

# NLS Workshop on Life Sciences

19<sup>th</sup> June 2008, Diamond Light Source

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(University of Oxford and Diamond)

Peter Weightman  
(University of Liverpool)

# Aim of Workshop

The aim of the workshop is to identify the major scientific opportunities for research in **biology** and **medicine** that will be facilitated by a new light source.

# Apologies

Professor Martyn Chamberlain, University of Durham

Professor Steven Evans, University of Leeds

Professor Giles Davies, University of Leeds

Professor John Helliwell, University of Manchester

Professor Peter Henderson, University of Leeds

Professor Neil Hunter, University of Sheffield

Dr Lars Jeuken, University of Leeds

Professor Edmund Linfield, University of Leeds

Dr Christopher May, University College London

Professor Ben Murdin, University of Surrey

Professor Paul O'Shea, University of Nottingham

Professor Andrea Russell, University of Southampton

Professor Harvey Rutt, University of Southampton

Professor Mike Somekh, University of Nottingham

Professor Pankaj Vadgama, Queen Mary College, University of London

Dr. Edward Yates, University of Liverpool

# 6<sup>th</sup> in a Series of Workshops to Establish Key Science Drivers and Outline Specifications for a possible New Light Source

- Electron Dynamics / Attosecond Science
  - May 13<sup>th</sup> 2008, Imperial College London
  - Meeting convenor – Jon Marangos
- High Energy Density Science
  - May 20<sup>th</sup> 2008, Rutherford Appleton Laboratory
  - Meeting convenor – Justin Wark
- Condensed Matter
  - May 21<sup>st</sup> 2008, Rutherford Appleton Laboratory
  - Meeting convenor – Andrea Cavalleri
- Chemical Science
  - May 22-23<sup>rd</sup> 2008, Daresbury Laboratory
  - Meeting convenors – Jonathan Underwood and Wendy Flavell
- Advanced Photon Sources
  - June 3<sup>rd</sup>-4<sup>th</sup> 2008, Daresbury Laboratory
  - Meeting convenor – Richard Walker
- **Life Sciences**
  - **June 19<sup>th</sup>, Diamond Light Source**
  - **Meeting convenors – Louise Johnson and Peter Weightman**

# What is NLS ?

- The STFC seeks to examine the case for a New Light Source Facility in the UK
- The NLS activity is jointly supported by STFC and Diamond Light Source Ltd, coupled to strong University/Accelerator Institute involvement
- A science driven project
  - First: define the key science drivers
  - Next: assess the technical solution
  - Only Then: assess funding and location

# Science Consultation

- The first phase of the NLS project will determine, through wide consultation, the key long term scientific objectives that are likely to be relevant for decades
  - *“What is the compelling science?”*
- NLS will examine the balance between objectives which can be achieved by exploiting the array of international next generation light sources that are under construction and those which will require a new UK capability
  - *“Do we need a new UK source?”*
  - *“What is the specification for a new UK source?”*

# NLS Timescales

- Phase 1 April – October 2008 (Consultation)
- *Science Review*\*
- Phase 2 October 2008 – October 2009 (Facility Conceptual Design)
- *Full review*
  - Large Facility Capital Fund
  - Proposal to be considered for funding 2010-

**\* Approval at this early point is essential and should not be assumed!**

# Phase 1: Establishing Key Science Drivers and Outline Specifications

- Workshops held and Working Groups formed
  - May / June 2008
- Working Groups report to Project Leader
  - Mid July 2008
- Science drivers case presented to Science Community for comment
  - September 2008
- Revised case submitted to STFC for consideration
  - October 2008

# The NLS Vision

We need to be thinking in the long term.

The science and technology objectives we identify must be those that will remain important for several decades to come.

The NLS vision is to ensure a strong and versatile capability that enables these objectives, and new ones as yet not imagined, that will maintain UK science at the forefront into the middle of the century.