

## Message to the JCMT Observing Community

Dear colleagues,

We write to bring you up to date on developments at the JCMT surrounding SCUBA-2.

The community will recall that SCUBA-2 was assessed from the beginning as a high-risk, high-reward project. In order to get the instrument on the telescope for three full years of operation before the expiry of the tripartite agreement in 2009, the detector technology is being developed in parallel with the instrument design.

Because the risks in this strategy were recognised early on, the project team has been highly-focussed on the development of the detector arrays. We are pleased to report that the array development continues to make excellent technical progress. The first prototype detector array is currently being evaluated in the lab at Cardiff, and results so far have been highly positive.

The project has, however, escalated in cost since its initial approval. In order to get a handle on this, a Cost & Management Review of the project was convened in October. The outcome of this review was that the project is under control, but that additional contingency was required in order to allow for unforeseen technical difficulties. Taking into account the panel's recommendation, the overall cost of the project is now estimated at £14.5M.

We have only £10.6M available. This is a combination of funds from the UK Office of Science and Technology, the Canada Foundation for Innovation, and the JCMT. There is thus a funding shortfall of **£3.9M**. If additional funds are not identified, the project will run out of money in the spring of 2005.

Descoping the instrument is one possibility for dealing with this. The obvious descope is to populate the instrument with fewer arrays (the design calls for 4 sub-arrays at each of two wavelengths, 450  $\mu\text{m}$  and 850  $\mu\text{m}$ ). The financial savings of such a decision, however, would be modest since the bulk of the cost is for the technology development; moreover, the science loss would be vastly disproportionate to the savings. For these reasons, descoping the instrument is not under serious consideration.

The inescapable conclusion from the above is that additional funds are absolutely required if the project is to proceed to completion. Over the last 18 months, we have explored the possibility of setting up new partnerships with other observatories and countries. For various reasons, this has not been successful. Thus we have finally reached the stage at which our only recourses are (a) to generate financial savings from the JCMT operations budget, and (b) to request additional funds from the three JCMT funding agencies.

A proposal to the agencies is currently being developed, with the assistance of several members of the community. The proposal will draw heavily for its justification on the

strong community support for a JCMT survey programme, as demonstrated through the Lols submitted in November (see the recent message to the community from Dr Ivison, Chairman of the JCMT Survey Steering Group). The proposal will be submitted in January and a final decision is anticipated by the end of February.

It is inevitable that significant financial savings from the JCMT operations budget will also be required as part of the rescue package. This can only be achieved through a descope of operations. A variety of possible descopes are currently under consideration. We will keep the community fully-informed as these plans mature; certainly, no changes are anticipated before the summer of 2005.

As mentioned in the 05A Call for Proposals, accommodation of SCUBA-2 at the JCMT requires substantial renovation of the facility. The scale of the required building work is unprecedented since the original construction of the observatory. In order to accomplish this work as expeditiously as possible, the telescope will be closed for between four and six months. The exact date of the shutdown is uncertain since it is tied to the SCUBA-2 project schedule; for the current scheduled delivery date of 31 May 2006, the shutdown would run from Jan to Apr 2006, and possibly starting one or two months earlier. Again, we will keep the community fully-informed should this timetable change.

The continued support of the JCMT observing community is vital as we seek means by which to complete SCUBA-2 and bring it to the JCMT. This instrument will build on the enormous success of SCUBA by providing an unprecedented mapping capability, and has no foreseeable competition: in conjunction with HARP-B and the various ancillary instruments, and in view of our interferometry partnership with the SMA and CSO, the JCMT will remain the world's leading submillimetre observatory for years to come.

*Wilfried Boland, Chairman, JCMT Board*

*Professor Gary Davis, Director JCMT*

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