

Fusion energy using tokamaks: can development be accelerated?

26 – 27 March 2018

Organised by Professor Colin Windsor FRS, Professor Dennis Whyte, Dr Jack Connor FRS, Dr Melanie Windridge and Professor Guenter Janeschitz.

| Monday 26 March | | | |
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| SESSION 1: Fusion's overview Chair: Colin Windsor FRS | | SESSION 3: Towards the future Chair: Melanie Windridge | |
| 09.00 | Welcome by the Royal Society and Colin Windsor FRS | | |
| 09.10 | Daniel Clery Alternatives to tokamaks: a faster-better-cheaper route to fusion energy? | 13.30 | Howard Wilson Technical challenges to fusion power |
| 09.40 | Discussion | 14.00 | Discussion |
| 09.55 | Tony Donné The European Fusion Roadmap towards fusion electricity | 14.15 | Yutaka Kamada JT-60SA and Japanese tokamak programmes |
| 10.25 | Discussion | 14.45 | Discussion |
| 10.40 | Coffee | 15.00 | Tea |
| SESSION 2: Current projects Chair: Dennis Whyte | | SESSION 4: The question of size Chair: Keith O'Nions FRS | |
| 11.05 | Guenter Janeschitz An economical viable fusion reactor based on the ITER experience | 15.30 | Hartmut Zohm On the size of tokamak fusion power plants |
| 11.35 | Discussion | 16.00 | Discussion |
| 11.50 | Ian Chapman The UKAEA Strategy for delivering fusion power | 16.15 | Melanie Windridge Smaller and quicker with STs and HTS |
| | | 16.30 | Alan Costley Towards an ST Fusion pilot plant |
| 12.20 | Discussion | 16.45 | Discussion |
| 12.35 | LUNCH | 17.00 | Poster session |
| | | 18.15 | CLOSE |

Tuesday 27 March

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| SESSION 5: Future projects Chair: Jack Connor FRS | | SESSION 7: The economics of fusion Chair: Guenter Janeschitz | |
| 09.00 | Jonathan Menard Fusion Nuclear Science Facility and Pilot Plant studies at PPPL | 13.30 | Niek Lopes Cardozo What is the value proposition of fusion energy? |
| 09.30 | Discussion | 14.00 | Discussion |
| 09.45 | Dennis Whyte Small, modular and economically attractive fusion enabled by HTS superconductors | 14.15 | Paul Thomas The economics of size |
| 10.15 | Discussion | 14.45 | Discussion |
| 10.30 | Coffee | 15.00 | Tea |
| SESSION 6: Engineering fusion Chair: Tom Todd | | SESSION 8: Discussion | |
| 11.00 | Elizabeth Surrey Engineering challenges for Accelerated Demonstrators | 15.30 | Open discussion: a road-map to accelerated fusion |
| 11.30 | Discussion | | |
| 11.45 | George Smith FRS Materials for fusion, with special reference to the spherical tokamak design | 16.30 | Colin Windsor FRS and Matt Ridley Summary and closing remarks |
| 12.15 | Discussion | | |
| 12.30 | LUNCH | 17.00 | CLOSE |

Correct as of 23 March 2018 – subject to change