



**OPTICON BOARD  
GRENOBLE  
21 SEPTEMBER 2004**

**PROJECT SCIENTIST'S REPORT**

Prepared by John Davies after input from network leaders.

**Summary.** This is an updated version of the paper presented to the executive in Leiden on 21 September. An extra section on AVO networking is added and minor updates are made to ELT and NUVA sections. Detailed information received since the executive meeting from various networks following the annual report templates has been included as annex rather than excessively retype this report. See Project\_scientists\_report.doc for these more detailed reports.

Overall, despite the delay in the arrival of funds, most of the networking activities are underway and making good progress. No major budget anomalies are foreseen at this time. If all stays to plan almost all the EU deliverables for the first 12 months will be met.

Written reports from JRA1,2,4,5 & 6 are circulated with the papers and are not summarised here.

**N1. Management network.** The workload at UKATC is roughly as expected and no problems have been encountered. Proformas setting out the breakdown of funds by activity for each contractor to accompany the first payments have been prepared and supplied to Cambridge so the payments can be made. Some clarifications in the work split between UKATC and Cambridge are underway.

The Project scientist presented OPTICON activities in a talk at the JENAM meeting in Granada. Various publicity material was been produced for this meeting (handouts, badges, pens etc) and these were widely distributed. Ample supplies of pens can be made available to anyone wishing to have some for further distribution. Handouts can be downloaded from the OPTICON website for local use.

**N2 European Northern Observatory.** Jesus Burgos and Anselmo Sosa report on progress of this multi faceted network as follows:

**Directors Meetings.** Directors with facilities at ENO have organized the first meeting under the NA2 together with the IV ENO Board meeting. Copenhagen, 4th June 2004.

**Laser Traffic Control System for ORM:** The kick-off meeting of this sub work package have been held in July, once the main rules for the Laser beacon deployment at the ORM have been presented and approved in the CCI meeting (Copenhagen, June 04). A new technician will be recruited in October leading the development and implementation of the LTCS. Coming work will focus initially on the definition of the project (hardware and software), assessment of the Hawaii software system, and determination of the exact position of the various telescopes.

**Site Characterisation:** A report on night-time seeing measurements with DIMMS has been produced. Annual report on measurements of extinction and dust is expected by December 2004. A dynamical database of meteorological data has already been developed and the Annual report on discussion forums for site-selection is expected to be delivered. Some contributions have been provided to the SPIE in June (Glasgow).

**Development of a Joint Information System for Solar Physics:** The Kick-off meeting was held in Tenerife (19th March) and a detailed planning for different activities was agreed. In April, by means of the JOSO (Joint Organization for Solar Observations) Secretariat and the Board of the JAD (Joint Astrophysics Division of the European Physical Society -EPS- and the European Astronomical Society -EAS), a general message was sent to all national communities related with Solar Physics, informing on the JIS initiative. A teleconference took place in May with the main objective of coordinating actions between JIS and EGSO (European Grid of Solar Observations). The First Draft Proposal related to the development of the JIS was issued by July 23rd.

**Public outreach:** The IAC has started the coordination with the working group for the preparation of several activities. Open Doors Days at the Observatories is one of these activities. A general ENO web page for public outreach is under development.

As noted in the finance tables the IAC has been unable to commit much spending due to the non availability of the EU advance. We propose to keep the assignment of funds to the partners involved in the NA2 activities as initially agreed. In this case, the total budget for the participation of the OPTICON members in NA2, has to be distributed as follows for the first 18 months of the contract:

### **N3. This is the structuring network and composes 6 parallel activities.**

**N3.1 ELT Science case.** The planned appointment of a project scientist for the ELT design study (Dr Isobel Hook) has been confirmed. An ELT web-site linked from the OPTICON pages has been established. A meeting with our US colleagues of the GSMT SWG was held in Berlin in mid-May, just prior to the large Berlin conference. Several presentations were made by members of the OPTICON SWG at the Berlin conference (Isobel Hook, Malcolm Bremer, Matt Lehnert). Isobel Hook also gave an

ELT science talk at SPIE and there is now a 12-page paper which is the written version of that talk. A major workshop on developing the ELT science case is scheduled for Florence between 8-11 November. Depending on the number of people supported at this meeting, the ELT budget expects to meet or slightly exceed its estimated budget for the first year. An ELT presentation supported by OPTICON was made at the recent bio-astronomy conference in Iceland.

Production of a glossy brochure on the ELT activity should be well underway by the time of the board meeting and is an agenda item there. PPARC's services have been offered to help with the production. See appended report for more details.

**N3.2 NUVA.** A Kick-off meeting for this activity took place in Madrid between 21-24 September. 24 persons attended. A simple web site has been established. Most of the year's budget is being spent in support of this meeting. Progress is summarised in the detailed report appended to this document. The NUVA proposes to advance the schedule of its conference by one year following the failure of STIS and uncertainty regarding the COS instrument on HST.

**N3.3 HTRA.** Henk Spriut reports that subgroups of the network have met informally at meetings of the JRA3 consortium, and discussed ways to project the most promising technological developments for high-time resolution astronomy over the funding period of the network and beyond. Planning is in progress for a conference with broad participation from outside the JRA in 2005, which will result in a 'white book' on high time resolution astronomy. Spending is expected to be on course by the end of the year.

**N3.4 AVO.** This network will support the formation of the Data Centre Alliance structure within the second phase of the AVO project entitled: EURO-VO. The EURO-VO will take the work of the AVO project forward to establish the essential infrastructures and alliances to make a Europe-wide VO possible. The EURO-VO project will achieve this by setting up three organizations. Firstly, a VO Technology Centre will be set up spread across several organizations to produce tools and infrastructure built on the AVO experiences in accordance with IVOA standards. The VO-TECH FP6 Design Study Proposal was successful and will result in a three years VO Technology Centre work program starting in 2003 valued at approximately 6 million Euro. Secondly, a Data Centre Alliance (DCA) must be formed between all European data centre and data providers to facilitate the knowledge transfer and coordination among these organizations and with the VOTC in order to make European data visible in the VO. Finally the EURO-VO will set up a distributed Facility Centre to help the community use VO resources and to provide central registry facilities for EURO-VO data and services. The N3.4 network will provide the mechanism to create the DCA and define its work mission and milestones. A first DCA meeting is planned in late 2004 followed by a workshop at ESO in mid 2005.

**N3.5 KTWG.** Callum Norrie, the newly appointed Project manager for N3.6 and JRA5, reports that a Kick-off meeting was held on 23<sup>rd</sup> June Glasgow with the core team. Recommendations were provided as to personnel for the extension of the core team and associate team. A Preliminary list of key technologies was identified. A structure has been identified to ensure good interaction with user groups. It is planned

to have 3 meetings per year including 2 technology workshops and a core meeting. The budget has not been strongly called upon to date, but the schedule for upcoming meetings will ensure full use of budget. Next meeting Grenoble 13th October.

**N3.6 FASE (Future Astronomical Software Environment):** Preben Grosbol writes: The work was started in the spring 2004 when a Web site was created (using [www.twiki.org](http://www.twiki.org)) and monthly telephone conferences were initiated. FASE will present a poster at ADASS 2004 on the current progress. A Kick-off meeting is being considered for Dec. 2-3 in ESO, Garching, where top level requirements and basic architecture of the environment will be discussed. The FASE budget for this year will be spent on the Kick-off meeting and possibly on a follow-up meeting in the spring of 2005. Minutes for all meetings can be found at the Web site.

**N4. Space-ground Synergy.** Jean-Loup Puget reports that this group is in the process of organising two meetings. One is on the support for test infrastructures in Europe that will be the kick off meeting for this working group. The meeting will be at ESTEC hosted by Martin Kessler (TBC). A second meeting is being organised on the scientific support for major ESA astronomical facilities. This is to be organised at IAS (TBC). A description of the goals and activities will be circulated after finalising the details with Martin Kessler. The travel money will be held at the ATC and paid directly to the meeting participants. All this should be well underway by the time of the October board and a report will thus be available.

**N5 Interferometry.** Eric Bakker reports as follows

**WP 1: exchange visitors programme.** The first issue of the EII exchange visitor program lead to 6 applications for a 1 month stay. Of the six applications, the NA management board has selected 5 for funding. The next issue of the exchange visitors program has a deadline of 15 September 2004.

**WP 2: working groups.** Two working groups have been installed. One on radiative transfer and the other on atmospheric modelling. Both related to the field of optical interferometry. Both working groups will meet for the first time before the end of this year.

**WP 3: Vision on next generation of interferometric facility.** A workshop was held from 23-26 August 2004 at Liege (Belgium), information is at the web site address <http://www.astro.ulg.ac.be/colloques/2004/meeting2/index.html>

A total of 39 scientists participated. A report will be finished before the end of November 2004. A number of topics were discussed.

More details are given in the report appended

## **N6. OPTICON Telescope Network.**

**N6.1 Telescope Directors Forum.** This group met in January 2004 under the aegis of the FP5 programme. In May John Davies attended a meeting called by NOAO in Virginia on the subject of the 'System of US telescopes'. Many similarities between the US system and the European situation were noted at this meeting. A splinter

group meeting was held in Paris to discuss the prospects for the 4m telescopes in the medium term. The next meeting of the telescope directors is scheduled for November 16 and 17. Spending for the network is close to the planned profile.

**N6.2 Access Office.** Jesus Burgos reports: The Access Office is now completely operative. Several procedures to manage the Access Programme have been produced and formally approved to guarantee the highest quality in providing our service to the community. The external website and internal database are fully developed and available with all relevant information about the Access Programme and telescopes; users and telescope operators have full access to these utilities, including on-line statistics, information and submission of reports. The first meeting of the Telescope Directors Forum was organized in Tenerife in January 2004. Oral contribution and a poster about the OPTICON Access Programme will be presented in JENAM 2004. Apart from managing the normal activities related to the Access Programme (contacts with telescope operators, information, deadlines, TACs, publicity, users, reports, reimbursement of travel grants, etc), the Access Office is working on other activities related to the impact of the programme and the different proposal submission systems, as presented and agreed during the meeting in January. Some highlights about the Access Programme in 2004: 323,5 observing periods awarded, 18 telescopes involved, 65 observing projects from 16 EU countries, 341 users (members of the user teams including the group leader) from 25 countries, 68 astronomers awarded with T&S grants from 15 countries. A progress report about the Access Programme during 2004 has been produced and delivered to the project office and is circulated with the papers.

**N6.3 Enhancement.** Michel Denefeld reports that there was a successful 'NEON like' observing school held at ESO/ST-ECF this July, based on archival data (ground and space) rather than actual student observing. This was only possible thanks to the support of ESO and OPTICON (which paid travel costs for some of the experienced participants who were acting as advisors). There were 20 participants from all over Europe. The importance of archival data was widely recognised by all participants/contributors, so this type of school will continue in parallel with schools directly at the telescope. It should be noted that this happened thanks to the initiative of the OPTICON enhancement group. We are pleased to report that the FP6 Marie Curie proposal for observing schools ranked A, and is entering the negotiation phase. The EU asks that "the level of EC contribution to organisational costs per supported attendee be negotiated" which may mean a reduction of the costs, but the fraction of reduction is unknown at this stage. The complementarity between MC and OPTICON funding will therefore be essential.

Future activities were discussed briefly during the Paris meeting in August, and will be discussed further during a WG meeting later this fall. It is envisaged to plan an activity around specifics of space research experiments, if the MC funding follows. At the borderline between enhancement and outreach, one is considering one or two nights of telescope time to execute programs proposed by University or College groups (fall 2005 at the earliest). The spending has started slowly because of the unavailability of the OPTICON funds (which has created some problems for the July activity) but will speed-up rapidly with the up-coming enhancement programs.

Funding status of the network programmes is given in a separate table.

## Network budgets, spend and projections as of 6 September 2004

	Spend to Date	Expected extra spend to end 2004	Projected Total at End 04	Approved Budget to End 2004	Approved Budget to Mid 2005	Projected Balance at End 2004
N1 UKATC	41578	107050	147608	135660	203490	-11948
N2 (5)	28356	83000	111356	259294	314250	+147938
N3.1 (1)	5463	35940	41403	38400	57600	-3003
N3.2 (2)	0	23166	23166	15600	23400	-7566
N3.3	0	19200	19200	19200	28800	0
N3.4	0	19200	19200	19200	24000	0
N3.5	0	24000	24000	24000	36000	0
N3.6 (3)	0	19200	19200	19200	28800	0
N4	0	5000	5000	16200	23400	+11200
N5	27900	24100	52000	52000	78000	0
N6.1 (2)	2160	43450	45610	30000	45000	-15610
N6.2 (4)	30578	43068	73646	77428	119428	+3782
N6.3	3433	9772	13206	20000	30000	+6794
<b>TOTAL</b>	139468	456146	594595	726182	1012168	+155438

Note 1. Excludes salary costs for Dr Hook

Note 2 : Large meetings in late 2004 and low levels of activity in early 2005 explain the projected overspend of N3.2 and N6.1 at the end of 2004. These will equilibrate by mid 2005 on present plans.

Note 3 N3.6 plans to commit much of its budget to a large meeting in late 2004.

Note 4: The initial value estimated for the access office network costs were Euro 420,000 for 5 years. For reasons which are now unclear a value of 380,000 appeared in the contract. This must be taken into account for future years.

Note 5 The spend related to the NA2 activity is behind schedule due to legal restrictions affecting the management of external funds. The IAC is not allowed to make some kind of expenses, like acquiring major durable equipment or recruitment some new staff, when too large amount of funding is involved, unless those necessary funds are effectively available in our accounts. In fact, main part of the durable equipment (around 120 k€) related to the Site Testing and other activities, as originally planed, could not be acquired because of this reason, and some other similar expenses, also originally planned as those related with personnel costs, could not be carried out due to this restriction. These expenses, originally planned and necessary for the activities, will be incurred as soon as funds are available. If funds arrive early, they could even be approached in 2004. The IAC made special efforts to guarantee the complete operation of the OPTICON Trans-national Access Office during 2004, and our budget availability was mainly devoted to support this activity and the expenses related (mainly staff).

