

HadronPhysics2

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The **Seventh Framework Programme for research and technological development (FP7)** is the European Union's chief instrument for funding research over the period **2007 to 2013**.

It brings together all research-related EU initiatives under a common roof playing a crucial role in reaching the goals of growth, competitiveness and employment. Its main objective is to further the construction of the **European Research Area**. Its specific goals are fourfold:

- To gain leadership in key scientific and technology areas
- To stimulate the creativity and excellence of European research
- To develop and strengthen the human potential of European research
- To enhance research and innovation capacity throughout Europe

The total budget for FP7, including the non-nuclear research of the Joint Research Centre, is **51 Billion euros over 7 years**.

There are **7 Specific Programmes** under FP7: Cooperation, Ideas, People and Capacities, Euratom and two Specific Programmes for the Joint Research Centre.

Capacities (9% of non-Euratom budget) includes calls on **Research Infrastructures**, with the goal to 'optimise the use and development of the best research infrastructures existing in Europe'.

One type of project that can be funded are so-called **Integrating Activities** 'providing a wider and more efficient access to, and use of, the research infrastructures existing in EU Member States, Associated Countries and at international level when appropriate (including: transnational access, joint research and networking).'

A list of funded Integrating Activities for FP6 and FP7 is available at http://ec.europa.eu/research/infrastructures/index_en.cfm?pg=projects

The HadronPhysics Projects

The **HadronPhysics** project in FP6 unified three previously separated communities of researchers using **leptons, hadrons and high energy heavy ion beams** for the study of hadrons and their properties.

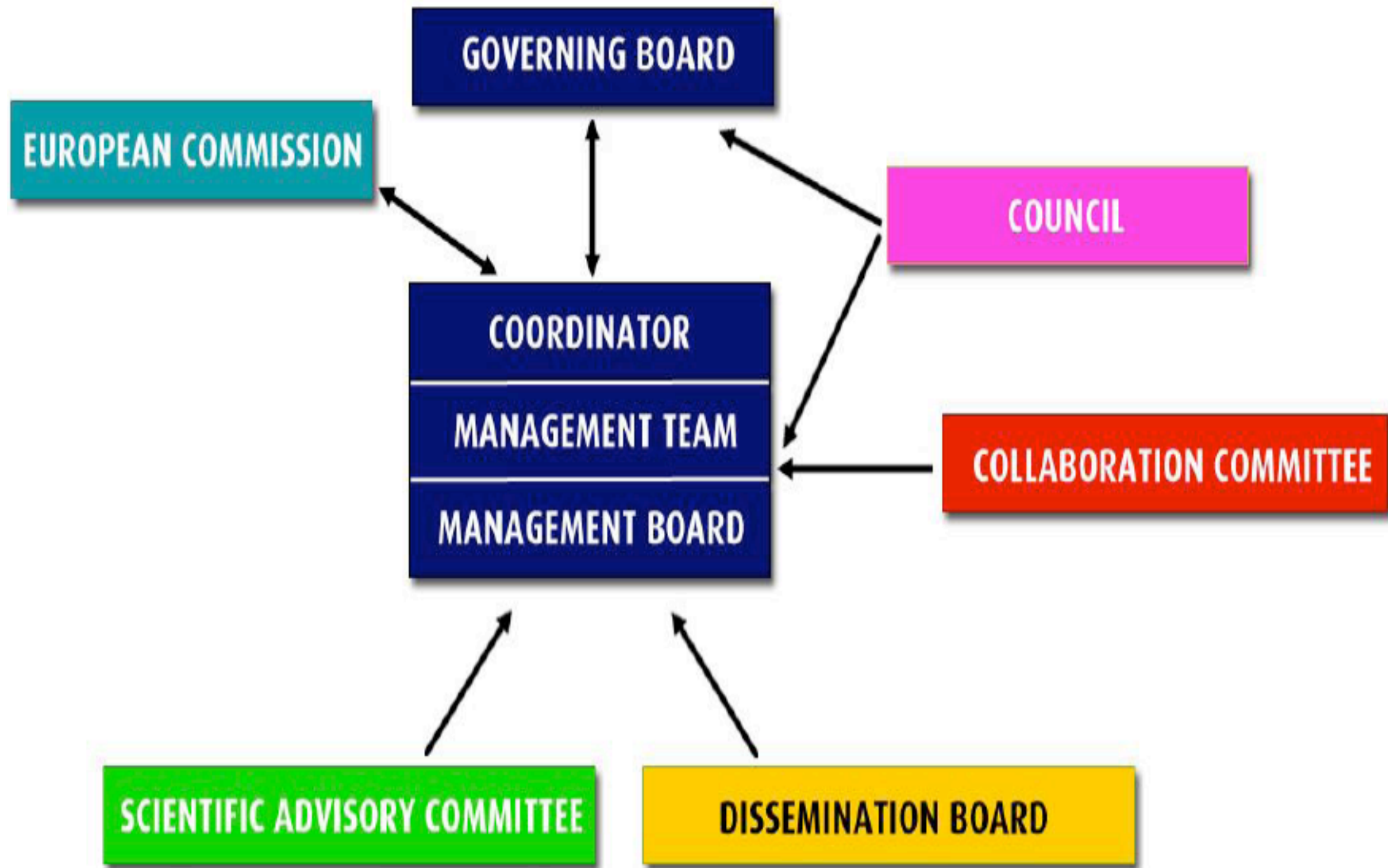
HadronPhysics included >2000 European researchers, ran from 2004 to 2008 and was funded with 17.4 M€.

HadronPhysics2 is the continuation of HadronPhysics in FP7, from 2009 to 2011, funded with 10.0 M€.

Projects within an Integrating Activity like HadronPhysics2 are not funded outright; the EU pays a 'requested contribution' of up to 75%.

- 46 European Organisations
- 36 Countries
- 103 other involved institutions
- More than 2000 researchers
- Coordinator INFN, Italy
- Project Coordinator Carlo Guaraldo, INFN-LNF
- EC requested contribution 10M€
- Contract duration 36 months, 2009-2011
- More at <http://www.hadronphysics2.eu>

HadronPhysics2 Management Structure



Lepton Beams

Günther Rosner

Fabienne Kunne

Mauro Anselmino

Glasgow, United Kingdom

CEA-IRFU, France

INFN Torino & Univ., Italy

Hadron Beams

Helmut Koch

James Ritman

Tord Johansson

Bochum, Germany

Bochum & Jülich, Germany

Uppsala, Sweden

Heavy Ions

Christian Kuhn

Eugenio Nappi

Mihai Petrovici

CNRS/IN2P3/IPHC, France

INFN-Bari, Italy

IFIN-HH, Romania

**NETWORKING
ACTIVITIES (8)
and
MANAGEMENT**

**TRANSNATIONAL
ACCESS
ACTIVITIES (5)**

**JOINT RESEARCH
ACTIVITIES (14)**



Theory

QCDnet: Hadron Physics in non-perturbative QCD

Toric: Theory of relativistic heavy ion collisions

Experiments

PrimeNet: Meson Physics in Low-Energy QCD

FAIRnet: A world-wide research networking activity for experiments on QCD at FAIR

ReteQuarkonii: Testing phases and non-perturbative features of QCD with quarkonium production

Strangeness

SPHERE: Strange Particles in Hadronic Environment Research in Europe

LEANNIS: Low-Energy Antikaon-Nucleon and -Nucleus Interaction Studies

Nucleon Structure

TMDnet: Mapping out the Transverse Structure of the Nucleon

Hadronic Probes

FZ Jülich - COSY

GSI Darmstadt

INFN - LNF Frascati



Electromagnetic Probes

University of Mainz - MAMI



JOHANNES GUTENBERG
UNIVERSITÄT MAINZ

Theoretical Studies

FBK-ECT* - Trento



Detector Development

CARAT: Characterization of Advanced Diamond for Particle Detection

FPCC: Frontier Photon detectors for Cherenkov Counters

FutureGas: Detector and electronics development for large-area low-mass self-triggered gaseous detectors

DIRCs: Development of fast, compact Cherenkov counters based on the Detection of Internally Reflected Cherenkov light

SciFi: Frontier scintillation detectors: inorganic scintillating fibers and performance control

HardEx: Hard Exclusive Reactions

Detector Development cont.

JointGEM: Ultra-light and ultra-large tracking systems based on GEM technology

ULISI: Ultra-light silicon tracking and vertex detection systems for frontier precision experiments

JETCAL: Electromagnetic Calorimeter for Jet Quenching Study

SiPM: Silicon Multiplier-Matrix Geiger-Mode Avalanche Micro-Pixel Photo Diodes for Frontier Detector Systems

Polarisation

SPINMAP: Spin Oriented Nuclei for Structure Mapping

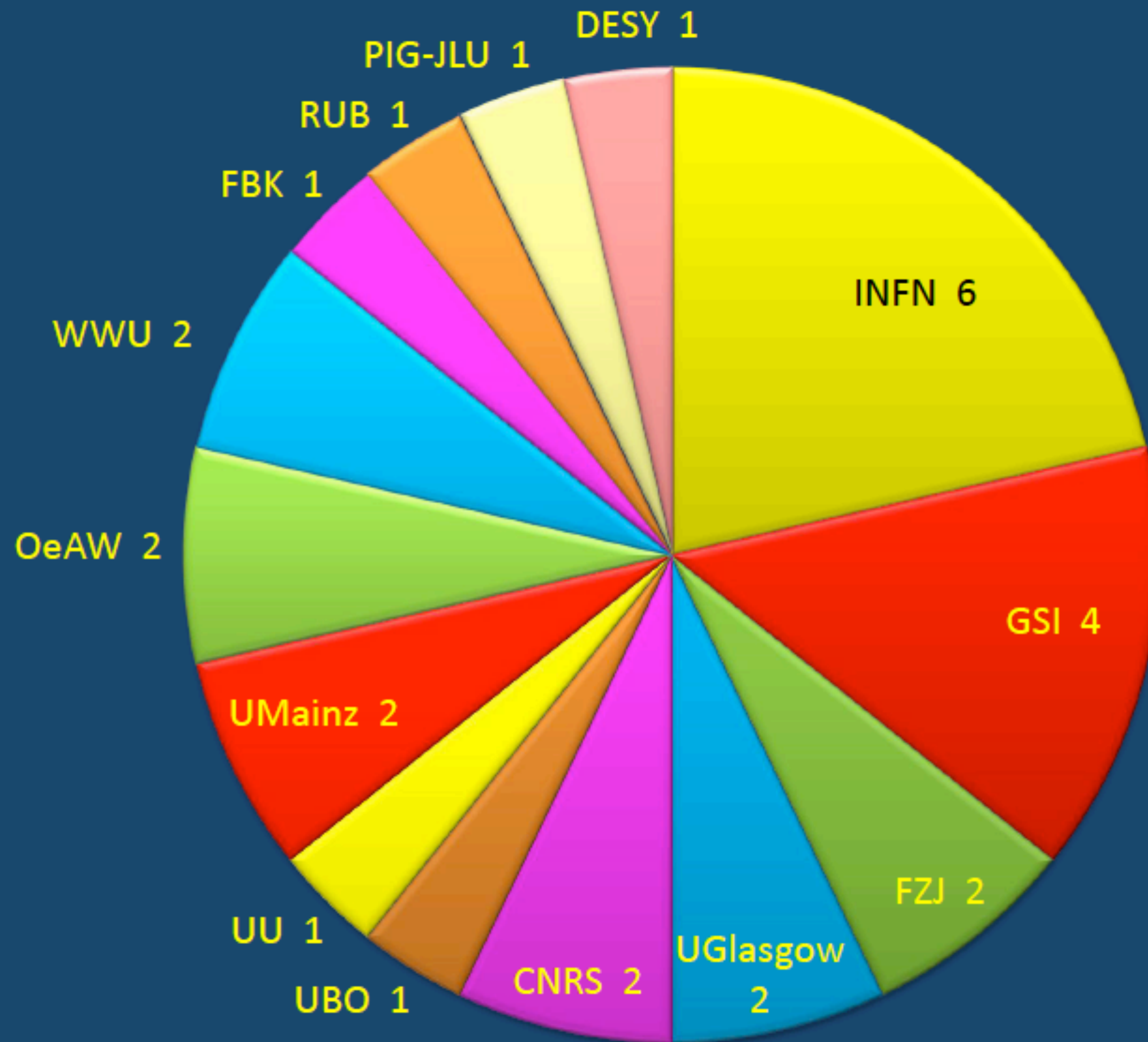
PolAntiP: Polarized Antiprotons

Target Development

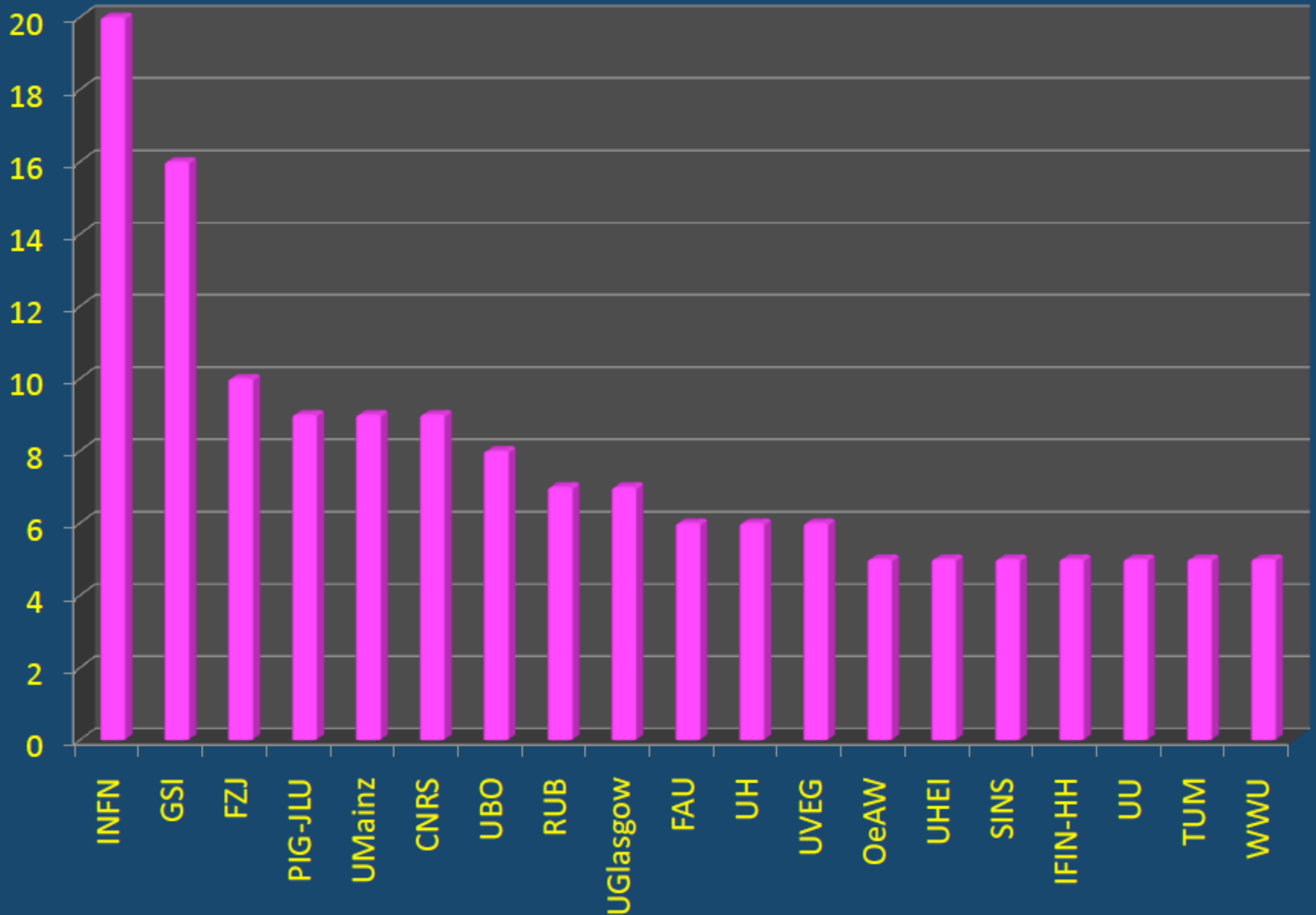
FutureJet: Cryogenic jets of nano-to micrometer-sized particles for hadron physics

Lattice Calculations

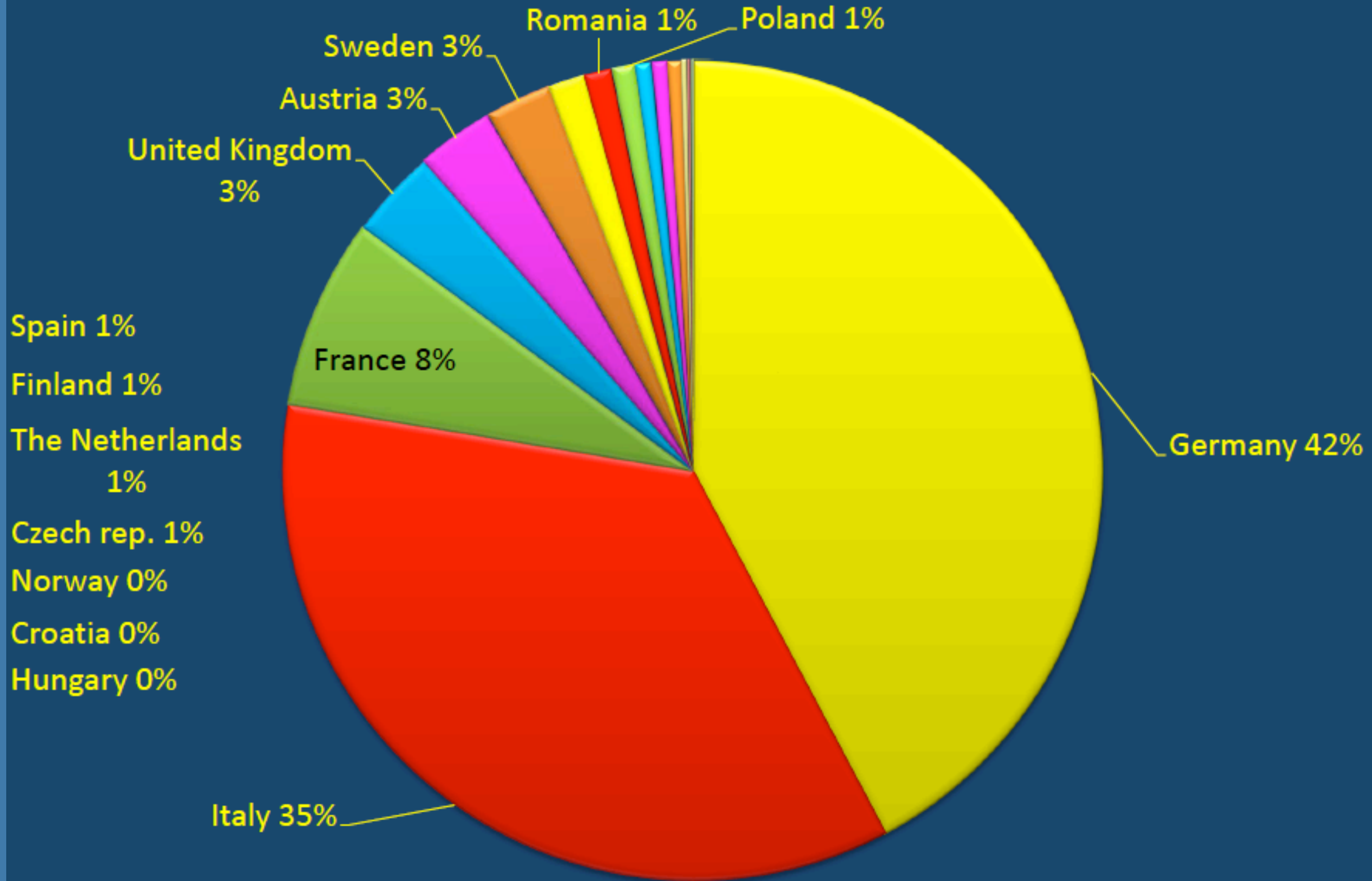
LatticeQCD: Lattice Quantum Chromo Dynamics



Work Package Participation



EU Contribution per Country



Total Human Effort (person months)

Beneficiaries:	15.448
Other Involved Institutions:	6.069
GRAND TOTAL:	21.517

→ 597 FTE over 36 months

→ ~2.000 scientists
(average 30% involvement)

Call 8: FP7-Infrastructures-2011-1

- Publication: 29 July 2010
- Budget: 100 M€ for Integrating Activities
- Topics included in Call 8: 23
- Expected projects to be funded: ~11
- Deadline to submit the Proposal: 25 November 2010

In order to ensure a continuity in the participation to the EU Framework Programmes, the HadronPhysics2 Governing Board decided to participate to Call 8 of FP7 with a [HadronPhysics3](#) Proposal.

Therefore, the HadronPhysics3 Proposal will be an upgrading of the running work packages, based on the excellence of new developments. Kick-off Meeting 16.-18. September in Paris.