



UCLouvain

Institut de recherche en mathématique et physique

Centre de Cosmologie, Physique des Particules et Phénoménologie

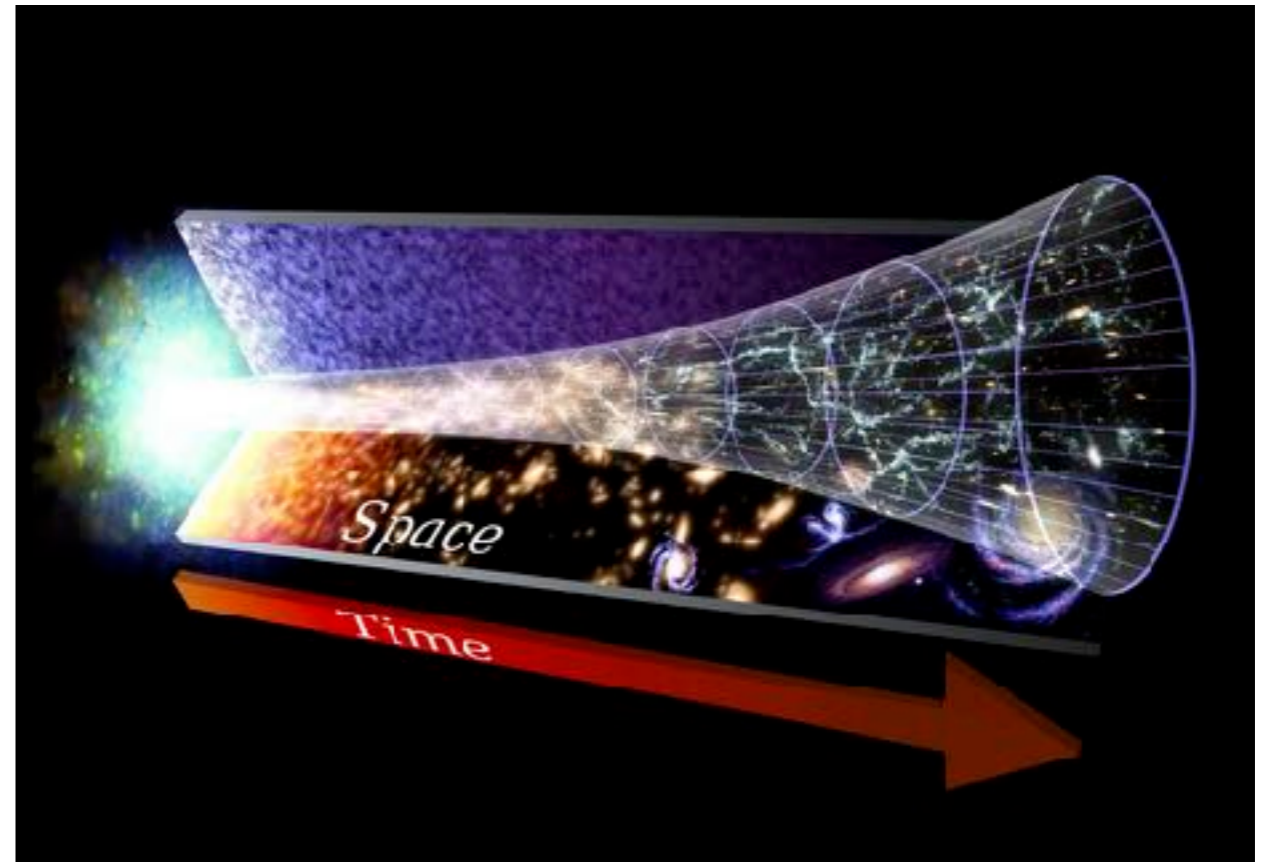


Thèses en physique en CP3/CURL
Celine Degrande

Recherche dans CP3 et CURL

Compréhension Physique de l'Univers:

- du **contenant** et du **contenu**
- de l'infiniment petit à l'infiniment grand



- Theories of fundamental interactions
- Cosmology and General Relativity
- Phenomenology of elementary particles
- Data analyses in particle physics, astroparticle and gravitational wave experiments
- Detector commissioning, operation and data processing
- Research & development of new detectors

Expériences

Joris van Heijningen

VIRGO + ET

KM3NeT

Vincent Lemaitre

Giacomo Bruno

Christophe Delaere

CMS

Andrea Giammanco

Muon Tomography

Eduardo Cortina Gil

Gwenhael De Wasseige

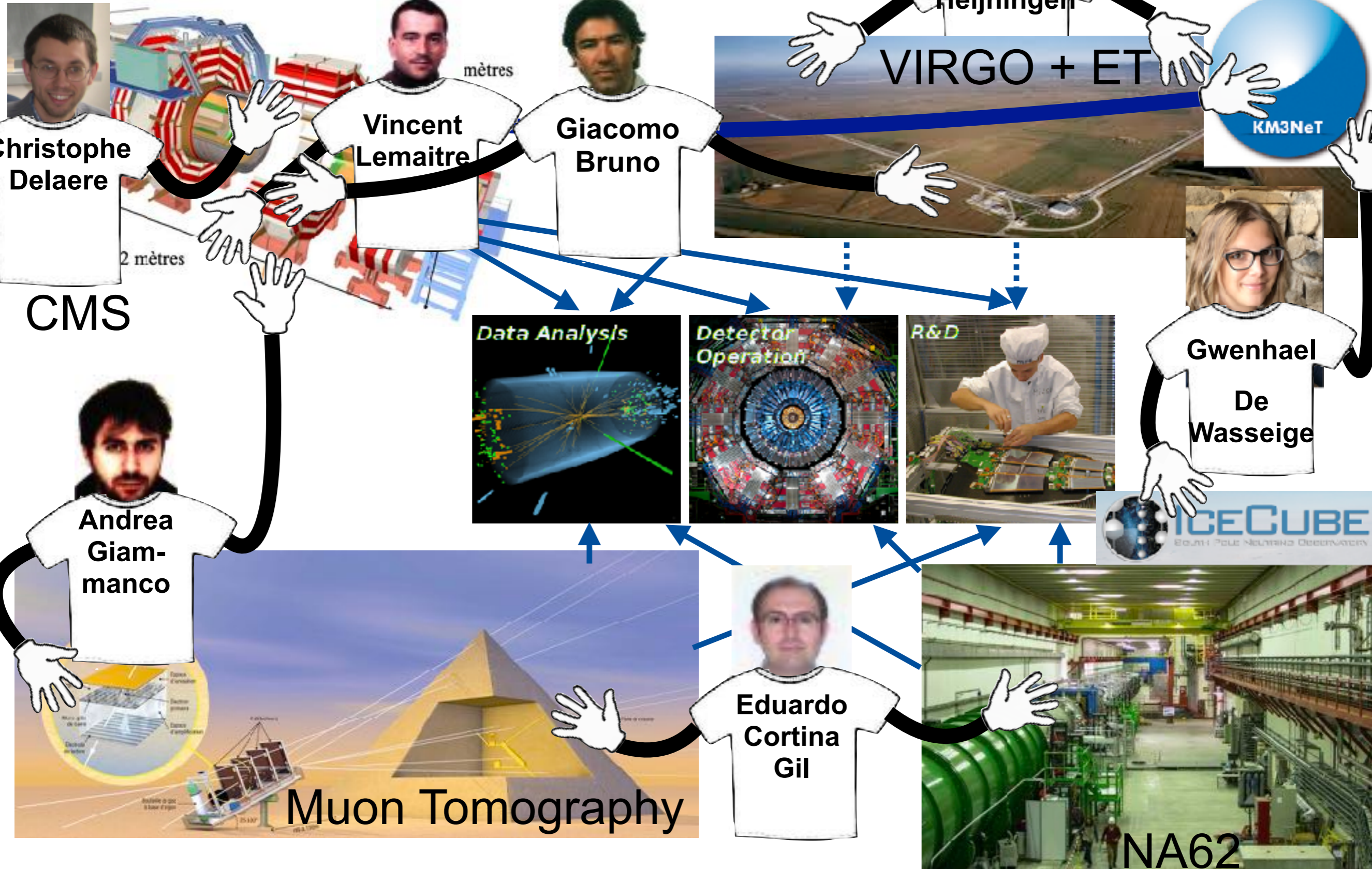
ICECUBE
SOUTH POLE NEUTRINO OBSERVATORY

NA62

Data Analysis

Detector Operation

R&D



Planck

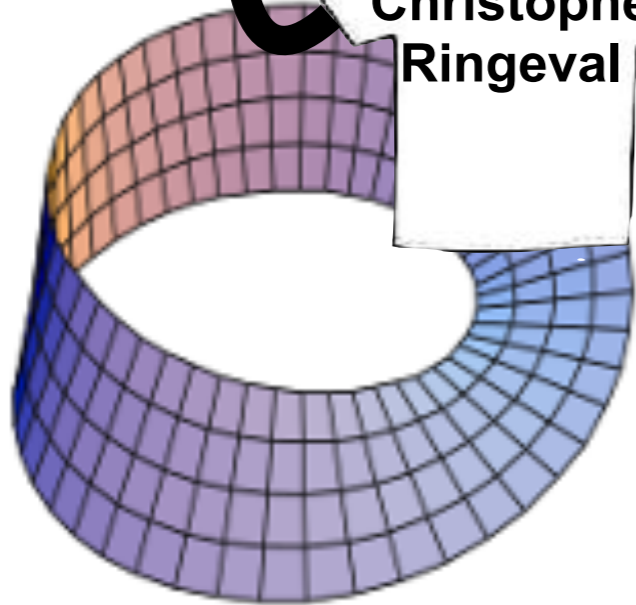


Theorie



Theory

Christophe Ringeval



Cosmology

Marco Drewes



Phenomena

Fabio Maltoni

	u up	c charm	t top	
QUARKS	d down	s strange	b bottom	γ photon
	e electron	μ muon	τ tau	Z Z boson
LEPTONS	ν_e electron neutrino	ν_μ muon neutrino	ν_τ tau neutrino	W W boson
				H Higgs boson

Olivier Mattelaer

Celine Degrande



MadDM

Membres de CP3/CURL



11 profs, 4 scientifiques, ~20 postdocs, ~20 doctorants
~20 nationalités

Financements pour doctorat

- FNRS aspirant
 - FRIA
 - Assistant UCL
- FSR
 - IISN (starting exp. project)
 - depuis des projets de recherche (MIS, PDR, ERC, ARC, EOS, ...)
 - Other?

Thèses a l'étranger

- Possibilité via les collaborations
- Contactez votre promoteur ou une personne du domaine
- Exemple: 2 positions ouvertes pour la recherche de matière sombre dans KM3NeT à IFIC, Valence

Thèses CP3/CURL récentes

Study of GigaTracker performance and a search for Axion-Like Particles at the NA62 experiment

Searches for new interactions within the SMEFT framework at present and future colliders

Development of a new tracker for the CMS upgrade phase 2 and study of the HL-LHC physics reach

Quadruple Splitting Functions in QCD

Probing the Higgs potential at current and future colliders

Aspects of Bottom-up Hidden Sector Models

Quantum and Thermal Effects on Inflation and Neutrino Dynamics in the Early Universe

Search for an extended scalar sector through the $H \rightarrow ZA \rightarrow l+l-bb$ process in pp collisions at $\sqrt{s} = 13$ TeV