

Grupul de Lucru 5

Strategie cooperari internationale

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Termeni de Referinta

4) Evaluarea capacitatii de participare a institutiilor romanesti la programul stiintific al marilor colaborari internationale pentru urmatoarea decada (2011-2020)

a) Analiza situatiei externe privind principalele proiecte pan-europene si internationale din domeniu: obiective, resurse necesare, organizare, rezultate si impact socio-economic;

b) Analiza factorilor interni de referinta (puncte tari, puncte slabe) precum si a celor externi (oportunitati, amenintari);

c) Stabilirea prioritatilor / obiectivelor strategice in participarea Romaniei la marile colaborari internationale din domeniul fizicii si propuneri privind modul de realizare

5) Elaborarea Strategiei nationale de colaborare internationala in domeniul fizicii pe termen scurt (2011-2013) si mediu (2014-2020).

Modul de lucru

- *GL5 in stransa colaborare cu GL4, GL3 si GL2, cu Partenerii si Expertii;*
- *Principalul rezultat (Strategiei nationale de colaborare internationala) reprezinta ultima Etapa a proiectului (august 2011).*

- *Baza de date privind marile colaborari internationale (programe de lucru, organizare, costuri, oportunitati, etc.)*
- *Baza de date privind rezultatele participarii Romaniei la colaborari internationale*

- *Criteria de analiza a rezultatelor colaborarilor*
 - *rezultate stiintifice*
 - *relevanta pentru cercetarea nationala*
 - *costuri, oportunitati pentru cercetatorii romani (inclusiv doctoranzi)*

Contributia GL5 in Etapa 1

Pregatirea cadrlui operational si metodologic de stabilire a obiectivelor strategice in cercetarea de fizica din tara si in strategia de participare la mari colaborari internationale

- stabilirea continutului bazei de date pentru colaborarile existente*
- stabilirea criteriilor, indicatorilor si metodologiei de evaluare a colaborarilor*
- identificarea proiectelor internationale si obtinerea unei baze de informare detaliate asupra acestora*

European Collaborations

E-ELT European Extremely Large Telescope

- European Southern Observatory Council decision of 2004 : to ensure the European leadership in ground based optical and InfraRed astronomy
- Reference Design of the 42 meter European Extremely Large Telescope: 2006
- Funded by EC via the OPTICON program
- Possible locations: Argentina, Chile, Morocco, Spain

European/Intl. Collaborations

FAIR : Facility for Anti-proton and Ion Research

Place: GSI Darmstadt

2001: Conceptual design; 2003 Approval ; 2004 International Steering Committee

Funded 75% by Germany

14 countries participating

2500 researchers (44 countries) have formulated letters of intent, proposing experiments

Aim: nuclear structure research with radioactive ion beams, QCD, hadronic matter

Preparation cost: 120 Million euro

Construction 1187 Million Euro (Operation 120 Million)

European Collaborations

KM3NeT Kilometre Cube Neutrino Telescope

Deep-Sea research infrastructure in the Mediterranean Sea

Cubic-kilometre –sized Neutrino Telescope for the Astronomy for
Detection of high energy cosmic neutrinos

Complements the United states IceCube Project (under construction under the Antarctic ice
At the South Pole)

Design Study 2006

European Collaborations

PRINS – Pan European Research Infrastructure for Nanostructures

Distributed Infrastructure: Belgium, France, Germany

Preparation Cost: 3.5 million Euro

Construction Cost: 1,400 million Euro

Operation Cost: 300 million Euro

European Collaborations

SKA Square Kilometre Array

Next generation Radio Telescope

Operating frequency 70 MHz – 25 GHz

Area: 1,000,000 m-sq

Aim: detect Pulsars, cosmic gravitational waves, Test Einstein's General relativity

Preparation Cost: 150 Million Euro

Construction Cost : 1500 Million Euro (2012 – 2016)

Operation Cost : 150 Million euro

European Collaborations

SPIRAL 2

To be build at GANIL

Rare isotope beam;
Complimentary to FAIR

Physics of Nuclei