

# EUROPEAN PLASMA RESEARCH ACCELERATOR WITH EXCELLENCE IN APPLICATIONS



Horizon2020



Science & Technology  
Facilities Council



Consiglio  
Nazionale delle  
Ricerche



MANCHESTER  
1824

The University of Manchester

Imperial College  
London

IST-ID

Associação do Instituto Superior Técnico  
para a Investigação e Desenvolvimento



UNIVERSITY OF  
LIVERPOOL

ENEA

Italian National Agency for New Technologies,  
Energy and Sustainable Economic Development



Universität Hamburg



SAPIENZA  
UNIVERSITÀ DI ROMA

Communication & Outreach  
Carsten P. Welsch



NOVEL FUNDAMENTAL RESEARCH  
 COMPACT EUROPEAN PLASMA  
 ACCELERATOR WITH SUPERIOR  
 BEAM QUALITY

[Find Out More](#)**OUR TECHNOLOGY**

EuPRAXIA brings together novel acceleration schemes, modern lasers, the latest correction technologies and large-scale user areas.

[LEARN MORE](#)**PARTICIPANTS**

A consortium of 16 laboratories and universities from 5 EU member states has formed to produce a conceptual design report.

[LEARN MORE](#)**WORK PACKAGES**

The project is structured into 14 work packages of which 8 are included into the EU design study.

[LEARN MORE](#)**MANAGEMENT**

The management bodies will organise, lead and control the project's activities and make sure that objectives are met

[LEARN MORE](#)

# Project Web Site

<http://eupraxia-project.eu>

- We have defined the **outward looking face** of the project
  - EuPRAXIA website
  - EuPRAXIA poster (events, etc.)
  - EuPRAXIA leaflet in German and English



# THE EUPRAXIA FILES

ISSUE 1 - May 2016

## Foreword



Dr Ralph Abmann  
EuPRAXIA Coordinator

Novel accelerators have seen strong advances not only in achievable beam energy but also in beam quality. This success story is still developing, as you can see from the publications that we collect in this first edition of "The EuPRAXIA Files". As many of you are aware, the Horizon2020 Design Study EuPRAXIA aims at a conceptual design for a European plasma accelerator with usable beams. Instead of another newsletter we will regularly provide you with summaries of recent publications, letting the science speak for itself. EuPRAXIA has meanwhile had an excellent project start and is gearing up to a workshop in Pisa at the end of June, organized together with the European Network for Novel Accelerators EuroNNac2 and EuCARD2. For further news on EuPRAXIA please visit our website or read regular updates in "Accelerating news". We wish you some inspirational science readings in this edition of "The EuPRAXIA Files", prepared by the EuPRAXIA outreach team in Liverpool with Ricardo Torres as lead editor.



HOME

EUPRAXIA FOR  
BEGINNERS

EVENTS

## FIRST ISSUE OF 'THE EUPRAXIA FILES' RELEASED

2016 - 05 - 26

We are proud to announce that the first issue of 'The EuPRAXIA Files' has just been published. It provides a summary of recent publications related to the science and technology of the EuPRAXIA project.

To subscribe, please send an email to [ricardo.torres@cockcroft.ac.uk](mailto:ricardo.torres@cockcroft.ac.uk)



ISSUE 1

**IOP Physics World** - the member magazine of the Institute of Physics

**physicsworld.com**

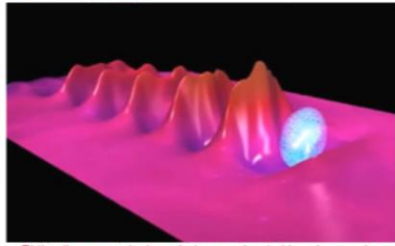
Home News Blog Multimedia In depth Events

News archive

- 2016
  - June 2016
  - May 2016
  - April 2016
  - March 2016
  - February 2016
  - January 2016
- 2015
- 2014
- 2013
- 2012
- 2011
- 2010
- 2009
- 2008
- 2007
- 2006
- 2005
- 2004
- 2003
- 2002
- 2001
- 2000
- 1999
- 1998
- 1997

## Consortium sets out to build European laser plasma accelerator

Apr 27, 2016 1 comment



Riding the wave: electrons being accelerated by a laser pulse

Accelerator physicists in five European countries are developing plans for the world's first high-energy laser plasma accelerator facility for use by science and industry. If built, the facility will deliver high-quality beams of electrons with energies up to 5 GeV.

The EuPRAXIA consortium, led by the European Union, the Italian National Research Council and the world's leading laser research centres, has just had its kick-off meeting.



Innovation Innovation

## Innovation news in brief: Innovate UK; health; MRC Technology; eFOLDi; plasma accelerator

Published Apr. 11 2016 09:06 AM

**design products & applications**

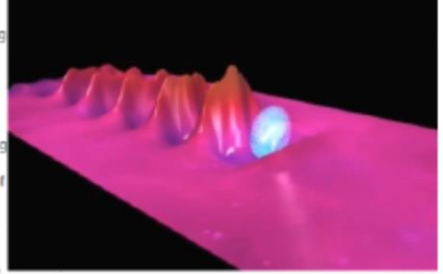
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What will the world's first plasma accelerator look like?

11 April 2016

**EuPRAXIA will design a world-first plasma accelerator research facility with strong industrial applications.**

Accelerator scientists from across Europe are collaborating to design the world's first high energy plasma-based accelerator, which will be stronger and more compact than the current accelerators used by industry today, opening up the opportunity to use the beams for entirely new types of application. The consortium, called EuPRAXIA, brings together 16 institutions and 18 associated partners from more than eight countries. It has just had its kick-off meeting.



**electro optics.com**

HOME BUSINESS APPLICATIONS TECHNOLOGY SUPPLIERS EVENTS JOBS FEATURES

TECHNOLOGY INDEX PRESS RELEASES WHITE PAPERS WEBCASTS TECH NEWS TECH FEATURES

TECHNOLOGY NEWS

## World's first high energy plasma-based accelerator to be built

23 April 2016

Tweet 1 Share

Accelerator scientists from across Europe are collaborating on the world's first high energy plasma-based accelerator, which will be stronger and more compact than the current accelerators used by industry today. It is hoped that the new technology will open up opportunities to use the beams for entirely new types of applications.

SEARCH NEWS

OTHER TECHNOLOGY NEWS

- Max Planck scientists couple high-power lasers into hollow optical fibres 23 March 2016
- Combined gas and fibre laser gives mid-infrared emission 16 March 2016
- European Commission announces schemes to boost photonics SMEs 23 February 2016

- We need your **input** !!
  - Events, presentations, publications, vacancies, other relevant news
  - Image files are also still required
  - Workshop announcements and summaries
  - Regular input to *Accelerating News* is also planned

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