

# ESOFORM PDF<sup>A</sup>T<sub>E</sub>X MACROS

## USERS' MANUAL FOR PHASE 1 PROPOSALS

European Southern Observatory

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### ESO DEADLINE FOR PROPOSAL SUBMISSION

The ESO deadline for Period 82B proposal submission is:

**21 April 2008, 12:00 CEST**

This Users' Manual and the whole ESOFORM Package is maintained by the Visiting Astronomers Department (VISAS), 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 at the European Southern Observatory, for all telescopes located at the 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](mailto:esoform@eso.org) for questions relative to the ESOFORM package as well as for more general questions about instrument performance, Observatory policy, etc... You should receive automatic acknowledgment from the system within 4 hours. If you do not receive any acknowledgment of your query, please email [visas@eso.org](mailto:visas@eso.org) directly.

## 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 Proposal Package

The ESOFORM package consists of:

- one L<sup>A</sup>T<sub>E</sub>X class file, (`esoformlarge.cls`) that, together with the style files (`common2e.sty` and `config.sty`), defines all the macros required to generate the application form for Large Programmes;
- one template proposal (`templatelarge.tex` for Large Programme applications, which the users may edit directly in order to create a new proposal;
- this Users' Manual (`usersmanual.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 templates, which are composed of macros that are defined in the ESOFORM class and style files. The macros allow the computer controlled typesetting of applications for observing time at ESO. If you are already familiar with T<sub>E</sub>X or L<sup>A</sup>T<sub>E</sub>X, 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 L<sup>A</sup>T<sub>E</sub>X rules.

The ESOFORM package has been prepared with the following version of pdfL<sup>A</sup>T<sub>E</sub>X: pdfT<sub>E</sub>X, Version 3.141592 (Web2C 7.5.5). If you encounter any serious pdfT<sub>E</sub>X or pdfL<sup>A</sup>T<sub>E</sub>X problem, please send an email to the address [esoform@eso.org](mailto:esoform@eso.org), describing the problem and indicating which version of pdfL<sup>A</sup>T<sub>E</sub>X you are using. For ease of use, we have adopted (and already included in the class file, `esoformlarge.cls`) a number of L<sup>A</sup>T<sub>E</sub>X definitions of commonly used astronomical symbols (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 NEW FEATURES FOR PERIODS 81 AND 82

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

- As of Period 82, in order to retrieve the ESOFORM package, users should register and activate their accounts with the ESO User Portal. This must be done well in advance of the submission deadline. The ESOFORM package can then be obtained by logging into the User Portal. Please note that proposals can also only be submitted using the User Portal.

Table 1: Astronomical L<sup>A</sup>T<sub>E</sub>X Symbols

<code>\ang</code>	Å	<code>90\deg</code>	90°	
<code>\halpha</code>	H $\alpha$	<code>16\sqdeg</code>	16deg <sup>2</sup>	
<code>\hbeta</code>	H $\beta$	<code>28\arcmin</code>	28'	
<code>\hgamma</code>	H $\gamma$	<code>11\arcsec</code>	11''	
<code>\lya</code>	Ly $\alpha$	<code>5\fd4</code>	5 <sup>d</sup> 4	
<code>\lyb</code>	Ly $\beta$	<code>8\fh2</code>	8 <sup>h</sup> 2	
<code>\mv</code>	$m_V$	<code>2\fm56</code>	2 <sup>m</sup> 56	
<code>\Mv</code>	$M_V$	<code>10\fs08</code>	10 <sup>s</sup> 08	
<code>\ubvr</code>	UBVR	<code>23\fdg12</code>	23°12	
<code>\ub</code>	$U-B$	<code>3\farcm6</code>	3'6	
<code>\bv</code>	$B-V$	<code>0\farcs27</code>	0'27	
<code>\vr</code>	$V-R$	<code>0\fp4</code>	0 <sup>p</sup> 4	
<code>\ur</code>	$U-R$	<code>\onehalf</code>	$\frac{1}{2}$	
<code>\jhk</code>	JHK	<code>\onethird</code>	$\frac{1}{3}$	
<code>\jh</code>	$J-H$	<code>\twothirds</code>	$\frac{2}{3}$	
<code>\hk</code>	$H-K$	<code>\onequarter</code>	$\frac{1}{4}$	
<code>\jk</code>	$J-K$	<code>\threequarters</code>	$\frac{3}{4}$	
<code>\ion{C}{4}</code>	C IV	<code>\slantfrac{{22}}{{7}}</code>	$\frac{22}{7}$	(braces unless one character)
<code>3.6\micron</code>	3.6 $\mu$ m	<code>\squig\$</code>	~	(math mode only)
<code>25\kms</code>	25 km s <sup>-1</sup>	<code>\lesssim\$</code>	≈	(math mode only)
<code>\peryr</code>	yr <sup>-1</sup>	<code>\gtrsim\$</code>	≈	(math mode only)
<code>M\subsun</code>	$M_{\odot}$	<code>\la\$</code>	≈	(math mode only)
<code>\sun</code>	☉	<code>\ga\$</code>	≈	(math mode only)
<code>\earth</code>	⊕	<code>\nodata</code>	...	(tables only)
<code>\sq</code>	□			

- As of Period 82, PIs should identify themselves through their unique User Portal username in the macro `\PI`.

The proposal receiver will automatically retrieve the name, affiliation and country of affiliation from the PI's profile; these details will appear in the printable copy of the proposal to be evaluated by the OPC. Please note that each user is allowed to have only one User Portal account; multiple accounts should not be created or used by for the same user. Failure to comply with this restriction **may lead to rejection** by ESO of the proposals of the offending PI.

- Co-I affiliations must be specified in the proposal form by indicating the corresponding institute code. Institutes and their codes are listed by country at:  
<http://www.eso.org/sci/observing/proposals/countryselect.html>.
- ESO/GTC proposals for Period 82B can be submitted for Large Programmes with observations starting between 1 March 2009 and 31 August 2009.
- In the macro `\ObservingRun`: For Period 82B observations users can only specify observing runs with Periods ranging from Period 82 to Period 86.
- As of Period 81, the ESOFORM includes a string called the “Total Time Requested” in Box 2. This time is computed only when the proposal is submitted; when compiling locally the field remains blank. This is normal and proposers should not be concerned about it.

### 3 HOW TO FILL A LARGE PROGRAMME TEMPLATE

As mentioned in the Introduction, you should fill in the template file (`templatelarge.tex`) with your favourite editor. The easiest way to write a proposal is to modify the file `templatelarge.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 overflow/overwrite problems. A careful visual check of the generated pdf file is mandatory.

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

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

- `\Cycle` contains the Period ID for this Call for Proposals, 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;
- `\OPTICONfunded` must be uncommented if your proposal can apply for travel funds from the OPTICON programme. (Read more about OPTICON in the Call for Proposals.) This flag will NOT produce any visible output in the compiled document.
- `\ProgrammeType` should be `LARGE` for Large Programmes.

Your first sequence will then have the following general format:

```
\Cycle{82B}
\Title{AGN host galaxies}
\SubCategoryCode{B9}
\ProgrammeType{LARGE}
```

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

### 3.2 The Abstract: BOX 2

This macro (`\Abstract`) contains the abstract of the proposal, i.e., a brief summary, in up to 13 lines, of your scientific aim.

```
\Abstract{ .
.
.
The text of your summary can be up to 13 lines in length.
Line breaking will
automatically be taken care of by LaTeX.
.
.
.
} <-- Do not forget the
      closing brace !
```

As of Period 81, the ESOFORM includes a string called the “Total Time Requested” in Box 2. This time is computed only when the proposal is submitted; when compiling locally the field remains blank. This is normal and proposers should not be concerned about it. The total amount of time is printed in the version of the proposal that is reviewed by the OPC.

### 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). This macro takes nine arguments, to be specified between nine pairs of curly braces {}, which are related to the following parameters:

Table 2: ESO OPC categories and subcategories

Panels	Categories	Code	Subcategories
<b>A</b>	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>B</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.
<b>C</b>	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).
<b>D</b>	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 P82B (Large Programmes)

Telescope	Instrument keywords
GTC <sup>1</sup>	CanariCam, OSIRIS

<sup>1</sup> Please note: CanariCam is only available in Visitor Mode and OSIRIS is only available in Service Mode.

**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, the run identification(s).

For example,

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

A Large 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 Large Programmes this can be any number from 82 up to and including P86.

**3. INSTRUMENT.** Provide the keyword of the instrument required for each observing run. The list of keywords of all instruments offered in this Period for Large Programmes is given in Table 3.

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

```
\ObservingRun{A}{83}{OSIRIS}{ }{ }{ }{ }
```

**4. REQUESTED TIME.** In order to allow for the automated scheduling of proposals, you must specify the amount of time that you are requesting (hours in Service Mode and nights in Visitor Mode).

**For Service Mode (SM),** provide at this stage only the total number of hours requested, followed by the letter **h** for hours. This should include also 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.

**For Visitor Mode (VM) proposals,** the runs are scheduled according to the information supplied in the Phase 1 proposal form. Consequently, you are required to provide already in this form detailed information about any particular scheduling requirements for the successful completion of your programme. You should code the requested time (in nights), starting with the total time requested, followed by the letter **n** for nights, according to the examples below:

4n	for 4 consecutive nights,
4n=4x1	for 4 times 1 night, with intervals in between,
6n=3x2	for 3 times 2 consecutive nights,
7n=3x2+1	for 3 times 2 consecutive nights followed by 1 night.

If the programme needs half-nights, you should code the requested time (in nights and half-nights), starting with the total time requested, following the few examples below (with **H1** = first half of the night, and **H2** = second half of the night):

2n=4H1	for 4 consecutive first halves of a night,
2n=4x1H2	for 4 times the second half of a night, with intervals in between,
3n=3x2H1	for 3 times 2 consecutive first halves of a night,
8n=3x2+4H2	for 3 times 2 consecutive nights followed by 4 consecutive second halves of a night,
8n=3x2+4x1H1	for 3 times 2 consecutive nights followed by 4 non-consecutive first halves of a night.

Provide, in the fourth pair of curly braces, the total amount of time that is required for the observing run, with the details about possible sub-runs. For example,

```
\ObservingRun{A}{83}{CanariCam}{8n=3x2+4H2}{-}{-}{-}{-}
```

**For all non-consecutive schedules, the details of the time intervals between the different sub-runs must be provided in Box 13** (see Sect. 3.15).

**5. MONTH PREFERENCE.** Provide the first three letters of the month (e.g. dec) which would be your first preference for scheduling. If you do not have any month preference simply write “any” For example,

```
\ObservingRun{A}{83}{CanariCam}{8n=3x2+4H2}{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}{83}{CanariCam}{8n=3x2+4H2}{dec}{d}{-}{-}
```

**7. SEEING REQUIREMENT.** Provide the required maximum acceptable seeing value (FWHM in arcseconds) at the wavelength of observation (see the Call for Proposals for the exact definition). The seeing 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}{83}{CanariCam}{8n=3x2+4H2}{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). You must select one of the following values:

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

For example,

```
\ObservingRun{A}{82}{CanariCam}{8n=3x2+4H2}{dec}{d}{0.8}{PHO}
```

**9. OBSERVING MODE.** Provide the requested observing mode: v = Visitor Mode and s = Service Mode. For example,

```
\ObservingRun{A}{82}{OSIRIS}{20h}{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}{OSIRIS}{20h}{dec}{d}{0.8}{CLR}{s}
\ObservingRun{A/alt}{83}{CanariCam}{6n}{dec}{d}{0.8}{CLR}{v}
```

indicates that the observations of run A could be obtained through allocation either of 20 hours in Service Mode with OSIRIS (primary choice) or of 6 nights in Visitor Mode with CanariCam (secondary choice). You may specify several alternative runs for each primary run.

## 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}{83}{OSIRIS}{24h}{dec}{d}{0.8}{PH0}{s}  
\ObservingRun{A/alt}{83}{CanariCam}{6n=3x4H1}{dec}{d}{0.8}{PH0}{v}  
\ObservingRun{B}{83}{CanariCam}{6n=6x1}{jan}{n}{0.6}{CLR}{v}
```

## 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, 6, 12, 24. 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 Name and Affiliations of PI and Co-I(s): BOX 4

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 the ESO User Portal username will automatically be converted to the PI's name, institute and country of affiliation by the receiver on submission of the proposal. 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 (Co-Is) 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/proposals/countryselect.html>.

You should have one instance of the macro `\CoI` for each Co-I of the proposal. The number of instances is unlimited. However, due to the limited available space, only the names of the first 20 Co-Is will appear in the printed version of the proposal form, followed by an ellipsis (...) if the actual number of Co-I is greater than 20. The whole list of Co-Is is nonetheless stored in the ESO database, where it can be accessed for any purpose requiring it.

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}{1122}  
\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 Co-I list follows:

```
\CoI{H.}{Cerny}{1170}  
\CoI{S.}{Bailer-Brown}{1088}  
\CoI{K.L.}{Giorgi}{1164}  
\CoI{S.}{Lichtman}{2047}
```

When the proposal is submitted these institute codes will be converted to the corresponding countries by the receiver.

### 3.5 Description of the Proposed Programme: BOX 5

The next three pages contain the description of the proposed programme. This description is restricted to THREE pages and composed of four different sections, activated by four 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{}`.

C) This section should provide a justification for the use of the GTC. The content of this section should be placed between the curly braces of the macro `\TelescopeJustification{}`.

D) This section should provide a justification for the observing mode requested (Visitor or Service). The content of this section should be placed between the curly braces of the macro `\ModeJustification{}`.

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

**THE RELATIVE LENGTHS OF EACH OF THESE FOUR SECTIONS ARE VARIABLE, BUT THEIR SUM IS RESTRICTED TO THREE PAGES.** Any text not fitting within the allocated three pages will be ignored. 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 pdfL<sup>A</sup>T<sub>E</sub>X, the length of the text is checked, and a warning message is issued if it is greater than three pages. While this warning may easily be overlooked in the real-time terminal window from which pdfL<sup>A</sup>T<sub>E</sub>X is run because of the continued scrolling resulting from other output, it is recorded in the logfile generated by pdfL<sup>A</sup>T<sub>E</sub>X. Users are strongly encouraged to check this log file.

### 3.6 Figures: BOX 5 (cont'd)

The two pages of the description of the proposed programme can be followed by up to TWO pages of figures. 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 pdfL<sup>A</sup>T<sub>E</sub>X 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 L<sup>A</sup>T<sub>E</sub>X caption. For example:

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

These attachments will be printed on up to two pages immediately following the scientific description. You must check the pdf output generated by pdfL<sup>A</sup>T<sub>E</sub>X 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 2 pages**. Please note that when the proposal is compiled with pdfL<sup>A</sup>T<sub>E</sub>X, the space required by the attachments is checked, and a warning message is issued if it exceeds 2 pages. While this warning may easily be overlooked in the real-time terminal window from which L<sup>A</sup>T<sub>E</sub>X is run because of the continued scrolling resulting from other output, it is recorded in the logfile generated by L<sup>A</sup>T<sub>E</sub>X. You are strongly encouraged to check this log file.

### 3.7 Experience of the applicants: BOX 6

Indicate the experience of the applicants with telescopes, instrumentation, and data reduction and the analysis required in this box.

### 3.8 Resources available to the team: BOX 7

Indicate the strategy for data reduction and analysis. Please also describe the resources available to the team, (e.g., computing facilities, research assistants, etc...), in this box

### 3.9 Special Remarks: BOX 8

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

```
\SpecialRemarks{This programme is an extension of the proposal  
080.B-1234, which was granted 2n in VM.}
```

### 3.10 Justification of Requested Time: BOX 9

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 Exposure Time Calculators (ETCs) whenever possible; these exist for all Paranal and La Silla instruments and are available at:

<http://www.gtc.iac.es/pages/instrumentacion/canaricam.php>.

For each instrument to be used, please specify the version of the Exposure Time Calculator that you have used. ETCs for GTC instrumentation are available at:

<http://canaricam.astro.ufl.edu:8080/itc/itc/servlets/ITCcanaricam.html> for CanariCam and

<http://venus.ifca.unican.es/gserrano/osiris/Calculators.html> for OSIRIS. **Please do check the instrumentation link above for updates on the ETC calculators for GTC instruments.**

Do **not** include any correction for unexpected meteorological conditions. The text should be typed as arguments of the following two macros:

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

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. In Visitor Mode, up to 30 min per night is devoted to the acquisition of these calibrations by the Observatory staff. If, in order to achieve the scientific goals of your projects, calibrations not foreseen in the respective calibration plan are required, you must include the additional amount of time that is needed to obtain them in the total amount of time that you are requesting.

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}{} 
```

If, on the other hand, 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.

### 3.11 Last Use of ESO Facilities: BOX 10

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.

### 3.12 Applicant’s Publications: BOX 11

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 L<sup>A</sup>T<sub>E</sub>X 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
}
```

### 3.13 List of Targets: BOX 12

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.

**Please note** that the scheduling of your programme will take into account **all targets** given in this list. Please include **only the targets requested for Period 82**. Make sure your targets are significantly observable during this period. Inclusion of targets with insufficient visibility during the current period may result in rejection of your programme by the automatic scheduler.

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}{-}
```

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 `\TargetsNotes{}` 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).

```
\TargetsNotes{The planned grid of pointings around the targets
               listed above will be defined during the first
               observing night.}
```

### 3.14 ESO Archive: BOX 12b

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 Scheduling Requirements: BOX 13

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);
- Visitor Mode runs split into non-consecutive nights (for which the fourth argument specifying the number of nights in Box 3 of the proposal form includes a formula);
- Visitor Mode runs mutually linked, which need to be scheduled in a given sequence and at specified time intervals,

you **must** uncomment the macro `\HasTimingConstraints`.

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 time series of observations acquired during a single night or over several consecutive nights of a contiguous Visitor Mode run;
- for Target of Opportunity observations.
- Please leave the brackets in `\HasTimingConstraints` blank. Details of time constraints can be entered in Special Remarks and using the other flags in Box 13.

Furthermore, in order to allow for the automated scheduling of all Visitor and Service Mode observing runs, you must provide all information related to the details of the way your programme should be scheduled.

**1. RUN SPLITTING.** For Visitor Mode runs: if the fourth argument you have provided in Box 3 indicates a simple number of consecutive nights or half-nights, e.g.:

```
\ObservingRun{A}{83}{CanariCam}{4n}{nov}{d}{0.8}{v}{}
```

you do not have to do anything. If the fourth argument in Box 3 indicates a more complicated requirement, with some non-consecutive nights, e.g.:

```
\ObservingRun{A}{83}{OSIRIS}{8h}{nov}{d}{0.8}{v}{}
```

you must provide some additional information. The fourth argument above, namely,  $8n=3 \times 2+4H2$ , means that you have requested a total of 8 nights, made of three sub-runs of 2 consecutive nights each, followed later by a sub-run of 4 consecutive second halves of a night.

You should use the macro `\RunSplitting{}{}`, and put the run identifier in the first argument. The second argument should indicate the way the run should be split into different sub-runs. If the interval between two sub-runs has to be exactly a given number of days, say 20, then this is a **strong** constraint and this number of days should be followed by the letter **s**. If the interval between two sub-runs has some tolerance on the number of days, say  $20 \pm 5$ , then this is a **weak** constraint and this number of days should be followed by the letter **w**. Consequently, if  $8n=3 \times 2+4H2$  means that you want three sub-runs of 2 consecutive nights each, the first and the second separated by 10 nights exactly, the second and the third separated by more or less 20 nights, followed exactly 15 days later by one sub-run of 4 consecutive second halves of a night, then the second argument of the macro `\RunSplitting{}{}` should contain the following expression:  $2,10s,2,20w,2,15s,4H2$ . Hence the following entry should appear in your proposal file:

```
\RunSplitting{A}{2,10s,2,20w,2,15s,4H2}
```

Note that it is necessary to specify explicitly the time intervals among all non consecutive sub-runs.

The macro `\RunSplitting` is meaningless for Service Mode runs, for which constraints of the considered type should be fully specified at Phase 2 (but the macro `\HasTimingConstraints` should be uncommented for such runs, so that they are duly flagged). **However please note that in in Service Mode, monitoring programmes are executed on a best effort basis only.** In particular, a monitoring sequence can be interrupted by unsuitable weather conditions or by runs scheduled in Visitor Mode.

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

```
\ObservingRun{A}{83}{2n}{nov}{d}{0.8}{v}{}
```

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-08}{14-nov-08}{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 duly convert event times from Universal Time to Local Time.

**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-09}{18-jan-09}{International Conference}
```

Times are understood according to the same convention as for the macro `TimeCritical` (see above).

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

```
\ObservingRun{A}{83}{CanariCam}{2n}{nov}{d}{0.8}{v}{}  
\ObservingRun{B}{83}{CanariCam}{3n}{nov}{d}{0.8}{v}{}  
\ObservingRun{C}{83}{OSIRIS}{20h}{nov}{d}{0.8}{v}{}
```

and would like some of them to be simultaneous and some later than others (by any delay, zero indicating immediately after), 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}{}
```

### 3.16 Instrument configuration: BOX 14

The template proposal `templatelarge.tex` for Large Programme applications contains the full list of configurations for the available instruments at GTC.

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).

## 4 SUBMISSION OF THE APPLICATION

Proposals must be prepared as pdf $\LaTeX$  source files, making use of the **latest ESOFORM** package, corresponding to the ESO Period for which they are submitted. 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 pdf $\LaTeX$**  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 not be communicated to the OPC;
- 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 a significant number of checks are performed by the ESOFORM package when running pdf $\LaTeX$ , a successful outcome of this process **does not guarantee** that a proposal is fully compliant. Indeed, many other checks (about half of the total number) can only be performed by the proposal reception system at the time when the proposal is submitted.

In particular, please be aware that as of Period 80, the proposal reception system checks for **the presence of text outside the argument fields of the ESOFORM macros** in the L<sup>A</sup>T<sub>E</sub>X source of the proposal, and rejects proposals in which such text is found. Although no such check is implemented at the stage of processing of the proposal with pdfL<sup>A</sup>T<sub>E</sub>X, its presence can be identified through inspection of the printed output. Any text (or extra space) appearing above the ESO logo on top of the first page of the latter results from the occurrence of input outside the ESOFORM macros in the L<sup>A</sup>T<sub>E</sub>X source. This input **must be commented out or relocated within the relevant macro** before the proposal is submitted.

Proposals must be 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 option to “Submit a proposal” in the left-hand side menu. By clicking on this you will be taken to the WASP page (Web Application for Submitting Proposals). On choosing the relevant cycle, you will be asked to upload the L<sup>A</sup>T<sub>E</sub>X file of your proposal and follow the the instructions on your browser.

A number of checks are executed at the various steps of the submission process; if requested to do so, please keep reloading the page with your browser until you see the results of these checks. Should a problem be detected, it will be clearly reported by the system: fix it in your proposal and make a new attempt at submitting it. Otherwise, you can proceed with the upload of the attachments. Further tests are done on these files (in particular, regarding their formats and their filenames). If they are successfully completed, 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.

**Note that WASP can be used just to verify your proposal without actually submitting it. In particular, you should take advantage of this by verifying a “skeleton” version of your proposal (containing only the technical details of your programme) well in advance of the Phase 1 deadline.**

## Submission Problems

The proposal submission acknowledgment page normally appears within seconds of completion of a a submission. However, during the last few hours before the Phase 1 deadline, the system may be slowed down by the high load, and the acknowledgment process may take several minutes. Please **be patient**: even though it may look like “nothing is happening”, the system most likely is actually busy processing a queue of proposals. Please **do not** abort your submission or make a new attempt at submitting the same proposal: this would only increase the load on the system and make it slower. However, if you have not succeeded in completing your submission within 1 hour, please contact ESO via email to [esoform@eso.org](mailto:esoform@eso.org). **Do not under any circumstance** attach your application (in any format) to this email. **Do not try to resubmit your application** before receiving further instructions from ESO. **Do not panic!** Once you have uploaded the L<sup>A</sup>T<sub>E</sub>X source of your proposal, your attempt, and the time at which you initiated it, are recorded in the ESO system, so that anomalous delays due to the proposal reception system will be duly identified. **Be aware** that if you experience difficulties due to the proposal reception system, you most likely are not the only user in this case, and the various problem reports must be handled sequentially, so that it may take some time before you receive feedback from ESO.

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 it within 24 hours of your submission, please report this anomaly to [esoform@eso.org](mailto:esoform@eso.org).

A safe way to avoid submission problems (often related to heavy system load during the last few hours before the deadline) is to submit your proposal early. We strongly encourage you to send in your applications and all attachments several days before the deadline.

**All proposals and their attachments must reach the ESO servers via the WASP interface**

**BEFORE 12:00 noon (Central European Summer Time) on the date of the deadline. Responsibility for verifying that ESO has correctly received, processed, and acknowledged your proposal before the proposal submission deadline rests entirely with you. Revisions, corrections, and/or modifications will not be accepted after the deadline.**

**IMPORTANT NOTICE**

Electronic proposal submission does not allow applicants to sign their proposals. Therefore ESO assumes that PIs 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.