

Particle Physics Advisory Panel

Philip Burrows

John Adams Institute for Accelerator Science

Oxford University

Outline

- **Background, context and remit**
- **PPAP membership**
- **Recent activities**
- **Looking ahead**

Advisory Panels set up (2009)

‘Five standing advisory panels will report to STFC’s Science Committee for Particle Physics, Astronomy and Nuclear Physics:

The panels will cover the areas of:

Particle Physics (PPAP)

Nuclear Physics (NPAP)

Particle Astrophysics (PAAP)

Near Universe (NUAP)

Far Universe (FUAP)

The remit of the panels will includes Theory, High Performance Computing and Data Curation issues in their respective areas.’

Terms of Reference (2009)

'Draft and maintain a roadmap describing current and future research opportunities in their areas, for presentation and approval by PPAN

Consult and interact with the community to ensure its views are canvassed and there is an appropriate and effective route for communication with STFC on strategic programmatic issues

Make an independent presentation to PPAN on the relevant panel area in years in which an STFC Programmatic Review takes place, thereby providing community input to the programmatic review process

Respond to other specific requests from PPAN for advice as the need arises'

Standing on the shoulders ...

Particle Physics Committee

Particle Physics Advisory Panel

Standing on the shoulders ...

Particle Physics Committee
Particle Physics Advisory Panel

Some things change:

PPARC	→	STFC
PPAN, PALS	→	Science Board
ASTAB	→	ASB ...

Standing on the shoulders ...

Particle Physics Committee
Particle Physics Advisory Panel

Some things change:

PPARC	→	STFC
PPAN, PALS	→	Science Board
ASTAB	→	ASB ...

The need for broad community engagement and distillation of sound strategic advice has not!

Working Together

- **The community**
- **Members of (PPAN) Science Board**
- **Experiment and Theory Grants Panels**
- **IoP HEPP Group**
- **Grant holders + principal investigators**
- **PP Action Group**
- **PA, NP, AS, SO Advisory Panels**

The PPAP 2009-10

Philip Burrows (Oxford) *chair*

Cinzia Da Via (Manchester)

Tim Gershon (Warwick)

Nigel Glover (Durham)

Claire Shepherd-Themistocleous (RAL) *deputy chair*

Mark Thomson (Cambridge)

Dan Tovey (Sheffield)

Rachel Boning (STFC)

The PPAP 2010-11

Philip Burrows (Oxford) *chair*

Cinzia Da Via (Manchester)

Tim Gershon (Warwick)

Nigel Glover (Durham)

Claire Shepherd-Themistocleous (RAL) *deputy chair*

Mark Thomson (Cambridge)

Paul Newman (Birmingham)

Rachel Reynolds (STFC)

PPAP going forward

- **2012: TG will stand down**
Add 3 new members – nominations solicited from community
→ panel of 9
- **2013: rotation of 3 members, including Chair**
- **2014: rotation of 3 members**
- **Etc.**

PPAP activities

- **Available to take input from Particle Physics community on relevant issues**

PPAP activities

- Available to take input from Particle Physics community on relevant issues
- Meet typically every 1-2 months by phone

PPAP activities

- Available to take input from Particle Physics community on relevant issues
- Meet typically every 1-2 months by phone
- Organise annual community town meeting

Community town meetings

2009, 2010, 2011 (Birmingham)

c. 100-200 community members attend

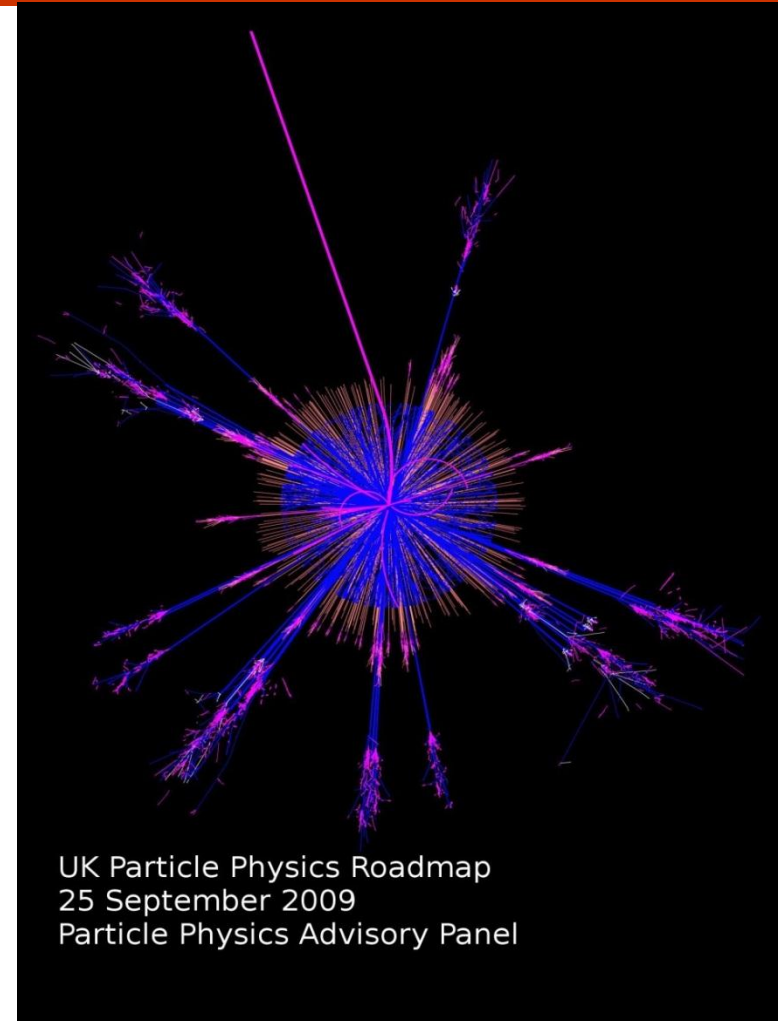


PPAP activities

- Available to take input from Particle Physics community on relevant issues
- Meet typically every 1-2 months by phone
- Organise annual community town meeting
- Prepare 'roadmap' reports

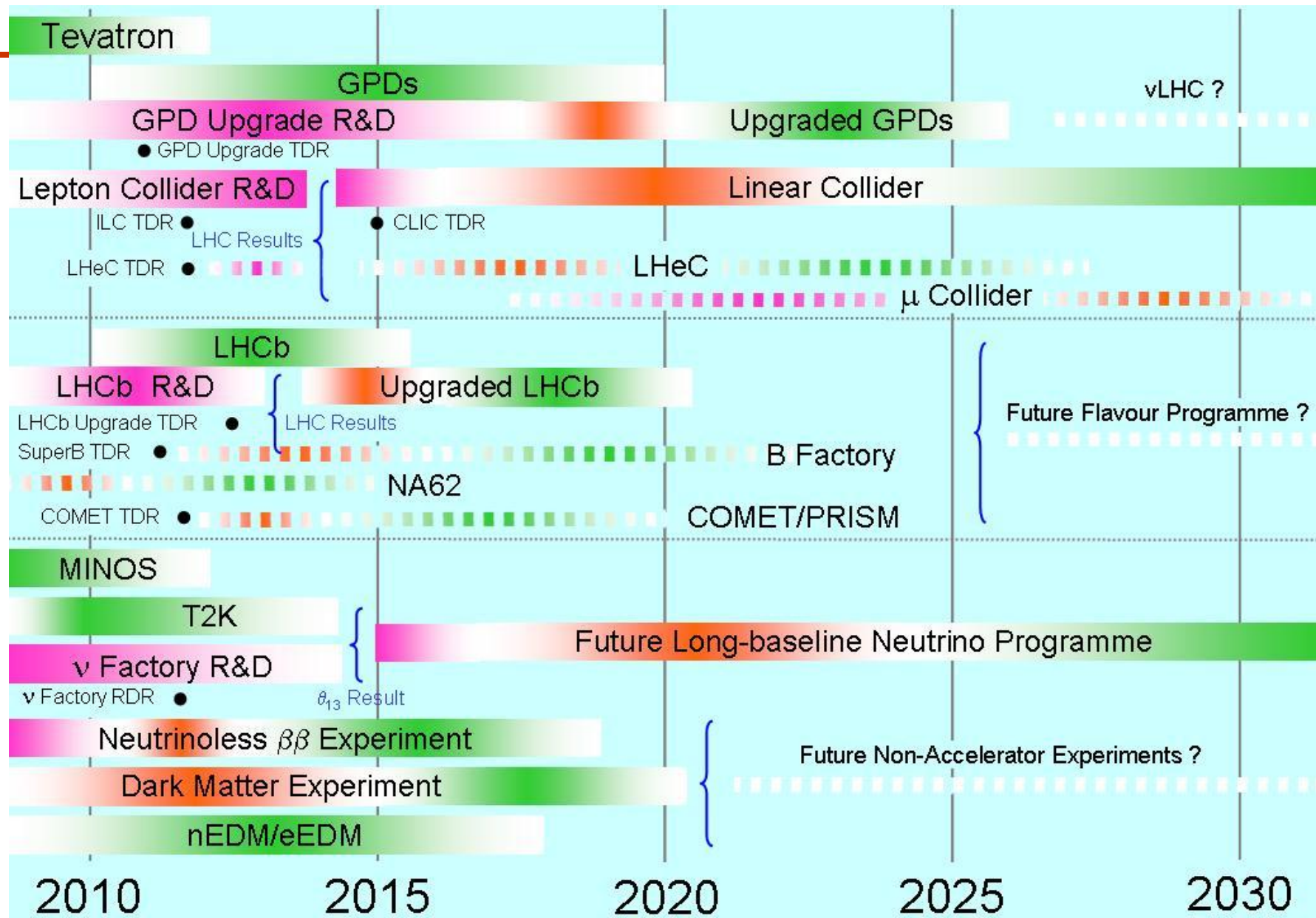
2009 PP Roadmap

- **Input to last programmatic review**
- **Major scientific challenges**
- **Facilities**
- **UK interests + involvement**
- **Programmatic recommendations**



http://www.hep.phy.cam.ac.uk/~thomson/ppap/PPAP_report_final.pdf

2009 PP Roadmap



2012 PP Roadmap update

- **Physics results**
- **Project timelines**
- **External funding**
- **Opportunities**

Update to the Particle Physics Advisory Panel Report

*P. N. Burrows, C. Da Via, T. Gershon, E. W. N. Glover, P. Newman,
C. Shepherd-Themistocleous and M. A. Thomson*

8/1/12

1. INTRODUCTION

In October 2009 the Particle Physics Advisory Panel (PPAP) issued a 'roadmap' report in which we identified the scientific challenges and opportunities for the UK in particle physics. We made a number of recommendations aimed at a broadly-based, but focussed, world-leading UK particle physics programme. The financial context for the STFC programmatic review of 2010 resulted in support for a small set of very high priority projects, but curtailment of (even modest) investment in several significant areas that add breadth and diversity to the UK programme; in some cases STFC support for R&D in projects that could be the future life-blood of the field was halted. Although the financial support for the few highest-priority projects was welcomed, the narrowing of opportunity to the UK is a matter of great concern to the community, as acknowledged by STFC.

Here we issue a brief update to our 2009 report to indicate, where relevant, changes in status, schedules and/or external funding for the respective projects. Most notably the LHC is producing its first crop of exciting physics results, and over the next couple of years these will be expected to have a major impact on planning future strategy in the field. In addition there are early indications of a possibly large value of the θ_{13} neutrino mixing parameter, and interesting signals in several dark matter search experiments.

The next CERN Council European Strategy exercise is now starting up, and is expected to make recommendations on the European particle physics strategy by mid 2013. It is vital that we in the UK fully engage with the strategy process, maintain our own strategic options and capabilities.

http://www.hep.phy.cam.ac.uk/~thomson/ppap/PPAP_report_update_Jan8_2012.pdf

PPAP activities

- Available to take input from Particle Physics community on relevant issues
- Meet typically every 1-2 months by phone
- Organise annual community town meeting
- Prepare 'roadmap' reports
- Organise 'forum' of group + project PIs + PP members of (PPAN) SB + Executive
- Provide input to STFC consultations

Input to STFC consultations

Based on community input and discussions at group leaders' forum

2011:	11/7/11	Community town meeting
	15/7/11	Input to review of RAL PPD
	11/10/11	PIs forum
	14/10/11	Input to review of advisory panels

PPAP activities

- Available to take input from Particle Physics community on relevant issues
- Meet typically every 1-2 months by phone
- Organise annual community town meeting
- Prepare 'roadmap' reports
- Organise 'forum' of group + project PIs + PP members of (PPAN) SB + Executive
- Provide input to STFC consultations
- Meet with (PPAN) SB and Executive as requested
- Liaise with other APs, in particular PAAP

Looking ahead

Key results expected from LHC

'rule in' or 'rule out' SM Higgs

Looking ahead

Key results expected from LHC

‘rule in’ or ‘rule out’ SM Higgs

Results on θ_{13} from T2K + Daya Bay ...

Looking ahead

Key results expected from LHC

‘rule in’ or ‘rule out’ SM Higgs

Results on θ_{13} from T2K + Daya Bay ...

STFC programmatic review coordinated by SB

PP community input via PPAP

Looking ahead

Key results expected from LHC

‘rule in’ or ‘rule out’ SM Higgs

Results on θ_{13} from T2K + Daya Bay ...

STFC programmatic review coordinated by SB

PP community input via PPAP

European Strategy Update exercise in progress

Community meeting, Cracow, September

Looking ahead

Key results expected from LHC

‘rule in’ or ‘rule out’ SM Higgs

Results on θ_{13} from T2K + Daya Bay ...

STFC programmatic review coordinated by SB

PP community input via PPAP

European Strategy Update exercise in progress

Community meeting, Cracow, September

Snowmass meeting summer 2013

Preparatory workshop, October, FNAL

2012 Community town meeting

Review UK PP programme in context of latest data
Take stock of evolving European and US strategies
Discuss optimal engagement in world programme

**Choose good date when Programmatic Review
schedule/process is known**

→ Autumn 2012

Do contact us!

Philip Burrows (Oxford) *chair*

Cinzia Da Via (Manchester)

Tim Gershon (Warwick)

Nigel Glover (Durham)

Claire Shepherd-Themistocleous (RAL) *deputy chair*

Mark Thomson (Cambridge)

Paul Newman (Birmingham)

<http://www.hep.phy.cam.ac.uk/~thomson/ppap.html>