



STFC Science Board 83rd meeting

20 and 21 April 2021, via videoconference

Meeting Summary

Professor Tara Shears chaired the 83rd meeting.

CERN Update

Science Board received an update from Jessica Atkinson and Sarah Verth, on the current CERN activities, covering the [CERN Evaluation Report](#), development of the UK CERN strategy, the latest update to the [European Strategy for Particle Physics](#), [Particle Physics Technology Advisory Panel](#) (PPTAP), UK delegation to the European Committee for Future Accelerators (ECFA) and the CERN Working Group on Governance.

Advisory Panel Update

Science Board were provided with an update from the Chair of the Particle Physics Advisory Panel (PPAP, Dr Matthew Needham). Science Board heard from the panel on recent activities, scheduled work the panel will be undertaking over the coming year and an update on progress of the community roadmap. The panel also had the opportunity to discuss any concerns from the panel or community with Science Board. Links to the scientific highlights presented can be found in [Annex 1](#).

Funding Advice and Recommendations

Science Board considered the following reports and reviews:

- The CMS-UK Upgrade Phase-II Construction Project Mid-Term Review
- R&D for LHCb Upgrade II: Maximising HL-LHC Discovery Potential (PPRP)
- Consolidated Grants Review Implementation Panel Report

UK Space Agency (UKSA) Update

Science Board received a presentation from Sue Horne, Head of Space Exploration, UKSA. The update covered the UKSA space science programme, exploration programme and the UKSA-STFC dual key relationship. Science Board heard about the current ESA and UK bilateral missions in operation and development, and the

current UKSA funding position and issues for both space science and exploration programmes.

Particle Astrophysics Programme Update

Science Board received an update on the status of the Particle Astrophysics Programme from Justin O’Byrne, including Dark Matter, the recent Gravitational Waves grants panel recommendations, and upcoming discussions around the UK’s participation in the Cherenkov Telescope Array (CTA).

Digital Research Infrastructure Update

Science Board received an overview of the current UKRI Digital Research Infrastructure (DRI) activities from Justin O’Byrne, including the remit and operation of DRI at both the UKRI level and local STFC level. Science Board were invited to comment on the draft Terms of Reference for the STFC e-Infrastructure Advisory Group (SEAG).

Infrastructure Prioritisation Assessment Briefing

Science Board were joined by members of the Technology and Accelerator Advisory Board (TAAB) for a joint briefing on the next steps towards assessment of preliminary proposals. Science Board and TAAB were both invited to comment on and discuss the process of joint prioritisation of preliminary proposals.

Standing items

The minutes and actions from the February 2021 meeting were reviewed and the Chair and Deputy Chair provided the Board with an update on any matters arising from the Council meeting and recent Town meetings.

Science Board received an update and additional commentary on the STFC update report from Professor Mark Thomson, Executive Chair of STFC, which included an update on the outcome of the spending review.

Information papers included an update report from TAAB, the STFC membership call 2021 advert and the LS&SM Advisory Panel proposal for an eBIC hub, which were noted by Science Board.

Date of Next Meeting

The next Science Board meeting will be held on 13 and 14 July (84th meeting) 2021 by videoconference.

A list of acronyms for this summary can be found in [Annex 2](#).

Annexes

Annex 1: Links to scientific highlights presented by Advisory Panels

PPAP:

1. Aad, G., Abbott, B., Abbott, D.C. *et al.* Evidence for $t\bar{t}t\bar{t}$ production in the multilepton final state in proton–proton collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. *Eur. Phys. J. C* 80, 1085 (2020).
<https://doi.org/10.1140/epjc/s10052-020-08509-3> [arXiv:2007.14858]
2. The T2K Collaboration., Abe, K., Akutsu, R. *et al.* Constraint on the matter–antimatter symmetry-violating phase in neutrino oscillations. *Nature* **580**, 339–344 (2020). <https://doi.org/10.1038/s41586-020-2177-0> [arXiv:1910.03887]
3. Test of lepton universality in beauty-quark decays. LHCb-PAPER-2021-004 [arXiv: 2103.11769]
4. <https://theory.fnal.gov/events/event/first-results-from-the-muon-g-2-experiment-at-fermilab/>

Annex 2: Acronyms

CMS: Compact Muon Solenoid

CTA: Cherenkov Telescope Array

DRI: Digital Research Infrastructure

eBIC: Electron Bio-Imaging Centre

ECFA: European Committee for Future Accelerators

ESA: European Space Agency

HL-LHC: High Luminosity upgrade to the LHC

LHCb: Large Hadron Collider beauty

LS&SM: Life Sciences & Soft Materials Advisory Panel

PPAP: Particle Physics Advisory Panel

PPRP: Projects Peer Review Panel

PPTAP: Particle Physics Technology Advisory Panel

R&D: Research and development

SEAG: STFC e-Infrastructure Advisory Group

TAAB: Technology and Accelerator Advisory Board

UKSA: UK Space Agency