



SKA Organisation

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Dr Chiara Ferrari
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9th May 2017

Dear Dr Ferrari,

Re: LABORATOIRE D'ASTROPHYSIQUE DE BORDEAUX

The SKA project is currently in the pre-construction phase and the detailed design of the telescope systems is underway. The project will enter the construction phase after completing a major design review in mid-2018. When completed, the telescope will be powerful enough to detect very faint radio signals emitted in the first billion years of the Universe when the first galaxies and stars started forming.

At the mid-point of the pre-construction phase a reassessment of the science priorities was conducted, this resulted in a re-prioritisation of the SKA frequency bands. One result of this was that Band 5 (4.6-13.7 GHz) was raised to become the second highest priority receiver band. As a result, a gap in the development plan existed associated with the development of high speed electronics and digitization for this frequency band. The expertise of the Laboratoire D'Astrophysique de Bordeaux (LAB) means it is very well-placed to fill this critical gap in the SKA programme. The electronics group at the LAB have already made a significant contribution to the project; they are on track to complete the first major design review of their work on the band 5 digitiser during July 2017. The LAB is recognised as a world leader in high speed analogue and digital electronics for astronomy and have successfully delivered similar systems for a number of major ground-based and space projects and we hope to continue working with them.

When this work is complete, the LAB system will enable astronomers to reveal the seeds of planets in planet-forming disks around nearby young stars, trace the star-formation history of galaxies over the past 11 billion years, and map the distribution of dense star-forming gas and young massive stars in our own Galaxy. It will also enable mapping of the structure of our galaxy via high precision distance measurements using Very Long Baseline Interferometry in conjunction with, for example, the European VLBI Network (EVN).

LAB is also contributing to the SKA Advanced Instrumentation Programme (AIP) via the Wide Band Single Pixel Feed (WBSPF) consortium. LAB lead the development of the WBSPF band B receiver. This development has synergies with the work they are undertaking in the Dish consortium where Lab have also been very active making advancements in the development to the preliminary design phase status.

At this time, the DISH Consortium is renewing its Consortium Agreement; once this process is complete, I will ensure that LAB's application to formally join the consortium is addressed promptly.

LAB have already made an important contribution to the project and we strongly encourage them to continue to participation and apply their considerable expertise which will assist in



exploiting France's strong industrial capability to contribute to the construction phase of the project.

Yours sincerely,

A handwritten signature in black ink, which appears to read 'Philip Diamond'.

Prof. Philip Diamond
Director-General
SKA Organisation

Cc: Alistair MacPherson, Head of Project, SKAO
Roger Franzen, DISH Consortium Leader, CSIRO
Michel Perault, CNRS/INSU
Stephane Gauffre, LAB
Mark Harman, DISH Engineering Project Manager, SKAO