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Notes taken by Andy Lawrence

Present : Steve Warren, Andy Lawrence, Nigel Hambly, Omar Almaini, Richard Jameson, Phil Lucas, Simon Hodgkin

(1) SCRUTINY OF 05A REPROCESSED DATA

1.1 At the July consortium meeting, people were concerned about sky subtraction problems, but a new algorithm was available. We had agreed that this should be tested on 05A data, that flat file access should be implemented, and that survey heads should assess the results.

1.2 Hambly said that the reprocessed 05A data was now arriving and being ingested; April data was ingested but the JPEGs weren't ready, and the whole of 05A wouldn't be complete for a month. Hambly explained how to access these data for testing purposes. Warren said that a Moon-distance column would be added so that testers could ignore things closer than 30 degrees.

1.3 The April data will be looked at asap, and a telcon meeting arranged in a week or so to discuss the results. The rest of the data will be looked at when it was completely ready.

(2) DR2 PLANNING

2.1 Hambly had circulated issues we needed to decide before we could set a timetable.

It was agreed as a general principle that we should keep processing implications and other commitments for DR2 to a minimum. We also agreed that we should resist reprocessing the whole backlog of data for every incremental change in the pipeline. Rather, when significant improvements have accumulated we will do a single major reprocessing; and at the end of project we will do a final definitive reprocessing - i.e. maybe twice or three times more in the project lifetime.

2.2 For DR2 we will use therefore use the current versions of 05A, 05B, and 06A data. This has the improved sky-subtraction for 05A and 06A but not 05B - so be it, until the next major reprocessing.

2.3 For DR2 there will be no changes to UDS. DR3 will of course be a significant step for UDS. We should aim by that stage to have a processing such that the frames match the stack.

2.4 Warren and Hodgkin described the calibration problem for Y and Z bands. This relies on extrapolation of JHK measurements of 2MASS stars, and so needs to make astrophysical assumptions. Now we have enough data we can see that these assumptions were not quite good enough. However it looks like this can be fixed by a simple offset correction of 0.1 mag in Y and rather less in Z. These corrections will be applied for DR2 at the archive.

2.5 We wish to have a series of quality flags, the most important of which is something marking objects likely to be cross-talk sources. How to tackle this is becoming well understood, but we will not require the pipeline to deliver this for DR2. Hambly and Warren will look at the possibility of adding some quality flags at the archive, if this looks reasonably easy.

2.6 We set an internal target date for DR2 completion of the end of January, but with a contingency of 1 month. At some point (beginning of January ?) we should review progress and decide whether to use the contingency; and then announce the date.

2.7 Hambly will now try to set a timetable, in discussion with Warren and Lawrence. This should be circulated soon for agreement. The key issues on 05A inspection, calibration, and quality flags should be settled by late November; we should maybe then have a review meeting in December.

2.8 We should try to set processing and archiving goals for DR3 and beyond in a structured way, rather than in ad hoc discussions. We should perhaps have a meeting in which we take stock and then set requirements. This could be the same meeting as the DR2 progress-meeting mentioned above.

(3) PLANNING AND SCHEDULING 06B OBSERVATIONS

3.1 We discussed the notes circulated by Warren with the agenda (reproduced as Appendix A below). We will get some extra time in 06B which should enable us to achieve 2/3 of the two year plan by the end of 06B. However current completion varies a lot between one survey and another.

3.2 We agreed that our AIM would be to make the 2/3 completion as uniform as possible between the surveys. Warren is trying a series of simulations to see how to make this work.

3.3 We agreed that for 06B, LAS rather than DXS should target the mediocre seeing time (0.9 to 1.3 arcsec). In mediocre seeing, LAS would double integration time.

3.4 Survey Heads should send Warren priorities and ideally quite detailed intentions for number of hours versus RA and Dec, so that he can solve the jigsaw puzzle. This should be done by Sept 20th. It was agreed however that we should stay away from the UDS, and aim for 3-6H rather than 6-8H. Edge stated that DXS priority would be for ELAIS-N1 and the Lockman Hole, which fitted this strategy well. Lucas stated that GPS would probably need to be at 4.5H.

3.5 It was suggested we should liaise with JAC on the actual QT algorithm, so that Warren's modelling would be as accurate as possible.

(4) NEGOTIATION WITH UNIVERSITY of HAWAII

4.1 We discussed the email from Ken Chambers, reproduce below as Appendix B. Lawrence added that Adamson had pointed out that any deal with UH would require Board endorsement. We noted that the full consortium meeting in July had already strongly endorsed the general idea of UH involvement, but didn't arrive at a specific model. The email from Chambers was after that meeting.

4.2 We agreed that 2/3 of UH time was a reasonable offer. This is 10% of UKIRT time. If there are no scheduling difficulties, this potentially means 20% more WFCAM times, and so is indeed very valuable.

4.3 They were clearly interested in both the existing UKIDSS and the potential UHS. We agreed that it was appropriate to invite them into both, reminding them of course that UHS was as yet only a proposal. It seemed they might be interested in extra deep fields for the DXS. Edge would contact them directly to find out what this means.

4.4 We suggested that as with the Japanese, they should name specific individuals to be consortium members, and only these individuals would have data rights. As with the rest of the consortium, they could add members whenever they wished. Staff who leave UH employment would stop being members. Their attention should be drawn to the agreed data access policies.

4.5 We agreed that at this level of input resource it would be appropriate to give them some clear influence on policy matters and survey design. We suggested we should create a position of "Hawaiian Survey Head" so that a UH member would be "on the Board" as it were. We should also encourage them to nominate individuals to be members of the various working groups. Finally, we should

strongly encourage them to contribute observers.

4.6 People felt that European astronomers needed just a little more privileged access to UKIDSS before opening up to UH. We should reserve 07A/DR3 for the ESO community, and plan for 07B/DR4 and onwards to be available to UH. (And likewise at that point, using UH time). This probably means they can get flat file access from late 2007, and archived DR4 data from mid 2008. We should perhaps tell them that they will have access from mid-2008 or DR4 onwards, whichever is earlier.

4.7 At the July consortium meeting, we had discussed the idea that in due course, once the ESO community was confident it had got a head start with UKIDSS, we should propose removing the ESO-World distinction, and simply make releases immediately world public. A deal with UH might push such a change into the distance, so that they get clear value. However given that we have not yet set UHS data policy, there are a number of solutions, such as arguing that UHS but not UKIDSS would be world public; or that UHS would be UK and UH only, while making UKIDSS world public. We could also reduce the gap from eighteen months to twelve months. It was agreed that it was probably best to be simply upfront with UH and seek their opinions on these issues as part of the negotiations.

(5) OTHER BUSINESS

5.1 It was noted that at the July consortium meeting we had set a target of a meeting in in mid-October to review progress on proposal writing. Nottingham was proposed as a venue. Almaini said he would look into possible dates.

SUMMARY OF KEY DATES

- Sept 15 : initial review of 05A inspection
- mid Sept : initial proposal drafts on Wiki
- Sept 20 : Survey Heads to send 06B requirements to Warren
- early Oct : proposal review meeting
- Oct 20 : final drafts of proposals
- Nov 3 : proposal deadline
- end Nov : complete analysis of cal, flags and inspection
- mid Dec : DR2 progress review + DR3 planning
- end Jan 2007 : target date DR2
- end Feb 2007 : reserve date DR2

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Appendix A : SURVEY PROGRESS and 06B REQUIREMENTS
Note by Steve Warren 2006-09-04

The following is a precis of discussions I have been having with JAC.

By end of 05B I estimated we were progressing at 62% of our initial estimated speed (these were the details I presented at our recent Edinburgh meeting). Allowing for some improvement, I suggested to JAC that we set the goal of completing 2/3 of the 2-year plan by the end of block 06B. Now my best estimate of the state of completion of the surveys at the end of 06A is

LAS 0.24
GPS 0.41
GCS 0.37
DXS 0.49
UDS 0.21

This is computed the same way as the 05B calculation presented at Edinburgh. It corresponds to the amount of good data, rather than the amount of time observed.

I then compute that the number of hours required to get to a fraction 0.67 is

LAS 666
GPS 184
GCS 113
DXS 86
UDS 357
Total 1406

In the above, the calculation assumes that the LAS will bear the brunt of the mediocre conditions in 06B. Up to the end of 05B, the DXS used a large amount of mediocre conditions, but rather little of this has been used in the final stacks. We should avoid throwing away significant amounts of data. So in computing the number of hours required, I multiplied the nominal amount of time for the LAS by the factor $1/0.85=1.18$. In fact the correction factor ought to be larger because over about 40% of the area we double the integration time i.e. survey speed is lower by a factor 1.4. But recall that the GPS and GCS also use slightly poorer conditions for some of their obs, so overall I'm happy with these numbers.

JAC scheduled 96N (assumed equivalent to 960h) for the block Nov-Mar, which is seriously inadequate. They have a number of restrictions on how long they can extend the 06B block, and we came to an agreement that UKIDSS should get another 30N, with WFCAM kept on to mid May. This gives us 1260h. It's worth noting that through much of the block the nights are somewhat longer than 10h so we will do slightly better. I propose that we multiply the above number by the fraction $1260/1406$, to arrive at my suggested final allocations for 06B as follows:

LAS 597
GPS 165
GCS 101
DXS 77
UDS 320

I then estimated the RA distribution of the requested fields, and ran them through my scheduling programme to see how well we could do. The main difficulty, not surprisingly, is the UDS, where I reckon that the best we can do is to get about 3/4 of the 320h observed. Nevertheless we can try and improve this in a variety of ways. For example they could compromise 0.1" on the seeing, and the other surveys could avoid their fields that are at similar RA to the UDS.

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Appendix B : INITIAL PROPOSAL FROM UH FOR UKIDSS PARTICIPATION
Email from Ken Chambers to Andy Lawrence 2006-08-07