The Future of UK Submillimetre Astronomy

Dec 12/13 2011

ROE

The UK Landscape

- The next Programmatic Review will commence in 2012 and should be complete in the summer of 2013
- This will provide the ‘Roadmap’ for the coming decade, and especially the next Spending Review
- For the UK we should assume that ALMA operations will be fully funded but any ‘upgrades’ may require additional costs above the subscription – Colin Vincent can add details about STFC funding etc

The JCMT

- STFC has agreed to continue funding of the JCMT until March 2013; NWO have announced their pull-out from that date; Canada has no obvious funding source beyond Sept 2014 but has not declared withdrawal at this stage and the community are trying to obtain funding for continuing access
- The Director JCMT submitted a paper to Science Board in Nov requesting continued operations to 31st March 2016 – a Panel has been set up to examine this (and the ING) and will report back to SB in April 2012 allowing the results to feed into the Programmatic Review – for the JCMT I expect this will critically depend on SCUBA-2 performance (see more tomorrow) and the science cases for the current surveys
- The Director JCMT commissioned Walter Gear to lead a study (JCMT2020) seeking to extend the life of the JCMT to 2020 and beyond through possible upgrades to the telescope and instrument suite and we will hear about this tomorrow

CCAT

- CCAT represents the ‘next generation’ ground-based facility
- The CCAT International Board is already constituted – USA [Caltech, Cornell, Colorado], Germany, Canada
- NSF funding of $4.5M for completion of the Eng Design Proposal – to be completed in Spring 2013 leading to the CDR in 2013
- Looking for NSF build funding in Fiscal14, build commence in 2014, first light 2017, operation 2018
- Current cost estimates looking at cap of $130M, inc $20M for first-light instruments
- Fred Young has committed $11M
- Instrument downselect – summer 2013

APEX, LMT, ALMA

- These three facilities either exist and are in operation, are being developed and enhanced, or will be in full operation over the coming three years.
- The UK has access to APEX and ALMA through ESO and we will hear more about ALMA capability tomorrow
- Possibilities may exist with the LMT and we will hear about the LMT capability tomorrow

Space

- SPICA seems to be the name of the game
- JAXA-led mission and ESA-supported as a ‘Mission of Opportunity’
- Currently in ESA extended study phase – *NOT* a selected and funded mission
- Decisions holding on what JAXA decides to do
- Hard to get information from the JAXA website – still mention of launch 2018 – pundits think ~2022
- UKSA and STFC have not allocated funding to support the mission or post-mission phase
- We will hear about SPICA capability tomorrow

Purpose of this Workshop

- It is NOT to decide the answer
- It IS to take the first steps in arriving at the answer
- We need to make most of the workshop format so that at the end of Day-1 we have a good handle on what are the key science questions to be answered and what observations are needed to answer them
- At the end of Day-2 we should be in a position to be able to say what range or mix of capability could, in principle, provide those observations
- Further meetings will then take this forward as appropriate

Questions

- What are the science drivers?

  (apologies to the galaxies group)

- What does that mean for capability ?

- How do we achieve that capability ?

- Continue the process to feed into the PR