Pipeline Priority Meeting
05.04.2006, IPP Room L130, 14:00-18:00

Introduction

This document provides input to the Pipelines Development Priority Meeting that will take place on 5 April, 2006. It lists for each operational pipeline a set of change requests together with their status (open, in progress, closed), a priority (if assigned during the last meeting), and an estimation of the resources required to implement them. The minutes of the last priority meeting (October 2005) are inserted in italic.

General
- Provide a table of content at the start of the document
- Compress closed tickets, no presentation
- Set page format to A4 (instead of letter)
- Time table for 21x10 min. topics

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Time Table

General Matter	14:00
FORS/VIMOS	14:20
GIRAFFE/FEROS	14:40
UVES/SINFONI	15:00
Break	15:20
ISAAC/SOFI	15:35
CRIRES/HAWK-I	15:55

NACO/VISIR	16:10
Break	16:30
MIDI/AMBER	16:45
OmegaCAM/VISTA	17:00
X-shooter	17:10
K-MOS	17:20
Detector Characterisation Package	17:30
CLIP	17:45
End of Meeting	18:00

1. GENERAL MATTERS

1.1 ".tfits" File Extension

FITS files are usually marked with the extensions ".fit" or ".fits". In the DFS system the extension ".fits" is used for files containing FITS image extensions, while the extension ".tfits" is used for files containing FITS binary table extensions. There are however products of mixed types for which no rule is clearly defined, and some pipelines (e.g. ISAAC, VISIR) use the extension name ".fits" for files that contain FITS binary tables. The instrument scientists at Paranal use the .tfits extension to recognize the files. However ".tfits" is not a standard extension for a FITS file. A general decision has to be taken for using or not the ".tfits" file extension.

1.2 DPR Keywords

The DFS department would like to enhance the pipelines classification rules and make sure that every data type produced by the VLT instruments is classified by the Data Organiser. All data produced by the VLT instruments should be classified, including the test and technical data that are normally not processed by the pipeline. Defining classification rule for all current known data types will help us to identify quickly in the future whenever a new data type is activated or whenever the values of DPR keywords have changed. Specifically, we would need the value of the keywords (HIERARCH.ESO.) DPR.CATG, DPR.TYPE, DPR.TECH, TPL.ID, and TPL.NAME for all data types produced by the current templates for all VLT/VLTI instruments. It should be possible to retrieve this information from the template scripts.

1.3 Recipes Modules

Prototype studies have been performed in the framework of the SAMPO project for the modular decomposition of VIMOS IFU recipes into the Taverda scientific workflow. This prototyping exercise is being continued with the AMBER pipeline. A report will be given on the current status and it should be discussed which pipeline should be next made modular and when.

2. FORS

2.1 Minutes

The following list of priorities was settled in the October 21, 2005 meeting both for VIMOS and FORS:

1. *DFS01734 (FORS: Add support for MXU)*
2. *DFS01244 (VIMOS: Change object detection algorithm for MOS)*
3. *DFS01243 (VIMOS: Evaluate possibility of output MOS products in IRAF format)*
4. *DFS01490 (VIMOS: MOS mask visualization tool)*

2.2 Status

The specification phase for the FORS/MXU pipeline was completed, and its implementation begun on December 2005. The MOS library functions for the complete determination of the spectral extraction mask are now completed and tested with data from various

instruments/grisms (FORS1/2-MOS/MXU, VIMOS-MOS/IFU, EMMI, GIRAFFE). The remaining functionality, related to scientific spectral extraction, will be implemented and tested during the next two months. A first release of the new FORS MOS+MXU pipeline to PSO can be expected within July 2006. An earlier delivery, on June 2006, will be made to DFO to ensure the robustness of the new pipeline and to evaluate the quality of its products.

2.3 Closed change requests

- **DFS02679**: Zero-point scripts for FORS1/2 do not work.
- **DFS02716**: FORS2 pipeline is not reducing standard star data and producing ZPs.
- **DFS02718**: Remove old calibrations in the FORS2 calibration database.
- **DFS02810**: Set SExtractor input parameter MASK_TYPE to NONE.
- **DFS02811**: Adapting MOS/LSS scientific recipes to reduce observations of spectro-photometric standard stars.

2.4 In Progress change requests

- **DFS01734**: Request for pipeline support to the reduction of MXU data and computation of QC parameters.
  Resources: 50 +/- 10 md
  Status: See section 1.2. The new system will also support FORS1/2 MOS data.

2.5 Suspended change requests

- **DFS01498**: Implement Stetson+Landolt Catalogue in the Photometric pipeline. The catalogue used in the VIMOS pipeline may be used for the purpose.
  Resources: 5 md
  PO priority: Very high

- **DFS01697**: General problems with the wavelength calibration should be fixed. For instance, the calibration fails systematically for arc lamps exposures taken with LSS narrow slits in grisms 1028z and 600I.
  Note: This is now linked to ticket DFS01734.

2.6 Open change requests

- **DFS01496**: Debug MOS flat-fielding. Occasional ghosts are left on the normalized masters
  Resources: 5 md
  PO priority: high
  Note: This is now linked to ticket DFS01734.

- **DFS01497**: Reduce standard star field images even if no standard stars are found.
  Resources: 4 md
  Priority: Non critical / Low
  Note: This is now linked to ticket DFS01734.

- **DFS01499**: Apply wavelength calibration to LSS/MOS standard stars.
  Resources: 10 +/- 5 md
  PO priority: Very high
  Note: This is now linked to ticket DFS01734.

- **DFS01696**: Improve overscan correction, in the case of very bright objects close to the overscan regions.
  Resources: 3 md
  PO priority: low
  Priority: Non critical / Medium

- **DFS01723**: The FORS2 pipeline has sometimes problems in reducing DARKs in CHIP2. CHIP1 never fails.
  Resources: 10 md
  Priority: Non critical / Low

- **DFS01733**: Reduction of BIAS in 2x2 binning.
  Resources: 10 md
  Priority: Serious / Medium
  Note: 2x2 binning observations are not a standard operation mode.

- **DFS01885**: Flat field correction to arc lamp frames.
  Resources: 10 md
  Priority: Serious / Medium
  Note: This is now linked to ticket DFS01734.

- **DFS01886**: Imaging pipeline failures in very crowded fields.
  Resources: Several weeks
  Priority: Serious / Low
  Note: This failure occurs sporadically, i.e., when SExtractor fails.

- **DFS01929**: Stacking of sequence of jittered images in imaging pipeline. Only single images are reduced.
  Resources: Several weeks
  Priority: Serious / High

- **DFS02002**: A ripple close to the vignetted regions of the FORS2 CCDs is seen on the reduced imaging data. This is likely due to the flat field normalization method.
  Resources: 3 md
  Priority: Non-critical/Low

- **DFS02039**: False detection of sources within the vignetted FORS2 CCDs regions in imaging data. The sources detected on the vignetted regions should be excluded from the sextractor output, and from the image quality determination.
  Resources: 2 md
  Priority: Serious/Medium

- **DFS02602**: Pipeline User Manual (upgrade)
  Resources: 15 md

3. VIMOS

3.1 Minutes

See VIMOS/FORS minutes in Section 1.1

3.2 Status

Work ongoing for FORS-MXU prevented significant changes on the VIMOS pipeline side. However, while adding support for the new HR_red holographig grisms, the alternative method for reference arc-lamp lines identification (very close to what is being developed for the FORS-MOS/MXU pipeline) was also added as an option to the VIMOS-IFU pipeline.

3.3 Closed change requests

- **DFS02595**: Support of new HR_red holographic grisms.
- **DFS02596**: Failures in IFU wavelength calibration because of inaccurate first-guess.
- **DFS02597**: Alignment and sum of jittered imaging exposures failed if the PA is not a multiple of 90 degrees.

- **DFS02598**: Added QC1 parameters describing mask alignment.
- **DFS02636**: After instrument interventions on October and December the astrometric WCS needed to be upgraded in raw files headers.

3.4 In Progress change requests

- **DFS02604**: Pipeline User Manual (reformatting)
  Resources: 7 md

3.5 Suspended change requests

- **DFS01505**: vmimobsjitter - Accurate alignment of images. Currently the alignment is just based on the images WCS, that is not accurate enough.
  Resources: 15 md
  Priority: Non critical / Medium
  PO priority: High
  Note: At the moment, several cases of reduced jittered imaging exposures have been analysed, and none of them have been found to display signs of bad alignment. This ticket will be suspended until an obvious case of bad images alignment is reported.

3.6 Open change requests

- **DFS01213**: vmImCalPhot - replace simple ("stupid") fitting algorithm with a robust version for simultaneous zero-point and color-term computation, exclude stars from the vignetted region from fit.
  Resources: 4 md
  Priority: Non critical / Medium

- **DFS01243**: Evaluate possibility/feasibility to change 1D extracted spectra file format to standard IRAF format (evaluation only!).
  Resources: 2 md
  Priority: Non critical / Low
  PO priority: Desirable but low

- **DFS01244**: vmmosobsstare, vmmosobsjitter - Change object detection algorithm used for spectrum extraction (use the brightest objects as reference and compute the offsets of the remaining objects from FITS header information).
  Resources: 15 md
  Priority: Non critical / Low
  Note: There are no objects coordinates in the VIMOS headers. It should be discussed how to implement this request.

- **DFS01490**: Provide mask visualization tool. Using the adp/adm file produced by vmmps create a preview of the mask layout.
  Resources: 5 md
  PO priority: Low (useful but not urgent)

- **DFS01981**: vmspcaldisp, vmifucalib – Add pipeline support for grism MR + filter OS_blue both for MOS and IFU.
  Resources: 7 md
  Note: This requires the definition of a new line catalogue, a set of new first guesses, and new data association rules.

- **DFS02327**: vmmosobsstare, vmmosobsjitter, vmifuscience – Add error spectrum to each extracted spectrum.
  Resources: 10 md

- **DFS02511**: All IFU and MOS recipes – Add support for LR_red and LR_blue observations with IFU shutter closed.

Resources: 10 md

3.7 New change requests

- **DFS02749**: vmmosobsstare, vmmosobsjitter - The positions of the extracted objects in the OBJECT_TABLE and WINDOW_TABLE products are given in mask coordinates. It would be desirable to have them also as RA and DEC.
  Resources: 5 md

- **DFS02806**: vmifucalib - Monitoring of arc lamp intensity with IFU, as is already made for MOS.
  Resources: 3 md

4. GIRAFFE

4.1 Minutes

The priorities are defined as follows:

1) *DFS02312: Complete GIRAFFE calibration database*
2) *DFS02600: Implement scattered light correction*
3) *DFS02313: Port GIRAFFE pipeline to CPL 2*
4) *DFS02314: Implement optimal extraction.*
5) *DFS02606:Pipeline User Manual*
6) *DFS02613:Add support for using simultaneous calibration fibres in the science recipe.*
7) *Standard star recipe, dark recipe, products in Euro3D format*

4.2 Status

Version 0.6.3 of the GIRAFFE pipeline has been prepared, and delivered to Paranal and DFO. This version provides support for 193 out of 195 possible instrument setups, i.e. provides a full set of calibration files for these setups.

Version 1.0 of the GIRAFFE pipeline has been released to the public. This includes the completion of the GIRAFFE Pipeline User Manual v1.0. There is no major differences of version 1.0 to version 0.6.3, basically only the version number was updated.

A potential problem showed up while creating the calibration database. For some setups the bad column present on the detector might confuse the fibre detection algorithm of the flat-field recipe. This needs to be addressed, since it may have an impact on the pipeline operations at Paranal and for DFO.

4.3 Closed change requests

- **DFS02312** Add remaining setups to the GIRAFFE calibDB for certification by DFO
- **DFS02396**: Flames files not reduced night 2005-06-28
- **DFS02606**: Pipeline User Manual and public release
- **DFS02717:** Pipeline does not reduce daily monitoring data (Mistaken)

4.4 In Progress change requests

- **DFS02600** Implement scattered light correction
  Status: Active. Implemented and tested. Test results showed that the algorithm provided as part of the OGL pipeline version is insufficient. The results have been discussed with DFO and it was agreed to look for a better algorithm. On request of DFO the status of this ticket is kept as active.

Priority: High
Resources: TBD

- **DFS02313**: Port the GIRAFFE pipeline to CPL 2.0.
  Status: Active
  Resources: 15 md

- **DFS02314**: Implement optimal spectrum extraction.
  Status: Active
  Resources: 15 md

4.5 Open change requests

- **DFS02613:** Add support for simultaneous calibration fibers in the science recipe.
  Resources: 7 md
- **DFS02649:** Standard star recipe
  Resources: 20md
- **DFS02650:** Dark recipe
  Resources: 15md
- **DFS02651:** Technical CCD calibration recipe
  Resources: TBD
- **DFS02723:** Health monitoring recipe for SIMLAMP,TAL data
  Resources: TBD

5. UVES, UVES-FIBER

5.1 Minutes

The priorities were defined as follows:

1) Burkhard and Claudio Melo should evaluate SimCal[2] mode before any further work is performed.
2) DFS01331 (Small scale oscillations) become first priority, but wait for Alain to provide the new algorithm.
3) Following priorities are DFS01804, DFS02546, DF02603

5.2 Status

SimCal has been verified and released. A new pipeline release (2.5.0) was prepared for P77. The UVES pipeline was converted to CPL for the X-shooter consortium. We should address the question of whether the converted CPL version should be used operationally.

5.3 Closed Change Requests

- **DFS01311** SimCal mode supported.
- **DFS02694** Line & order table possible misalignments are now prevented.
- **DFS02703** An average extraction possible crash found in setting 860, due to possible line-order misalignments, is now prevented with an on the fly realignment of line-order tables during science reduction.

5.4 In Progress change requests

- **DFS02711:** LAMP,TFLAT support. Implemented requested data reduction and QC. May be some additions are needed once we get experience with these new data.
  Resources: 3 md

Status: Implemented, part of 2.5.0. TBD if can be closed.

- **DFS01331** Red data extracted by the UVES pipeline have small scale oscillations.
  Resources: tbd (The delivered code has not yet evaluated).
  Status: Assigned. Optimal extraction needs to be rewritten. I received code from A. Smette on Jan 23rd. Due to other priorities I started to look at it only on March 10. A report will be prepared for the meeting.

5.5 Open Change Requests

- **DFS01804**: FLAMES-UVES instrument throughput/ETC verification
  Resources: 25 md
  Status: Feedback. Probably I need some input from PSO/DFO (considered at FLAMES IOT meeting to be the most important ticket after SimCal, DFS01311)

- **DFS02546** Errors in the UVES pipeline
  Resources: 3 md.
  Status: suspended. On the things still open is not clear what to do and if a change may decrease robustness.
  Done: Efficiency computation: errors in object offset setting and in sky slit settings.
  Done: Variance: errors in variance computation.
  Open: Wavelength re-sampling: a shift of 0.5 pixels to be corrected.
  Open: variance not properly propagated when re-binning is applied.
  Rejected: Average extraction: a shift of 0.5 pix to be corrected. Rejected as it generates crashes on wavelength calibration.

- **DFS02603** Upgrade UVES and FLAMES-UVES Pipeline User Manuals
  Resources: 2 weeks.
  Status: Assigned. TBD when to start.

6. SINFONI

6.1 Minutes

The priorities were defined as follows:

1) Among the open change requests, first priority is given to DFS02133 (Port to CPL)
2) DFS02316 (Differential refraction): verify how urgent the request really is.
3) SINFONI remains top priority wrt UVES

6.2 Status

A new release (1.3.0) was prepared for P77. The conversion to CPL has been completed for most recipes. The link to eclipse library was removed and large part of the eclipse lower level library code converted to CPL The new release also includes support of new Strehl and pupil data. The converted code requires approval from DFO. Then the new pipeline could also be released to public.

6.3 Closed Change Requests

- **DFS02025:** Specifications for PSF, standard star, science reduction for large jitter offsets.
  a) PSF request: reduce as a science and then measure FWHM, encircled energy.
  b) STD requests: Implement Cuby formula and measure FWHM, encircled energy
  c) Generic offset: define a data reduction strategy in case the object is not in the FOV
- **DFS02430:** Median of collapsed frames of science, std star, psf with improper WCS coordinates. Solved.
- **DFS02590:** FWHM contains too large changes.
- **DFS02607:** Implemented a User Manual following the template.

- **DFS02672:** arc recipe fails in H+K 025mas setting. Solved using different parameter defaults
- **DFS02682:** std recipe generates MED_SKY empty product. Solved. DFO mistake.
- **DFS02704:** Changed of PRO.CATG on sky product of objnod, stdstar, psf recipes.
- **DFS02734:** Added support of OBJECT_JITTER raw data.
- **DFS02754:** Fixed problem with PSF-CALIBRATOR and no sky data.
- **DFS02761:** Provided single QC parameter to monitor Strehl.
- **DFS02794:** Added INS1.LAMP5.ST and INS1.SHUT2.ST into OPS.LOG.
- **DFS02795:** Possible duplicated QC keywords in FITS header. Solved.

6.4 In Progress change requests

- **DFS02133:** Sinfoni pipeline eclipse code needs to be ported to CPL
  Resources: I worked on this project 5-6 weeks. I did more than expected. I estimate at least 4-5 weeks to complete the conversion and support DFO in the verifications.
  Status: All recipes but si_rec_distortion have been converted to CPL. The new code need still to be validated by DFO.

- **DFS02562:** Slitpos and wavecal. Slitpos is Input and output of wavecal. To solve this problem one should provide no input and set bootstap=TRUE. But this option shows limit in robustness.
  Resources: 3md
  Status: A change of parameter defaults and a small code change should have fixed the problem. DFO is verifying.

- **DFS02758:** Support of PUPIL,LAMP.
  Resources: 3md
  Status: Implemented. This is a new data type. The basic data reduction and QC are implemented and verified on the data received in March. Additional quality control may be needed.

6.5 Open Change Requests

- **DFS02006:** Pipeline/esorex/CPL modifies FITS keyword content.
  Resources: TBD
  Status: Suspended. This is a CPL problem. FITS string chards filled with values shorter than 8 chars are not blank padded into the products. This may lead to problem in DO master calibration frame association. The ticket should be closed and a new ticket open into CPL.

- **DFS02136:** Differential refraction in 25 mas setting. A skew of a few pixels appears in the cube products.
  Resources: 25md
  Status: Henri proposed a new algorithm to compute the distortions. This algorithm should be implemented and verified. I need to look at the algorithm, new data are needed, interaction with Henri is probably needed.

- **DFS02548:** WCS in cube reconstructed frames. Coordinates are wrong.
  Resources: 3md
  Status: open. A function to convert improper format of value in a FITS keyword need to be implemented.

- **DFS02805:** Provide a single encircled energy QC parameter.
  Resources: 3md
  Status: Open. I need a complete list of QC params from PSO.

7. ISAAC

7.1 Minutes

1) DFS01854 is advanced QC and DFO will have to decide what to do with this ticket. In the meantime it moves down in priority.

2) New priorities: DFS01167, DFS02310, DFS01854

7.2 Status

The pipeline version 5.4.2 has been released and delivered for P77. The documentation has been completed, and the pipeline package is ready to be publicly released. This version 5.4.2 solves a number of tickets (see next section) and produces tables with '.fits' extension.

7.3 Closed change requests

- **DFS02665**: Add --max_arc_w parameter to isaac_spc_arc
- **DFS02666**: Add PRO CATG tyag for the bpm in isaac_img_twflat
- **DFS02663**: Correct the bckd stdev in the jitter
- **DFS02660**: Add QC.WLEN in isaac_spc_arc
- **DFS02669**: Change the way QC.BACKGD INSTMAG is computed in isaac_img_jitter
- **DFS02667**: Use the PRO.CATG as DO.CATG
- **DFS02673**: Chage PRO CATG in isaac_spc_jitter
- **DFS02674**: Add full header for secondary products in isaac_img_twflat
- **DFS02675**: Add PRO CATG values for secondary products in isaac_img_twflat
- **DFS02676**: Add QC NBBADPIX in isaac_img_twflat
- **DFS02680**: Add new product to isaac_img_illum
- **DFS02683**: 2 new QC parameters in isaac_img_detlin
- **DFS02687**: Fixed a wrong PRO.CATG in isaac_img_zpoint
- **DFS02688**: Fixed a wrong PRO.CATG in isaac_img_twflat
- **DFS02689**: 3 new QC parameters in isaac_img_jitter
- **DFS02690**: Added 2 new products in isaac_img_jitter
- **DFS02741**: Avoid edges to get the correlation point
  Use comma separated parameters in recipes
  Change the rules so that the recipe names are the same
- **DFS02763**: zpoint detection pb
- **DFS02765**: STDEV problem in isaac_spc_arc
  Changed QC.FWHM.MODE from pixels to arcseconds on DFO request
- **DFS02767**: isaac_spc_jitter detection pb in chopping mode
- **DFS02771**: tag for darks changed in isaac_img_twflat
- **DFS02789**: missing closing quote in header

7.4 In Progress change requests

- **DFS02601**: Documentation
  Status: The User Manual has been revised for the public release. Waiting for final approval.

- **DFS01854**: Tilt of absorption features in the telluric standards
  Status: On DFO/PSO side.

7.5 Open change requests

- **DFS01167**: Gaussian fit to compute FWHM
  Resources: 5 md (made easy with a new function that will appear in CPL 3.0)

- **DFS02310**: Response function/ efficiency formula should be upgraded

Resources: 10md

8. SOFI

Pipeline version 1.0.0 has been tested off-line by Valentin Ivanov in La Silla. Although we agreed that the wavelength calibration still needs some improvement, the pipeline state is good enough to be already installed in operation for P77. Release 1.0.0 has been packed, and is ready to be installed in La Silla. The DFS has been updated to support the SOFI instrument.

The SOFI pipeline contains the following recipes:

- sofi_img_dark
- sofi_img_domeflat
- sofi_img_illum
- sofi_img_jitter
- sofi_img_zpoint
- sofi_spc_arc
- sofi_spc_flat
- sofi_spc_jitter

9. CRIRES

9.1 Minutes

This is the top priority, before ISAAC and NACO. INS/Ralf to provide a Specifications Document, including an association map. The calibration plan and the DRL Specification document should be more detailled. they currently do not contain any algorithm description. The DRL Design document will be written once those documents will be finalised. Alain Smette should be involved in the discussions. A list of recipes required for Commissionning 1 should be given. Support by the pipeline will be needed for the Commissionning 1 (now planned for June)

9.2 Status

Commissionning will take place in June.Currently available are some data reduction tools:

- crires_util_extract: spectrum optimal extraction
- crires_util_profile: spectrum profile analysis
- crires_util_wlassign: pixel-wavelength conversion
- crires_util_wlcalib: wavelength calibration using emission lines (to be improved)

The following recipes remain to be developed (in the proposed order of priority):

- Flat field (data available)
- Detector transmission analysis (data available)
- Odd-even effect correction (data available)
- Combination of nodded frames
- Dark

10. NACO

10.1 Minutes

1) Investigate whether the ISAAC physical model (from pipeline and ETC) can be easily adapted to NACO
2) Priorities on maintenance templates remain unchanged but proceed with DFS01731 (NACO spectro pipeline) if input is provided
3) ISAAC and NACO Public Releases are lower in priority than work on CRIRES

10.2 Status

The responsibility for the NACO pipeline has been transferred to Lars Lundin. Pipeline version 3.4.0 delivered to SEG for installation in Paranal by Apr. 1 2006 and for installation at DFO.The maintenance template tickets are on hold, waiting for Paranal to fix RTC headers. Concerning the spectroscopy tickets, Paranal has provided physical model for wavelength calibration.

10.3 Closed change requests

- **DFS02799**: twilightflat recipe doesn't handle properly dark subtraction
- **DFS02697**: Weird behaviour of the NACO pipeline
- **DFS02821**: naco_img_jitter segmentation faults on missing ESO SEQ CUMOFFSETX
- **DFS02822**: memory leak and missing error status in naco_img_strehl
- **DFS02823**: naco_img_zpoint has memory leak and wrong error report on invalid input
- **DFS02824**: dark,lampflat,slitpos,strehl,twflat may finish with no products and no error
- **DFS02825**: Non-conforming FITS headers of products

10.4 In Progress change requests

- **DFS02605**: Pipeline User Manual
  Resources: 30 md

10.5 Open change requests

- **DFS01724**: Maintenance template support : Check_pupil
  Resources: 15md

- **DFS01725**: Maintenance template support : Check_vis_wfs and Check_ir_wfs
  Resources: 20md

- **DFS01726**: Maintenance template support : flexure model
  Resources: 15md

- **DFS01727**: Maintenance template support : alignment recipe
  Resources: 15md

- **DFS01730**: NACO spectro pipeline : spectroscopic flatfield
  Resources: 5md

- **DFS01731**: NACO spectro pipeline : arc recipe
  Resources: 10md

- **DFS01732:** NACO spectro pipeline : observation recipe
  Resources: 10md

- **DFS02626**: request to add spectral type and Mag in the products of the NACO zpoint recipe
  Resources: 5md

- **DFS02627**: Change to the list of parameters written by the zpont recipe
  Resources: 5md

- **DFS02698**: DO_CATG of calibration products should be the same as their PRO_CATG
  Resources: 5md

- **DFS02699**: Additional product of the NACO image science recipe
  Resources: 5md

- **DFS02700**: Calculating sky background in the raw frames of the science imaging
  Resources: 5md

11. VISIR

11.1 Minutes

The current set of priorities is defined as follows:
2) DFS02177, DFS02191, DFS02194, DFS02608 are the items to be closed for public release
3) Followed by DFS02178, DFS02192, DFS02195, DFS02196

11.2 Status

The pipeline version 1.4.0 was delivered to DFO and accepted by SEG for delivery to Paranal by Apr. 1st 2006. The pipeline version 1.3.7 was released together with a user manual to the public in January. A number of DFS tickets are still open.

11.3 Closed change requests

- **DFS02191**: Prepare the public release of the VISIR pipeline
- **DFS02194**: The sigma value for the gaussian used for the spectrum convolution must be chang
- **DFS02233**: Streehl ratio calculations
- **DFS02608**: Pipeline User Manual
- **DFS02623**: visir_img_combine seems to expect frames in a specific order
- **DFS02630**: Warning should be given if standard star coordinates do not match name in header
- **DFS02648**: irplib_flat_fit_set() does not describe assumptions on input
- **DFS02740**: Contribution maps should be always produced
- **DFS02746**: Products and PAF depend on placement of calibration files in SOF
- **DFS02826**: Non-conforming FITS headers of products

11.4 In progress change requests

- **DFS02177**: Adding keywords to the VISIR flat-field recipe PAF files
  Resources: 5md

11.5 Open change requests

- **DFS02178**: DPR.TECH in case of spectroscopy
  Resources: 5md

- **DFS02192**: Implement the optimal spectrum extraction.
  Resources: More than three weeks (must first get an overview of the algorithm)

- **DFS02195**: The fringing must be detected and stored in QC parameters

Resources: Unknown (until specification is received), but hardly less than two weeks

- **DFS02196**: The object in imaging must be extracted from the combined image
  Resources: 10md

- **DFS02220**: computation of the noise in spectroscopy
  Resources: Unknown (until new specification is received)

- **DFS02305**: WCS coordinates of reduced VISIR_img_obs_AutoChopNod data are inaccurate
  Resources: Likely 5md

- **DFS02405**: Additional parameters in the QC1_VISIR.yyyy-mm-dd.ops.log for visir_img_combine.
  Resources: 5md

- **DFS02617**: Unique PRO.CATG for different modes of visir_img_ff (Needs input from Paranal).
  Resources: 5md

- **DFS02726**: Recipe for background measurement
  Resources: 10md

12. MIDI

12.1 Minutes

New MIDI ticket for AT support: wait until the hardware and interactive visibility calculations are verified at Paranal.

12.2 Status

The SCI_PHOT algorithms for kappa-matrix computation (DFS02218) as well as the corresponding optical compensation have been implemented. The scan rejection has been extended in DISPERSED processing to address individual wavelength channels and frames. The result of the SCI-PHOT processing, however, remains to be validated with suitable SCI_PHOT observations and mask. Further development of the pipeline involves the adaptation to CPL for Gasgano/EsoRex support. Two changes were requested by Paranal but not yet logged as DFS tickets:

1) Support Split files for DET_LIN and DET_RON Technical Templates (proposed by Sebastien). Waiting for FITS files from Paranal.
2) Modification of pipeline recipes for DET_RON and DET_LIN based on individual pixel characterization (Proposed by Sebastien).

12.3 Closed change requests

- **DFS02217:** wavelength calibration recipe (Database created for : GRISM HIGH_SENS, GRISM SCI_PHOT and PRISM HIGH_SENS
- **DFS0624**: multi-resolution dispersed fringe visibility
- **DFS02609**: support ATs (No action necessary. With the use of the two VCMs during AT observations, the pipeline generates products which go through QC)
- **DFS02218**: support SCI_PHOT mode (Wavelength dependent Kappa transfer matrix computation and optical compensation have been implemented. Remaining tickets DFS02837, DFS02838)

12.4 In progress change requests

- **DFS02609**: Pipeline User Manual
  Resources: 5 md
  Status: A first version was produced. Some refinements and addition for SCI_PHOT are needed.

12.5 Open change requests

- **DFS02835**: Frames (and Scans) should be rejected base on SNR for the different channels in both HIGH_SENS and SCIPHOT mode PRISM and GRISM
  Resources: 12md

- **DFS02836**: Visibilities to be calculated also for I1 and I2
  Resources: 18md

- **DFS02837**: error calculation for the Kappa Matrix.
  Resources: 6md

- **DFS02838**: Filtering/smoothing of the kappa matrix coefficient.
  Resources: 7md

- **DFS02839**: Masks files are still needed for the SCI_PHOT mode (PRISM and GRISM).
  Resources: 5md (when the data are received)

13. AMBER

13.1 Status

The AMBER pipeline (version 2.0.1) was updated to use the library amdlib 2.x: Quality Control dictionary, with additional parameters and plotting, have been added. Further development of the pipeline involves the integration of detector correction recipes, based on the ANSI-C libraries provided by MPI Bonn. Work on the splitting of AMBER recipes and integration in the Taverda prototype is also carried out in the framework of the SAMPO project.

13.2 In progress change requests

- **DFS02610**: Finalize Pipeline User Manual
  Resources: 5 md
  Status: A first version was produced.

- **DFS02751**: Offline plotting is not working
  Resources: 5 md
  Status: Implemented. The plotting script has been adapted to the new table structure

13.3 Open change requests

- **DFS02832**: QC parameter to identify the wavelength in the object product.
  Resources: 5 md

14. OMEGACAM

14.1 Minutes

The OmegaCam pipeline will be tested with WFI data and with MVM. Contact persons: Thomas Szeifert and Fernando Selman for WFI, Charles Rite for MVM

14.2 Status

A data set of WFI images provided by Charles Rite was reduced with the OmegaCAM pipeline. The astrometry of the stacked images reduced with this pipeline has been compared to the results of the MVM pipeline. The matching with the USNOA catalogs is fairly good. This comparison was done for all stacked images from each of the 8 extensions. The OmegaCAM User Manual has progressed a lot, Jitter and Dither functions have been updated to optimize the code, and DFO has received a tarfile of the pipeline for performance tests using Condor.

15. VISTA/VIRCAM

15.1 Status

The Vircam pipeline is still being developed by the VISTA Consortium. A test delivery has been sent to DFS last December containing a few recipes and some test data. The purpose of this delivery was to check the compliance of the coding with CPL and the DFS standards.Constant support has been given to the Consortium in the past months on the development of the pipeline. A VISTA progress meeting will happen at the end of April in Garching. The purpose of this meeting is to evaluate the status of the pipeline development.A dry-run of the Vircam pipeline and infrastructure is expected to happen in June. The purpose of this test is to assess the performance of the pipeline in the system.

15.2 Closed change requests

- **DFS02816**: Install test pipeline for DFO.
  Status: Implemented

16. HAWK-I

16.1 Minutes

Document release date can be discussed at a later stage

16.2 Status

The DRL design document is written together with Markus Kissler-Patig and Luigi Bedin on a shared CVS module.

17. X-SHOOTER.

17.1 Minutes

The X-Shooter FDR was on 6-7 Feb. The DRS passed on condition to implement a list of AI..

17.2 Status

X-SHOOTER had FDR on Feb 7-8. The DRS passed FDR on condition that some AI are implemented. CVS access was provided to the consortium. A 2 days training on how to write elementary CPL recipes was provided by Jonas to the consortium at IAP.

18. K-MOS

18.1 Status

The DFS representative, Carlo Izzo, closely followed the preparation of the software-related documents to be delivered at PDR (May 2006), providing comments and suggestions.

19. FEROS

19.1 Status

Like for the SOFI pipeline, LaSilla requested a DFS FEROS pipeline. LaSilla IS/IOT proposes to embed the existing FEROS MIDAS pipeline in the pipeline infrastructure by making use of the existing robust high-level reduction procedures. The objective is to provide QC at the mountain (currently missing). LaSilla IS/IOT proposed to essentially do the port, provided some basic support is delivered, and contact points are established.

20. DETECTOR CHARACTERISATION PACKAGE

A monitoring plan for infrared detectors has been defined by Paranal and a collection of the data sets currently produced by the infrared instruments has been prepared. The document "Infrared Array Detectors and Monitoring Plan" comes in complement to the "Optical CCDs Detector Test and Analysis Procedures". The DFS Department proceeded with the recruitment of a Paid Associate to work on the implementation of pipeline recipes for detector characterization. It is now possible to proceed toward the consolidation of specifications for monitoring procedures, templates, data formats, and recipes, for both the infrared and optical detectors.

21. CLIP

21.1 Minutes

1) eclipse calls should be replaced asap by CPL
2) Mark and Andreas to define a project structure
3) Wait for requirements document to be provided by the new project leader

21.2 Status

An internal project proposal has been distributed by Paranal. The project plan outlines the phases, timelines and responsibilities within the project. Paranal requirements for the CLIP project have been listed in a draft document. The PA position filled in the DFS Department for the detector characterisation package will also be assigned to the CLIP project.