

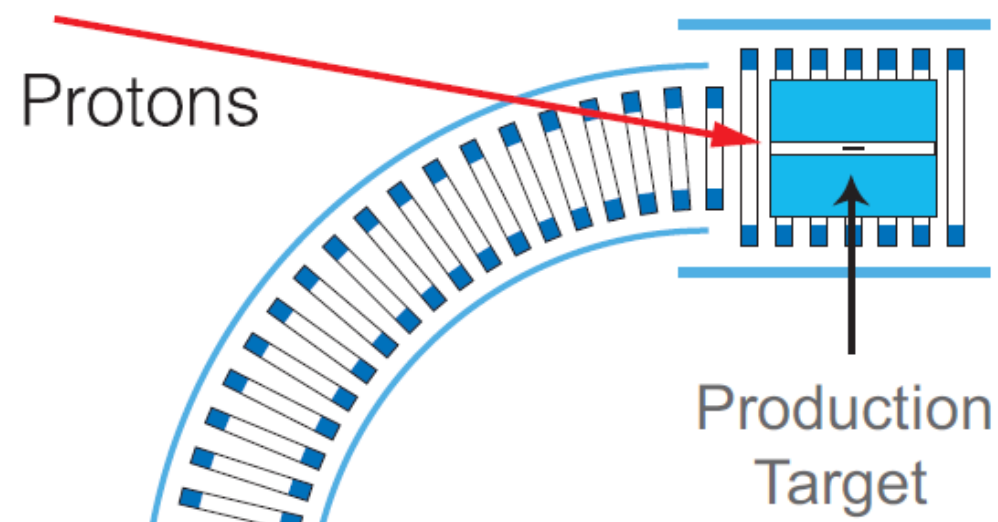
Imperial College
London

Muon-to-Electron Conversion: UK Perspective

Yoshi Uchida

1 July 2009

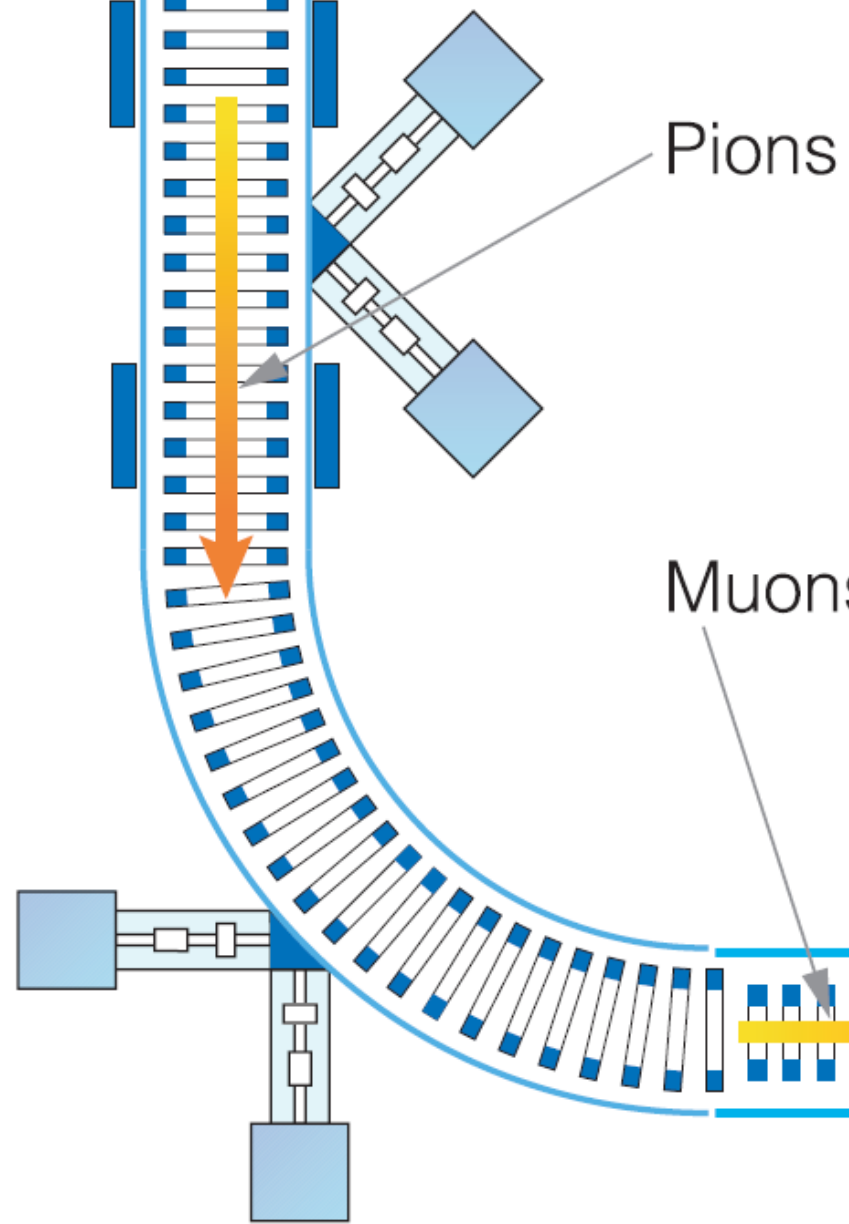
PRISM/FFAG Meeting at Imperial



Pion Capture Section

A section to capture pions with a large solid angle under a high solenoidal magnetic field by superconducting magnet

COMET Experimental Layout (Coherent Muon to Electron Transition)

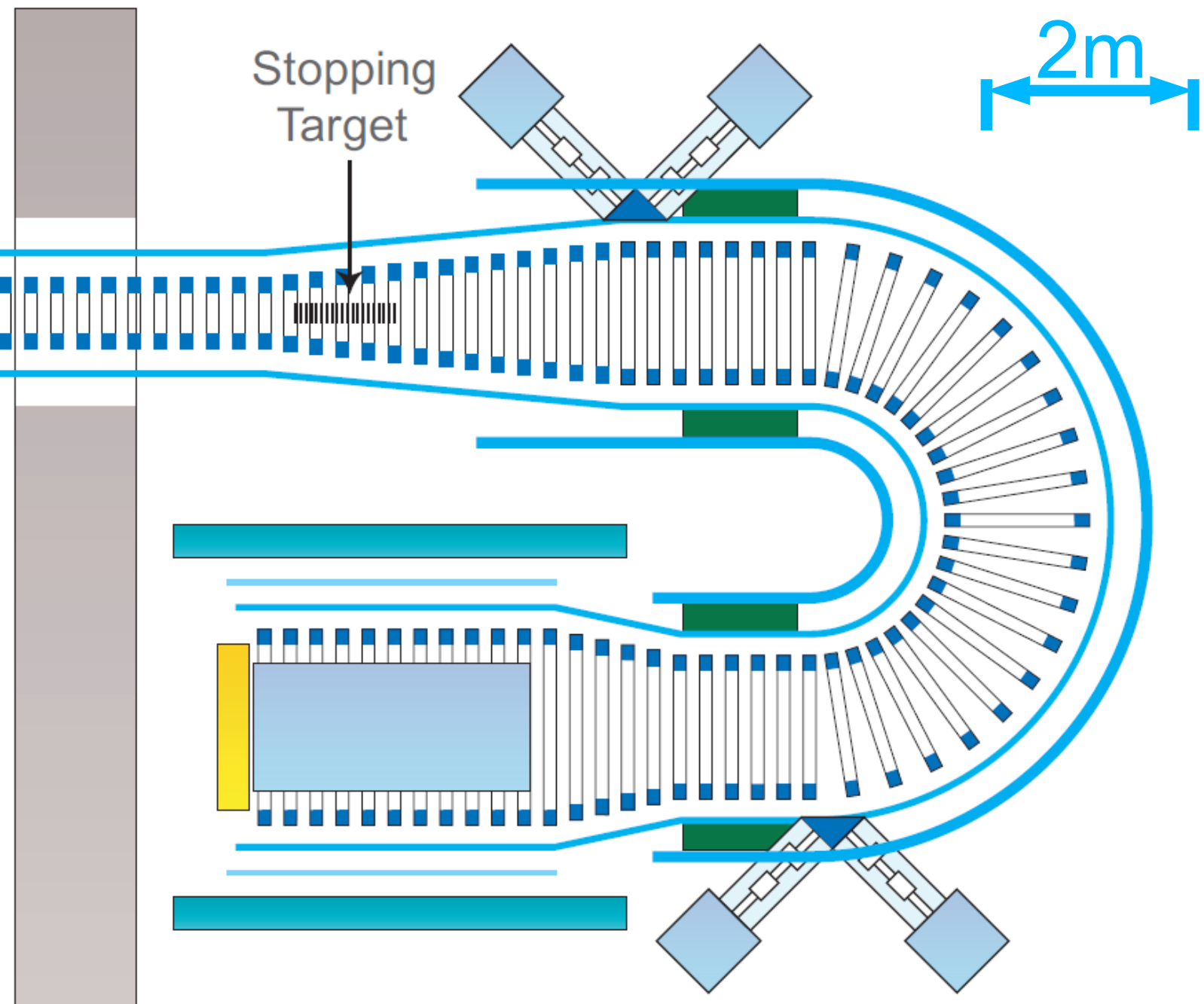


Pion-Decay and Muon-Transport Section

A section to collect muons from decay of pions under a solenoidal magnetic field.

Detector Section

A detector to search for muon-to-electron conversion processes.



2m

The COMET Collaboration (March 2009)



JINR, Dubna, Russia

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D. Mzhavia, J. Pontecorvo,
B. Sabirov, Z. Tsamaiaidze,
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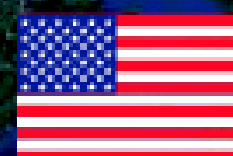


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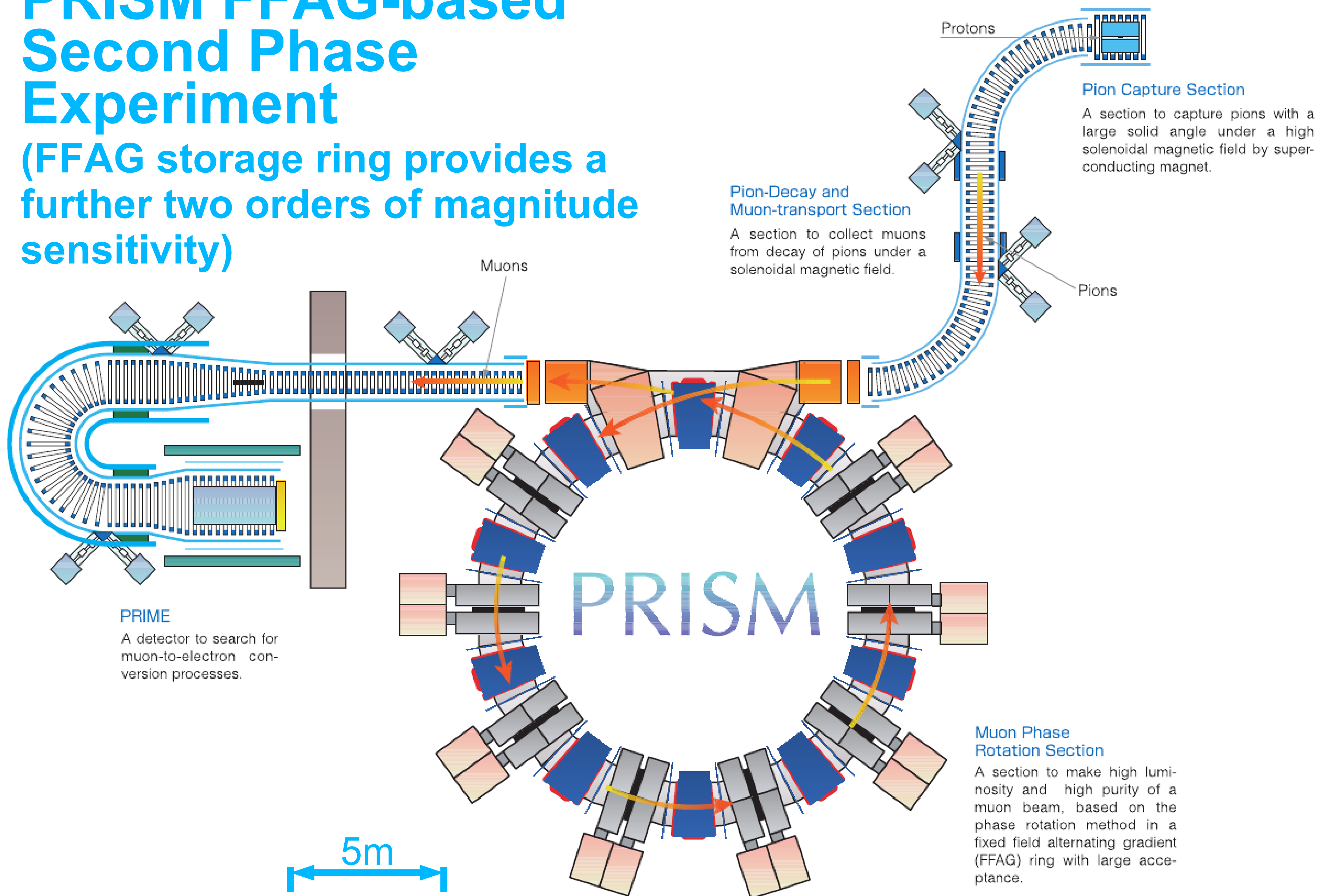
Y. Arimoto, Y. Igarashi, S. Ishimoto, S. Mihara, H. Nishiguchi,
T. Ogitsu, M. Tomizawa, A. Yamamoto, and K. Yoshimura

COMET in the UK

- Participated in collaboration meetings (Dec '08, May '09)
- CDR recently submitted to J-PARC PAC
- Backgrounds measurement at PSI with mu2e collaboration
- Theoretical status report forthcoming
(Graham Ross, Steve King, Silvia Pascoli)
- UK expertise applicable to many aspects of the experiment
 - Focusing on software-based physics studies to investigate these in detail

PRISM FFAG-based Second Phase Experiment

(FFAG storage ring provides a
further two orders of magnitude
sensitivity)





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White hard hat

PRISM/FFAG

- Many synergies with UK accelerator programme
- To be closely examined today and tomorrow

Future Plans

- Consider the COMET/PRISM programme as a whole
- COMET physics studies
- FFAG studies, exploiting synergies with current UK work
- “PPAP” Meeting in mid-July
- Expand collaboration to further interested and experienced UK parties
- Statement of Interest
- Requests for Funding

- Any ideas, suggestions, discussion points?

Dinner Plans

- Gilmour's in Chelsea, at 7pm
- Leaving Blackett Laboratory main entrance at 6.30pm
- Maps available at the front of the room
- Menus and wine list on the [workshop web page](#)

Please sign up or confirm your attendance on the sheet at the front of the room!