



European Organisation
for Astronomical
Research in the
Southern Hemisphere

Organisation Européenne
pour des Recherches
Astronomiques
dans l'Hémisphère Austral

Europäische Organisation
für astronomische
Forschung in der
südlichen Hemisphäre

Director General

Garching, 16 June 2006
ODG100-06/isk

Dr. Janet E. Drew
Imperial College of Science
Technology and Medicine
Blackett Laboratory
Exhibition Road
LONDON SW7 2AZ

Dear Dr. Drew,

Accompanying this letter you will find the review report by the ESO Surveys Team (EST) of the survey management plan for your VPHAS+ project. As you will see, the review indicates a number of areas where the management plan is not compliant with the requirements and policies for ESO public surveys. The normal procedure to review these management plans (which are a strong pre-requisite for my approval of public surveys) is that the review items (Rixes) are sent to the PI's for comments and corrections after which the revised plans are evaluated by a high level review board that reports to me. I decided to step-in at this intermediate step because I am worried about the nature of the problems identified in the first (EST) review.

In order to ensure that the products of ESO public surveys serve the community at large, we have developed policies establishing how and when the data products should be delivered to the ESO archive for public release. This, of course, requires that you have the resources required for processing the data and making it available as described. The EST estimates that your team is seriously understaffed, and this is the reason for my worries.

ESO public surveys are intended to provide powerful legacies to many generations of future astronomers, and it is our collective responsibility to take every possible step to achieve this goal. Therefore, I invite you to re-submit the survey management plan for VPHAS+ giving due consideration to comments by the EST.

With kind regards,

Catherine Cesarsky

Cc: Jorge Melnick

- VPHAS SMP review -

RID=Review Item Discrepancy, RIC=Review Item Comment, RIQ=Review Item Question
Please use a separate page per Rix.

Reviewer: ESO Survey Team	
Document No	VPHAS SMP
RID, RIC or RIQ ?	RIQ
Section	Abstract
Page(s)	
<p>Rix text</p> <p>Please add an abstract which describes the project in broad terms, and explain acronyms.</p>	
<p>Reply from Survey Team</p> <p>Name:</p>	

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Section	Survey Observing Strategy
Page(s)	
RIx text	
<ol style="list-style-type: none">1. Revise observing strategy: this must include the use of bright time, as requested in the public survey proposal which was recommended by the OPC.2. VPHAS has the lowest observing efficiency of all the surveys due to the very short exposure times requested. Overhead vs. exposures are about 200% for the 30 sec. exposures to 50% for the 120 sec. exposures.	
Reply from Survey Team	
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Reviewer: ESO Survey Team	
Document No	VPHAS SMP
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Section	Survey Data Calibration Needs
Page(s)	
<p>RIx text</p> <ol style="list-style-type: none"> 1. This section is almost identical to the one in the VST ATLAS SMP. This leads to the consideration that the information provided by the team was taken one-to-one from a common source, without science-related considerations. This is a matter of concern. 2. The claim is made that fringing frames (here in the i'-band) can be obtained by using the deeper exposures from KIDS. This seems doubtful for variable fringing patterns. The team is asked to provide an independent calibration strategy for fringing corrections. 	
<p>Reply from Survey Team</p> <p>Name:</p>	

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Section	Survey Reduction Process
Page(s)	
<p>RIX text</p> <p>The review has identified the following problems in the VPHAS data reduction process:</p> <ol style="list-style-type: none"> 1. The introduction of Sect. 4 and Subsection 4.1 is almost identical to VST ATLAS SMP: the lack of science-case evaluations is a matter of concern. 2. The data reduction of the VPHAS survey is not carried out by the team itself, but by the Vista Data Flow System (VDFS) in Cambridge. The VPHAS Public Survey project relies almost fully on the Cambridge Survey Unit, which is also supposed to do all the processing for the VISTA telescope. This represents a bottleneck for the timely analysis and distribution of the survey products. The overall impression is of some distance between the PI and the overall data reduction process. 3. Where will the data products be archived? According to the ESO policies for survey, the data products from the VST public surveys will be available from the ESO archive. 4. This section shows a very strong dependence on the Cambridge Survey Unit to provide also the quality control (QC) checks, which are confined to individual pointings. The team must describe which are the QC checks that they are performing by themselves to ensure homogeneity of photometry and astrometry across the whole survey. 	

Reply from Survey Team

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Document No	VPHAS SMP
RID, RIC or RIQ ?	RID
Section	Manpower and hardware capabilities devoted to data reduction and quality assessment
Page(s)	

RIX text

The review has identified the following problems in the VPHAS plan for manpower and hardware capabilities

1. There is a real lack of resources committed to VPHAS. To show this, a figure of merit was defined that relates the approximate total amount of data for a given survey (~ area x all filters) to the number of FTE's. In essence, this is the approximate amount of data that will be processed by EACH FTE over the duration of the survey.

Survey	Area sq.deg	Filters	Area x Filters	Total	FTEs	(Area x filters)/ FTE
VPHAS	1850	H α ,u,g,r,i	9250	9250	1.5	6167

a single FTE dealing with more than (effectively) 2000 sq. deg. of data EACH year, for the VPHAS surveys, is probably a gross underestimate and this represent a point of concern.

2. Several parts of this section are almost identical to the corresponding ones in the VST ATLAS SMP, which makes the previous evaluation even more worrisome.
3. On which hardware is the VDFS running for VPHAS data? Only some spare disk capacity is described in the SMP.
4. What is the funding situation for the manpower involved in the VPHAS data reduction? The funding for the Cambridge Astronomy Survey Unit (CASU) is limited in time, and will have to process data from the VISTA consortium too. What happens if the PPARC grant is not renewed?

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Section	Data quality assessment process
Page(s)	

RIx text

The description of the data quality assessment process is identical to the one included in the VST ATLAS SMP. This leads to the consideration that this section was taken one-to-one from a common source, without much science-case related evaluation. A specific and detailed description must be provided of a) what the VDFS will provide as quality control parameters and b) what the team will be providing by itself to ensure QC checks through the whole survey for their specific science cases.

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Section	Data products and VO compliance
Page(s)	

RIX text

1. Where will the data products be archived? The SMP states that the catalogues will be hosted eventually at the ESO SAF.
2. VPHAS refers often to data products on a "pointing by pointing basis": does this mean that they will provide only the reduced frame per single pointing, and the single band catalogues per pointing?
3. What kind of meta-data will be provided to ensure that catalogues from different pointings can be merged and used for scientific purposes?

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Section	Timeline delivery of data product
Page(s)	

RIx text

1. The team must provide a description of the proposed catalogue contents.
2. ESO policies state that PS teams should start to deliver data product after 6 months of the 1st delivery of data. Further interactions with PS team are required to identify a more quantized strategy, so that catalogues for meaningful sub-areas of the survey can delivered to ESO archive and be accessible to the community

Reply from Survey Team

Name: