to touch different grounds and new plans

**With the common goal to prepare a document for the
What NEXT meeting February 16-17 2016 - Roma**