



APPEC

Astroteilchenphysik in Europa

Thomas Berghöfer
APPEC General Secretary

Ministries, funding agencies responsible for policy and/or providing funding in Astroparticle physics research at the national or international level, or their designated institution with legal status, are eligible for Partnership.

Memorandum of Understanding For the Astroparticle Physics European Consortium (ApPEC)

By and Between

- Commissariat à l'Energie Atomique et aux Energies Alternatives (CEA), a French state-owned research entity with a scientific, technical or industrial activity duly organised under the laws of France and having its registered office located Bâtiment Le Ponant D-25 rue Leblanc, Paris 15ème, France; represented by Prof. Philippe Chomaz, Director of its Institut de Recherche sur les lois Fondamentales de l'Univers (Irfu); hereinafter referred to as CEA.
- Centre National de la Recherche Scientifique (CNRS), a public scientific and technological establishment, headquartered at 3, rue Michel-Ange, 75716, Paris cedex 16, represented by Prof. Jacques Martino, Director of its National Institute of Nuclear and Particle Physics (IN2P3), hereinafter referred to as CNRS/IN2P3.
- Deutsches Elektronen-Synchrotron (DESY), a German research centre of the Helmholtz



Tasks distribution in Europe



DESY:

- International Contact
- Computing
- Industrial Relations
- Common Fund / Archive

CNRS:

- Strategic Actions
- Interdisciplinarity
- Outreach

LSC (MINECO):

- Electronic Tools
- Internet

INFN:

- Networking
- Theory
- Education Centre

FRS-FNRS, FWO (Belgium)

CSF (Croatia)

CEA, CNRS (France)

DESY, KIT (Germany)

RIA (Ireland)

INFN (Italy)

FOM (Netherlands)

NCN (Poland)

IFIN-HH (Romania)

LSC (Spain)

SNSF (Switzerland)

STFC (UK)

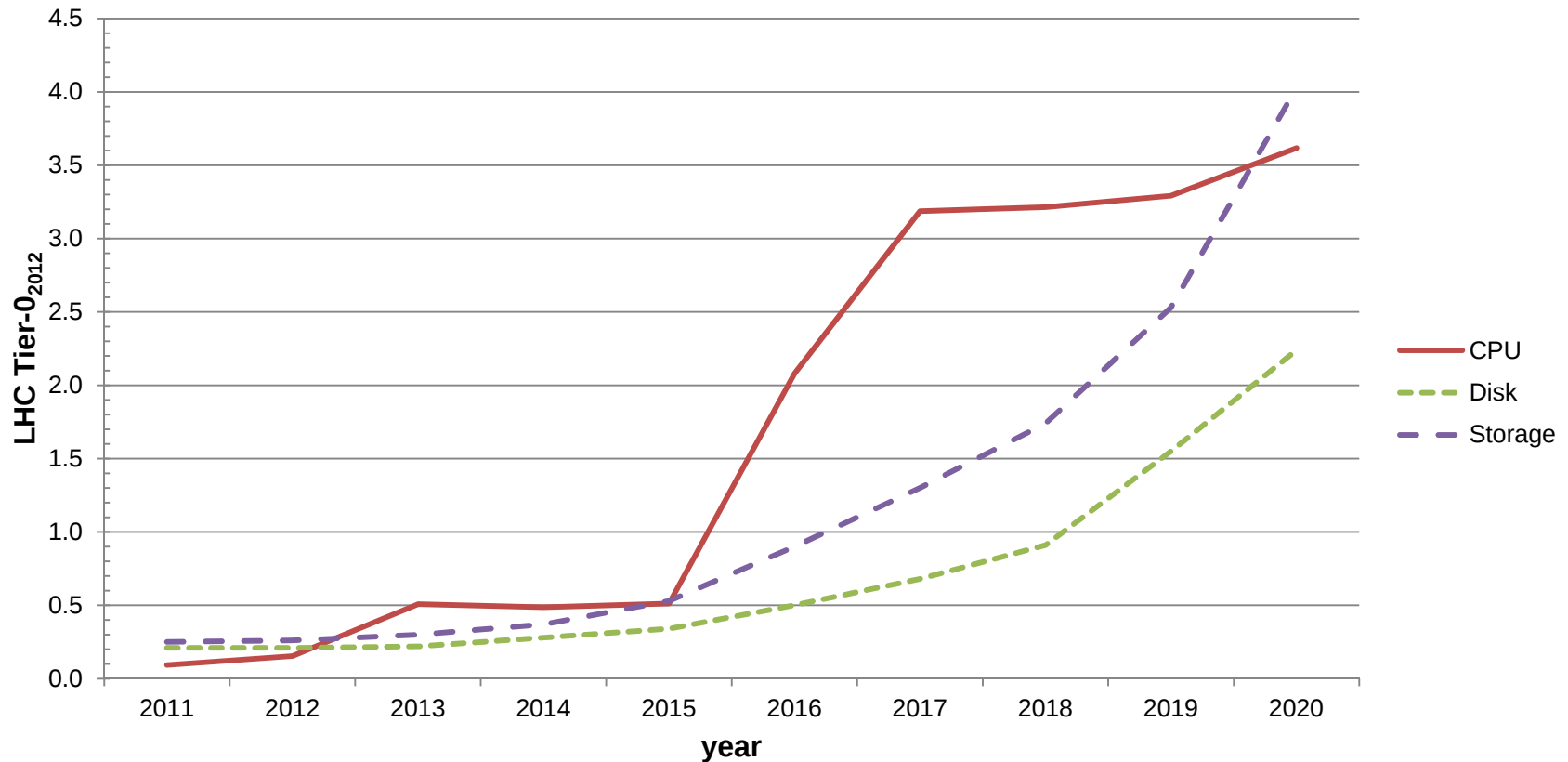
VR (Sweden)

JINR (Dubna)

ESO (observer)

Today: selected APPEC activities:

- Computing needs in astroparticle physics
- Liaise with ESFRI
- Support for Horizon2020 initiatives
- Technology: coordination & support
- Gender equality



Overall computing requirements in astroparticle physics

An “LHC Tier-0₂₀₁₂ unit” denotes the capability of 65000 CPU cores in 2012 and short and long term storage of 30 PBytes

White paper on astroparticle physics computing almost complete



Research Infrastructures & ESFRI

APPEC is the voice to listen in case of
astroparticle related RIs

New ESFRI Roadmap 2016

New Roadmap will be more of a strategy document that analyses

- the landscape of RIs in EU and internationally
- gaps in the EU RI ecosystem
- pan-European projects
- synergies with the national/regional projects
- synergies with existing RIs and strategies for optimal use, continuous upgrade, sustainability and end of life perspectives
- global research infrastructure opportunities

Timeline

- September 25th: Roadmap update launch meeting in Trieste
- March 2015: Deadline for new project proposals
- January 2016: New roadmap published

ESFRI Roadmap shall regularly updated every two years

From John Womersley's presentation at the APPEC General Assembly, 18 June 2014, CERN



Horizon 2020

Research and Innovation in three pillars

1
**EXCELLENT
SCIENCE**
22,27 BE

2
**INDUSTRIAL
LEADERSHIP**
15,51 BE

3
**SOCIETAL
CHALLENGES**
27,05 BE

- Marie S. Curie Actions
- ERC
- Research infrastructures
- Future and Emerging Technologies

Researchers, institutes,
Companies may participate or
benefit as 3rd party

- Photonics KET

Mainly for industry, institutes
may participate

HEALTH, FOOD SECURITY,
SUSTAINABLE AGRICULTURE,
MARINE AND MARITIME
RESEARCH AND THE BIO-
ECONOMY, ENERGY, TRANSPORT,
CLIMATE ACTION, RESOURCE
EFFICIENCY AND RAW
MATERIALS, INCLUSIVE,
INNOVATIVE AND REFLECTIVE
SOCIETY, SECURE SOCIETIES
CHALLENGE

APPEC's support for Horizon 2020:

- Preparation of documents
- Workshop in Zeuthen, Nov. 2013
- Workshop in Paris, Feb. 27/28 2014

Resulted in a lot of activities:

Integrating Activities: Gravitational Waves, Underground Labs

Cluster of ESFRI projects: ASTERICS

Design Study: DARWIN

MSCA: MultiDEEP (did not pass), COFUND, indiv. fellowships

Computing: ZEPHYR

Teaming & Twinning: IFIN-HH & KIT, Cracow & CNRS

Spiegel Online:

Juncker will die Arbeit der Kommission in sieben Projektteams organisieren. Carlos Moedas, zukünftiger Kommissar für Forschung, taucht in den neuen Organigrammen jeweils nur in der untersten Ebene auf.

... Die Forschung ist quasi nur nachgeordnet.

Kowi Newsletter:

Der designierte EU-Forschungskommissar, Carlos Moedas (geboren 1970) ... seit 2011 Staatssekretär im Kabinett des portugiesischen Ministerpräsidenten Pedro Passos Coelho.

...

Carlos Moedas hat in Lissabon und Paris Bauingenieurwesen studiert sowie an der Harvard Business School einen MBA absolviert.

Vor seiner politischen Karriere war Carlos Moedas u.a. bei Goldman Sachs, der Deutschen Bank/Eurohypo Investment Bank und Aguirre Newman (Investmentberatung für Immobilien) tätig.

Technology is important in Horizon 2020!

- Astroparticle Physics is technology driven
- APPEC's Horizon 2020 events have introduced
 - FET: Future Emerging Technology
 - LEIT: Leadership in enabling and industrial technologies
- Difficult to understand “innovation”

R&D in astroparticle physics needs coordination

- APPEC functional centre in charge
- Ideas:
 - Create R&D roadmap
 - exchange via internet forum
 - More Technology Fora to come



Astroparticle Physics European Consortium



APPEC Technology Forum

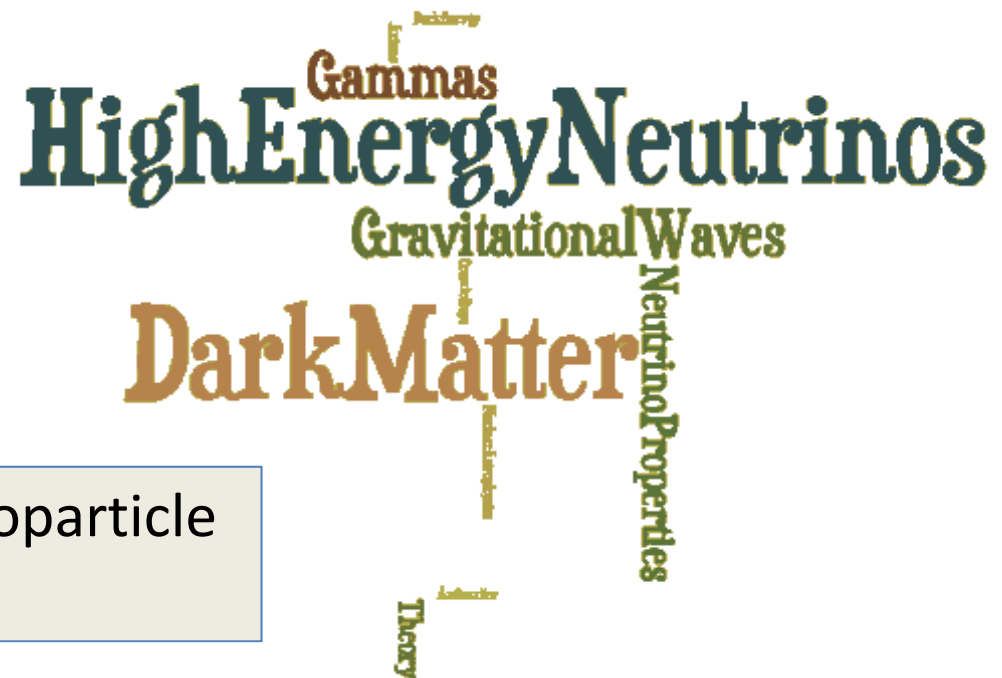
22-23 April 2015 - Schloss Nymphenburg - Munich

**Photosensors
& auxiliary electronics**





First names of female astroparticle physicists in leading positions



Fields addressed by female astroparticle physicists in leading positions



Máire Geoghegan-Quinn

Gender equality and gender mainstreaming in research

has been identified by the European Commission as one of the priorities for the European Research Area ...

“to end the waste of talent which we cannot afford and to diversify views and approaches in research and foster excellence”

⇒ APPEC spin-off: GENERA project in H2020

GENERA: Gender Equality Network in the European Research Area in Physics

Participant No	Abbreviation	Participant organisation name	Country
1 (Coordinator)	DESY	Stiftung Deutsches Elektronen-Synchrotron DESY	Germany
2	FOM	Stichting voor Fundamenteel Onderzoek der Materie FOM	Netherlands
3	KIT	KIT - Karlsruher Institut für Technologie	Germany
4	PORTIA	Portia Ltd	UK
5	INFN	Istituto Nazionale di Fisica Nucleare	Italy
6	MPG	Max-Planck-Gesellschaft	Germany
7	JOANNEUM	JOANNEUM RESEARCH Forschungsgesellschaft mbH	Austria
8	CIEMAT	Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas	Spain
9	UNIGE	Université de Genève	Switzerland
10	CNR	Consiglio Nazionale delle Ricerche	Italy
11	IFIN-HH	Horia Hulubei National Institute of Physics and Nuclear Engineering	Romania
12	UJ	Uniwersytet Jagiellonski w Krakowie	Poland
13	CNRS	Centre National de la Recherche Scientifique	France
14 (Associate)	HGF	Helmholtz-Gemeinschaft Deutscher Forschungszentren e.V.	Germany
15 (Associate)	DIAS	Dublin Institute of Advanced Studies	Ireland
16 (Associate)	FRS-FNRS	Fonds de la Recherche Scientifique	Belgium
17 (Associate)	DONNESCENZA	Associazione Donne e Scienza	Italy
(Interested Observer)	SNF	Swiss National Science Foundation	Switzerland

Gender in Astroparticle Physics

Very interesting approach in the Helmholtz
Alliance

(Presentation on last Monday by
Bianca Keilhauer & Julian Rautenberg)

Let us see what we can achieve together!



Stay in touch and let's discuss!

Greetings from APPEC