ESOFORM PDFLaTeX MACROS
USERS' MANUAL FOR PHASE 1 PROPOSALS

European Southern Observatory

CONTENTS

Period 96 Director Discretionary Time

This Users' Manual and the whole ESOFORM Package is maintained by the Observing Programmes Office (OPO), while the background software is provided by the User Support System (USS) Department.

1 INTRODUCTION

The ESOFORM package has been designed to enable a fully electronic preparation and submission of applications for observing time on all telescopes located at the European Southern Observatory's La Silla Paranal observatory.

Getting help. Should you need assistance from ESO to prepare your proposal, please send emails to the address esoform@eso.org for questions related to the ESOFORM package as well as for more general questions about Observatory policy, etc. For instrument specific questions, e.g., related to instrument performance and configuration, please email usd-help@eso.org.

1.1 How to Obtain the New ESOFORM Proposal Package

The ESOFORM Proposal Package may be obtained by logging into the ESO User Portal at the following address:

http://www.eso.org/UserPortal.

1.2 Description of the Content of the ESOFORM DDT Proposal Package

The ESOFORM DDT package consists of:

- a LaTeX class file (`esoform.cls`), which, together with the style files `config.sty` and `common2e.sty` defines all the macros required to generate application forms for DDT Programmes;
- a template proposal (`templateDDT.tex`) for DDT Programme applications, which the users may edit directly in order to create a new proposal;
- this Users' Manual (`usersmanualDDT.tex`), which contains all the information required to fill the templates, as well as instructions on the electronic submission of proposals (via the Web-based WASP interface in the ESO User Portal);
- a short README file.

1.3 General Features

The present manual describes the use of the ESOFORM DDT template, which is composed of macros that are defined in the ESOFORM class and style files. The macros allow the computer controlled typesetting of applications for Director Discretionary Time at ESO. If you are already familiar with TeX or LaTeX, you will probably have no difficulty using the macros provided. You should follow the instructions given below and keep in mind that all your input must conform to the standard LaTeX rules.

The ESOFORM DDT package has been prepared with the following version of pdfLaTeX: pdfTeX, Version 3.141592 (Web2C 7.5.5). If you encounter any serious pdfTeX or pdfLaTeX problem, please send an email to the address esoform@eso.org, describing the problem and indicating which version of pdfLaTeX you are using. For ease of use, we have adopted and already included a number of LaTeX definitions of commonly used astronomical symbols in the class file `esoform.cls`) (see list in Table 1).

For every observing period, the layout of the instruments will be updated according to the anticipated availability of instruments at the La Silla Paranal Observatory. *Please note that* **only** *proposals prepared using the* **latest** *version of ESOFORM will be valid and accepted by ESO.*

2 IMPORTANT REMINDERS AND NEW FEATURES FOR PERIOD 96

The main new features or changes introduced in the ESOFORM package in the last two periods are summarised in this section.

- **Observing conditions:** The definitions of the observing conditions for Phase 1 and Phase 2 can be found on the **Observing Conditions** webpage. Please note in particular the change of the minimum moon distance for grey conditions since Period 92.

Table 1: Astronomical LaTeX Symbols

`\ang`	Å	`90\deg`	90°	
`\halpha`	Hα	`16\sqdeg`	$16\mathrm{deg}^2$	
`\hbeta`	Hβ	`28\arcmin`	$28'$	
`\hgamma`	Hγ	`11\arcsec`	$11''$	
`\lya`	Lyα	`5\fd4`	$5\overset{\mathrm{d}}{.}4$	
`\lyb`	Lyβ	`8\fh2`	$8\overset{\mathrm{h}}{.}2$	
`\mv`	m_V	`2\fm56`	$2\overset{\mathrm{m}}{.}56$	
`\Mv`	M_V	`10\fs08`	$10\overset{\mathrm{s}}{.}08$	
`\ubvr`	$UBVR$	`23\fdg12`	$23\overset{\circ}{.}12$	
`\ub`	$U-B$	`3\farcm6`	$3\overset{\prime}{.}6$	
`\bv`	$B-V$	`0\farcs27`	$0\overset{\prime\prime}{.}27$	
`\vr`	$V-R$	`0\fp4`	$0\overset{\mathrm{p}}{.}4$	
`\ur`	$U-R$	`\onehalf`	$^1/_2$	
`\jhk`	JHK	`\onethird`	$^1/_3$	
`\jh`	$J-H$	`\twothirds`	$^2/_3$	
`\hk`	$H-K$	`\onequarter`	$^1/_4$	
`\jk`	$J-K$	`\threequarters`	$^3/_4$	
`\ion{C}{4}`	C IV	`\slantfrac{{22}}{7}`	$^{22}/_7$	(braces unless one character)
`3.6\micron`	3.6μm	`$\squig$`	$\sim$	(math mode only)
`25\kms`	25 km s^{-1}	`$\lesssim$`	$\lesssim$	(math mode only)
`\peryr`	yr^{-1}	`$\gtrsim$`	$\gtrsim$	(math mode only)
`M\subsun`	$\mathrm{M}_\odot$	`$\la$`	$\lesssim$	(math mode only)
`\sun`	$\odot$	`$\ga$`	$\gtrsim$	(math mode only)
`\earth`	$\oplus$	`\nodata`	...	(tables only)
`\sq`	$\square$			

- **Definition of Service Mode runs:** An observing programme, as described in a single proposal, may consist of one or more runs. Multiple runs should only be requested for observations with different instruments or for different observing modes (e.g., service mode normal runs, pre-imaging runs). Service Mode runs should not be split according to time-critical windows, or used to group targets according to their Right Ascensions.
- **Precipitable water vapour (PWV):** Users of CRIRES and APEX instruments in service mode must specify an upper limit for PWV as an observing constraint during their Phase 1 and Phase 2 preparation. Examples of the correct usage are shown in the ESOFORM package template files.

3 HOW TO FILL A DDT PROGRAMME TEMPLATE

As mentioned in the Introduction, you should fill in with your favourite editor the template file (`templateDDT.tex`). The easiest way to write a proposal is to modify the file `templateDDT.tex` by following the examples therein and the detailed instructions given in the present manual. Input in the template is allowed **only within the arguments of the provided ESOFORM macros**. The presence of text **outside** the macro arguments will lead to **rejection** of the proposal by the automatic proposal reception system (see Sect. 4).

Please note that **it is the responsibility of the applicants to stay within the current box limits** and to eliminate potential overfill/overwrite problems. A careful visual check of the generated pdf file is mandatory.

3.1 The Cycle, the Title, the Subcategory Code: BOX 1

The first macros to check in the `templateDDT.tex` files are:

- `\Cycle` contains the current Period ID and should NOT be modified by the users;

- `\Title` must contain the title of the application (up to two lines);
- `\SubCategoryCode` must contain only one subcategory code, corresponding to the keyword (see Table 2) best summarizing the aim of your proposal. For example, a study of high-redshift clusters of galaxies will have the code A5;
- `\ProgrammeType` should always be `DDT` for DDT Proposals.

Your first sequence will then have the following general format:

```
\Cycle{96Z}
\Title{AGN host galaxies}
\SubCategoryCode{B9}
\ProgrammeType{DDT}
```

which means that you would like to study some AGN host galaxies, with subcategory code B9.

3.2 The Abstract: BOX 2

The ESOFORM includes a string called the "Total Time Requested" in Box 2. This field remains blank when compiling locally; this is normal and proposers should not be concerned about it. The total time requested is only computed in the version of the proposal that is reviewed by the OPC.

This macro (`\Abstract`) contains the abstract of the proposal, i.e., a brief summary, in up to nine lines, of your scientific aim.

```
\Abstract{ .
           .
           .
           The text of your summary which will usually be
           several lines long. Line breaking will
           automatically be taken care of by LaTeX.
           .
           .
           .              }  <-- Do not forget the
                                 closing brace !
```

3.3 Information about the Different Runs: BOX 3

The next macro (`\ObservingRun`) allows the description of the different parameters characterizing your observing run(s) and is necessary for the scheduling and completion of your programme (see examples below). Please note that this macro now takes ten arguments, to be specified between ten pairs of curly braces `{}`, which are related to the parameters described below.

1. RUN ID. Your programme may involve several observing runs, e.g. for complementary use of different telescopes or different instruments. Each observing run (up to 26) required by a proposal should be identified by a different letter, following the sequence A, B, C, . . . , Z as needed. Provide, in the first pair of curly braces, this (these) run identification(s). For example,

```
\ObservingRun{A}{}{}{}{}{}{}{}{}{}
\ObservingRun{B}{}{}{}{}{}{}{}{}{}
```

A DDT Programme may have up to 26 runs. Since the space for the run description in Box 3 is limited to 10 lines, a new box containing the observing runs beyond this limit will be created at the end of the proposal form if needed.

2. PERIOD KEYWORD. Provide, in the second pair of curly braces, the period number. For DDT proposals this may be either 96 or 97.

3. INSTRUMENT. Provide the keyword of the instrument required for each observing run. The complete list of keywords of all instruments that are currently available is given in Table 3.

Provide, in the third pair of curly braces, the instrument required for each observing run. For example,

Table 2: ESO OPC categories and subcategories

Panels	Categories	Code	Subcategories
A	Cosmology	A1	Surveys of AGNs and high-z galaxies;
		A2	Identification studies of extragalactic surveys;
		A3	Large scale structure and evolution;
		A4	Distance scale;
		A5	Groups and clusters of galaxies;
		A6	Gravitational lensing;
		A7	Intervening absorption line systems;
		A8	High-redshift galaxies (star formation and ISM).
B	Galaxies and galactic nuclei	B1	Morphology and galactic structure;
		B2	Unresolved and resolved stellar populations;
		B3	Chemical evolution;
		B4	Galaxy dynamics;
		B5	Peculiar/interacting galaxies;
		B6	Non-thermal processes in galactic nuclei (incl. QSRs, QSOs, blazars, Seyfert galaxies, BALs, radio galaxies, and LINERS);
		B7	Thermal processes in galactic nuclei and starburst galaxies (incl. ultraluminous IR galaxies, outflows, emission lines, and spectral energy distributions);
		B8	Central supermassive objects;
		B9	AGN host galaxies.
C	ISM, star formation and planetary systems	C1	Gas and dust, giant molecular clouds, cool and hot gas, diffuse and translucent clouds;
		C2	Chemical processes in the interstellar medium;
		C3	Star forming regions, globules, protostars, HII regions;
		C4	Pre-main-sequence stars (massive PMS stars, Herbig Ae/Be stars and T Tauri stars);
		C5	Outflows, stellar jets, HH objects;
		C6	Main-sequence stars with circumstellar matter, early evolution;
		C7	Young binaries, brown dwarfs, exosolar planet searches;
		C8	Solar system (planets, comets, small bodies).
D	Stellar evolution	D1	Main-sequence stars;
		D2	Post-main-sequence stars, giants, supergiants, AGB stars, post-AGB stars;
		D3	Pulsating stars and stellar activity;
		D4	Mass loss and winds;
		D5	Supernovae, pulsars;
		D6	Planetary nebulae, nova remnants and supernova remnants;
		D7	Pre-white dwarfs and white dwarfs, neutron stars;
		D8	Evolved binaries, black-hole candidates, novae, X-ray binaries, CVs;
		D9	Gamma-ray and X-ray bursters;
		D10	OB associations, open and globular clusters, extragalactic star clusters;
		D11	Individual stars in external galaxies, resolved stellar populations;
		D12	Distance scale – stars.

Table 3: Keywords of Available Instruments for Normal Programmes

Telescope	Instrument keywords
UT1	FORS2, KMOS, NACO
UT2	FLAMES, XSHOOTER, UVES
UT3	SPHERE, VIMOS, VISIR
UT4	HAWKI, MUSE, SINFONI
VLTI	AMBER, PIONIER
VISTA	VIRCAM
VST	OMEGACAM
APEX	ARTEMIS, FLASH[1], LABOCA, SEPIA, SHFI
NTT	SOFI, EFOSC2
3.6	HARPS

[1] CHAMPP and FLASH are APEX PI instruments, in order to propose the use of these instruments the instrument PI must be contacted at least two weeks prior to submitting the proposal (see the Call for Proposals); Users are requested to check the **La Silla Paranal Observatory News** webpage for the availability of their desired telescope and instrument in the current period.

```
\ObservingRun{A}{96}{FORS2}{}{}{}{}{}{}{}
```

4. REQUESTED TIME. In order to allow for the scheduling of proposals, you must specify the amount of time that you are requesting. For DDT Programmes, only Service Mode is supported; at this stage you should only provide the total amount of time in hours, followed by the letter `h` for hours. This should also include the time related to any special calibrations required in addition to the standard calibrations provided by ESO. Any more detailed information about possible particular scheduling features will be provided during Phase 2 Service Mode proposal preparation.

5. MONTH PREFERENCE. Provide the first three letters of the month (e.g. dec) that would be your first preference for scheduling (valid months are oct, nov, dec, jan, feb, mar, apr, may, jun, jul, aug, sep). If you do not have any month preference simply write "any". For example,

```
\ObservingRun{A}{96}{FORS2}{4h}{dec}{}{}{}{}{}
```

6. MOON REQUIREMENT. Provide the required phase of the moon, by using only one of the following three characters (see the Call for Proposals for the exact definition), namely:

- `d` for "dark time"
- `g` for "grey time"
- `n` for "no restriction"

For example,

```
\ObservingRun{A}{96}{FORS2}{4h}{dec}{d}{}{}{}{}
```

7. SEEING REQUIREMENT. Provide the required maximum acceptable seeing value (FWHM in arcseconds) in the V-band at zenith (see the Call for Proposals). The value should correspond to the one given as input to the ETC. Your requirement must be one of the following values:

0.4, 0.6, 0.8, 1.0, 1.2, 1.4, n

For example,

```
\ObservingRun{A}{96}{FORS2}{4h}{dec}{d}{0.8}{}{}{}
```

8. TRANSPARENCY REQUIREMENT. Provide the transparency condition of the atmosphere required during your observations (see the Call for Proposals for the exact definition). Your requirement must be one of the following values:

CLR	for clear sky, although with some rare clouds
PHO	for photometric, a perfect night
THN	for thin cirrus, inducing absorption up to 0.2 mag

For example,

```
\ObservingRun{A}{96}{FORS2}{4h}{dec}{d}{0.8}{PHO}{}{}
```

9. OBSERVING MODE. Provide the requested observing mode: `s` = Service Mode (which is the only supported mode for DDT programmes). For example,

```
\ObservingRun{A}{96}{FORS2}{4h}{dec}{d}{0.8}{s}{}
```

Alternative runs

For each requested run, you may specify one or several "alternative runs" for possible execution of the proposed observations with another instrument (in general mounted on another telescope). To this effect, add another line in Box 3, with in the first pair of curly braces, the letter identifying your primary run, followed by "`\alt`". For example,

```
\ObservingRun{A}{FORS2}{2h}{dec}{d}{0.8}{CLR}{s}{}
\ObservingRun{A/alt}{96}{VIMOS}{6h}{dec}{d}{0.8}{CLR}{s}{}
```

indicates that the observations of run A could be obtained through allocation either of 2 hours in Service Mode with FORS-1 (primary choice) or of 6 hours in Service Mode with VIMOS (secondary choice). You may specify several alternative runs for each primary run (e.g., in the example above, FORS2 or EFOSC2 runs might plausibly be other suitable alternatives).

Multiple runs

If more than one run is needed for execution of the programme, then fill as many lines as needed. For example,

```
\ObservingRun{A}{96}{FORS2}{2h}{dec}{d}{0.8}{PHO}{s}
\ObservingRun{A/alt}{96}{VIMOS}{2h}{dec}{d}{0.8}{PHO}{s}
\ObservingRun{B}{96}{NACO}{6h}{jan}{n}{0.6}{CLR}{s}
```

APEX users should note that all observations for a given APEX instrument must be included in a **single run**. The proposal receiver will reject any proposal with more than one run per APEX instrument.

10. RUN TYPE. This should only be filled in if the DDT programme necessitates a TOO Run. The RUN TYPE field must be left blank for all Normal, Short and Calibration Programme proposals.

Please note that this feature should be used only for ToO runs. Briefly, ToO Runs are defined to be runs for which the target cannot be known more than one week before the observation must be carried out. If you want to specify one of your runs as being a ToO run, then please enter "TOO" in the tenth (and final) brackets.

```
\ObservingRun{A}{96}{FORS2}{1h}{dec}{d}{0.8}{PHO}{s}{TOO}
```

More details corresponding to this ToO run must be specified in the `\TOORun` macro (Box 15; Sect. 3.21). This field should be left blank for all other (non-TOO) runs.

Proprietary time

The default data proprietary time is 12 months. Nevertheless, you can ask to reduce it for your data by using the macro `\ProprietaryTime{`*time*`}`. The *time* is expressed in months, and only the following values can be entered: 0, 1, 2, 6, 12. For example,

```
\ProprietaryTime{6}
```

Please note that this macro does not produce any printable output at compilation, but the information that it contains will be duly stored in ESO's database when the proposal is submitted.

3.4 Past, Present, and Future of this Programme: BOX 4

In order to allow for the evaluation of the proposal within the broader context of the project of which it is part, taking into account the observations already obtained in the past and the data still to be acquired in the future, indicate in Box 4:

- `\AwardedNights`: the amount of time (in nights or hours) allocated to this project in previous periods, together with the programme number (e.g., 094.B-1234), and the telescope on which this time was allocated;
- `\FutureNights`: the amount of time (in nights or hours) still necessary, in the future, after this proposal, to complete the programme, if any, and the corresponding telescope(s).

For example,

```
\AwardedNights{UT1}{4n in 094.B-1234}
\FutureNights{UT3}{2n}
```

3.5 Special Remarks: BOX 5

Take advantage of this box to provide any special remark (up to three lines). For example,

```
\SpecialRemarks{This programme is a resubmission, in updated form, of
  proposal 094.B-1234, which had been granted 2n in VM
  with UT2+UVES and was entirely clouded out.}
```

3.6 Name and Affiliations of PI and CoI(s): BOX 6

The macro `\PI` must be used to identify the Principal Investigator (PI) of the proposals. Its parameters are simply the ESO User Portal username of the PI. We no longer require the PI's full name as this will be filled in automatically by the receiver on submission. Usage of this macro is illustrated in the following example:

```
\PI{username}
```

You should use the macro `\CoI` to specify also, for all the Co-Investigators (CoIs) of this proposal, their initial(s), last name, and institute code. Institutes and their codes are listed according to country at the following webpage:
http://www.eso.org/sci/observing/phase1/countryselect.html.
You should have one instance of the macro `\CoI` for each CoI of the proposal. The number of instances is unlimited. However, please note that even if all CoIs do not appear in the printed version of the form, the entire CoI list is stored in the ESO database, where it can be accessed when required.

PLEASE NOTE: Due to the way in which the proposal receiver system parses the CoI macro, the number of pairs of curly brackets '{}' in this macro must be strictly equal to 3, i.e., the number of parameters of the macro. Accordingly, curly brackets should not be used within the parameters (e.g., to protect LaTeX signs). For instance:

```
\CoI{L.}{Ma\c con}{1150}
\CoI{R.}{Men\'endez}{1098}
```

are valid, while

```
\CoI{L.}{Ma{\c}con}{1122}
\CoI{R.}{Men{\'}endez}{1098}
```

are not. Unfortunately the receiver does not give an explicit error message when such invalid forms are used in the CoI macro, but the processing of the proposal keeps hanging indefinitely.

An example of input of a CoI list follows:

```
\CoI{H.}{Cerny}{1150}
\CoI{S.}{Bailer-Brown}{1088}
\CoI{K.L.}{Giorgi}{1164}
\CoI{S.}{Lichtman}{2047}
\CoI{L.}{Men\'endez}{1150}
```

3.7 Description of the Proposed Programme: BOX 7

The next two pages contain the description of the proposed programme. This description is restricted to TWO pages and composed of five different sections, activated by five different macros.

A – Scientific rationale: this section should describe the scientific background of the project, with pertinent references; any previous work in the field plus the justification for the present proposal should be included. The content of this section should be placed between the curly braces of the macro `\ScientificRationale{}`.

B – Immediate objective of the proposal: this section should state what is actually going to be observed and what will be extracted from the observations, so that the feasibility becomes clear. The content of this section should be placed between the curly braces of the macro `\ImmediateObjective{}`.

The references should preferably use the simplified abbreviations used in *Astronomy & Astrophysics*.

THE RELATIVE LENGTHS OF EACH OF THESE SECTIONS ARE VARIABLE, BUT THEIR SUM IS RESTRICTED TO ONE PAGE. Any text not fitting within the allocated page can be added to the next page (with the figures). All text and figures must fit within a total of two pages. There is a size limit of 1MB for each figure to be uploaded.

It is the responsibility of the proposers to check that their programme description does not exceed the maximum acceptable length. To this effect, proposers should carry out a careful visual inspection of a print-out of their proposal prior to submitting it. Also, when the proposal is compiled with pdfLaTeX, the length of the text is checked, and a warning message is issued if it is greater than 2 pages. While this warning may easily be overlooked in the real-time terminal window from which pdfLaTeX is run because of the continued scrolling resulting from other output, it is recorded in the pdfLaTeX logfile.

3.8 Figures: BOX 7 (cont'd)

Up to ONE page of the figures and text can be added in addition to the page detailing the Scientific Justiciation and the Immediate Objective. This material can be included using the macros `\MakePicture{}{}` and `\MakeCaption{}`.

NOTE THAT POSTSCRIPT PICTURES ARE NOT ACCEPTED. Since the proposals are compiled using the pdfLaTeX package, only JPEG and PDF file formats are accepted. Attachments in other formats should be converted into one of the accepted formats using appropriate tools (such as ps2pdf, convert, or gimp). In order to reduce the size of the attachments, **we strongly suggest the use of the PDF format for simple plots and graphs, and JPEG for large figures (such as astronomical images).**

The figure macro `\MakePicture{}{}{}` has two arguments: the name of the file of the picture, and a list of optional keywords specifying formatting parameters of the image (as defined in the `graphicx` package). For example:

```
\MakePicture{MyPic1.pdf}{width=15cm,height=8.0cm,angle=90}
\MakePicture{MyPic2.jpg}{width=12cm}
```

The filename should have a `.jpg` or `.jpeg` extension for JPEG files, and a `.pdf` extension for PDF files; other extensions are not accepted.

The caption macro `\MakeCaption{}` takes one single argument, which should contain any LaTeX caption. For example:

```
\MakeCaption{Insert caption using LaTeX.}
```

These attachments will be printed on up to one page immediately following the scientific description. You must check the pdf output generated by pdfLaTeX before submitting your proposal to make sure that the attachments are properly included. In particular, **colour figures should still be readable if printed in black and white**. Also, it is **your responsibility** to check that your attachments **fit within the allocated 1 page**. Please note that when the proposal is compiled with pdfLaTeX, the space required by the attachments is checked, and a warning message is issued if it exceeds 1 page. While this warning may easily be overlooked in the real-time terminal window from which LaTeXis run because of the continued scrolling resulting from other output, it is recorded in the logfile generated by LaTeX. You are strongly encouraged to check this log file.

3.9 Justification of Requested Time: BOX 8

In this box, you should provide a careful justification of the requested lunar phase and of the requested amount of time. To this effect, you should use the ESO Exposure Time Calculators whenever possible; these exist for all Paranal and La Silla instruments and are available at **http://www.eso.org/observing/etc**. Links to exposure time calculators for APEX instrumentation can be found in Sections 7.1 and 7.2 in the Call for Proposals.

For each telescope and instrument to be used, please specify the version of the ESO Exposure Time Calculator that you have used. Do **not** include any correction for unexpected meteorological conditions. The text should be typed as arguments of the following two macros:

```
\WhyLunarPhase{}
\WhyNights{}
```

3.10 Telescope Justification: BOX 8a

This section should provide a justification for the use of the selected telescope (e.g., VLT, NTT, etc...) with respect to other available alternatives. The content of this section should be placed between the curly braces of the macro `\TelescopeJustification{}`.

3.11 Observing Mode Justification: BOX 8b

This section should provide a justification for usage of the DDT channel for submission of the proposal (as opposed to submission through the regular OPC channel). The content of this section should be placed between the curly braces of the macro `\DDTJustification{}`.

3.12 Calibration Request: BOX 8c

For Service Mode runs, the calibrations foreseen in the instrument calibration plans are absorbed by the Observatory; they do not need to be included in the amount of requested time. If calibrations are required that are not included in the respective calibration plan, you must include the additional amount of time that is needed to obtain them in the total amount of time requested.

The macro `\Calibrations` must be used to specify the calibration requirements of your proposal. It takes two arguments. The first one should be set to `standard` if the calibrations contemplated in the calibration plan are sufficient. In this case, no input is required for the second argument:

```
\Calibrations{standard}{}
```

However, if you need additional calibrations, the first argument must be set to `special`, and a brief description of non-standard calibrations that you need must be given as second argument. For example,

```
\Calibrations{special}{Adopt a special calibration}
```

Note that non-standard daytime calibrations must be specified here, but contrary to additional nighttime calibrations, the corresponding time need not be included in the total amount of requested time.

3.13 Last Use of ESO Facilities: BOX 9

The macro `\LastObservationRemark` must be used to provide a brief report on the use of the ESO facilities during the last 2 years. You should specify the programme identification numbers, and describe the status of the data obtained, and the scientific output generated.

3.14 ESO Archive: BOX 9a

You should use the `\RequestedDataRemark` macro to indicate if the data requested in the proposal are in the ESO Archive (**http://archive.eso.org**), and if so, to explain the need for new data.

3.15 Duplication of GTO Programmes: BOX 9b

Specify whether there is any duplication of targets/regions covered by ongoing GTO and/or Public Survey programmes. If so, please explain the need for the new data here. Details on the protected target/fields in these ongoing programmes can be found at: GTO programmes:
http://www.eso.org/sci/observing/teles-alloc/gto.html.

3.16 Applicant's Publications: BOX 10

The applicants should provide, with the macro `\Publications{}`, a list of their publications related to the subject of the current proposal and published during the past two years. The A&A simplified abbreviations for references should be used. The individual references should be separated with a small amount of vertical space, to be created with the standard LaTeX command `\smallskip\\`. For example:

```
\Publications{
Name1 A., Name2 B., 2001, ApJ, 518, 567: Title of article1
\smallskip\\
Name3 A., Name4 B., 2002, A\&A, 388, 17: Title of article2
\smallskip\\
Name5 A. et al., 2002, AJ, 118, 1567: Title of article3
}
```

3.17 List of Targets: BOX 11

Provide the complete list of targets to be observed in this programme, by using the macro `\Target{}{}{}{}{}{}{}{}{}` with the following nine parameters: Run Identifier (you may use the same target/field in more than one run), Target/Field name, Right Ascension (hh mm ss.f, or hh mm.f, or hh.f) and Declination (dd mm ss, or dd mm.f, or dd.f) for the J2000 equinox, requested time on target (in hours with overheads and calibration included), magnitude, angular diameter, additional information (see below), and reference star identifier (see below) for each target field. Please use the format {00 00 00} in case of unknown coordinates. There can be as many occurrences of the macro `\Target` as required to accommodate all targets of all runs of the programme. Long lists of targets will continue on the last page(s) of the proposal form.

The additional information field (8th argument of the `\Target` macro) may in general be used to provide any relevant piece of information about the target that does not pertain to any other argument of the macro (e.g. the period of a variable star). However, for APEX targets, usage of this field is **mandatory** to indicate the requested Precipitable Water Vapour (PWV) and the acceptable range of Local Sidereal Time (LST) for the considered observation. The format should be similar to the one shown in the following example:

```
\Target{A}{HD 104237}{12 00 05.6}{-78 11 33}{1}{}{}{PWV<0.7mm;LST=9h00-15h00}{}
```

A reference source identifier must be provided for all natural guide stars (NGS), in the case of NGS observations with NACO, SINFONI and CRIRES, and all tip-tilt stars (TTS), in the case of all laser guide star (LGS) observations with NACO and SINFONI. For observations with the noAO modes of SINFONI and CRIRES, you do not need to provide this information. **The reference source designation has to be the exact identifier of the selected star either from the Guide Star Catalog 2 (GSC2) or the 2MASS point source catalogue.** Note that GSC2 stars identifiers should NOT be preceded by GSC2, but must start with either N or S. In case the reference source is not included in either catalogue, for instance because it is a supernova or a solar system object, "alt" should be entered as reference source identifier, and additional information can be provided in the `\TargetNotes` macro. Rules for reference star designation can be found for GSC2 at:
http://vizier.u-strasbg.fr/viz-bin/VizieR-n?-source=METAnot&catid=1271&notid=1&-out=text.

Examples of valid and invalid GSC2 identifiers are given below:

N01230121	good
S33333331	good
n01230121	bad
N012301201	bad
S01230141	bad
S3333333000001	bad
S01201201234567	bad

For 2MASS, the rules for reference star designation are available at:
http://www.ipac.caltech.edu/2mass/releases/allsky/doc/sec2_2a.html.

Here are some examples of correct and incorrect identifiers:

2MASS J01234567+7801020	good
2MASS J00000000+7801020L	good
2MASS J01234567+9000000	good
2MASS J01234567+9000000W	good
2MASX J01234567+7801020	bad
2MASS J97234567+7801020	bad

Thus the following examples illustrate the correct usage of the `\Target` macro when a reference star must be specified:

```
\Target{B}{NGC 105}{22 55 00}{-47 50 30}{9.0}{}{}{}{S33333331}
\Target{C}{NGC 106}{00 24 43}{-05 09 00}{2.0}{}{}{}{2MASS J01234567+7801020}
```

The macro `\TargetNotes{}` should be used to include any comments that apply to several or all targets (or to specify reference stars that are not found in the GSC2 or 2MASS catalogues).

```
\TargetNotes{This is a note about the targets.}
```

3.18 Scheduling Requirements: BOX 12

If your proposal involves any of the following:

- observations to be executed on specific dates (e.g., for simultaneity with observations at other facilities);
- observations to be executed at pre-defined time intervals (e.g., at different epochs so as to achieve phase coverage of a periodically variable target);

you **must** uncomment the macro `\HasTimingConstraints` but please leave the brackets empty.

Please note that the macro `\HasTimingConstraints` should be **commented out** in the following cases:

- for scheduling constraints resulting only from the genuine visibility window of the target sources (defined by their location in the sky) or from the phases of the Moon;
- for Target of Opportunity observations.

1. RUN SPLITTING. This parameter only makes sense for Visitor Mode runs, which are not allowed in DDT programmes.

2. LINK FOR COORDINATED OBSERVATIONS. If you have requested three different runs in Box 3, e.g.:

```
\ObservingRun{A}{96}{FORS2}{2h}{nov}{d}{0.8}{CLR}{s}{}
\ObservingRun{B}{96}{FORS2}{3h}{dec}{d}{0.8}{CLR}{s}{}
\ObservingRun{C}{96}{UVES}{2h}{nov}{d}{0.8}{CLR}{s}{}
```

and would like some of them to be simultaneous and some later than others, independently of the exact period of scheduling, then use `simultaneous, after` and the macro `\Link{}{}{}{}` in the following way:

```
\Link{B}{after}{A}{10}
\Link{B}{after}{A}{}
\Link{B}{simultaneous}{C}{}
```

3. UNSUITABLE PERIOD(S) OF TIME. If you have requested two nights in Box 3 and would like them to be scheduled to avoid some unsuitable periods of time, for some reason, then use the macro `\UnsuitableTimes{}{}{}{}` in the following way:

```
\UnsuitableTimes{A}{15-jan-16}{18-jan-16}{International Conference}
\UnsuitableTimes{B}{15-jan-16}{18-jan-16}{International Conference}
\UnsuitableTimes{C}{15-jan-16}{18-jan-16}{International Conference}
\UnsuitableTimes{C}{1-jan-16}{3-jan-16}{Committee Meeting}
```

Dates correspond to 12:00 noon Local Time at the Observatory location (i.e., in Chile). In other words the first date refers to the start of the first night of the unsuitable period; the second date refers to the end of the last night. As with the `TimeCritical` macro, only one run can be specified in each `UnsuitableTimes macro`.

3.19 Scheduling Requirements contd.. : BOX 12

4. SPECIFIC DATE(S) FOR TIME CRITICAL OBSERVATIONS. If you have requested 2 nights in Box 3, e.g.:

```
\ObservingRun{A}{96}{FORS2}{2h}{nov}{d}{0.8}{s}{}
```

and if for some reason (e.g., specific phase of a variable object or parallel observations with already scheduled HST observations, etc.) you need these two nights scheduled between some specific dates, then use the macro `\TimeCritical{}{}{}{}` in the following way:

```
\TimeCritical{A}{12-nov-15}{14-nov-15}{parallel observation with HST}
```

Note that the indicated dates correspond to 12:00 noon Local Time at the Observatory location (i.e., in Chile). In other words, the first date refers to the start of the first night of the acceptable interval, and the second to the end of the last night. Please make sure to convert event times from Universal Time to Local Time.

3.20 Instrument configuration: BOX 13

The template proposal (`templateDDT.tex`) contains the full list of configurations for all available instruments at all available ESO telescopes (Paranal, La Silla and Chajnantor). In order to provide general information about the setup of the ESO instrument(s) you plan to use, please uncomment only the lines related to the instrument modes and configurations needed for the acquisition of your desired observations. For some lines related, e.g., to special filters or central wavelength, please add the required information where appropriate (between the already existing curly braces).

Note that you **must** put the run ID within the first pair of curly braces of the relevant lines. **Do not** specify any instrument configuration for alternative runs (see Box 3). Note that all parameters are **mandatory** for the `\INSconfig` macro (do not use empty fields).

3.21 ToO page

If your programme has Target of Opportunity runs (ToO) runs, you should specify these in the `\ObservingRun` macro using "TOO" in the corresponding field. The ToO information must be filled in for the run using the corresponding `\TOORun` macro. The arguments in this macro are, in order: the run identifier, the nature of the observation, the number of targets per run, and the number of triggers per targets. There must be one occurrence of the macro `\TOORun` for each of the ToO runs specified in Run Type field in the `\ObservingRun` macro (Box 3). The second argument (nature of the observation) may be one of the four following keywords:

- RRM, for observations to be triggered via the automated Rapid Response Mode system;
- ToO-hard, for observations to be triggered manually that need to be carried out within 48 hours of receipt of the trigger by the Observatory (and in most cases, as soon as possible), or that involve a strict time constraint (i.e., that must be executed during a specific night);
- ToO-soft, for manually triggered observations for which the Observatory can receive notification more than 48 hours before execution, and which can be scheduled for execution with a flexibility of at least ± 1 day;

Only one keyword can be specified for each run. If observations pertaining to different categories are needed, several runs must be defined. The number of triggers must be indicated for RRM, ToO-hard and ToO-soft observations only. An occurrence of the macro `\TOORun` looks like the following example:

```
\TOORun{A}{ToO-hard}{2}{3}
```

You have the opportunity to add some notes to the ToO page by using the macro `\TOONotes`. As a rule, ToO proposals should involve at least one trigger of one of either the RRM or ToO-hard or ToO-soft types.

3.22 The Visitor Instrument Page

The following commands are only needed for proposals involving a Visitor Instrument, in which case they are also **mandatory**. In principle, visitor instruments are not allowed for DDT proposals however. If you require a Visitor Instrument you should uncomment them and provide the required information between the different pairs of curly braces.

```
%\Desc{}   % Description of the instrument and its operation
%\Comm{}   % On which telescope(s) has instrument been commissioned/used
%\WV{}     % Total weight and value of equipment to be shipped
%\Wfocus{} % Weight at the focus (including ancillary equipment)
%\Interf{} % Compatibility of attachment interface with required focus
%\Focal{}  % Back focal distance value
%\Acqu{}   % Acquisition, focusing, and guiding procedure
%\Softw{}  % Compatibility with ESO software standards (data handling)
%\Suppl    % Estimate of services expected from ESO (in person days)
```

4 SUBMISSION OF THE APPLICATION

Proposals must be prepared as pdfLaTeX source files, making use of the **latest ESOFORM** package, corresponding to the current ESO Period. Proposals received in any other format, or with modified ESOFORM macros, will be automatically rejected by the automated proposal handling system.

When the LaTeX source file of your application is complete, **please process it with pdfLaTeX** so as to identify any possible LaTeX format errors. In particular, we **strongly** recommend that you

- review the log file generated by LaTeX so as to check for the presence of warning messages issued by the ESOFORM macros. Such messages report, among others, instances in which a text field is too long, so that your input is truncated in the pdf file that is generated, and part of the information that you submit will be lost;
- carefully inspect a printed copy of the output to make sure that all parts of the application are duly completed, and that their formatting is appropriate.

Please note that while several checks are performed by the ESOFORM package when running pdfLaTeX, successful compilation **does not guarantee** that a proposal is fully compliant. Indeed, many key checks can only be performed by the proposal reception system after the proposal has been uploaded within the ESO User Portal.

You should verify that your proposal complies with ESO requirements using a "skeleton" version of your proposal that only contains the technical details of your programme. This should be done well before you would like to submit. Please upload the "skeleton" proposal as if you were submitting it and follow the instructions online. If the proposal passes all the technical checks you will get the message: "Your proposal is verified and passed all the checks (but not submitted yet)!". You can then either log out of the User Portal or return to the submission page by selecting the option to "Go back to the beginning". More details on the full proposal submission procedure are given below.

Proposals are submitted by logging into the ESO User Portal. In order to do this, proposers must be registered and have activated their User Portal accounts. To submit please go to:

http://www.eso.org/UserPortal

Once you have logged in, you should see an item called "Actions" in the left-hand side menu. If you select this you will see the option to "Submit a proposal", by clicking on this you will then be taken to the WASP page (Web Application for Submitting Proposals). On choosing the relevant cycle, you will be asked to upload the LaTeX file of your proposal and should follow the subsequent instructions.

A number of checks are executed at the various steps of the submission process; please follow the instructions online. If a problem is detected it will be clearly reported by the system: fix it in your proposal and resubmit it. Once the proposal passes through all the checks, you will be requested to finalise the submission by clicking on the corresponding button. **It is essential that you execute this final step**: your proposal will not be submitted until this is done, even though you have uploaded all the necessary files!
Upon submission of a correctly completed proposal, the ESO proposal validation software will return an identifier assigned to the valid proposal. This identifier, and the acknowledgment page in which it appears, represent the official confirmation that the proposal successfully entered the proposal handling system. We recommend that you take note of the identifier; you may also want to print the acknowledgment page for your records. In addition, an email confirmation is sent to the submitter and to the PI of the proposal.

Some common problems are described below.

- BibTeX formats are not permitted within the ESOFORM package.
- Figures without the corresponding .jpg or .pdf extensions will make the receiver hang.
- The proposal reception system checks for **the presence of text outside the argument fields of the ESOFORM macros** in the LaTeX source of the proposal, and rejects proposals in which such text is found. If there is text outside the macros it appears as text or extra space above the ESO logo on top of the first page. This input **must be commented out or relocated within the relevant macro** before the proposal is submitted.

Submission Problems

The proposal submission acknowledgment page normally appears within seconds of completion of a a submission. However, the acknowledgment process may take several minutes. As mentioned above, the acknowledgment Web page providing the identifier of your proposal is the official confirmation of its successful submission. The subsequent email notification is only sent to you as a secondary confirmation, and delay in its delivery should not represent a concern. However, if you have not received a confirmation email within 24 hours of your submission, please report this anomaly to esoform@eso.org.

IMPORTANT NOTICE

Electronic proposal submission does not allow applicants to sign their proposals. Therefore ESO assumes that PI's take full responsibility for the contents of the proposal, in particular in regard to the names of co-investigators and the agreement to act according to the instructions for visiting astronomers, should observing time be granted.