The ESA-ESO Topical Science Working Groups

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Starting in September 2003, ESO and ESA have now held two science planning coordination meetings in order to ensure that there remains a joint awareness of potential future synergies or missed opportunities on the ground or in space. The meetings were attended by the chairs (or representatives) of the scientific advisory committees and by the executives of both organisations. The initiative was taken with the realisation that the two organisations are serving essentially the same scientific communities and share common scientific goals.

At the first meeting, it was decided to set up a small number of working groups that would examine scientific topics or specific instrumental synergies that would be important over the next decade or so. The first of these was on the topic of the search for and the subsequent characterisation of extra-solar planets – the report of this group, chaired by Michael Perryman (ESA/ESTEC) and co-chaired by Olivier Hainaut (ESO, Chile) is summarised in the accompanying article by Kerber and Hainaut. The second was to look at the joint opportunities offered by Herschel and ALMA in the infrared and sub-mm wavebands. Chaired by Tom Wilson (ESO Garching) and co-chaired by David Elbaz (CEA/Saclay), it is nearing completion and will become available towards the end of 2005.

During the second meeting in February 2005, a new working group was proposed with the intention of reviewing cosmology with particular emphasis on the investigations of the nature of dark energy and dark matter from an astrophysical perspective. This new working group on Fundamental Cosmology was established in June 2005, with John Peacock (Edinburgh) as Chairman and Peter Schneider (Bonn) as Co-Chairman. It will consider projects in the areas of dark matter, dark energy, and other aspects of the early universe, with the aim of reporting in February 2006.

The full membership of these groups and access to their reports as they become available can be obtained from: *http://stecf.org/eso-esa/*

ESA-ESO Working Group on Extra-Solar Planets

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The ESA-ESO working group on extra-solar planets was the first of a number of such groups to make a careful analysis of scientific fields that are of interest to both ESA and ESO. The groups also make recommendations for the development of the fields facilitating coordinated planning between the two leading European organisations advancing astronomy from the ground and from space.

The extra-solar planet working group, chaired by Michael Perryman (ESA), consisted of: Olivier Hainaut (Co-chair ESO), Dainis Dravins (Lund), Alain Léger (IAS), Andreas Quirrenbach (Leiden) and Heike Rauer (DLR). Florian Kerber and Robert Fosbury from the ECF were the support scientists. A group of experts contributed on specific subjects[1]: François Bouchy (COROT), Fabio Favata (Eddington), Malcom Fridlund (Darwin), Anne-Marie Lagrange (Planetfinder), Tsevi Mazeh (Transits), Daniel Rouan (Genie), Stéphane Udry (Radial velocity), and Joachim Wambsganss (Microlensing). The group operated between June and December 2004 and documented their findings and recommendations to both agencies in a report which is available in printed form from the ST-ECF and on both ESO and ESA websites (*http://www.eso.org/gen-fac/pubs/esaesowg/* and *http://sci.esa.int/science-e/www/object/index.cfm?fobjectid=36935*). This article gives a very brief summary of the report and encourages feedback from the community.

[1] The working group membership was established by the chair and co-chair: the report is not a result of consultation with the community as a whole. The experts contributed considerable information to the report, but the conclusions and recommendations are the responsibility of the members.

The terms of reference provided by ESA and ESO called on the working group to the following:

1. Survey of the Field: this will comprise: (a) review of the methods used or envisaged for extra-solar planet detection and study; (b) survey of the associated instrumentation worldwide (operational, planned, or proposed, on ground and in space); (c) for each, a summary of the potential targets, accuracy and sensitivity limits, and scientific capabilities and limitations.
2. Role of ESO and ESA Facilities: this will: (a) identify areas in which current and planned ESA and ESO facilities will contribute; (b) analyse the expected scientific returns and risks of each; (c) identify areas of potential scientific overlap, and thus assess the extent to which the facilities complement or compete; (d) identify open areas which merit attention by one or both organisations (for example, follow-up observations by ESO to maximise the return from other major facilities); (e) con-