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Very Large Telescope Paranal Science Operations UVES Templates Reference Guide

Doc. No. VLT-MAN-ESO-13200-1567

Issue 110, Date 01/18/2022

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Change Record

| Issue/Rev. | Date | Section/Parag. affected | Reason/Initiation/Documents/Remarks |
|------------|----------|-------------------------|---|
| 1.0 | 11/02/98 | | |
| 1.1 | 22/05/98 | All | Comments included |
| 1.2 | 29/06/98 | All | Small changes |
| 1.3 | 17/09/98 | All | Removed Lamp ATs |
| 1.4 | 29/04/99 | All | Updated templates |
| 1.5 | 16/06/99 | All | Updated templates after PAE, tsf tables generated from tsf files |
| 1.6 | 14/01/00 | All | Restructured after UVES Commissioning, for release of P65 instrument package |
| 1.7 | 02/06/00 | | Updated for P66: |
| | | 8 | - usage of offset stars |
| | | 8 | - neutral density filters for acquisition |
| | | 9.2,9.4 | - new dichroic standard settings |
| 1.8 | 20/12/00 | | Updated for P67: |
| | | 8 | - U filter for blue slicer acquisition |
| 1.8.1 | 23/01/01 | 6 | Correction: wave → flat |
| 1.9 | 01/07/01 | | Updated for P68: |
| | | 7.1,A | - keyword order DET - SEQ - TEL - INS |
| | | 7.2 | - 625kHz readout mode in VM |
| | | 9.1 | - maximum number of exposures 999 |
| | | 9.2,9.4 | - Red 600 std setting for iodine cell |
| 1.9.1 | 01/10/01 | | Minor corrections |
| 2.0 | 09/12/01 | | Updated for P69: |
| | | 8.1 | Acquisition: new TEL keywords |
| | | 9.2 | HER_5 replaces CUSO4 |
| 2.1 | 29/06/02 | | Updated for P70: |
| | | 9.1,9.2 | New SEQ.SOURCE keyword |
| 2.2 | 10/01/04 | | Updated for P73: |
| | | 8.3,A | Acquisition templates for RRM added |
| 75 | 14/02/05 | | Updated for P75: |
| | | 9.2,10.3,A | Std Dichroic settings with 760nm added |
| 76 | 01/06/05 | | Updated for P76: |
| | | | Minor corrections |
| | | 9.2 | Red 600 std setting without iodine cell |
| | | 8.2,A | Use of image slicer #3 with dichroic #2 |
| 77 | 12/12/05 | | Updated for P77: |
| | | | Minor changes |
| | | 9.1,A | Interference filters for red arm in VM |
| | | A | Added info about proper motion support |
| 78 | 14/01/06 | | Updated for P78 |
| 79 | 09/06/06 | | Updated for P79 |

| Issue/Rev. | Date | Section/Parag. affected | Reason/Initiation/Documents/Remarks |
|------------|------------|-------------------------|---|
| 80 | 10/02/07 | | Updated for P80 |
| 81 | 24/05/07 | | Updated for P81 |
| 82 | 03/12/07 | | Updated for P82 |
| 83 | 28/08/08 | | Updated for P83 |
| | | 2, 6, 8.1 | Minor changes |
| 83.1 | 26/11/08 | 8.1,A | ADDVEL removed from the acquisition templates |
| 84 | 26/02/09 | | Updated for P84 |
| 85 | 27/08/09 | | Minor updates for P85 |
| 86 | 27/02/10 | | Updated for P86 |
| 87 | 12/08/10 | | Updated for P87 |
| 88 | 18/02/11 | | Updated for P88 |
| 88.1 | 07/04/11 | | Author list updated |
| 89 | 01/09/11 | | Updated for P89 |
| 90 | 23/02/12 | | Updated for P90 |
| 91 | 29/08/12 | | Updated for P91 |
| 92 | 26/02/13 | | Updated for P92 |
| 93 | 28/08/13 | | Updated for P93 |
| 94 | 26/02/14 | | Updated for P94 |
| 95 | 23/07/14 | | Updated for P95 |
| 96 | 18/01/15 | | Updated for P96 |
| 97 | 05/09/15 | | Updated for P97 |
| | | 8.1 | Added clarification about blind offsets |
| 98 | 05/01/16 | | Updated for P98 |
| 99 | 09/09/16 | | Updated for P99 |
| 100 | 05/22/17 | | Updated for P100 |
| | | all | author list updated |
| | | 6, 9.5, app. A | added UVES_dic1_obs_sky |
| 101 | 08/29/17 | | Updated for P101 |
| 102 | 01/29/2018 | | Version updated for P102 |
| | | all | Reference to the P2PP → P2 transition |
| Issue 103 | 09/19/18 | all | update for P103 CfP |
| Issue 106 | 23/05/20 | all | update for P106 Ph2 |
| Issue 107 | 23/11/20 | all | update for P107 Ph2 |
| Issue 108 | 24/05/21 | all | update for P108 Ph2 |
| Issue 109 | 25/08/21 | all | update for P109 Ph1 |
| | | 8.3 | link to RRM instruction corrected |
| Issue 110 | 21/01/22 | all | update for P110 Ph1 |

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1 Glossary

Acquisition: Accurate positioning of the telescope in order to center the target on the spectrograph slit.

Atmospheric Dispersion Correction (ADC) unit: This unit can be inserted in the pre-slit area of UVES to correct for atmospheric dispersion.

BIAS frame: Read-out of the CCD detector of zero integration time with shutter closed. The registered number of electrons per pixel has to be subtracted from a science exposure, because these were not created by photons from the source.

Calibration: Procedures to remove the instrumental signature from the scientific data (e.g., by subtracting BIAS frames and by dividing through the flatfield).

Camera: UVES has two cameras (red and blue arm) containing a CCD detector. The camera images the spectrum on the CCD.

Charge-Coupled Device: Electronic 2D-array detector converting photons into electrons. For UVES there are three CCDs, one for the blue arm and a mosaic of two CCDs for the red arm.

Cross-disperser grating: An echelle spectrograph contains two dispersive elements, in the case of UVES two gratings. One is the echelle grating, the other one is called the cross-disperser grating. UVES hosts two cross-dispersers, each with two different gratings. The cross-disperser grating determines the distance between the echelle orders.

Decker: Determines the slit length (not to be confused with the guy who built UVES).

Derotator: This element (not to be confused with the telescope adaptor/rotator unit) is placed in the diverging beam coming from the telescope and compensates for field rotation (which is inherent to the Nasmyth focus).

Dichroic: This element in the UVES mode selector reflects all the light below a certain wavelength and is transparent for longer wavelengths. This allows the operation of the spectrograph using both spectrograph arms simultaneously.

Flatfield: Spectrum obtained from light source with a flat (i.e. without spectral features) energy distribution, e.g., a tungsten lamp. The registered signal provides information about the response of the detector, allowing a determination of the variation in sensitivity from pixel to pixel, the echelle order shape, the presence of bad columns on the detector, etc.

Free Setting: A setting of the instrument defined by the observer, generally with a different wavelength, readout or binning than any of the standard settings. Free settings are normally only available in visitor mode in order to reduce the calibration load in service mode.

Grating: UVES contains two echelle gratings (one blue and one red) which form the heart of the spectrograph. The grating disperses the light in its colors.

Guide star: A point source used for accurate tracking (and active control of the telescope mirrors).

Image slicer: This device converts a two-dimensional image (e.g., of a star) in the focal plane of the telescope into a one-dimensional slit. In this way, the light that normally would fall outside the slit (especially when using a narrow slit for high spectral resolution) is fed to the spectrograph.

Iodine cell: A glass cell filled with heated I₂ gas can be inserted in the light beam to superimpose a molecular absorption spectrum, containing many lines, on the observed astronomical spectrum. This enables very accurate wavelength calibration.

Mode Selector: Unit in the pre-slit area of UVES which directs the light to one of the two spectrograph arms or to both arms simultaneously (with help of dichroics).

Observation Block: A logical unit of exposures needed to obtain a coherent set of data. Encompasses all relevant information for a successful data acquisition on a target. It consists of target information, a set of templates, parameter files for the templates, conditions, requirements and comments concerning the specified observations. It represents the entity the short-term scheduler deals with. Constructing Observation Blocks is part of the Phase II Proposal Preparation Process.

Phase II: During this phase the successful applicant (whose Phase I proposal has been accepted based on the scientific rationale and technical feasibility) prepares the Observation Blocks to carry out the observing program.

Pre-slit area: UVES spectral elements located in front of the spectrograph slits.

Spectrograph arm: UVES consists of two “separate” spectrographs, one optimized for the blue (blue arm) and one for the red wavelength region (red arm).

Spectrograph slit: The image of the astronomical source produced by the telescope is focussed on the spectrograph slit.

Standard Setting: A pre-defined setting of the instrument facilitating the preparation of the observations. The Observatory provides the relevant calibration files when a Standard Setting is used.

Template: A set of instructions for the performance of a standard operation on an instrument, the instrument and detector setups. The templates represent specially devised sequences for often used instrument operations and calibrations.

Template Signature File: This is a description of a Template and its parameters. It contains information about the type and allowed ranges of the parameters; some of the parameters have to be set by the observer.

Wavelength calibration: Spectrum obtained from emission-line source. The wavelengths of the (many) emission lines are accurately known and are used to transform pixel space into wavelength space.

2 List of acronyms and abbreviations

| | |
|----------------|---|
| AT | Acquisition Template |
| CT | Calibration Template |
| CCD | Charge-Coupled Device |
| ESO | European Southern Observatory |
| OB | Observation Block |
| OS | Observation Software |
| OT | Observation Template |
| P2/P2PP | Phase II Proposal Preparation tools |
| RRM | Rapid Response Mode |
| UVES | Ultraviolet and Visual Echelle Spectrograph |
| VLT | Very Large telescope |

3 Introduction

This document describes the **Templates** defined for the Ultraviolet and Visual Echelle Spectrograph (UVES) mounted at Nasmyth B focus of Kueyen (UT2) of the Very Large Telescope (VLT). The reader of this reference guide is assumed to be reasonably familiar with the UVES instrument, e.g., from the User Manual [1].

The UVES Templates are characterized by the **Template Signature Files (TSFs)**, which are part of the templates themselves and contain the parameters (telescope, instrument, detector) that have to be set, including the ones to be specified by the observer during Phase II of the observation preparation process via the P2 tool (see [1], [3], [4]). The Templates are the building blocks of science and calibration **Observation Blocks (OBs)**. The latter define the observing mode and complete telescope and instrument setup for a given observation.

A subset of the observation templates contains predefined **Standard Settings** with a limited choice of central wavelengths [1]. The use of Standard Settings is a requirement for the execution of OBs in Service Mode [2]. Further, Standard Settings will be calibrated by the observatory and are automatically processed by the UVES pipeline.

4 References

- [1] *UVES User Manual*, VLT-MAN-ESO-13200-1825, Issue 102, 01/29/18, L. Sbordone, C. Ledoux
- [2] *UVES Calibration Plan*, VLT-PLA-ESO-13200-1123, Issue 102, 01/29/18, L. Sbordone, C. Ledoux
- [3] *P2PP version 3 User Manual*, VLT-MAN-ESO-19200-5167, Issue 8, 01/16/17, M. Rejkuba
- [4] <http://www.eso.org/sci/observing/phase2/p2intro.XSHOOTER.html>

5 Instrument Modes

UVES has 4 *modes* reflected in the template groupings:

1. Light beam enters the red arm only (*red*)
2. Light beam enters the blue arm only (*blue*)
3. Light beam is split by the dichroic mirror #1 into the red and the blue arm (*dic1*) which allows simultaneous observations in both arms
4. Light beam is split by the dichroic mirror #2 into the red and the blue arm (*dic2*) which allows simultaneous observations in both arms

6 Template Modes

The UVES templates are split into groups depending on the *function* to be performed:

Acquisition Templates (AT):

1. acquisition on slit (*acq_slit*)
2. acquisition on image slicer (*acq_imsl*)
3. acquisition on slit for RRM observations (*acq_slitrrm*)

Observation Templates (OT):

1. science exposure in free setting (*obs_expfree*)
2. science exposure in standard setting (*obs_exp*)
3. flux standard star exposure in free setting (*obs_stdfree*)
4. flux standard star exposure in standard setting (*obs_std*)
5. twilight sky flat field exposure for solar spectrum (*obs_sky*)

Calibration Templates (CT):

1. calibration exposures for wavelength in free setting (*cal_wavefree*)
2. calibration exposures for wavelength 'attached' to a science/standard star exposure (*cal_waveatt*)
3. calibration exposures of continuum lamp in free setting (*cal_flatfree*)
4. calibration exposures of continuum lamp 'attached' to a science/standard star exposure (*cal_flatatt*)
5. calibration of detector bias (*cal_bias*)
6. calibration of detector dark current (*cal_dark*)

Each of the instrument modes can be combined with each of the template modes to generate the complete set of templates. The corresponding template filenames are:

UVES_< *mode* >_< *function* >

NOTE: A science or calibration OB must be composed from templates of the **same** *mode*; otherwise the OB will fail during execution.

7 Templates: General Remarks

7.1 Notation

In this document all template keywords are given in the following notation:

Keyword Name Parameter Range *Label in P2*

Within one template, the keywords are ordered according to the sequence **DET – SEQ – TEL – INS**.

A detailed listing of all free and fixed keywords in the UVES templates is given in Appendix A.

7.2 Detector Setups

In all OTs and CTs the detector integration times

DET1.WIN1.UIT1 0..36000 *Blue Exposure Time*
DET2.WIN1.UIT1 0..36000 *Red Exposure Time*

and detector readout modes

DET1.READ.SPEED *Blue Readout Mode*
DET2.READ.SPEED *Red Readout Mode*

have to be specified. To optimize the S/N in different type of observations while keeping the number of modes to be calibrated reasonable, 4 readout modes have been identified. A readout mode defines the readout speed, the gain, and the binning factors.

| Readout Mode | Observing Mode | Application |
|------------------|-----------------|--|
| “225kHz,1x1,low” | Service/Visitor | non-readout noise limited observations |
| “50kHz,2x2,high” | Service/Visitor | readout noise limited observations |
| “225kHz,1x2,low” | Visitor | intermediate to the two modes above |
| “50kHz,2x3,high” | Visitor | very faintest objects |
| “625kHz,1x1,low” | Visitor | high time resolution observations |

8 Acquisition Templates

8.1 UVES_< mode >_acq_slit

The UVES slit acquisition template. The telescope will preset to the specified RA and DEC, i.e.,

TEL.TARG.ALPHA and **TEL.TARG.DELTA**.

For very faint ($B > 19$, $V > 20$) or extended objects, offset stars have to be used to exactly position the slit on the target. In this case, the RA & DEC coordinates in the OB are also the coordinates of the science target. The following convention between target and offset star coordinates is used:

TEL.TARG.ALPHA + **TEL.TARG.OFFSETALPHA**[arcsec] = RA(offset star)

TEL.TARG.DELTA + **TEL.TARG.OFFSETDELTA**[arcsec] = DEC(offset star)

The offsets have to be specified in arcseconds, in particular:

TEL.TARG.OFFSETALPHA[arcsec] =
 (RA(offset star) - **TEL.TARG.ALPHA**) * COS(**TEL.TARG.DELTA**)

In P2, the offset keywords have the labels

TEL.TARG.OFFSETALPHA *RA blind offset*
TEL.TARG.OFFSETDELTA *DEC blind offset* .

The keyword

TEL.AG.GUIDESTAR CATALOGUE *Get Guide Star from*
 SETUPFILE NONE

determines how the guide star for the telescope is selected. With the default option CATALOGUE the telescope will select automatically a suited guide star from the VLT guide star catalogue. This option should be appropriate for most users. If a specific guide star has to be used, the option SETUPFILE can be used; the coordinates of this guide star must then be specified via the keywords

TEL.GS1.ALPHA *Guide star RA*
TEL.GS1.DELTA *Guide star DEC* .

If no automatic guide star acquisition is required, the option NONE has to be used for **TEL.AG.GUIDESTAR**. In this exceptional case the guide star coordinates have to be entered manually by the telescope operator.

After guiding has started and active optics corrections have been applied, the target is acquired interactively by the operator to the center of the slit on the UVES slitviewer corresponding to the *mode*. In case of the *dic1* and *dic2* mode the target is visible on both slitviewers and the slitviewer to be used for acquisition has to be specified via

DET.GUIDECAM RED BLUE *Guide Camera* .

If the derotator is used in “ELEV” mode (cf. below) and one of the two slits in the red and blue arm is considerably shorter, it is recommended to center the star on the arm with the shorter slit, i.e., to select the slitview camera of the corresponding arm. Otherwise, the atmospheric dispersion can displace the object close to the edge of the shorter slit.

In general, the selected slitview camera will be used by the operator for secondary guiding on the target or a field star.

For the acquisition of very bright objects ($V < 6$ mag), neutral density filters can be inserted in the pre-slit area to avoid the saturation of the slitviewer CCDs. A neutral density filter is selected via

INS.FILT1.NAME FREE ND1 . . . ND3 *Acq. Pre-Slit Filter*

For filter ND n ($n = 1 \dots 3$) the brightness is lowered by $n * 2.5$ mag. Make sure that the effective brightness of the target is between 7 – 11 mag. Note, that the filter will be forced to FREE (no filter) for the science exposure.

The Derotation Mode can be specified via

INS.DROT.MODE ELEV SKY *Derotation Mode.*

The mode “ELEV” corresponds to a slit aligned with the parallactic angle, i.e. the atmospheric dispersion will spread the light along the slit. This minimizes slit losses and is best suited for point sources.

The mode “SKY” keeps the slit on a fixed position angle on the sky. The Position Angle has to be specified in

INS.DROT.POSANG 0..360 *Position Angle*

with the common (N→E) convention. If a particular angle is required then the **INS.DROT.MODE**

must **not** be placed as ELEV but as SKY. Since in this case the position angle is not aligned with the parallactic angle, atmospheric dispersion will lead to slit losses. They can be reduced up to a zenith distance of 60 degrees by the use of the UVES atmospheric dispersion corrector (ADC). The ADC is inserted into the beam by setting

INS.ADC.MODE AUTO OFF *ADC*

to ‘‘AUTO’’.

For stable throughput, a depolarizer can be inserted into the beam via

INS.DPOL.MODE ON OFF *Depolarizer.*

In *red* mode, in addition to the options above, an Iodine Absorption Cell can be inserted into the beam via

INS.OPT1.NAME IN OUT *Iodine Cell.*

INS.OPT2.NAME UNDSIZ OVSIZ *Pupil Stop*

controls the instrument Pupil Stop size. Only in combination with the iodine cell the use of an undersized pupil stop (‘‘UNDSIZ’’) is recommended. In all other instrument mode, the Pupil Stop is forced to ‘‘OVSIZ’’ for maximum throughput.

8.2 UVES_*mode*_acq_imsl

The UVES image slicer acquisition template. The target is acquired interactively by the operator to the respective entrance position of the image slicer which is selected via

INS.SLIT1.NAME SLIC#1 SLIC#2 *Image Slicer.*
 SLIC#3

At the end of the acquisition, the slicer is inserted, and the slit is configured to predefined width and height corresponding to the respective slicer. No secondary guiding is available for image slicer observations.

The image slicers #2 and #3 are optimized to obtain the maximum resolving power in the blue and red arm, respectively. Therefore, only the following selections are allowed for the different instrument modes; however, image slicer #3 can also be used in combination with dichroic #2 Red 760 standard setting:

1. UVES_red_acq_imsl: ‘‘SLIC#1’’ ‘‘SLIC#3’’
2. UVES_blue_acq_imsl: ‘‘SLIC#1’’ ‘‘SLIC#2’’
3. UVES_dic1_acq_imsl: ‘‘SLIC#1’’
4. UVES_dic2_acq_imsl: ‘‘SLIC#1’’ ‘‘SLIC#3’’

For image slicer observations in the blue arm with CD#1, it is highly recommended to insert for the acquisition the ‘U’ filter in the pre-slit wheel:

INS.FILT1.NAME U *Acq. Pre-Slit Filter*

This will minimize the displacement of the object on the image slicer entrance due to the atmospheric dispersion. Note, that the filter will be forced to FREE (no filter) for the science exposure.

The depolarizer is the only additional pre-slit function which is free to be set via

INS.DPOL.MODE ON OFF *Depolarizer.*

As in the slit acquisition, only in *red* mode the Iodine Cell can be used together with an undersized Pupil Stop (cf. above).

8.3 UVES_< mode >_acq_slitrrm

This template should be used only in service mode and has been created for execution of observations of Targets of Opportunity in Rapid Response Mode (<https://www.eso.org/sci/observing/phase2/SMSpecial/RRMObservation.UVES.html>). It appears to the user very similar to the usual UVES slit acquisition template, but with shorter acquisition time, which is important for immediate follow-up of transient phenomena, such as gamma-ray bursts, novae, or supernovae. Note that it is possible to perform observations in dic1 and dic2 modes in the same OB.

9 Observation Templates

9.1 UVES_< mode >_obs_expfree

UVES science exposure template with a 'free' instrument setting.

This template allows to freely configure the instrument (Slit width, Decker Height, below slit Filter, Crossdisperser, Central Wavelength, Camera Tilt) and detector (Readout Mode, Exposure Time) within given ranges. It is up to the user to define a meaningful configuration. Eight interference filters have been installed to use with the UVES RED arm in visitor mode starting in P77. The purpose of these filters is to isolate certain echelle orders to allow the use of the maximum slit length of 30". The filters and their central wavelengths are: H α (656.6 nm), H β (486.1 nm), OIII (500.7 nm), OIII (436.3 nm), NII (575.5 nm), OI (630.0 nm), SII (672.4 nm), and HeII (468.6 nm). The peak transmission of the individual filters ranges from 70 to 90%. All interference filters should be used in combination with Crossdisperser #3.

The keyword

SEQ.SOURCE POINT EXTENDED *Source Type*

allows the user to specify the source geometry of the target to be observed with this template. This keyword will not affect the way in which the target is observed but only the way the science spectrum is treated by the UVES pipeline: POINT sources are extracted and sky subtracted with an optimum-extraction algorithm while for EXTENDED objects the spatial information along the slit will be preserved, i.e. two-dimensional spectra are extracted.

With the above-defined instrument and detector configuration the template will take

in *red* and *blue* mode

SEQ.NEXPO 0..999 *No. of Exp*

respectively in *dic1* and *dic2* mode

SEQ.NEXPORED 0..999 *No. of Red Exp*

SEQ.NEXPOBLUE 0..999 *No. of Blue Exp*

exposures at each offset position.

The offsets are defined as lists of offsets in arcseconds along (x) and perpendicular (y) to the slit via

TEL.TARG.OFFSETX -999..999 *X offset in arcsec*

TEL.TARG.OFFSETY -999..999 *Y offset in arcsec.*

SEQ.NOFF 1..100 *Number of offsets*

offsets will be carried out looping through the lists. The specified offsets are with respect

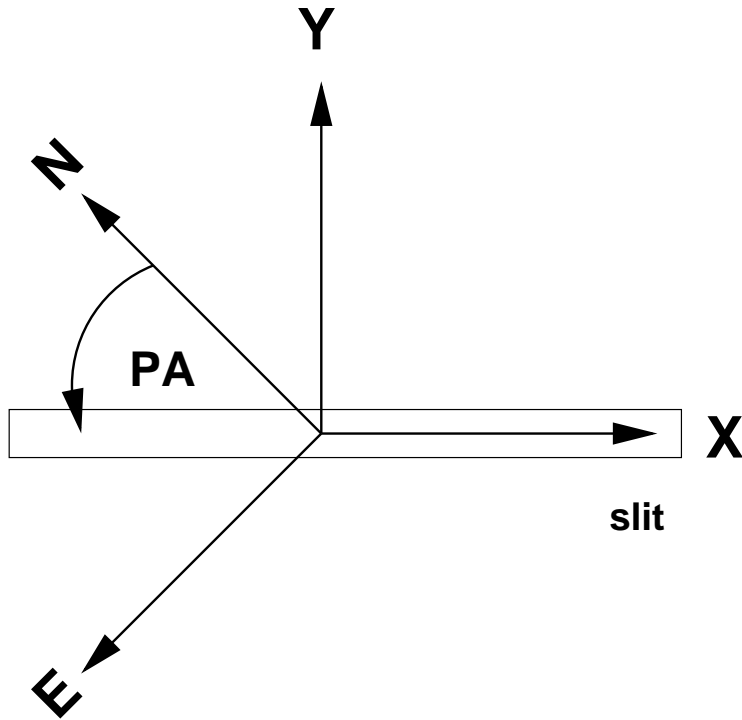


Figure 1: Slit coordinate systems. **NOTE:** A positive offset in x or y direction will move the **object** in direction of the +x or +y axis.

to the actual position (NOT the slit center). The orientation of the sky and slit coordinates systems are shown in Fig. 1. At each offset position the above defined number of exposures are taken.

At the end of the template the star is offset back to the original acquisition position, i.e. the slit center.

The x offsets are useful to take jitter exposures of the target along the slit. A list of xy offsets is recommended to map extended objects.

Note: Offsetting must only be used if the derotator is set to **SKY** mode in the acquisition template (cf. Sect. 8.1). Otherwise the object will rotate out of the slit during a long exposure.

Examples:

A) After the star has been acquired to the slit center, with the parameter set

```
SEQ.NEXPORED          3
SEQ.NEXPOBLUE         1
SEQ.NOFF               2
TEL.TARG.OFFSETX      -2.5 5.0
TEL.TARG.OFFSETY       0
```

the first offset moves the star 2.5 arcsec to the 'left' (-x direction). At this position 3 red and 1 blue exposures are taken. After the exposures are finished the star is offset from its current position by 5 arcsec to the 'right', again along the slit since the y offset is again 0. At the new position again 3 red and 1 blue exposures are taken. This sequence would result in two sets of spectra, one with the target in the 'left' half of the slit, the second with the target in the 'right' half.

B) Another parameter set like

```
SEQ.NEXPORED          1
SEQ.NEXPOBLUE         1
SEQ.NOFF               4
TEL.TARG.OFFSETX       0
TEL.TARG.OFFSETY       0 2 2 2
```

could be suited to map an extended object. After taking a red and blue exposure at the acquisition position (e.g., a bright nucleus) the target is 3 times offset by 2 arcsec perpendicular to the slit to the 'top' (+y direction). At each offset position a red and a blue exposure is taken.

C) Obviously, the default parameters

```
SEQ.NOFF          1
TEL.TARG.OFFSETX  0
TEL.TARG.OFFSETY  0
```

result in **SEQ.NEXPO** exposures with the target on the slit center.

9.2 UVES_< mode >_obs_exp

UVES science exposure template with standard settings.

Standard settings are predefined instrument configurations to simplify the creation of science OBs. If standard settings are used, the corresponding calibrations will be provided by the observatory. Further, science data of single point sources obtained in standard settings can be processed by the UVES data reduction pipeline.

A standard setting is selected via the corresponding parameter

| | | | | |
|-------------------------|-------------------------|-------------|-------------|----------------|
| INS.REDEXP.MODE | 520 580 600 860 | <i>Red</i> | <i>Mode</i> | <i>Central</i> |
| | | <i>Wlgt</i> | | |
| INS.BLUEEXP.MODE | 346 437 | <i>Blue</i> | <i>Mode</i> | <i>Central</i> |
| | | <i>Wlgt</i> | | |
| INS.DIC1EXP.MODE | 346+580 390+564 | <i>Dic.</i> | <i>Mode</i> | <i>Central</i> |
| | 346+564 390+580 | <i>Wlgt</i> | | |
| INS.DIC2EXP.MODE | 437+860 346+860 390+860 | <i>Dic.</i> | <i>Mode</i> | <i>Central</i> |
| | 437+760 346+760 390+760 | <i>Wlgt</i> | | |

which is a choice of one central wavelength or of a combination of two wavelengths in the case of the dichroic modes. Table 1 shows the corresponding instrument configuration for the respective standard settings.

Note that the Red 600 standard setting can now be used in combination with the Iodine absorption cell or without.

The only remaining parameters to be specified are the Source Type, the Slit Width and Camera Tilt for the instrument and Readout Mode and Exposure Time for the detector. In addition the number of exposures and offsets and the lists of xy offsets are required as in the free exposure (cf. above).

9.3 UVES_< mode >_obs_stdfree

UVES standard star observation template with a 'free' instrument setting.

Same as UVES_< mode >_obs_expfree (cf. above) but for the observation of spectrophotometric standard stars. For standard stars observed with this template the UVES pipeline produces response curves to allow a flux calibration of the science spectra taken in the same instrument setup. However, the flux standard star must be selected from the list of available UVES flux standards as available from the UVES webpage.

9.4 UVES_< mode >_obs_std

UVES standard star observation template with a standard setting. Same as UVES_< mode >_obs_exp (cf. above) but for the observation of spectrophotometric standard stars.

Table 1: Instrument configuration for standard settings

| mode | setting | Wave | Xdisp | Filter | Decker | Comment |
|------|---------|------|-------|--------|--------|-----------------------------|
| red | 520 | 520 | CD#3 | SHP700 | 8.9 | |
| red | 580 | 580 | CD#3 | SHP700 | 12.0 | |
| red | 600 | 600 | CD#3 | SHP700 | 12.0 | with or without Iodine cell |
| red | 860 | 860 | CD#4 | OG590 | 12.0 | |
| blue | 346 | 346 | CD#1 | HER_5 | 10.0 | |
| blue | 437 | 437 | CD#2 | HER_5 | 10.0 | |
| dic1 | 346+580 | 346 | CD#1 | HER_5 | 10.0 | |
| | | 580 | CD#3 | SHP700 | 12.0 | |
| dic1 | 390+564 | 390 | CD#2 | HER_5 | 8.0 | |
| | | 564 | CD#3 | SHP700 | 11.0 | |
| dic1 | 346+564 | 346 | CD#1 | HER_5 | 10.0 | |
| | | 564 | CD#3 | SHP700 | 11.0 | |
| dic1 | 390+580 | 390 | CD#2 | HER_5 | 8.0 | |
| | | 580 | CD#3 | SHP700 | 12.0 | |
| dic2 | 346+760 | 346 | CD#1 | HER_5 | 10.0 | |
| | | 760 | CD#4 | BK7_5 | 8.0 | |
| dic2 | 390+760 | 390 | CD#2 | HER_5 | 8.0 | |
| | | 760 | CD#4 | BK7_5 | 8.0 | |
| dic2 | 437+760 | 437 | CD#2 | HER_5 | 10.0 | |
| | | 760 | CD#4 | BK7_5 | 8.0 | |
| dic2 | 437+860 | 437 | CD#2 | HER_5 | 10.0 | |
| | | 860 | CD#4 | OG590 | 12.0 | |
| dic2 | 346+860 | 346 | CD#1 | HER_5 | 10.0 | |
| | | 860 | CD#4 | OG590 | 12.0 | |
| dic2 | 390+860 | 390 | CD#2 | HER_5 | 8.0 | |
| | | 860 | CD#4 | OG590 | 12.0 | |

9.5 UVES_dic1_obs_sky

UVES sky flat observation in DIC1 390+580 nm setting. Used only to obtain twilight sky flat fields (i.e. solar spectra) for long term monitoring of the instrument radial velocity stability. Same as UVES-*< mode >*_obs_exp (cf. above).

10 Calibration Templates

10.1 UVES-*< mode >*_cal_wavefree

The UVES wavelength calibration template for free instrument settings. This template does the same as the free observation template UVES-*< mode >*_obs_expfree but with a calibration lamp as light source. The lamp is selected with the parameter

INS.LAMP TAL HGL USEL *Calibration Lamp.*

For normal wavelength calibrations always the Thorium Argon lamp (“TAL”) should be used.

10.2 UVES-*< mode >*_cal_waveatt

The UVES calibration template for ‘attached’ wavelength calibrations. ‘Attached’ indicates that this calibration template can be used only **after** a science or standard star exposure. The template inserts the calibration mirror and switches on the selected lamp without touching the current instrument configuration.

Note: Since in general **no** calibrations are taken during the night, the use of this template is only justified if highest possible radial-velocity accuracy is required.

10.3 UVES-*< mode >*_cal_flatfree

The UVES flatfield calibration template for free instrument settings. This template is identical to the template for wavelength calibration (cf. above) but uses a continuum lamp as light source.

Five continuum lamps are provided by the UVES calibration unit. Each lamp is optimized for the use with a specific crossdisperser at a standard wavelength, i.e.,

| INS.GRAT <i>i</i> .NAME | INS.GRAT <i>i</i> .WLEN | INS.LAMP |
|--------------------------------|--------------------------------|-----------------------------------|
| “CD#1” | 346 | “FFL1”, “D2L” (only below 350 nm) |
| “CD#2” | 390 437 | “FFL2” |
| “CD#3” | 520 564 580 600 | “FFL3” |
| “CD#4” | 760 860 | “FFL4” |

Therefore, in the *dic1* and *dic2* modes, two lamps have to be chosen, one for each spectrograph arm. The flatfield exposures are taken first in the blue arm with the lamp specified in

INS.LAMPBLUE D2L FFL1 FFL2 *Blue Flat Lamp*
USEL

and then in the red arm with the lamp specified in

INS.LAMPRED FFL3 FFL4 USEL *Red Flat Lamp.*

10.4 UVES_< mode >_cal_flatatt

The UVES template for 'attached' flatfield calibrations. This template is identical to the template for wavelength calibration (cf. above) but uses a continuum lamp as light source.

Note: Since in general **no** calibrations are taken during the night, the use of this template is only justified if highest possible flatfielding accuracy, e.g., in the wavelength regimes of strong fringing is required.

10.5 UVES_< mode >_cal_dark

The UVES dark exposure template. This template takes for a given detector setup the specified number of dark exposures with the CCD and instrument shutter closed.

10.6 UVES_< mode >_cal_bias

The UVES bias exposure template. Same as the dark exposure template but the exposure time is forced to zero.

A UVES Template Signature Files

In the following, all UVES Template Signature Files (TSF) are listed with their free and fixed parameters. In addition, for the free parameters the ranges and defaults are indicated together with the label as it appears in P2.

The new standard keyword order for VLT instruments according to the sequence **DET** – **SEQ** – **TEL** – **INS** has been introduced with the version 1.9 of this document.

Four acquisition templates, UVES_< mode >_acq_slitrrm, have been created for the execution of targets of opportunity observations in Rapid Response Mode.

| UVES/UVES_blue_acq_imsl.tsf | | |
|------------------------------------|--|----------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| TEL.TARG.ALPHA | ra () | |
| TEL.TARG.DELTA | dec () | |
| TEL.TARG.EQUINOX | -2000..3000 (<i>2000</i>) | Equinox |
| TEL.TARG.PMA | -10..10 (<i>0</i>) | Proper motion Alpha |
| TEL.TARG.PMD | -10..10 (<i>0</i>) | Proper motion Delta |
| TEL.TARG.EPOCH | -2000..3000 (<i>2000</i>) | Epoch |
| TEL.TARG.OFFSETALPHA | (<i>0.0</i>) | RA blind offset |
| TEL.TARG.OFFSETDELTA | (<i>0.0</i>) | DEC blind offset |
| TEL.AG.GUIDESTAR | CATALOGUE SETUP- FILE NONE (<i>CATA- LOGUE</i>) | Get Guide Star from |
| TEL.GS1.ALPHA | ra () | Guide star RA |
| TEL.GS1.DELTA | dec () | Guide star DEC |
| INS.SLIT1.NAME | SLIC#1 SLIC#2 (<i>SLIC#2</i>) | Image Slicer |
| INS.FILT1.NAME | FREE ND1 ND2 ND3 U (<i>FREE</i>) | Acq. Pre-Slit Filter |
| INS.DPOL.MODE | ON OFF (<i>OFF</i>) | Depolarizer |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| SEQ.PRESET | T | Preset flag |
| TEL.TARG.TYPE | COORDINATE | |
| INS.MODE | BLUE | Instrument Mode |
| INS.LAMP | NONE | Cal. Lamp |
| INS.DROT.MODE | STAT | Derotation Mode |
| INS.DROT.POSANG | 0.0 | Position Angle |
| INS.ADC.MODE | OFF | ADC |
| INS.OPTI1.NAME | OUT | Iodine Cell |
| INS.OPTI2.NAME | OVRsiz | Pupil Stop |
| INS.SLIT2.WID | 0.2 | Blue Slit Width |
| INS.SLIT2.LEN | 12.0 | Blue Decker Height |

| UVES/UVES_blue_acq_slit.tsf | | |
|-----------------------------|--|----------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (Default) | Label |
| TEL.TARG.ALPHA | ra () | |
| TEL.TARG.DELTA | dec () | |
| TEL.TARG.EQUINOX | -2000..3000 (2000) | Equinox |
| TEL.TARG.PMA | -10..10 (0) | Proper motion Alpha |
| TEL.TARG.PMD | -10..10 (0) | Proper motion Delta |
| TEL.TARG.EPOCH | -2000..3000 (2000) | Epoch |
| TEL.TARG.OFFSETALPHA | (0.0) | RA blind offset |
| TEL.TARG.OFFSETDELTA | (0.0) | DEC blind offset |
| TEL.AG.GUIDESTAR | CATALOGUE SETUP- FILE NONE (CATA- LOGUE) | Get Guide Star from |
| TEL.GS1.ALPHA | ra () | Guide star RA |
| TEL.GS1.DELTA | dec () | Guide star DEC |
| INS.DROT.MODE | SKY ELEV (ELEV) | Derotation Mode |
| INS.DROT.POSANG | 0.0..360.0 (0.0) | Position Angle |
| INS.FILT1.NAME | FREE ND1 ND2 ND3 U (FREE) | Acq. Pre-Slit Filter |
| INS.DPOL.MODE | ON OFF (OFF) | Depolarizer |
| INS.ADC.MODE | AUTO OFF (OFF) | ADC |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| SEQ.PRESET | T | Preset flag |
| TEL.TARG.TYPE | COORDINATE | |
| INS.MODE | BLUE | Instrument Mode |
| INS.LAMP | NONE | Cal. Lamp |
| INS.SLIT1.NAME | FREE | Image Slicer |
| INS.OPTI1.NAME | OUT | Iodine Cell |
| INS.OPTI2.NAME | OVRSIZ | Pupil Stop |
| INS.SLIT2.WID | 0.6 | Blue Slit Width |
| INS.SLIT2.LEN | 10.0 | Blue Decker Height |

| UVES/UVES_blue_acq_slitrrm.tsf | | |
|--------------------------------|-----------------------------|----------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| TEL.TARG.ALPHA | ra () | |
| TEL.TARG.DELTA | dec () | |
| TEL.TARG.EQUINOX | -2000..3000 (<i>2000</i>) | Equinox |
| TEL.TARG.PMA | -10..10 (<i>0</i>) | Proper motion Alpha |
| TEL.TARG.PMD | -10..10 (<i>0</i>) | Proper motion Delta |
| TEL.TARG.EPOCH | -2000..3000 (<i>2000</i>) | Epoch |
| TEL.TARG.OFFSETALPHA | (<i>0.0</i>) | RA blind offset |
| TEL.TARG.OFFSETDELTA | (<i>0.0</i>) | DEC blind offset |
| TEL.AG.GUIDESTAR | CATALOGUE () | Get Guide Star from |
| TEL.GS1.ALPHA | ra () | Guide star RA |
| TEL.GS1.DELTA | dec () | Guide star DEC |
| INS.DROT.MODE | ELEV () | Derotation Mode |
| INS.DROT.POSANG | 0.0 () | Position Angle |
| INS.FILT1.NAME | FREE () | Acq. Pre-Slit Filter |
| INS.DPOL.MODE | OFF () | Depolarizer |
| INS.ADC.MODE | OFF () | ADC |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| SEQ.PRESET | T | Preset flag |
| SEQ.RRM.REGISTER | T | RRM flag |
| TEL.TARG.TYPE | COORDINATE | |
| INS.MODE | BLUE | Instrument Mode |
| INS.LAMP | NONE | Cal. Lamp |
| INS.SLIT1.NAME | FREE | Image Slicer |
| INS.OPTI1.NAME | OUT | Iodine Cell |
| INS.OPTI2.NAME | OVRsiz | Pupil Stop |
| INS.SLIT2.WID | 0.6 | Blue Slit Width |
| INS.SLIT2.LEN | 10.0 | Blue Decker Height |

| UVES/UVES_blue_cal_bias.tsf | | |
|------------------------------------|--|--------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET1.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Blue Readout Mode |
| SEQ.NEXPO | 0..999 (1) | No. of Exp. |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Dark | Blue Exposure Type |
| DET1.WIN1.UIT1 | 0.0 | Blue Exposure Time |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | IMAGE | Data Prod. Tech. |
| DPR.TYPE | BIAS | Data Prod. Type |

| UVES/UVES_blue_cal_dark.tsf | | |
|------------------------------------|--|--------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET1.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Blue Readout Mode |
| DET1.WIN1.UIT1 | 0..36000 (<i>10</i>) | Blue Exposure Time |
| SEQ.NEXPO | 0..999 (<i>1</i>) | No. of Exp. |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Dark | Blue Exposure Type |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | IMAGE | Data Prod. Tech. |
| DPR.TYPE | DARK | Data Prod. Type |

| UVES/UVES_blue_cal_flatatt.tsf | | |
|---------------------------------------|---------------------------------------|--------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET1.WIN1.UIT1 | 0..36000 (<i>10</i>) | Blue Exposure Time |
| SEQ.NEXPO | 0..999 (<i>1</i>) | No. of Exp. |
| INS.LAMP | D2L FFL1 FFL2 USEL (<i>FFL1</i>) | Cal. Lamp |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Normal | Blue Exposure Type |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |
| DPR.TYPE | LAMP,FLAT | Data Prod. Type |

| UVES/UVES_blue_cal_flatfree.tsf | | |
|---------------------------------|--|--------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET1.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Blue Readout Mode |
| DET1.WIN1.UIT1 | 0..36000 (10) | Blue Exposure Time |
| SEQ.NEXPO | 0..999 (1) | No. of Exp. |
| INS.LAMP | D2L FFL1 FFL2 USEL (FFL1) | Cal. Lamp |
| INS.SLIT1.NAME | FREE SLIC#1 SLIC#2 SLIC#3 (FREE) | Image Slicer |
| INS.DPOL.MODE | ON OFF (OFF) | Depolarizer |
| INS.SLIT2.WID | 0.15..10.0 (0.6) | Blue Slit Width |
| INS.SLIT2.LEN | 0.2..30.0 (10.0) | Blue Decker Height |
| INS.FILT2.NAME | FREE BG24 HER_5 HER_10 HER_15 (HER_5) | Blue Filter |
| INS.GRAT1.NAME | CD#1 CD#2 (CD#1) | Blue XDisp. Id |
| INS.GRAT1.WLEN | 300.0..500.0 (346.0) | Blue XDisp. wlgth |
| INS.TILT1.POS | -150.0..150.0 (0.0) | Blue Camera Tilt |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Normal | Blue Exposure Type |
| INS.MODE | BLUE | Instrument Mode |
| INS.SHUT1.ST | F | Telescope Shutter |
| INS.DROT.MODE | STAT | Derotation Mode |
| INS.DROT.POSANG | 0.0 | Position Angle |
| INS.FILT1.NAME | FREE | Pre-Slit Filter |
| INS.ADC.MODE | OFF | ADC |
| INS.OPTI1.NAME | OUT | Iodine Cell |
| INS.OPTI2.NAME | OVR Siz | Pupil Stop |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |
| DPR.TYPE | LAMP,FLAT | Data Prod. Type |

| UVES/UVES_blue_cal_waveatt.tsf | | |
|---------------------------------------|-----------------------------|--------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET1.WIN1.UIT1 | 0..36000 (<i>10</i>) | Blue Exposure Time |
| SEQ.NEXPO | 0..999 (<i>1</i>) | No. of Exp. |
| INS.LAMP | TAL HGL USEL (<i>TAL</i>) | Cal. Lamp |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Normal | Blue Exposure Type |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |
| DPR.TYPE | LAMP,WAVE | Data Prod. Type |

| UVES/UVES_blue_cal_wavefree.tsf | | |
|---------------------------------|--|--------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET1.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Blue Readout Mode |
| DET1.WIN1.UIT1 | 0..36000 (10) | Blue Exposure Time |
| SEQ.NEXPO | 0..999 (1) | No. of Exp. |
| INS.LAMP | TAL HGL USEL (<i>TAL</i>) | Cal. Lamp |
| INS.SLIT1.NAME | FREE SLIC#1 SLIC#2 SLIC#3 (<i>FREE</i>) | Image Slicer |
| INS.DPOL.MODE | ON OFF (<i>OFF</i>) | Depolarizer |
| INS.SLIT2.WID | 0.15..10.0 (0.6) | Blue Slit Width |
| INS.SLIT2.LEN | 0.2..30.0 (10.0) | Blue Decker Height |
| INS.FILT2.NAME | FREE BG24 HER_5 HER_10 HER_15 (<i>HER_5</i>) | Blue Filter |
| INS.GRAT1.NAME | CD#1 CD#2 (<i>CD#1</i>) | Blue XDisp. Id |
| INS.GRAT1.WLEN | 300.0..500.0 (346.0) | Blue XDisp. wlgth |
| INS.TILT1.POS | -150.0..150.0 (0.0) | Blue Camera Tilt |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Normal | Blue Exposure Type |
| INS.MODE | BLUE | Instrument Mode |
| INS.SHUT1.ST | F | Telescope Shutter |
| INS.DROT.MODE | STAT | Derotation Mode |
| INS.DROT.POSANG | 0.0 | Position Angle |
| INS.FILT1.NAME | FREE | Pre-Slit Filter |
| INS.ADC.MODE | OFF | ADC |
| INS.OPTI1.NAME | OUT | Iodine Cell |
| INS.OPTI2.NAME | OVRsiz | Pupil Stop |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |
| DPR.TYPE | LAMP,WAVE | Data Prod. Type |

| UVES/UVES_blue_obs_exp.tsf | | |
|-----------------------------------|--|------------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET1.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Blue Readout Mode |
| DET1.WIN1.UIT1 | 0..36000 (10) | Blue Exposure Time |
| SEQ.NEXPO | 0..999 (1) | No. of Exp. |
| SEQ.SOURCE | POINT EXTENDED (POINT) | Source Type |
| SEQ.NOFF | 1..100 (1) | Number of offsets |
| TEL.TARG.OFFSETX | -999..999 (0) | X offset in arcsec. |
| TEL.TARG.OFFSETY | -999..999 (0) | Y offset in arcsec. |
| INS.BLUEEXP.MODE | 346 437 (346) | Blue Mode Central Wlgt |
| INS.SLIT2.WID | 0.15..10.0 (0.6) | Blue Slit Width |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Normal | Blue Exposure Type |
| INS.LAMP | NONE | Cal. Lamp |
| INS.BLUEEXP.SETTINGS | 346 CD#1 HER_5 10.0 437 CD#2 HER_5 10.0 | Blue Mode Settings |
| INS.TILT1.POS | 0 | Blue Camera Tilt |
| DPR.CATG | SCIENCE | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |
| DPR.TYPE | OBJECT | Data Prod. Type |

| UVES/UVES_blue_obs_expfree.tsf | | |
|--------------------------------|--|---------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (Default) | Label |
| DET1.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Blue Readout Mode |
| DET1.WIN1.UIT1 | 0..36000 (10) | Blue Exposure Time |
| SEQ.NEXPO | 0..999 (1) | No. of Exp. |
| SEQ.SOURCE | POINT EXTENDED (POINT) | Source Type |
| SEQ.NOFF | 1..100 (1) | Number of offsets |
| TEL.TARG.OFFSETX | -999..999 (0) | X offset in arcsec. |
| TEL.TARG.OFFSETY | -999..999 (0) | Y offset in arcsec. |
| INS.SLIT2.WID | 0.15..10.0 (0.6) | Blue Slit Width |
| INS.SLIT2.LEN | 0.2..30.0 (10.0) | Blue Decker Height |
| INS.FILT2.NAME | FREE BG24 HER_5 HER_10 HER_15 (HER_5) | Blue Filter |
| INS.GRAT1.NAME | CD#1 CD#2 (CD#1) | Blue XDisp. Id |
| INS.GRAT1.WLEN | 300.0..500.0 (346.0) | Blue XDisp. wlgth |
| INS.TILT1.POS | -150.0..150.0 (0.0) | Blue Camera Tilt |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Normal | Blue Exposure Type |
| INS.LAMP | NONE | Cal. Lamp |
| DPR.CATG | SCIENCE | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |
| DPR.TYPE | OBJECT | Data Prod. Type |

| UVES/UVES_blue_obs_std.tsf | | |
|-----------------------------------|--|------------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET1.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Blue Readout Mode |
| DET1.WIN1.UIT1 | 0..36000 (<i>10</i>) | Blue Exposure Time |
| SEQ.NEXPO | 0..999 (<i>1</i>) | No. of Exp. |
| SEQ.NOFF | 1..100 (<i>1</i>) | Number of offsets |
| TEL.TARG.OFFSETX | -999..999 (<i>0</i>) | X offset in arcsec. |
| TEL.TARG.OFFSETY | -999..999 (<i>0</i>) | Y offset in arcsec. |
| INS.BLUEEXP.MODE | 346 437 (<i>346</i>) | Blue Mode Central Wlgt |
| INS.SLIT2.WID | 0.15..10.0 (<i>0.6</i>) | Blue Slit Width |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Normal | Blue Exposure Type |
| INS.LAMP | NONE | Cal. Lamp |
| INS.BLUEEXP.SETTINGS | 346 CD#1 HER_5 10.0 437 CD#2 HER_5 10.0 | Blue Mode Settings |
| INS.TILT1.POS | 0 | Blue Camera Tilt |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |
| DPR.TYPE | STD | Data Prod. Type |

| UVES/UVES_blue_obs_stdfree.tsf | | |
|--------------------------------|--|---------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET1.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Blue Readout Mode |
| DET1.WIN1.UIT1 | 0..36000 (10) | Blue Exposure Time |
| SEQ.NEXPO | 0..999 (1) | No. of Exp. |
| SEQ.NOFF | 1..100 (1) | Number of offsets |
| TEL.TARG.OFFSETX | -999..999 (0) | X offset in arcsec. |
| TEL.TARG.OFFSETY | -999..999 (0) | Y offset in arcsec. |
| INS.SLIT2.WID | 0.15..10.0 (0.6) | Blue Slit Width |
| INS.SLIT2.LEN | 0.2..30.0 (10.0) | Blue Decker Height |
| INS.FILT2.NAME | FREE BG24 HER_5 HER_10 HER_15 (HER_5) | Blue Filter |
| INS.GRAT1.NAME | CD#1 CD#2 (CD#1) | Blue XDisp. Id |
| INS.GRAT1.WLEN | 300.0..500.0 (346.0) | Blue XDisp. wlgth |
| INS.TILT1.POS | -150.0..150.0 (0.0) | Blue Camera Tilt |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Normal | Blue Exposure Type |
| INS.LAMP | NONE | Cal. Lamp |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |
| DPR.TYPE | STD | Data Prod. Type |

| UVES/UVES_dic1_acq_ims1.tsf | | |
|------------------------------------|--|----------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET.GUIDECAM | BLUE RED (<i>RED</i>) | Guide camera. |
| TEL.TARG.ALPHA | ra () | |
| TEL.TARG.DELTA | dec () | |
| TEL.TARG.EQUINOX | -2000..3000 (<i>2000</i>) | Equinox |
| TEL.TARG.PMA | -10..10 (<i>0</i>) | Proper motion Alpha |
| TEL.TARG.PMD | -10..10 (<i>0</i>) | Proper motion Delta |
| TEL.TARG.EPOCH | -2000..3000 (<i>2000</i>) | Epoch |
| TEL.TARG.OFFSETALPHA | (<i>0.0</i>) | RA blind offset |
| TEL.TARG.OFFSETDELTA | (<i>0.0</i>) | DEC blind offset |
| TEL.AG.GUIDESTAR | CATALOGUE SETUP- FILE NONE (<i>CATALOGUE</i>) | Get Guide Star from |
| TEL.GS1.ALPHA | ra () | Guide star RA |
| TEL.GS1.DELTA | dec () | Guide star DEC |
| INS.SLIT1.NAME | SLIC#1 (<i>SLIC#1</i>) | Image Slicer |
| INS.FILT1.NAME | FREE ND1 ND2 ND3 U (<i>FREE</i>) | Acq. Pre-Slit Filter |
| INS.DPOL.MODE | ON OFF (<i>OFF</i>) | Depolarizer |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| SEQ.PRESET | T | Preset flag |
| TEL.TARG.TYPE | COORDINATE | |
| INS.MODE | DICHR#1 | Instrument Mode |
| INS.LAMP | NONE | Cal. Lamp |
| INS.DROT.MODE | STAT | Derotation Mode |
| INS.DROT.POSANG | 0.0 | Position Angle |
| INS.ADC.MODE | OFF | ADC |
| INS.OPTI1.NAME | OUT | Iodine Cell |
| INS.OPTI2.NAME | OVRsiz | Pupil Stop |
| INS.SLIT2.WID | 0.2 | Blue Slit Width |
| INS.SLIT2.LEN | 12.0 | Blue Decker Height |
| INS.SLIT3.WID | 0.2 | Red Slit Width |
| INS.SLIT3.LEN | 12.0 | Red Decker Height |

| UVES/UVES_dic1_acq_slit.tsf | | |
|------------------------------------|--|----------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET.GUIDECAM | BLUE RED (<i>RED</i>) | Guide camera. |
| TEL.TARG.ALPHA | ra () | |
| TEL.TARG.DELTA | dec () | |
| TEL.TARG.EQUINOX | -2000..3000 (<i>2000</i>) | Equinox |
| TEL.TARG.PMA | -10..10 (<i>0</i>) | Proper motion Alpha |
| TEL.TARG.PMD | -10..10 (<i>0</i>) | Proper motion Delta |
| TEL.TARG.EPOCH | -2000..3000 (<i>2000</i>) | Epoch |
| TEL.TARG.OFFSETALPHA | (<i>0.0</i>) | RA blind offset |
| TEL.TARG.OFFSETDELTA | (<i>0.0</i>) | DEC blind offset |
| TEL.AG.GUIDESTAR | CATALOGUE SETUP- FILE NONE (<i>CATA- LOGUE</i>) | Get Guide Star from |
| TEL.GS1.ALPHA | ra () | Guide star RA |
| TEL.GS1.DELTA | dec () | Guide star DEC |
| INS.DROT.MODE | SKY ELEV (<i>ELEV</i>) | Derotation Mode |
| INS.DROT.POSANG | 0.0..360.0 (<i>0.0</i>) | Position Angle |
| INS.FILT1.NAME | FREE ND1 ND2 ND3 U (<i>FREE</i>) | Acq. Pre-Slit Filter |
| INS.DPOL.MODE | ON OFF (<i>OFF</i>) | Depolarizer |
| INS.ADC.MODE | AUTO OFF (<i>OFF</i>) | ADC |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| SEQ.PRESET | T | Preset flag |
| TEL.TARG.TYPE | COORDINATE | |
| INS.MODE | DICHR#1 | Instrument Mode |
| INS.LAMP | NONE | Cal. Lamp |
| INS.SLIT1.NAME | FREE | Image Slicer |
| INS.OPTI1.NAME | OUT | Iodine Cell |
| INS.OPTI2.NAME | OVR Siz | Pupil Stop |
| INS.SLIT2.WID | 0.6 | Blue Slit Width |
| INS.SLIT2.LEN | 10.0 | Blue Decker Height |
| INS.SLIT3.WID | 0.6 | Red Slit Width |
| INS.SLIT3.LEN | 10.0 | Red Decker Height |

| UVES/UVES_dic1_acq_slitrrm.tsf | | |
|--------------------------------|-----------------------------|----------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET.GUIDECAM | BLUE RED (<i>RED</i>) | Guide camera. |
| TEL.TARG.ALPHA | ra () | |
| TEL.TARG.DELTA | dec () | |
| TEL.TARG.EQUINOX | -2000..3000 (<i>2000</i>) | Equinox |
| TEL.TARG.PMA | -10..10 (<i>0</i>) | Proper motion Alpha |
| TEL.TARG.PMD | -10..10 (<i>0</i>) | Proper motion Delta |
| TEL.TARG.EPOCH | -2000..3000 (<i>2000</i>) | Epoch |
| TEL.TARG.OFFSETALPHA | (<i>0.0</i>) | RA blind offset |
| TEL.TARG.OFFSETDELTA | (<i>0.0</i>) | DEC blind offset |
| TEL.AG.GUIDESTAR | CATALOGUE () | Get Guide Star from |
| TEL.GS1.ALPHA | ra () | Guide star RA |
| TEL.GS1.DELTA | dec () | Guide star DEC |
| INS.DROT.MODE | ELEV () | Derotation Mode |
| INS.DROT.POSANG | 0.0 () | Position Angle |
| INS.FILT1.NAME | FREE () | Acq. Pre-Slit Filter |
| INS.DPOL.MODE | OFF () | Depolarizer |
| INS.ADC.MODE | OFF () | ADC |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| SEQ.PRESET | T | Preset flag |
| SEQ.RRM.REGISTER | T | RRM flag |
| TEL.TARG.TYPE | COORDINATE | |
| INS.MODE | DICHR#1 | Instrument Mode |
| INS.LAMP | NONE | Cal. Lamp |
| INS.SLIT1.NAME | FREE | Image Slicer |
| INS.OPTI1.NAME | OUT | Iodine Cell |
| INS.OPTI2.NAME | OVR Siz | Pupil Stop |
| INS.SLIT2.WID | 0.6 | Blue Slit Width |
| INS.SLIT2.LEN | 10.0 | Blue Decker Height |
| INS.SLIT3.WID | 0.6 | Red Slit Width |
| INS.SLIT3.LEN | 10.0 | Red Decker Height |

| UVES/UVES_dic1_cal_bias.tsf | | |
|------------------------------------|---|--------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET1.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high | Blue Readout Mode |
| DET2.READ.SPEED | 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (<i>225kHz,1x1,low</i>) | Red Readout Mode |
| SEQ.NEXPOBLUE | 0..999 (<i>1</i>) | No. of Blue Exp. |
| SEQ.NEXPORED | 0..999 (<i>1</i>) | No. of Red Exp. |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Dark | Blue Exposure Type |
| DET1.WIN1.UIT1 | 0.0 | Blue Exposure Time |
| DET2.EXP.TYPE | Dark | Red Exposure Type |
| DET2.WIN1.UIT1 | 0.0 | Red Exposure Time |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | IMAGE | Data Prod. Tech. |
| DPR.TYPE | BIAS | Data Prod. Type |

| UVES/UVES_dic1_cal_dark.tsf | | |
|------------------------------------|---|--------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET1.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low <i>(225kHz,1x1,low)</i> | Blue Readout Mode |
| DET1.WIN1.UIT1 | 0..36000 <i>(10)</i> | Blue Exposure Time |
| DET2.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low <i>(225kHz,1x1,low)</i> | Red Readout Mode |
| DET2.WIN1.UIT1 | 0..36000 <i>(10)</i> | Red Exposure Time |
| SEQ.NEXPOBLUE | 0..999 <i>(1)</i> | No. of Blue Exp. |
| SEQ.NEXPORED | 0..999 <i>(1)</i> | No. of Red Exp. |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Dark | Blue Exposure Type |
| DET2.EXP.TYPE | Dark | Red Exposure Type |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | IMAGE | Data Prod. Tech. |
| DPR.TYPE | DARK | Data Prod. Type |

| UVES/UVES_dic1_cal_flatatt.tsf | | |
|---------------------------------------|---------------------------------------|--------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET1.WIN1.UIT1 | 0..36000 (<i>10</i>) | Blue Exposure Time |
| DET2.WIN1.UIT1 | 0..36000 (<i>10</i>) | Red Exposure Time |
| SEQ.NEXPOBLUE | 0..999 (<i>1</i>) | No. of Blue Exp. |
| SEQ.NEXPORED | 0..999 (<i>1</i>) | No. of Red Exp. |
| INS.LAMPBLUE | D2L FFL1 FFL2 USEL (<i>FFL1</i>) | Blue Flat Lamp |
| INS.LAMPRED | FFL3 FFL4 USEL (<i>FFL3</i>) | Red Flat Lamp |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Normal | Blue Exposure Type |
| DET2.EXP.TYPE | Normal | Red Exposure Type |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |
| DPR.TYPE | LAMP,FLAT | Data Prod. Type |

| UVES/UVES_dic1_cal_flatfree.tsf | | |
|---------------------------------|--|--------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET1.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Blue Readout Mode |
| DET1.WIN1.UIT1 | 0..36000 (10) | Blue Exposure Time |
| DET2.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Red Readout Mode |
| DET2.WIN1.UIT1 | 0..36000 (10) | Red Exposure Time |
| SEQ.NEXPOBLUE | 0..999 (1) | No. of Blue Exp. |
| SEQ.NEXPORED | 0..999 (1) | No. of Red Exp. |
| INS.LAMPBLUE | D2L FFL1 FFL2 USEL (FFL1) | Blue Flat Lamp |
| INS.LAMPRED | FFL3 FFL4 USEL (FFL3) | Red Flat Lamp |
| INS.SLIT1.NAME | FREE SLIC#1 SLIC#2 SLIC#3 (FREE) | Image Slicer |
| INS.DPOL.MODE | ON OFF (OFF) | Depolarizer |
| INS.SLIT2.WID | 0.15..10.0 (0.6) | Blue Slit Width |
| INS.SLIT2.LEN | 0.2..30.0 (10.0) | Blue Decker Height |
| INS.FILT2.NAME | FREE BG24 HER_5 HER_10 HER_15 (HER_5) | Blue Filter |
| INS.GRAT1.NAME | CD#1 CD#2 (CD#1) | Blue XDisp. Id |
| INS.GRAT1.WLEN | 300.0..500.0 (346.0) | Blue XDisp. wlgth |
| INS.TILT1.POS | -150.0..150.0 (0.0) | Blue Camera Tilt |
| INS.SLIT3.WID | 0.15..10.0 (0.6) | Red Slit Width |
| INS.SLIT3.LEN | 0.2..30.0 (10.0) | Red Decker Height |
| INS.FILT3.NAME | FREE BG40 SHP700 OG590 BK7_5 BK7_10 BK7_15 (SHP700) | Red Filter |
| INS.GRAT2.NAME | CD#3 CD#4 (CD#3) | Red XDisp. Id |
| INS.GRAT2.WLEN | 500.0..1100.0 (580) | Red XDisp. wlgth |
| INS.TILT2.POS | -220.0..220.0 (0.0) | Red Camera Tilt |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Normal | Blue Exposure Type |
| DET2.EXP.TYPE | Normal | Red Exposure Type |
| INS.MODE | DICHR#1 | Instrument Mode |
| INS.SHUT1.ST | F | Telescope Shutter |
| INS.DROT.MODE | STAT | Derotation Mode |
| INS.DROT.POSANG | 0.0 | Position Angle |
| INS.FILT1.NAME | FREE | Pre-Slit Filter |
| INS.ADC.MODE | OFF | ADC |
| INS.OPTI1.NAME | OUT | Iodine Cell |

| UVES/UVES_dic1_cal_waveatt.tsf | | |
|---------------------------------------|-----------------------------|--------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET1.WIN1.UIT1 | 0..36000 (<i>10</i>) | Blue Exposure Time |
| DET2.WIN1.UIT1 | 0..36000 (<i>10</i>) | Red Exposure Time |
| SEQ.NEXPOBLUE | 0..999 (<i>1</i>) | No. of Blue Exp. |
| SEQ.NEXPORED | 0..999 (<i>1</i>) | No. of Red Exp. |
| INS.LAMP | TAL HGL USEL (<i>TAL</i>) | Cal. Lamp |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Normal | Blue Exposure Type |
| DET2.EXP.TYPE | Normal | Red Exposure Type |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |
| DPR.TYPE | LAMP,WAVE | Data Prod. Type |

| UVES/UVES_dic1_cal_wavefree.tsf | | |
|---------------------------------|--|--------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET1.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Blue Readout Mode |
| DET1.WIN1.UIT1 | 0..36000 (10) | Blue Exposure Time |
| DET2.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Red Readout Mode |
| DET2.WIN1.UIT1 | 0..36000 (10) | Red Exposure Time |
| SEQ.NEXPOBLUE | 0..999 (1) | No. of Blue Exp. |
| SEQ.NEXPORED | 0..999 (1) | No. of Red Exp. |
| INS.LAMP | TAL HGL USEL (<i>TAL</i>) | Cal. Lamp |
| INS.SLIT1.NAME | FREE SLIC#1 SLIC#2 SLIC#3 (<i>FREE</i>) | Image Slicer |
| INS.DPOL.MODE | ON OFF (<i>OFF</i>) | Depolarizer |
| INS.SLIT2.WID | 0.15..10.0 (0.6) | Blue Slit Width |
| INS.SLIT2.LEN | 0.2..30.0 (10.0) | Blue Decker Height |
| INS.FILT2.NAME | FREE BG24 HER_5 HER_10 HER_15 (<i>HER_5</i>) | Blue Filter |
| INS.GRAT1.NAME | CD#1 CD#2 (<i>CD#1</i>) | Blue XDisp. Id |
| INS.GRAT1.WLEN | 300.0..500.0 (346.0) | Blue XDisp. wlgth |
| INS.TILT1.POS | -150.0..150.0 (0.0) | Blue Camera Tilt |
| INS.SLIT3.WID | 0.15..10.0 (0.6) | Red Slit Width |
| INS.SLIT3.LEN | 0.2..30.0 (10.0) | Red Decker Height |
| INS.FILT3.NAME | FREE BG40 SHP700 OG590 BK7.5 BK7_10 BK7_15 (<i>SHP700</i>) | Red Filter |
| INS.GRAT2.NAME | CD#3 CD#4 (<i>CD#3</i>) | Red XDisp. Id |
| INS.GRAT2.WLEN | 500.0..1100.0 (580) | Red XDisp. wlgth |
| INS.TILT2.POS | -220.0..220.0 (0.0) | Red Camera Tilt |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Normal | Blue Exposure Type |
| DET2.EXP.TYPE | Normal | Red Exposure Type |
| INS.MODE | DICHR#1 | Instrument Mode |
| INS.SHUT1.ST | F | Telescope Shutter |
| INS.DROT.MODE | STAT | Derotation Mode |
| INS.DROT.POSANG | 0.0 | Position Angle |
| INS.FILT1.NAME | FREE | Pre-Slit Filter |
| INS.ADC.MODE | OFF | ADC |
| INS.OPTI1.NAME | OUT | Iodine Cell |
| INS.OPTI2.NAME | OVSIZ | Pupil Stop |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |

| UVES/UVES_dic1_obs_exp.tsf | | |
|----------------------------|---|-------------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (Default) | Label |
| DET1.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low <i>(225kHz,1x1,low)</i> | Blue Readout Mode |
| DET1.WIN1.UIT1 | 0..36000 <i>(10)</i> | Blue Exposure Time |
| DET2.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low <i>(225kHz,1x1,low)</i> | Red Readout Mode |
| DET2.WIN1.UIT1 | 0..36000 <i>(10)</i> | Red Exposure Time |
| SEQ.NEXPOBLUE | 0..999 <i>(1)</i> | No. of Blue Exp. |
| SEQ.NEXPORED | 0..999 <i>(1)</i> | No. of Red Exp. |
| SEQ.SOURCE | POINT EXTENDED <i>(POINT)</i> | Source Type |
| SEQ.NOFF | 1..100 <i>(1)</i> | Number of offsets |
| TEL.TARG.OFFSETX | -999..999 <i>(0)</i> | X offset in arcsec. |
| TEL.TARG.OFFSETY | -999..999 <i>(0)</i> | Y offset in arcsec. |
| INS.DICEXP.MODE | 346+580 390+564 346+564 390+580 <i>(346+580)</i> | Dic Mode Central Wlghts |
| INS.SLIT2.WID | 0.15..10.0 <i>(0.6)</i> | Blue Slit Width |
| INS.SLIT3.WID | 0.15..10.0 <i>(0.6)</i> | Red Slit Width |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Normal | Blue Exposure Type |
| DET2.EXP.TYPE | Normal | Red Exposure Type |
| INS.LAMP | NONE | Cal. Lamp |
| INS.DICEXP.SETTINGS | 346 CD#1 HER_5 10.0 390 CD#2 HER_5 8.0 437 CD#2 HER_5 10.0 564 CD#3 SHP700 11.0 580 CD#3 SHP700 12.0 | Dic Mode Settings |
| INS.TILT1.POS | 0 | Blue Camera Tilt |
| INS.TILT2.POS | 0 | Red Camera Tilt |
| DPR.CATG | SCIENCE | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |
| DPR.TYPE | OBJECT | Data Prod. Type |

| UVES/UVES_dic1_obs_expfree.tsf | | |
|--------------------------------|--|---------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET1.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Blue Readout Mode |
| DET1.WIN1.UIT1 | 0..36000 (10) | Blue Exposure Time |
| DET2.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Red Readout Mode |
| DET2.WIN1.UIT1 | 0..36000 (10) | Red Exposure Time |
| SEQ.NEXPOBLUE | 0..999 (1) | No. of Blue Exp. |
| SEQ.NEXPORED | 0..999 (1) | No. of Red Exp. |
| SEQ.SOURCE | POINT EXTENDED (POINT) | Source Type |
| SEQ.NOFF | 1..100 (1) | Number of offsets |
| TEL.TARG.OFFSETX | -999..999 (0) | X offset in arcsec. |
| TEL.TARG.OFFSETY | -999..999 (0) | Y offset in arcsec. |
| INS.SLIT2.WID | 0.15..10.0 (0.6) | Blue Slit Width |
| INS.SLIT2.LEN | 0.2..30.0 (10.0) | Blue Decker Height |
| INS.FILT2.NAME | FREE BG24 HER_5 HER_10 HER_15 (HER_5) | Blue Filter |
| INS.GRAT1.NAME | CD#1 CD#2 (CD#1) | Blue XDisp. Id |
| INS.GRAT1.WLEN | 300.0..500.0 (346.0) | Blue XDisp. wlgth |
| INS.TILT1.POS | -150.0..150.0 (0.0) | Blue Camera Tilt |
| INS.SLIT3.WID | 0.15..10.0 (0.6) | Red Slit Width |
| INS.SLIT3.LEN | 0.2..30.0 (10.0) | Red Decker Height |
| INS.FILT3.NAME | FREE BG40 SHP700 OG590 BK7_5 BK7_10 BK7_15 (SHP700) | Red Filter |
| INS.GRAT2.NAME | CD#3 CD#4 (CD#3) | Red XDisp. Id |
| INS.GRAT2.WLEN | 500.0..1100.0 (580) | Red XDisp. wlgth |
| INS.TILT2.POS | -220.0..220.0 (0.0) | Red Camera Tilt |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Normal | Blue Exposure Type |
| DET2.EXP.TYPE | Normal | Red Exposure Type |
| INS.LAMP | NONE | Cal. Lamp |
| DPR.CATG | SCIENCE | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |
| DPR.TYPE | OBJECT | Data Prod. Type |

| UVES/UVES_dic1_obs_sky.tsf | | |
|-----------------------------------|---|-------------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET1.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low <i>(225kHz,1x1,low)</i> | Blue Readout Mode |
| DET1.WIN1.UIT1 | 0..36000 <i>(10)</i> | Blue Exposure Time |
| DET2.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low <i>(225kHz,1x1,low)</i> | Red Readout Mode |
| DET2.WIN1.UIT1 | 0..36000 <i>(10)</i> | Red Exposure Time |
| SEQ.NEXPOBLUE | 0..999 <i>(1)</i> | No. of Blue Exp. |
| SEQ.NEXPORED | 0..999 <i>(1)</i> | No. of Red Exp. |
| SEQ.SOURCE | POINT EXTENDED <i>(POINT)</i> | Source Type |
| SEQ.NOFF | 1..100 <i>(1)</i> | Number of offsets |
| TEL.TARG.OFFSETX | -999..999 <i>(0)</i> | X offset in arcsec. |
| TEL.TARG.OFFSETY | -999..999 <i>(0)</i> | Y offset in arcsec. |
| INS.DICEXP.MODE | 346+580 390+564 346+564 390+580 <i>(346+580)</i> | Dic Mode Central Wlghts |
| INS.SLIT2.WID | 0.15..10.0 (0.6) | Blue Slit Width |
| INS.SLIT3.WID | 0.15..10.0 (0.6) | Red Slit Width |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Normal | Blue Exposure Type |
| DET2.EXP.TYPE | Normal | Red Exposure Type |
| INS.LAMP | NONE | Cal. Lamp |
| INS.DICEXP.SETTINGS | 346 CD#1 HER_5 10.0 390 CD#2 HER_5 8.0 437 CD#2 HER_5 10.0 564 CD#3 SHP700 11.0 580 CD#3 SHP700 12.0 | Dic Mode Settings |
| DPR.TYPE | FLAT,SKY | Data Prod. Type |
| INS.TILT1.POS | 0 | Blue Camera Tilt |
| INS.TILT2.POS | 0 | Red Camera Tilt |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |

| UVES/UVES_dic1_obs_std.tsf | | |
|----------------------------|--|-------------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET1.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Blue Readout Mode |
| DET1.WIN1.UIT1 | 0..36000 (10) | Blue Exposure Time |
| DET2.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Red Readout Mode |
| DET2.WIN1.UIT1 | 0..36000 (10) | Red Exposure Time |
| SEQ.NEXPOBLUE | 0..999 (1) | No. of Blue Exp. |
| SEQ.NEXPORED | 0..999 (1) | No. of Red Exp. |
| SEQ.NOFF | 1..100 (1) | Number of offsets |
| TEL.TARG.OFFSETX | -999..999 (0) | X offset in arcsec. |
| TEL.TARG.OFFSETY | -999..999 (0) | Y offset in arcsec. |
| INS.DICEXP.MODE | 346+580 390+564 346+564 390+580 (346+580) | Dic Mode Central Wlghts |
| INS.SLIT2.WID | 0.15..10.0 (0.6) | Blue Slit Width |
| INS.SLIT3.WID | 0.15..10.0 (0.6) | Red Slit Width |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Normal | Blue Exposure Type |
| DET2.EXP.TYPE | Normal | Red Exposure Type |
| INS.LAMP | NONE | Cal. Lamp |
| INS.DICEXP.SETTINGS | 346 CD#1 HER_5 10.0 390 CD#2 HER_5 8.0 437 CD#2 HER_5 10.0 564 CD#3 SHP700 11.0 580 CD#3 SHP700 12.0 | Dic Mode Settings |
| INS.TILT1.POS | 0 | Blue Camera Tilt |
| INS.TILT2.POS | 0 | Red Camera Tilt |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |
| DPR.TYPE | STD | Data Prod. Type |

| UVES/UVES_dic1_obs_stdfree.tsf | | |
|--------------------------------|--|---------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET1.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Blue Readout Mode |
| DET1.WIN1.UIT1 | 0..36000 (10) | Blue Exposure Time |
| DET2.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Red Readout Mode |
| DET2.WIN1.UIT1 | 0..36000 (10) | Red Exposure Time |
| SEQ.NEXPOBLUE | 0..999 (1) | No. of Blue Exp. |
| SEQ.NEXPORED | 0..999 (1) | No. of Red Exp. |
| SEQ.NOFF | 1..100 (1) | Number of offsets |
| TEL.TARG.OFFSETX | -999..999 (0) | X offset in arcsec. |
| TEL.TARG.OFFSETY | -999..999 (0) | Y offset in arcsec. |
| INS.SLIT2.WID | 0.15..10.0 (0.6) | Blue Slit Width |
| INS.SLIT2.LEN | 0.2..30.0 (10.0) | Blue Decker Height |
| INS.FILT2.NAME | FREE BG24 HER_5 HER_10 HER_15 (HER_5) | Blue Filter |
| INS.GRAT1.NAME | CD#1 CD#2 (CD#1) | Blue XDisp. Id |
| INS.GRAT1.WLEN | 300.0..500.0 (346.0) | Blue XDisp. wlgth |
| INS.TILT1.POS | -150.0..150.0 (0.0) | Blue Camera Tilt |
| INS.SLIT3.WID | 0.15..10.0 (0.6) | Red Slit Width |
| INS.SLIT3.LEN | 0.2..30.0 (10.0) | Red Decker Height |
| INS.FILT3.NAME | FREE BG40 SHP700 OG590 BK7_5 BK7_10 BK7_15 (SHP700) | Red Filter |
| INS.GRAT2.NAME | CD#3 CD#4 (CD#3) | Red XDisp. Id |
| INS.GRAT2.WLEN | 500.0..1100.0 (580) | Red XDisp. wlgth |
| INS.TILT2.POS | -220.0..220.0 (0.0) | Red Camera Tilt |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Normal | Blue Exposure Type |
| DET2.EXP.TYPE | Normal | Red Exposure Type |
| INS.LAMP | NONE | Cal. Lamp |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |
| DPR.TYPE | STD | Data Prod. Type |

| UVES/UVES_dic2_acq_ims1.tsf | | |
|-----------------------------|--|----------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (Default) | Label |
| DET.GUIDECAM | BLUE RED (<i>RED</i>) | Guide camera. |
| TEL.TARG.ALPHA | ra () | |
| TEL.TARG.DELTA | dec () | |
| TEL.TARG.EQUINOX | -2000..3000 (<i>2000</i>) | Equinox |
| TEL.TARG.PMA | -10..10 (<i>0</i>) | Proper motion Alpha |
| TEL.TARG.PMD | -10..10 (<i>0</i>) | Proper motion Delta |
| TEL.TARG.EPOCH | -2000..3000 (<i>2000</i>) | Epoch |
| TEL.TARG.OFFSETALPHA | (<i>0.0</i>) | RA blind offset |
| TEL.TARG.OFFSETDELTA | (<i>0.0</i>) | DEC blind offset |
| TEL.AG.GUIDESTAR | CATALOGUE SETUP- FILE NONE (<i>CATA- LOGUE</i>) | Get Guide Star from |
| TEL.GS1.ALPHA | ra () | Guide star RA |
| TEL.GS1.DELTA | dec () | Guide star DEC |
| INS.SLIT1.NAME | SLIC#1 SLIC#3 (<i>SLIC#1</i>) | Image Slicer |
| INS.FILT1.NAME | FREE ND1 ND2 ND3 U (<i>FREE</i>) | Acq. Pre-Slit Filter |
| INS.DPOL.MODE | ON OFF (<i>OFF</i>) | Depolarizer |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| SEQ.PRESET | T | Preset flag |
| TEL.TARG.TYPE | COORDINATE | |
| INS.MODE | DICHR#2 | Instrument Mode |
| INS.LAMP | NONE | Cal. Lamp |
| INS.DROT.MODE | STAT | Derotation Mode |
| INS.DROT.POSANG | 0.0 | Position Angle |
| INS.ADC.MODE | OFF | ADC |
| INS.OPTI1.NAME | OUT | Iodine Cell |
| INS.OPTI2.NAME | OVR Siz | Pupil Stop |
| INS.SLIT2.WID | 0.2 | Blue Slit Width |
| INS.SLIT2.LEN | 12.0 | Blue Decker Height |
| INS.SLIT3.WID | 0.2 | Red Slit Width |
| INS.SLIT3.LEN | 12.0 | Red Decker Height |

| UVES/UVES_dic2_acq_slit.tsf | | |
|-----------------------------|--|----------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET.GUIDECAM | BLUE RED (<i>RED</i>) | Guide camera. |
| TEL.TARG.ALPHA | ra () | |
| TEL.TARG.DELTA | dec () | |
| TEL.TARG.EQUINOX | -2000..3000 (<i>2000</i>) | Equinox |
| TEL.TARG.PMA | -10..10 (<i>0</i>) | Proper motion Alpha |
| TEL.TARG.PMD | -10..10 (<i>0</i>) | Proper motion Delta |
| TEL.TARG.EPOCH | -2000..3000 (<i>2000</i>) | Epoch |
| TEL.TARG.OFFSETALPHA | (<i>0.0</i>) | RA blind offset |
| TEL.TARG.OFFSETDELTA | (<i>0.0</i>) | DEC blind offset |
| TEL.AG.GUIDESTAR | CATALOGUE SETUP- FILE NONE (<i>CATA- LOGUE</i>) | Get Guide Star from |
| TEL.GS1.ALPHA | ra () | Guide star RA |
| TEL.GS1.DELTA | dec () | Guide star DEC |
| INS.DROT.MODE | SKY ELEV (<i>ELEV</i>) | Derotation Mode |
| INS.DROT.POSANG | 0.0..360.0 (<i>0.0</i>) | Position Angle |
| INS.FILT1.NAME | FREE ND1 ND2 ND3 U (<i>FREE</i>) | Acq. Pre-Slit Filter |
| INS.DPOL.MODE | ON OFF (<i>OFF</i>) | Depolarizer |
| INS.ADC.MODE | AUTO OFF (<i>OFF</i>) | ADC |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| SEQ.PRESET | T | Preset flag |
| TEL.TARG.TYPE | COORDINATE | |
| INS.MODE | DICHR#2 | Instrument Mode |
| INS.LAMP | NONE | Cal. Lamp |
| INS.SLIT1.NAME | FREE | Image Slicer |
| INS.OPTI1.NAME | OUT | Iodine Cell |
| INS.OPTI2.NAME | OVR Siz | Pupil Stop |
| INS.SLIT2.WID | 0.6 | Blue Slit Width |
| INS.SLIT2.LEN | 10.0 | Blue Decker Height |
| INS.SLIT3.WID | 0.6 | Red Slit Width |
| INS.SLIT3.LEN | 10.0 | Red Decker Height |

| UVES/UVES_dic2_acq_slitrrm.tsf | | |
|--------------------------------|-----------------------------|----------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET.GUIDECAM | BLUE RED (<i>RED</i>) | Guide camera. |
| TEL.TARG.ALPHA | ra () | |
| TEL.TARG.DELTA | dec () | |
| TEL.TARG.EQUINOX | -2000..3000 (<i>2000</i>) | Equinox |
| TEL.TARG.PMA | -10..10 (<i>0</i>) | Proper motion Alpha |
| TEL.TARG.PMD | -10..10 (<i>0</i>) | Proper motion Delta |
| TEL.TARG.EPOCH | -2000..3000 (<i>2000</i>) | Epoch |
| TEL.TARG.OFFSETALPHA | (<i>0.0</i>) | RA blind offset |
| TEL.TARG.OFFSETDELTA | (<i>0.0</i>) | DEC blind offset |
| TEL.AG.GUIDESTAR | CATALOGUE () | Get Guide Star from |
| TEL.GS1.ALPHA | ra () | Guide star RA |
| TEL.GS1.DELTA | dec () | Guide star DEC |
| INS.DROT.MODE | ELEV () | Derotation Mode |
| INS.DROT.POSANG | 0.0 () | Position Angle |
| INS.FILT1.NAME | FREE () | Acq. Pre-Slit Filter |
| INS.DPOL.MODE | OFF () | Depolarizer |
| INS.ADC.MODE | OFF () | ADC |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| SEQ.PRESET | T | Preset flag |
| SEQ.RRM.REGISTER | T | RRM flag |
| TEL.TARG.TYPE | COORDINATE | |
| INS.MODE | DICHR#2 | Instrument Mode |
| INS.LAMP | NONE | Cal. Lamp |
| INS.SLIT1.NAME | FREE | Image Slicer |
| INS.OPTI1.NAME | OUT | Iodine Cell |
| INS.OPTI2.NAME | OVR Siz | Pupil Stop |
| INS.SLIT2.WID | 0.6 | Blue Slit Width |
| INS.SLIT2.LEN | 10.0 | Blue Decker Height |
| INS.SLIT3.WID | 0.6 | Red Slit Width |
| INS.SLIT3.LEN | 10.0 | Red Decker Height |

| UVES/UVES_dic2_cal_bias.tsf | | |
|------------------------------------|---|--------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET1.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high | Blue Readout Mode |
| DET2.READ.SPEED | 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (<i>225kHz,1x1,low</i>) | Red Readout Mode |
| SEQ.NEXPOBLUE | 0..999 (<i>1</i>) | No. of Blue Exp. |
| SEQ.NEXPORED | 0..999 (<i>1</i>) | No. of Red Exp. |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Dark | Blue Exposure Type |
| DET1.WIN1.UIT1 | 0.0 | Blue Exposure Time |
| DET2.EXP.TYPE | Dark | Red Exposure Type |
| DET2.WIN1.UIT1 | 0.0 | Red Exposure Time |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | IMAGE | Data Prod. Tech. |
| DPR.TYPE | BIAS | Data Prod. Type |

| UVES/UVES_dic2_cal_dark.tsf | | |
|------------------------------------|---|--------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET1.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (<i>225kHz,1x1,low</i>) | Blue Readout Mode |
| DET1.WIN1.UIT1 | 0..36000 (<i>10</i>) | Blue Exposure Time |
| DET2.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (<i>225kHz,1x1,low</i>) | Red Readout Mode |
| DET2.WIN1.UIT1 | 0..36000 (<i>10</i>) | Red Exposure Time |
| SEQ.NEXPOBLUE | 0..999 (<i>1</i>) | No. of Blue Exp. |
| SEQ.NEXPORED | 0..999 (<i>1</i>) | No. of Red Exp. |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Dark | Blue Exposure Type |
| DET2.EXP.TYPE | Dark | Red Exposure Type |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | IMAGE | Data Prod. Tech. |
| DPR.TYPE | DARK | Data Prod. Type |

| UVES/UVES_dic2_cal_flatatt.tsf | | |
|---------------------------------------|---------------------------------------|--------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET1.WIN1.UIT1 | 0..36000 (<i>10</i>) | Blue Exposure Time |
| DET2.WIN1.UIT1 | 0..36000 (<i>10</i>) | Red Exposure Time |
| SEQ.NEXPOBLUE | 0..999 (<i>1</i>) | No. of Blue Exp. |
| SEQ.NEXPORED | 0..999 (<i>1</i>) | No. of Red Exp. |
| INS.LAMPBLUE | D2L FFL1 FFL2 USEL (<i>FFL2</i>) | Blue Flat Lamp |
| INS.LAMPRED | FFL3 FFL4 USEL (<i>FFL4</i>) | Red Flat Lamp |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Normal | Blue Exposure Type |
| DET2.EXP.TYPE | Normal | Red Exposure Type |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |
| DPR.TYPE | LAMP,FLAT | Data Prod. Type |

| UVES/UVES_dic2_cal_flatfree.tsf | | |
|---------------------------------|--|--------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET1.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Blue Readout Mode |
| DET1.WIN1.UIT1 | 0..36000 (10) | Blue Exposure Time |
| DET2.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Red Readout Mode |
| DET2.WIN1.UIT1 | 0..36000 (10) | Red Exposure Time |
| SEQ.NEXPOBLUE | 0..999 (1) | No. of Blue Exp. |
| SEQ.NEXPORED | 0..999 (1) | No. of Red Exp. |
| INS.LAMPBLUE | D2L FFL1 FFL2 USEL (FFL2) | Blue Flat Lamp |
| INS.LAMPRED | FFL3 FFL4 USEL (FFL4) | Red Flat Lamp |
| INS.SLIT1.NAME | FREE SLIC#1 SLIC#2 SLIC#3 (FREE) | Image Slicer |
| INS.DPOL.MODE | ON OFF (OFF) | Depolarizer |
| INS.SLIT2.WID | 0.15..10.0 (0.6) | Blue Slit Width |
| INS.SLIT2.LEN | 0.2..30.0 (10.0) | Blue Decker Height |
| INS.FILT2.NAME | FREE BG24 HER_5 HER_10 HER_15 (HER_5) | Blue Filter |
| INS.GRAT1.NAME | CD#1 CD#2 (CD#2) | Blue XDisp. Id |
| INS.GRAT1.WLEN | 300.0..500.0 (437) | Blue XDisp. wlgth |
| INS.TILT1.POS | -150.0..150.0 (0.0) | Blue Camera Tilt |
| INS.SLIT3.WID | 0.15..10.0 (0.6) | Red Slit Width |
| INS.SLIT3.LEN | 0.2..30.0 (10.0) | Red Decker Height |
| INS.FILT3.NAME | FREE BG40 SHP700 OG590 BK7_5 BK7_10 BK7_15 (OG590) | Red Filter |
| INS.GRAT2.NAME | CD#3 CD#4 (CD#4) | Red XDisp. Id |
| INS.GRAT2.WLEN | 500.0..1100.0 (860) | Red XDisp. wlgth |
| INS.TILT2.POS | -220.0..220.0 (0.0) | Red Camera Tilt |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Normal | Blue Exposure Type |
| DET2.EXP.TYPE | Normal | Red Exposure Type |
| INS.MODE | DICHR#2 | Instrument Mode |
| INS.SHUT1.ST | F | Telescope Shutter |
| INS.DROT.MODE | STAT | Derotation Mode |
| INS.DROT.POSANG | 0.0 | Position Angle |
| INS.FILT1.NAME | FREE | Pre-Slit Filter |
| INS.ADC.MODE | OFF | ADC |
| INS.OPTI1.NAME | OUT | Iodine Cell |

| UVES/UVES_dic2_cal_waveatt.tsf | | |
|---------------------------------------|-----------------------------|--------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET1.WIN1.UIT1 | 0..36000 (<i>10</i>) | Blue Exposure Time |
| DET2.WIN1.UIT1 | 0..36000 (<i>10</i>) | Red Exposure Time |
| SEQ.NEXPOBLUE | 0..999 (<i>1</i>) | No. of Blue Exp. |
| SEQ.NEXPORED | 0..999 (<i>1</i>) | No. of Red Exp. |
| INS.LAMP | TAL HGL USEL (<i>TAL</i>) | Cal. Lamp |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Normal | Blue Exposure Type |
| DET2.EXP.TYPE | Normal | Red Exposure Type |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |
| DPR.TYPE | LAMP,WAVE | Data Prod. Type |

| UVES/UVES_dic2_cal_wavefree.tsf | | |
|---------------------------------|---|--------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET1.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low <i>(225kHz,1x1,low)</i> | Blue Readout Mode |
| DET1.WIN1.UIT1 | 0..36000 <i>(10)</i> | Blue Exposure Time |
| DET2.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low <i>(225kHz,1x1,low)</i> | Red Readout Mode |
| DET2.WIN1.UIT1 | 0..36000 <i>(10)</i> | Red Exposure Time |
| SEQ.NEXPOBLUE | 0..999 <i>(1)</i> | No. of Blue Exp. |
| SEQ.NEXPORED | 0..999 <i>(1)</i> | No. of Red Exp. |
| INS.LAMP | TAL HGL USEL <i>(TAL)</i> | Cal. Lamp |
| INS.SLIT1.NAME | FREE SLIC#1 SLIC#2 SLIC#3 <i>(FREE)</i> | Image Slicer |
| INS.DPOL.MODE | ON OFF <i>(OFF)</i> | Depolarizer |
| INS.SLIT2.WID | 0.15..10.0 <i>(0.6)</i> | Blue Slit Width |
| INS.SLIT2.LEN | 0.2..30.0 <i>(10.0)</i> | Blue Decker Height |
| INS.FILT2.NAME | FREE BG24 HER_5 HER_10 HER_15 <i>(HER_5)</i> | Blue Filter |
| INS.GRAT1.NAME | CD#1 CD#2 <i>(CD#2)</i> | Blue XDisp. Id |
| INS.GRAT1.WLEN | 300.0..500.0 <i>(437)</i> | Blue XDisp. wlgth |
| INS.TILT1.POS | -150.0..150.0 <i>(0.0)</i> | Blue Camera Tilt |
| INS.SLIT3.WID | 0.15..10.0 <i>(0.6)</i> | Red Slit Width |
| INS.SLIT3.LEN | 0.2..30.0 <i>(10.0)</i> | Red Decker Height |
| INS.FILT3.NAME | FREE BG40 SHP700 OG590 BK7_5 BK7_10 BK7_15 <i>(OG590)</i> | Red Filter |
| INS.GRAT2.NAME | CD#3 CD#4 <i>(CD#4)</i> | Red XDisp. Id |
| INS.GRAT2.WLEN | 500.0..1100.0 <i>(860)</i> | Red XDisp. wlgth |
| INS.TILT2.POS | -220.0..220.0 <i>(0.0)</i> | Red Camera Tilt |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Normal | Blue Exposure Type |
| DET2.EXP.TYPE | Normal | Red Exposure Type |
| INS.MODE | DICHR#2 | Instrument Mode |
| INS.SHUT1.ST | F | Telescope Shutter |
| INS.DROT.MODE | STAT | Derotation Mode |
| INS.DROT.POSANG | 0.0 | Position Angle |
| INS.FILT1.NAME | FREE | Pre-Slit Filter |
| INS.ADC.MODE | OFF | ADC |
| INS.OPTI1.NAME | OUT | Iodine Cell |
| INS.OPTI2.NAME | OVSIZ | Pupil Stop |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |

| UVES/UVES_dic2_obs_exp.tsf | | |
|-----------------------------------|---|-------------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET1.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low <i>(225kHz,1x1,low)</i> | Blue Readout Mode |
| DET1.WIN1.UIT1 | 0..36000 <i>(10)</i> | Blue Exposure Time |
| DET2.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low <i>(225kHz,1x1,low)</i> | Red Readout Mode |
| DET2.WIN1.UIT1 | 0..36000 <i>(10)</i> | Red Exposure Time |
| SEQ.NEXPOBLUE | 0..999 <i>(1)</i> | No. of Blue Exp. |
| SEQ.NEXPORED | 0..999 <i>(1)</i> | No. of Red Exp. |
| SEQ.SOURCE | POINT EXTENDED <i>(POINT)</i> | Source Type |
| SEQ.NOFF | 1..100 <i>(1)</i> | Number of offsets |
| TEL.TARG.OFFSETX | -999..999 <i>(0)</i> | X offset in arcsec. |
| TEL.TARG.OFFSETY | -999..999 <i>(0)</i> | Y offset in arcsec. |
| INS.DICEXP.MODE | 437+760 346+760 390+760 437+860 346+860 390+860 <i>(437+860)</i> | Dic Mode Central Wlghts |
| INS.SLIT2.WID | 0.15..10.0 <i>(0.6)</i> | Blue Slit Width |
| INS.SLIT3.WID | 0.15..10.0 <i>(0.6)</i> | Red Slit Width |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Normal | Blue Exposure Type |
| DET2.EXP.TYPE | Normal | Red Exposure Type |
| INS.LAMP | NONE | Cal. Lamp |
| INS.DICEXP.SETTINGS | 346 CD#1 HER_5 10.0 390 CD#2 HER_5 8.0 437 CD#2 HER_5 10.0 564 CD#3 SHP700 11.0 580 CD#3 SHP700 12.0 760 CD#4 BK7_5 8.0 860 CD#4 OG590 12.0 | Dic Mode Settings |
| INS.TILT1.POS | 0 | Blue Camera Tilt |
| INS.TILT2.POS | 0 | Red Camera Tilt |
| DPR.CATG | SCIENCE | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |
| DPR.TYPE | OBJECT | Data Prod. Type |

| UVES/UVES_dic2_obs_expfree.tsf | | |
|--------------------------------|---|---------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET1.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low <i>(225kHz,1x1,low)</i> | Blue Readout Mode |
| DET1.WIN1.UIT1 | 0..36000 <i>(10)</i> | Blue Exposure Time |
| DET2.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low <i>(225kHz,1x1,low)</i> | Red Readout Mode |
| DET2.WIN1.UIT1 | 0..36000 <i>(10)</i> | Red Exposure Time |
| SEQ.NEXPOBLUE | 0..999 <i>(1)</i> | No. of Blue Exp. |
| SEQ.NEXPORED | 0..999 <i>(1)</i> | No. of Red Exp. |
| SEQ.SOURCE | POINT EXTENDED <i>(POINT)</i> | Source Type |
| SEQ.NOFF | 1..100 <i>(1)</i> | Number of offsets |
| TEL.TARG.OFFSETX | -999..999 <i>(0)</i> | X offset in arcsec. |
| TEL.TARG.OFFSETY | -999..999 <i>(0)</i> | Y offset in arcsec. |
| INS.SLIT2.WID | 0.15..10.0 <i>(0.6)</i> | Blue Slit Width |
| INS.SLIT2.LEN | 0.2..30.0 <i>(10.0)</i> | Blue Decker Height |
| INS.FILT2.NAME | FREE BG24 HER_5 HER_10 HER_15 <i>(HER_5)</i> | Blue Filter |
| INS.GRAT1.NAME | CD#1 CD#2 <i>(CD#2)</i> | Blue XDisp. Id |
| INS.GRAT1.WLEN | 300.0..500.0 <i>(437)</i> | Blue XDisp. wlgth |
| INS.TILT1.POS | -150.0..150.0 <i>(0.0)</i> | Blue Camera Tilt |
| INS.SLIT3.WID | 0.15..10.0 <i>(0.6)</i> | Red Slit Width |
| INS.SLIT3.LEN | 0.2..30.0 <i>(10.0)</i> | Red Decker Height |
| INS.FILT3.NAME | FREE BG40 SHP700 OG590 BK7_5 BK7_10 BK7_15 <i>(OG590)</i> | Red Filter |
| INS.GRAT2.NAME | CD#3 CD#4 <i>(CD#4)</i> | Red XDisp. Id |
| INS.GRAT2.WLEN | 500.0..1100.0 <i>(860)</i> | Red XDisp. wlgth |
| INS.TILT2.POS | -220.0..220.0 <i>(0.0)</i> | Red Camera Tilt |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Normal | Blue Exposure Type |
| DET2.EXP.TYPE | Normal | Red Exposure Type |
| INS.LAMP | NONE | Cal. Lamp |
| DPR.CATG | SCIENCE | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |
| DPR.TYPE | OBJECT | Data Prod. Type |

| UVES/UVES_dic2_obs_std.tsf | | |
|----------------------------|---|-------------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (Default) | Label |
| DET1.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Blue Readout Mode |
| DET1.WIN1.UIT1 | 0..36000 (10) | Blue Exposure Time |
| DET2.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Red Readout Mode |
| DET2.WIN1.UIT1 | 0..36000 (10) | Red Exposure Time |
| SEQ.NEXPOBLUE | 0..999 (1) | No. of Blue Exp. |
| SEQ.NEXPORED | 0..999 (1) | No. of Red Exp. |
| SEQ.NOFF | 1..100 (1) | Number of offsets |
| TEL.TARG.OFFSETX | -999..999 (0) | X offset in arcsec. |
| TEL.TARG.OFFSETY | -999..999 (0) | Y offset in arcsec. |
| INS.DICEXP.MODE | 437+760 346+760 390+760 437+860 346+860 390+860 (437+860) | Dic Mode Central Wlghts |
| INS.SLIT2.WID | 0.15..10.0 (0.6) | Blue Slit Width |
| INS.SLIT3.WID | 0.15..10.0 (0.6) | Red Slit Width |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Normal | Blue Exposure Type |
| DET2.EXP.TYPE | Normal | Red Exposure Type |
| INS.LAMP | NONE | Cal. Lamp |
| INS.DICEXP.SETTINGS | 346 CD#1 HER_5 10.0 390 CD#2 HER_5 8.0 437 CD#2 HER_5 10.0 564 CD#3 SHP700 11.0 580 CD#3 SHP700 12.0 760 CD#4 BK7_5 8.0 860 CD#4 OG590 12.0 | Dic Mode Settings |
| INS.TILT1.POS | 0 | Blue Camera Tilt |
| INS.TILT2.POS | 0 | Red Camera Tilt |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |
| DPR.TYPE | STD | Data Prod. Type |

| UVES/UVES_dic2_obs_stdfree.tsf | | |
|--------------------------------|--|---------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET1.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Blue Readout Mode |
| DET1.WIN1.UIT1 | 0..36000 (10) | Blue Exposure Time |
| DET2.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Red Readout Mode |
| DET2.WIN1.UIT1 | 0..36000 (10) | Red Exposure Time |
| SEQ.NEXPOBLUE | 0..999 (1) | No. of Blue Exp. |
| SEQ.NEXPORED | 0..999 (1) | No. of Red Exp. |
| SEQ.NOFF | 1..100 (1) | Number of offsets |
| TEL.TARG.OFFSETX | -999..999 (0) | X offset in arcsec. |
| TEL.TARG.OFFSETY | -999..999 (0) | Y offset in arcsec. |
| INS.SLIT2.WID | 0.15..10.0 (0.6) | Blue Slit Width |
| INS.SLIT2.LEN | 0.2..30.0 (10.0) | Blue Decker Height |
| INS.FILT2.NAME | FREE BG24 HER_5 HER_10 HER_15 (HER_5) | Blue Filter |
| INS.GRAT1.NAME | CD#1 CD#2 (CD#2) | Blue XDisp. Id |
| INS.GRAT1.WLEN | 300.0..500.0 (437) | Blue XDisp. wlgth |
| INS.TILT1.POS | -150.0..150.0 (0.0) | Blue Camera Tilt |
| INS.SLIT3.WID | 0.15..10.0 (0.6) | Red Slit Width |
| INS.SLIT3.LEN | 0.2..30.0 (10.0) | Red Decker Height |
| INS.FILT3.NAME | FREE BG40 SHP700 OG590 BK7_5 BK7_10 BK7_15 (OG590) | Red Filter |
| INS.GRAT2.NAME | CD#3 CD#4 (CD#4) | Red XDisp. Id |
| INS.GRAT2.WLEN | 500.0..1100.0 (860) | Red XDisp. wlgth |
| INS.TILT2.POS | -220.0..220.0 (0.0) | Red Camera Tilt |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET1.EXP.TYPE | Normal | Blue Exposure Type |
| DET2.EXP.TYPE | Normal | Red Exposure Type |
| INS.LAMP | NONE | Cal. Lamp |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |
| DPR.TYPE | STD | Data Prod. Type |

| UVES/UVES_red_acq_ims1.tsf | | |
|-----------------------------|--|----------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (Default) | Label |
| TEL.TARG.ALPHA | ra () | |
| TEL.TARG.DELTA | dec () | |
| TEL.TARG.EQUINOX | -2000..3000 (2000) | Equinox |
| TEL.TARG.PMA | -10..10 (0) | Proper motion Alpha |
| TEL.TARG.PMD | -10..10 (0) | Proper motion Delta |
| TEL.TARG.EPOCH | -2000..3000 (2000) | Epoch |
| TEL.TARG.OFFSETALPHA | (0.0) | RA blind offset |
| TEL.TARG.OFFSETDELTA | (0.0) | DEC blind offset |
| TEL.AG.GUIDESTAR | CATALOGUE SETUP- FILE NONE (CATA- LOGUE) | Get Guide Star from |
| TEL.GS1.ALPHA | ra () | Guide star RA |
| TEL.GS1.DELTA | dec () | Guide star DEC |
| INS.SLIT1.NAME | SLIC#1 SLIC#3 (SLIC#3) | Image Slicer |
| INS.FILT1.NAME | FREE ND1 ND2 ND3 U (FREE) | Acq. Pre-Slit Filter |
| INS.DPOL.MODE | ON OFF (OFF) | Depolarizer |
| INS.OPTI1.NAME | IN OUT (OUT) | Iodine Cell |
| INS.OPTI2.NAME | OVR Siz UNDSIZ FREE (OVR Siz) | Pupil Stop |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| SEQ.PRESET | T | Preset flag |
| TEL.TARG.TYPE | COORDINATE | |
| INS.MODE | RED | Instrument Mode |
| INS.LAMP | NONE | Cal. Lamp |
| INS.DROT.MODE | STAT | Derotation Mode |
| INS.DROT.POSANG | 0.0 | Position Angle |
| INS.ADC.MODE | OFF | ADC |
| INS.SLIT3.WID | 0.2 | Red Slit Width |
| INS.SLIT3.LEN | 12.0 | Red Decker Height |

| UVES/UVES_red_acq_slit.tsf | | |
|-----------------------------------|--|----------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| TEL.TARG.ALPHA | ra () | |
| TEL.TARG.DELTA | dec () | |
| TEL.TARG.EQUINOX | -2000..3000 (<i>2000</i>) | Equinox |
| TEL.TARG.PMA | -10..10 (<i>0</i>) | Proper motion Alpha |
| TEL.TARG.PMD | -10..10 (<i>0</i>) | Proper motion Delta |
| TEL.TARG.EPOCH | -2000..3000 (<i>2000</i>) | Epoch |
| TEL.TARG.OFFSETALPHA | (<i>0.0</i>) | RA blind offset |
| TEL.TARG.OFFSETDELTA | (<i>0.0</i>) | DEC blind offset |
| TEL.AG.GUIDESTAR | CATALOGUE SETUP- FILE NONE (<i>CATA- LOGUE</i>) | Get Guide Star from |
| TEL.GS1.ALPHA | ra () | Guide star RA |
| TEL.GS1.DELTA | dec () | Guide star DEC |
| INS.DROT.MODE | SKY ELEV (<i>ELEV</i>) | Derotation Mode |
| INS.DROT.POSANG | 0.0..360.0 (<i>0.0</i>) | Position Angle |
| INS.FILT1.NAME | FREE ND1 ND2 ND3 U (<i>FREE</i>) | Acq. Pre-Slit Filter |
| INS.DPOL.MODE | ON OFF (<i>OFF</i>) | Depolarizer |
| INS.ADC.MODE | AUTO OFF (<i>OFF</i>) | ADC |
| INS.OPTI1.NAME | IN OUT (<i>OUT</i>) | Iodine Cell |
| INS.OPTI2.NAME | OVSIZ UNDSIZ FREE (<i>OVSIZ</i>) | Pupil Stop |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| SEQ.PRESET | T | Preset flag |
| TEL.TARG.TYPE | COORDINATE | |
| INS.MODE | RED | Instrument Mode |
| INS.LAMP | NONE | Cal. Lamp |
| INS.SLIT1.NAME | FREE | Image Slicer |
| INS.SLIT3.WID | 0.6 | Red Slit Width |
| INS.SLIT3.LEN | 10.0 | Red Decker Height |

| UVES/UVES_red_acq_slitrrm.tsf | | |
|--------------------------------------|-----------------------------|----------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| TEL.TARG.ALPHA | ra () | |
| TEL.TARG.DELTA | dec () | |
| TEL.TARG.EQUINOX | -2000..3000 (<i>2000</i>) | Equinox |
| TEL.TARG.PMA | -10..10 (<i>0</i>) | Proper motion Alpha |
| TEL.TARG.PMD | -10..10 (<i>0</i>) | Proper motion Delta |
| TEL.TARG.EPOCH | -2000..3000 (<i>2000</i>) | Epoch |
| TEL.TARG.OFFSETALPHA | (<i>0.0</i>) | RA blind offset |
| TEL.TARG.OFFSETDELTA | (<i>0.0</i>) | DEC blind offset |
| TEL.AG.GUIDESTAR | CATALOGUE () | Get Guide Star from |
| TEL.GS1.ALPHA | ra () | Guide star RA |
| TEL.GS1.DELTA | dec () | Guide star DEC |
| INS.DROT.MODE | ELEV () | Derotation Mode |
| INS.DROT.POSANG | 0.0 () | Position Angle |
| INS.FILT1.NAME | FREE () | Acq. Pre-Slit Filter |
| INS.DPOL.MODE | OFF () | Depolarizer |
| INS.ADC.MODE | OFF () | ADC |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| SEQ.PRESET | T | Preset flag |
| SEQ.RRM.REGISTER | T | RRM flag |
| TEL.TARG.TYPE | COORDINATE | |
| INS.MODE | RED | Instrument Mode |
| INS.LAMP | NONE | Cal. Lamp |
| INS.SLIT1.NAME | FREE | Image Slicer |
| INS.OPTI1.NAME | OUT | Iodine Cell |
| INS.OPTI2.NAME | OVR Siz | Pupil Stop |
| INS.SLIT2.WID | 0.6 | Blue Slit Width |
| INS.SLIT2.LEN | 10.0 | Blue Decker Height |

| UVES/UVES_red_cal_bias.tsf | | |
|-----------------------------------|--|-------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET2.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Red Readout Mode |
| SEQ.NEXPO | 0..999 (1) | No. of Exp. |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET2.EXP.TYPE | Dark | Red Exposure Type |
| DET2.WIN1.UIT1 | 0.0 | Red Exposure Time |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | IMAGE | Data Prod. Tech. |
| DPR.TYPE | BIAS | Data Prod. Type |

| UVES/UVES_red_cal_dark.tsf | | |
|-----------------------------------|--|-------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET2.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Red Readout Mode |
| DET2.WIN1.UIT1 | 0..36000 (10) | Red Exposure Time |
| SEQ.NEXPO | 0..999 (1) | No. of Exp. |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET2.EXP.TYPE | Dark | Red Exposure Type |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | IMAGE | Data Prod. Tech. |
| DPR.TYPE | DARK | Data Prod. Type |

| UVES/UVES_red_cal_flatatt.tsf | | |
|--------------------------------------|---|-------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET2.WIN1.UIT1 | 0..36000 (<i>10</i>) | Red Exposure Time |
| SEQ.NEXPO | 0..999 (<i>1</i>) | No. of Exp. |
| INS.LAMP | FFL3 FFL4 USEL (<i>FFL3</i>) | Cal. Lamp |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET2.EXP.TYPE | Normal | Red Exposure Type |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |
| DPR.TYPE | LAMP,FLAT | Data Prod. Type |

| UVES/UVES_red_cal_flatfree.tsf | | |
|--------------------------------|--|-------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (Default) | Label |
| DET2.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Red Readout Mode |
| DET2.WIN1.UIT1 | 0..36000 (10) | Red Exposure Time |
| SEQ.NEXPO | 0..999 (1) | No. of Exp. |
| INS.LAMP | FFL3 FFL4 USEL (FFL3) | Cal. Lamp |
| INS.SLIT1.NAME | FREE SLIC#1 SLIC#2 SLIC#3 (FREE) | Image Slicer |
| INS.DPOL.MODE | ON OFF (OFF) | Depolarizer |
| INS.OPTI1.NAME | IN OUT (OUT) | Iodine Cell |
| INS.OPTI2.NAME | OVRsiz UNDSIZ FREE (OVRsiz) | Pupil Stop |
| INS.SLIT3.WID | 0.15..10.0 (0.6) | Red Slit Width |
| INS.SLIT3.LEN | 0.2..30.0 (10.0) | Red Decker Height |
| INS.FILT3.NAME | FREE BG40 SHP700 OG590 BK7.5 BK7_10 BK7_15 HALPHA HBETA OIII5007 OIII4363 NII5755 OI6300 SII6724 HeII4686 (SHP700) | Red Filter |
| INS.GRAT2.NAME | CD#3 CD#4 (CD#3) | Red XDisp. Id |
| INS.GRAT2.WLEN | 500.0..1100.0 (580) | Red XDisp. wlgth |
| INS.TILT2.POS | -220.0..220.0 (0.0) | Red Camera Tilt |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET2.EXP.TYPE | Normal | Red Exposure Type |
| INS.MODE | RED | Instrument Mode |
| INS.SHUT1.ST | F | Telescope Shutter |
| INS.DROT.MODE | STAT | Derotation Mode |
| INS.DROT.POSANG | 0.0 | Position Angle |
| INS.FILT1.NAME | FREE | Pre-Slit Filter |
| INS.ADC.MODE | OFF | ADC |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |
| DPR.TYPE | LAMP,FLAT | Data Prod. Type |

| UVES/UVES_red_cal_waveatt.tsf | | |
|--------------------------------------|-----------------------------|-------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET2.WIN1.UIT1 | 0..36000 (<i>10</i>) | Red Exposure Time |
| SEQ.NEXPO | 0..999 (<i>1</i>) | No. of Exp. |
| INS.LAMP | TAL HGL USEL (<i>TAL</i>) | Cal. Lamp |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET2.EXP.TYPE | Normal | Red Exposure Type |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |
| DPR.TYPE | LAMP,WAVE | Data Prod. Type |

| UVES/UVES_red_cal_wavefree.tsf | | |
|--------------------------------|---|-------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET2.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Red Readout Mode |
| DET2.WIN1.UIT1 | 0..36000 (10) | Red Exposure Time |
| SEQ.NEXPO | 0..999 (1) | No. of Exp. |
| INS.LAMP | TAL HGL USEL (<i>TAL</i>) | Cal. Lamp |
| INS.SLIT1.NAME | FREE SLIC#1 SLIC#2 SLIC#3 (<i>FREE</i>) | Image Slicer |
| INS.DPOL.MODE | ON OFF (<i>OFF</i>) | Depolarizer |
| INS.OPTI1.NAME | IN OUT (<i>OUT</i>) | Iodine Cell |
| INS.OPTI2.NAME | OVSIZ UNDSIZ FREE (<i>OVSIZ</i>) | Pupil Stop |
| INS.SLIT3.WID | 0.15..10.0 (0.6) | Red Slit Width |
| INS.SLIT3.LEN | 0.2..30.0 (10.0) | Red Decker Height |
| INS.FILT3.NAME | FREE BG40 SHP700 OG590 BK7.5 BK7_10 BK7_15 HALPHA HBETA OIII5007 OIII4363 NII5755 OI6300 SII6724 HeII4686 (<i>SHP700</i>) | Red Filter |
| INS.GRAT2.NAME | CD#3 CD#4 (<i>CD#3</i>) | Red XDisp. Id |
| INS.GRAT2.WLEN | 500.0..1100.0 (580) | Red XDisp. wlgth |
| INS.TILT2.POS | -220.0..220.0 (0.0) | Red Camera Tilt |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET2.EXP.TYPE | Normal | Red Exposure Type |
| INS.MODE | RED | Instrument Mode |
| INS.SHUT1.ST | F | Telescope Shutter |
| INS.DROT.MODE | STAT | Derotation Mode |
| INS.DROT.POSANG | 0.0 | Position Angle |
| INS.FILT1.NAME | FREE | Pre-Slit Filter |
| INS.ADC.MODE | OFF | ADC |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |
| DPR.TYPE | LAMP,WAVE | Data Prod. Type |

| UVES/UVES_red_obs_exp.tsf | | |
|----------------------------|--|-----------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET2.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Red Readout Mode |
| DET2.WIN1.UIT1 | 0..36000 (10) | Red Exposure Time |
| SEQ.NEXPO | 0..999 (1) | No. of Exp. |
| SEQ.SOURCE | POINT EXTENDED (POINT) | Source Type |
| SEQ.NOFF | 1..100 (1) | Number of offsets |
| TEL.TARG.OFFSETX | -999..999 (0) | X offset in arcsec. |
| TEL.TARG.OFFSETY | -999..999 (0) | Y offset in arcsec. |
| INS.REDEXP.MODE | 520 580 600 860 (580) | Red Mode Central Wlgt |
| INS.SLIT3.WID | 0.15..10.0 (0.6) | Red Slit Width |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET2.EXP.TYPE | Normal | Red Exposure Type |
| INS.LAMP | NONE | Cal. Lamp |
| INS.REDEXP.SETTINGS | 520 CD#3 SHP700 8.9 580 CD#3 SHP700 12.0 600 CD#3 SHP700 12.0 860 CD#4 OG590 12.0 | Red Mode Settings |
| INS.TILT2.POS | 0 | Red Camera Tilt |
| DPR.CATG | SCIENCE | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |
| DPR.TYPE | OBJECT | Data Prod. Type |

| UVES/UVES_red_obs_expfree.tsf | | |
|-------------------------------|--|---------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET2.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Red Readout Mode |
| DET2.WIN1.UIT1 | 0..36000 (10) | Red Exposure Time |
| SEQ.NEXPO | 0..999 (1) | No. of Exp. |
| SEQ.SOURCE | POINT EXTENDED (POINT) | Source Type |
| SEQ.NOFF | 1..100 (1) | Number of offsets |
| TEL.TARG.OFFSETX | -999..999 (0) | X offset in arcsec. |
| TEL.TARG.OFFSETY | -999..999 (0) | Y offset in arcsec. |
| INS.SLIT3.WID | 0.15..10.0 (0.6) | Red Slit Width |
| INS.SLIT3.LEN | 0.2..30.0 (10.0) | Red Decker Height |
| INS.FILT3.NAME | FREE BG40 SHP700 OG590 BK7_5 BK7_10 BK7_15 HALPHA HBETA OIII5007 OIII4363 NII5755 OI6300 SII6724 HeII4686 (SHP700) | Red Filter |
| INS.GRAT2.NAME | CD#3 CD#4 (CD#3) | Red XDisp. Id |
| INS.GRAT2.WLEN | 500.0..1100.0 (580) | Red XDisp. wlgth |
| INS.TILT2.POS | -220.0..220.0 (0.0) | Red Camera Tilt |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET2.EXP.TYPE | Normal | Red Exposure Type |
| INS.LAMP | NONE | Cal. Lamp |
| DPR.CATG | SCIENCE | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |
| DPR.TYPE | OBJECT | Data Prod. Type |

| UVES/UVES_red_obs_std.tsf | | |
|----------------------------------|--|-----------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET2.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Red Readout Mode |
| DET2.WIN1.UIT1 | 0..36000 (<i>10</i>) | Red Exposure Time |
| SEQ.NEXPO | 0..999 (<i>1</i>) | No. of Exp. |
| SEQ.NOFF | 1..100 (<i>1</i>) | Number of offsets |
| TEL.TARG.OFFSETX | -999..999 (<i>0</i>) | X offset in arcsec. |
| TEL.TARG.OFFSETY | -999..999 (<i>0</i>) | Y offset in arcsec. |
| INS.REDEXP.MODE | 520 580 600 860 (<i>580</i>) | Red Mode Central Wlgt |
| INS.SLIT3.WID | 0.15..10.0 (<i>0.6</i>) | Red Slit Width |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET2.EXP.TYPE | Normal | Red Exposure Type |
| INS.LAMP | NONE | Cal. Lamp |
| INS.REDEXP.SETTINGS | 520 CD#3 SHP700 8.9 580 CD#3 SHP700 12.0 600 CD#3 SHP700 12.0 860 CD#4 OG590 12.0 | Red Mode Settings |
| INS.TILT2.POS | 0 | Red Camera Tilt |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |
| DPR.TYPE | STD | Data Prod. Type |

| UVES/UVES_red_obs_stdfree.tsf | | |
|--------------------------------------|--|---------------------|
| <i>To be specified:</i> | | |
| Parameter | Range (<i>Default</i>) | Label |
| DET2.READ.SPEED | 225kHz,1x1,low 50kHz,2x2,high 225kHz,1x2,low 50kHz,2x3,high 625kHz,1x1,low (225kHz,1x1,low) | Red Readout Mode |
| DET2.WIN1.UIT1 | 0..36000 (10) | Red Exposure Time |
| SEQ.NEXPO | 0..999 (1) | No. of Exp. |
| SEQ.NOFF | 1..100 (1) | Number of offsets |
| TEL.TARG.OFFSETX | -999..999 (0) | X offset in arcsec. |
| TEL.TARG.OFFSETY | -999..999 (0) | Y offset in arcsec. |
| INS.SLIT3.WID | 0.15..10.0 (0.6) | Red Slit Width |
| INS.SLIT3.LEN | 0.2..30.0 (10.0) | Red Decker Height |
| INS.FILT3.NAME | FREE BG40 SHP700 OG590 BK7_5 BK7_10 BK7_15 HALPHA HBETA OIII5007 OIII4363 NII5755 OI6300 SII6724 HeII4686 (SHP700) | Red Filter |
| INS.GRAT2.NAME | CD#3 CD#4 (CD#3) | Red XDisp. Id |
| INS.GRAT2.WLEN | 500.0..1100.0 (580) | Red XDisp. wlgth |
| INS.TILT2.POS | -220.0..220.0 (0.0) | Red Camera Tilt |
| <i>Fixed values:</i> | | |
| Parameter | Value | Label |
| DET2.EXP.TYPE | Normal | Red Exposure Type |
| INS.LAMP | NONE | Cal. Lamp |
| DPR.CATG | CALIB | Data Prod. Cath. |
| DPR.TECH | ECHELLE | Data Prod. Tech. |
| DPR.TYPE | STD | Data Prod. Type |