INTERNATIONAL GAMMA-RAY ASTROPHYSICS LABORATORY (INTEGRAL)

Science Operations Centre

Proposal Generation Tool SUM

INT-SOC-SUM-018

Issue 1.1
3rd June 2003

Prepared by	J.Treloar	
Approved by	L.Hansson	

Distribution List

M.Kessler	SCI-SA
A.Parmar	SCI-SA
C. Winkler	SCI-SA
L. Hansson	SCI-SAG
P. Barr	SCI-SAG
A. Jeanes	SCI-SAG
N. Dean	SCI-SAG
J. Nolan	SCI-SAG
J. Treloar	SCI-SAG
F.Jacobs	SCI-SAG
O.R.Williams	SCI-SAG
R.Much	SCI-SAG
A. Orr	SCI-SAG
J. Sternberg	SCI-SAG
E.Kuulker	SCI-SAG
T.Oosterbroek	SCI-SAG
R. Carli	SCI-PG
T.Lock	TOS-QQS
T. Courvoisier	ISDC
P. Maldari	MOC
W. Hermsen	MS
L. Natalucci	IBIS
P. Herbert	SPI
A. Hornstrupp	JEM-X
E. De Miguel	OMC

Document Status Sheet

Document Title		INTEGRAL Proposal Generation Tool SUM	
Reference No:		INT-SOC-SUM-018	
Issue	Revision	Date	Reason for change
0	Draft	7th September 2000	First issue for SAG internal review
1	0	20th October 2000	Issue with minor updates
1	1	3rd June 2003	AO2 issue

Document Change Control

DCR No:	1	Date: 3rd June 2003	Approved:	
Document Title		Proposal Generation Tool SUM		
Reference No:		INT-SOC-SUM-018		
Issue	Paragraph	Reason for change		
1.0		New document		
1.1	Figure 12 Figure 18 Figure 22	Updated for AO2		

Table Of Contents

Distribution List ii
Document Status Sheet iii
Document Change Control iv
Table Of Contents v
List Of Figures viii
List Of Tables ix

1 Introduction 1
1.1 Purpose 1
1.2 Intended Readership 1
1.3 Using Online Help 1
1.4 Using the SUM 1
1.4.1 Conventions Used 1
1.5 Problem Reporting 1
1.6 Definitions, acronyms and abbreviations 2
1.6.1 Definition of Terms 2
1.6.2 Acronyms 2
1.7 References 4
1.7.1 Applicable documents 4
1.7.2 Reference documents 4

2 Proposal Generation Tool Conventions 5
2.1 Common Panel Layout 5
2.2 Mandatory Fields 5
2.3 Help Menu 6
2.4 Panel Menu 6

3 Proposal Generation Tool Basics 7
3.1 Installing the Proposal Generation Tool 7
3.2 Starting the Proposal Generation Tool 7
3.3 Enabled and Disabled Fields 7
3.4 Using the Mouse 7
3.4.1 Terminology 8
3.4.2 Input Focus 8
3.4.3 Menus 8
3.4.4 Pick-Lists 8
3.4.5 Buttons and Check Boxes 9
3.5 Using the Keyboard 9
3.5.1 Input Focus 9

3.5.2 Menus ... 9
3.5.3 Pick-Lists ... 10
3.5.4 Buttons and Check Boxes ... 10
3.5.5 Textfields ... 10
3.6 Exiting the Proposal Generation Tool ... 10

4 Saving, Loading and Printing ... 12
4.1 Saving ... 12
4.2 Loading ... 12
4.3 Printing ... 13
4.3.1 The Print Options Dialogue ... 13
4.3.2 Printing an Entire Proposal ... 14
4.3.3 Printing Admin Details ... 14
4.3.4 Printing Proposal Details ... 14
4.3.5 Printing Observations ... 14
4.3.6 Printing the Observation Summary ... 14

5 Entering Data ... 15
5.1 The Main Panel ... 15
5.2 The Admin Details Panel ... 15
5.3 The Proposal Details Panel ... 16
5.3.1 Attaching the Scientific Justification ... 16
5.4 The Observation Details Panel ... 17
5.4.1 Observation Numbering ... 17
5.4.2 Displaying Observations ... 18
5.4.3 The Observation Menu ... 19
5.4.4 Instrument Settings ... 19
5.4.5 JEM-X TM Formats ... 19

6 Online Tools ... 21
6.1 Observation Time Estimator ... 21
6.2 Target Visibility Predictor ... 22
6.3 Printing Results ... 23

7 Submitting a Proposal to ISOC ... 24
7.1 Submitting for the First Time ... 24
7.2 Repeating a Submission ... 25
7.3 Obtaining a Copy of a Submitted Proposal from ISOC ... 25

8 Extra Features ... 26
8.1 Autosave ... 26
8.2 Changing the Mandatory Item Colour ... 26

Appendix A: Keyboard Shortcuts ... 28

A.1 Main Panel 28
A.2 Admin Details Panel 29
A.3 Proposal Details Panel 29
A.4 Observation Details Panel 30
A.5 Observation Time Estimator Panel 31
A.6 Target Visibility Predictor Panel 31

List Of Figures

Figure 1 Common Panel Layout 5
Figure 2 Example of Mandatory Fields 5
Figure 3 Example Help Panel 6
Figure 4 Enabled and Disabled Fields 7
Figure 5 Using Pick-Lists 8
Figure 6 Accessing Menus Using the Keyboard 9
Figure 7 The File Menu 11
Figure 8 The Quit Dialogue 11
Figure 9 The Save Dialogue 12
Figure 10 The Open Dialogue 13
Figure 11 The Print Options Dialogue 13
Figure 12 The Main Panel 15
Figure 13 The Admin Details Panel (upper part) 16
Figure 14 Adding Attachments 16
Figure 15 The Attach Dialogue 17
Figure 16 The Observation Details Panel (upper part) 18
Figure 17 The Observation Menu 19
Figure 18 JEM-X 2 Mode Parameters Panel 20
Figure 19 The OTE Panel 21
Figure 20 The TVP Panel 22
Figure 21 TVP Results Panel 23
Figure 22 The Summary Panel 24
Figure 23 Successful Submission Dialogue 24

List Of Tables

Table 1: Main Panel Keyboard Shortcuts 28
Table 2: Admin Details Panel Keyboard Shortcuts 29
Table 3: Proposal Details Panel Keyboard Shortcuts 29
Table 4: Observation Details Panel Keyboard Shortcuts.....30
Table 5: OTE Panel Keyboard Shortcuts.....31
Table 6: TVP Panel Keyboard Shortcuts 31

1 Introduction

1.1 Purpose

This document explains how to use the Proposal Generation Tool (PGT) software to prepare a science proposal for use with the INTEGRAL Observatory. It explains the use of the software from a functional, rather than scientific, point of view.

1.2 Intended Readership

Observers wishing to apply for science time on INTEGRAL should familiarise themselves with this document and keep it handy to use as a reference. Proposals for INTEGRAL can only be created and submitted by using the PGT software.

1.3 Using Online Help

The online help provides brief explanations for most of the fields in the PGT and is accessed from the Help menu (see section 2.3, page 6).

1.4 Using the SUM

This document provides more detailed explanations of the PGT functionality than the online help can provide. However, the PGT is not a difficult tool to use and once you are familiar with the basics, you should not need to refer to this document very often.

1.4.1 Conventions Used

The labels used for items in panels are shown in *italics*. Items in a panel which cause an action to be performed are shown in **bold**.

1.5 Problem Reporting

If you discover a problem with the PGT, your first port of call should be the Frequently Asked Questions (FAQ) page on the Integral Web Site (IWS) found at this location:

http://astro.esa.int/Integral/isoc/

If this does not answer your query, then you can send a message to the Helpdesk at the following email address:

inthelp@rssd.esa.int

1.6 Definitions, acronyms and abbreviations

1.6.1 Definition of Terms

The definition of terms is provided in [AD-2].

1.6.2 Acronyms

ADS	Archive and Distribution System
AO	Announcement of Opportunity
API	Application Programming Interface
CSSW	Common Services Software
DBOB	Data Base of Observable Bins
ECS	Exposure Completion Status (file)
ED	Event Designator
EID	Experiment Interface Document
ESA	European Space Agency
ESOC	European Space Operations Centre
ESTEC	European Space Technology and Research Centre
FE	Front-End
FOV	Field of View
GO	General Observer
GPC	Galactic Plane Core
GPS	Galactic Plane Survey
CPWG	Core Programme Working Group
GUI	Graphical User Interface
IASW	Instrument Application Software
IBIS	Gamma-ray Imager
ICD	Interface Control Document
ICCS	ISOC Configuration Control System
IFTS	INTEGRAL File Transfer System
INTEGRAL	International Gamma-Ray Astrophysics Laboratory
IOP	Initial Observations Parameters
ISO	Infrared Space Observatory
ISOC	INTEGRAL Science Operations Centre
ISDC	INTEGRAL Science Data Centre
ISWT	INTEGRAL Science Working Team
JEM-X	X-ray Monitor
LAN	Local Area Network
MIRD	Mission Implementation Requirements Document
MOC	Mission Operations Centre
MOUT	Message Out
MP	Mission Planner
OBSW	On-board Software
OCS	Observation Completion Status (file)
OGS	Operational Ground Segment

OMC	Optical Monitor Camera
OPP	OMC Pointing Parameters
OSS	Observation Scheduling System
PA	Product Assurance
PAD	Proposal Administrative Data
PAS	Performance Analysis Subsystem
PDC	Problem Domain Component
PGT	Proposal Generation Tool
PH	Proposal Handler
PHS	Proposal Handling System
PI	Principal Investigator
POD	Planning and Observation Data
POS	Preferred Observation Sequence
PA	Product Assurance
PS	Project Scientist
PSF	Planning Skeleton File
SCMP	Software Configuration Management Plan
SGS	Science Ground Segment
SGSIP	SGS Implementation Plan
SGSM	Science Ground Segment Manager
SGSRD	SGS Requirements Document
SPI	Gamma-ray Spectrometer
SPMP	Software Project Management Plan
SPAP	Software Product Assurance Plan
SVT	System Validation Test
SVVP	Software Verification and Validation Plan
TAC	Time Allocation Committee
TM	Telemetry
TOO	Target Of Opportunity
URL	Universal Resource Locator
WWW	World Wide Web

1.7 References

1.7.1 Applicable documents

The following documents are applicable in their latest version (except PSS-05):

AD-1	PSS-05-0	ESA Software Engineering Standards, Issue 2
AD-2	INT-SOC-DOC-002	Definition of Observations Terms
AD-3	INT-SOC-URD-001	ISOC URD
AD-4	INT-SOC-SRD-002	ISOC SRD
AD-5	INT-SOC-PL-005	ISOC SPAP
AD-6	INT-SOC-PL-002	ISOC SCMP
AD-7	INT-SOC-PL-003	ISOC SVVP
AD-8	INT-SOC-ICD-001	ISOC - ISDC ICD
AD-9	INT-SOC-ICD-002	ISOC - OMC ICD
AD-10	INT-MOC-SYS-ICD-0001	OGS - SGS ICD
AD-11	INT-SOC-DOC-003	ISOC infrastructure
AD-12	INT-SOC-PL-004	ISOC SPMP

1.7.2 Reference documents

RD-1	INT-SOC-DOC-001	ISOC Operations Concept
RD-2	INT-SYS-MIS-TN-0002-SMD	INTEGRAL Mission Planning Concept
RD-3		Coad P., Yourdon E; *Object-Oriented Design*; Prentice Hall 1991
RD-4	BSSC ESA; Issue 1 Draft 2	Guide To Applying ESA software engineering standards to projects using OO Methods; July 1997
RD-5		Design Patterns; Addison Wesley 1994; Gamma E. et Al.
RD-6	INT-SR-1594	SGS Requirement Document
RD-7	INT-PL-03197	SGS Implementation Plan
RD-8	INT-IC-AI-0005	Satellite Database ICD
RD-9	INT-RP-AI-0030	Packet Structure Definition
RD-10	INT-SAG-98-0042-TN	Instrument Modes and Mode Transitions Supported by ISOC
RD-11	INT-SOC-DOC-023	JEM-X Observer’s Manual

2 Proposal Generation Tool Conventions

2.1 Common Panel Layout

Every panel shares a common layout. This layout consists of a menu bar at the top of the panel with an icon strip underneath it. The icon strip usually contains the ESA logo, the ISOC logo and the Integral logo. Below the icon strip is a scrollable area containing the main body of the panel. When a panel is first opened it will be shown at its default size. If you resize the panel so that it is smaller than this default size, scroll bars will automatically appear and you can use these to view the hidden parts of the panel.

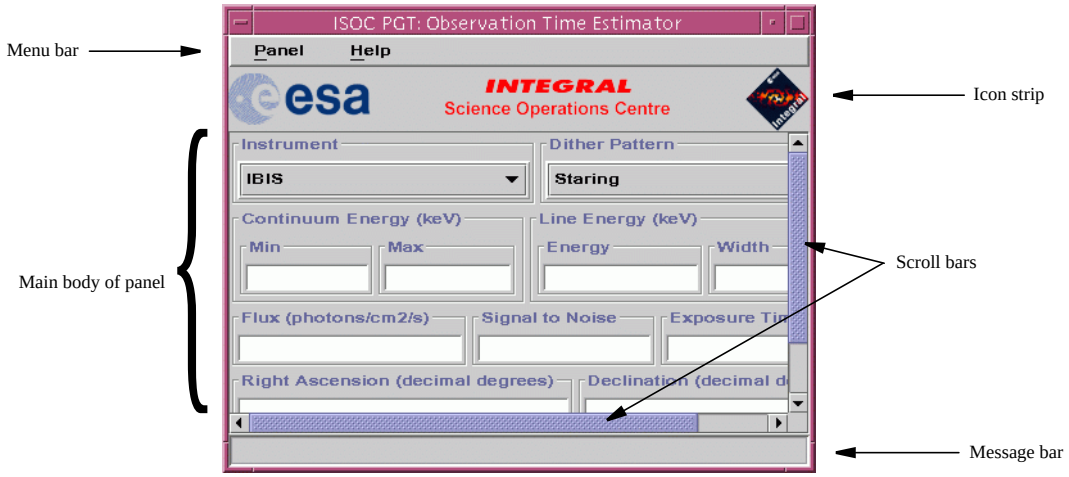

Figure 1 Common Panel Layout

At the bottom of every panel is a message bar. Informative messages may appear here from time to time.

2.2 Mandatory Fields

Mandatory fields are fields which you <u>must</u> complete. They are denoted by a coloured background. By default, they are coloured cyan, though you may choose a different colour by editing the PGT.lax file (see section 8.2, page 26).

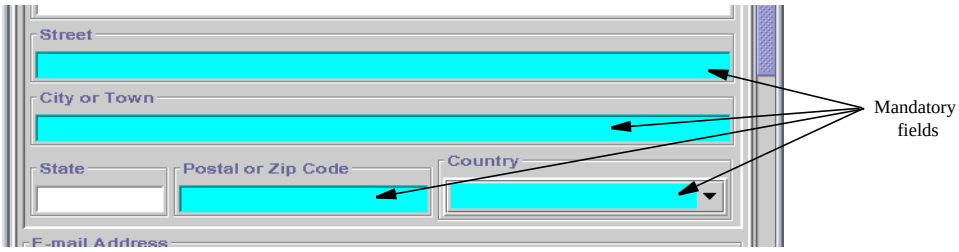

Figure 2 Example of Mandatory Fields

2.3 Help Menu

Menus are located on the menu bar at the top of every panel (see section 3.4.3, page 8, and section 3.5.2, page 9, for details of the different ways of accessing menus). One menu which is common to all panels in the PGT is the *Help* menu. This menu contains at least two entries: **Panel** and **Overview**.

The **Panel** entry causes a help panel to be displayed which provides information about the panel to which the help menu belongs. The **Overview** entry opens a help panel which contains an overview of the major functionality in the PGT. This overview is the same no matter which *Help* menu was used to activate it.

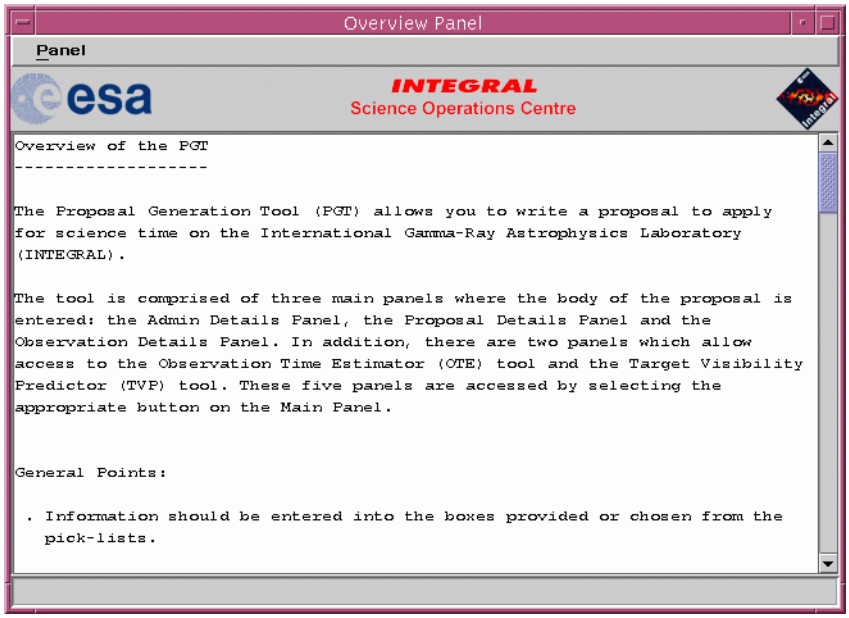

Figure 3 Example Help Panel

2.4 Panel Menu

Every panel, except the Main Panel, contains a *Panel* menu with some or all of the entries **Reset**, **Print** and **Hide**.

The **Reset** entry allows the user to reset all the inputs in the current panel to their default values.

The **Print** entry allows the contents of some panels to be sent to a printer.

The **Hide** entry closes the current panel, but preserves any data entered into any of the fields. This means that if the panel is reopened, the data will be visible again.

3 Proposal Generation Tool Basics

3.1 Installing the Proposal Generation Tool

The PGT is written in the Java programming language and, as such, is platform independent, meaning that the same software will run on many operating systems without modification. However, in order to ease installation on different platforms and to allow local customisation of certain parameters, the PGT is provided in a variety of platform specific packages. These packages can be found on the Integral Web Site (see section 1.5, page 1, for the URL).

To install the package for a given platform, follow the instructions in the README.txt file which can also be found on the Integral Web Site.

3.2 Starting the Proposal Generation Tool

The method of starting the PGT depends on the platform in use. UNIX users start the PGT by running a script, whereas Windows users double click on a desktop icon. The README.txt file provides details of how to start the PGT.

3.3 Enabled and Disabled Fields

Certain fields can become disabled or enabled depending on which selections or settings are made to other fields in a panel. When a field is disabled, it is shown with gray text on a gray background, and when it is enabled, it is shown with black text on a gray or coloured (if it is a mandatory field) background.

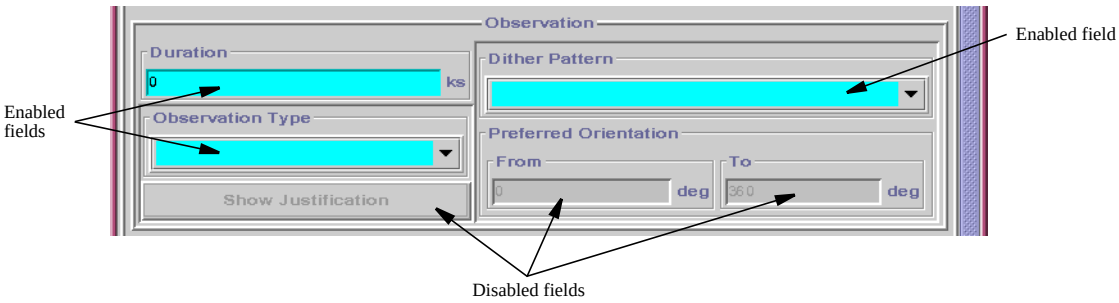

Figure 4 Enabled and Disabled Fields

3.4 Using the Mouse

The mouse is used to move an on-screen pointer and to trigger events, such as activating menus and buttons, making selections from pick-lists, moving the input focus from one field to another and changing the positions of scrollbars.

3.4.1 Terminology

"Clicking" refers to pressing the left-hand mouse button while the pointer is over an item you want to activate. For example, "click the OK button" means move the pointer to the OK button and press (and release) the left-hand mouse button.

"Right-clicking" refers to clicking using the right-hand mouse button instead of the left-hand one.

"Dragging" refers to holding a mouse button down whilst moving the pointer.

3.4.2 Input Focus

Data can be entered into only one field at a time. Similarly, only one button, menu item or pick-list can be activated at a time. The item which is currently active, that is, receiving input, is said to have the "input focus". Text entry fields are signified as having the input focus by a vertical bar (called the "caret") which usually flashes. Buttons and pick-lists have a faint rectangular box within them, if they have the input focus. To transfer the input focus from one item to another, click on the item you want to transfer the input focus to.

3.4.3 Menus

To open a menu, click on the name of the menu you wish to open in the menu bar (see Fig. 1) of the panel. To select an entry from the menu, click on the entry. An alternative way of making menu selections is to hold the mouse button down over the menu bar and when the menu appears, drag the pointer to your selection; when you release the mouse button, the entry under the pointer will be activated.

3.4.4 Pick-Lists

A pick-list can be opened by clicking on it. To make a selection from the list, click on the entry you want to select from the list.

Figure 5 Using Pick-Lists

If the list has many entries, not all will be visible at once and a scrollbar will be shown to the right of the list. You can use this scrollbar to make visible the entries in the list which are currently hidden. In order to make use of the scrollbar, you must

not hold the mouse button down when you open the pick-list. If you do hold the mouse button down and drag the pointer, you will only be able to select the entries which are currently visible, because the pick-list will close as soon as you release the mouse button.

3.4.5 Buttons and Check Boxes

To activate a button, just click on it. Similarly, to toggle the state of a check box, click on it.

3.5 Using the Keyboard

It is possible to use the majority of the PGT using only the keyboard. Most of the functionality of the mouse can be replicated with a few simple key presses. However, the mouse may still be necessary to make the PGT windows active in the desktop environment of your chosen platform.

Note that the SPACEBAR may be used in place of the ENTER key in the sections which follow.

3.5.1 Input Focus

To move the input focus from one item in a panel to another, press the TAB key on the keyboard. Repeatedly pressing this key will cause the input focus to move to each item in turn. To reverse the direction in which the input focus cycles, hold down the SHIFT key whilst pressing the TAB key.

3.5.2 Menus

Look at Fig. 6 and notice that the initial letter of each of the menu names on the menu bar is underscored. The underscored letter can be used in combination with the ALT key to open the menu. For example, to open the *Panel* menu, hold down the ALT key and press the P key.

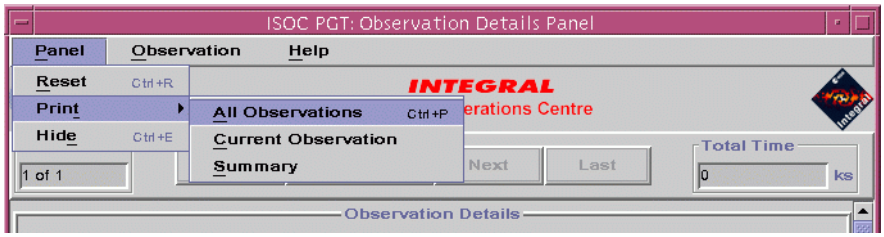

Figure 6 Accessing Menus Using the Keyboard

Once a menu is open, the UP-ARROW and DOWN-ARROW cursor keys can be used to highlight entries in the menu. To select an entry, use the cursor keys to highlight it, then press the ENTER key. Alternatively, just press the letter key which corresponds to the underscored letter for the menu entry you wish to select. For example, to select the **Reset** entry in the open *Panel* menu, just press the R key.

Similarly, to open the *Print* submenu, press the T key. Note that any letter in the name of the menu entry may be underscored, not just the initial letter.

Some menu entries have keyboard shortcuts (known as accelerators) which are shown to the right of the entry in a menu. For example, to reset the contents of the Observation Details Panel (Fig. 6) press and hold the CTRL (Control) key then press the R key. This can be done whenever the window is active, that is, you do not need to open a menu first. A complete list of keyboard accelerators is shown in Appendix A.

3.5.3 Pick-Lists

To open a pick-list using the keyboard, press the TAB key until the pick-list gains the input focus (see section 3.4.2, page 8, and section 3.5.1, page 9) then press the ENTER key. To traverse the list, use the UP-ARROW and DOWN-ARROW cursor keys. When your chosen entry is highlighted, press the ENTER key to select it.

3.5.4 Buttons and Check Boxes

A button can be activated by pressing the TAB key until the button has the input focus (see section 3.4.2, page 8, and section 3.5.1, page 9), then pressing the ENTER key. To toggle the state of a check box, press the TAB key until the check box has the input focus, then press the SPACEBAR (not the ENTER key).

3.5.5 Textfields

To enter text into a textfield, ensure it has the input focus (see section 3.4.2, page 8, and section 3.5.1, page 9) before typing. Some textfields only allow numbers to be entered, others will allow any character. All textfields have a maximum number of characters (including spaces and carriage returns) which may be entered and you will hear a beep when this limit is reached. Some textfields also limit the number of lines which may be entered i.e. you can press ENTER only a limited number of times. Note that textfields may sometimes resize themselves within a panel while you type. This allows the components in a panel to make the best use of the available space for the input you have entered.

3.6 Exiting the Proposal Generation Tool

The PGT can be exited by selecting the **Exit** menu entry from the *File* menu in the Main Panel (see Fig. 7), or by pressing and holding the CTRL key and then pressing the E key while the Main Panel is active.

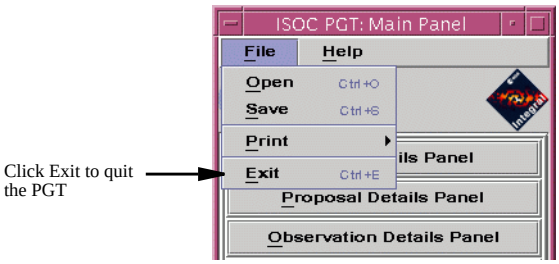

Figure 7 The File Menu

If you have made changes to your proposal, you will be asked if you would like to save your proposal before exiting.

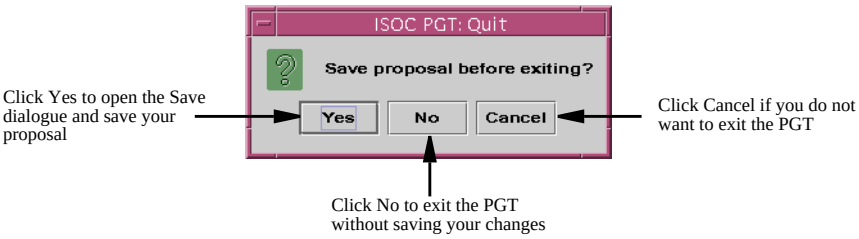

Figure 8 The Quit Dialogue

4 Saving, Loading and Printing

4.1 Saving

A proposal may be saved at any time by selecting the **Save** menu entry in the *File* menu of the Main Panel (see Fig. 7). This will cause the Save dialogue to appear.

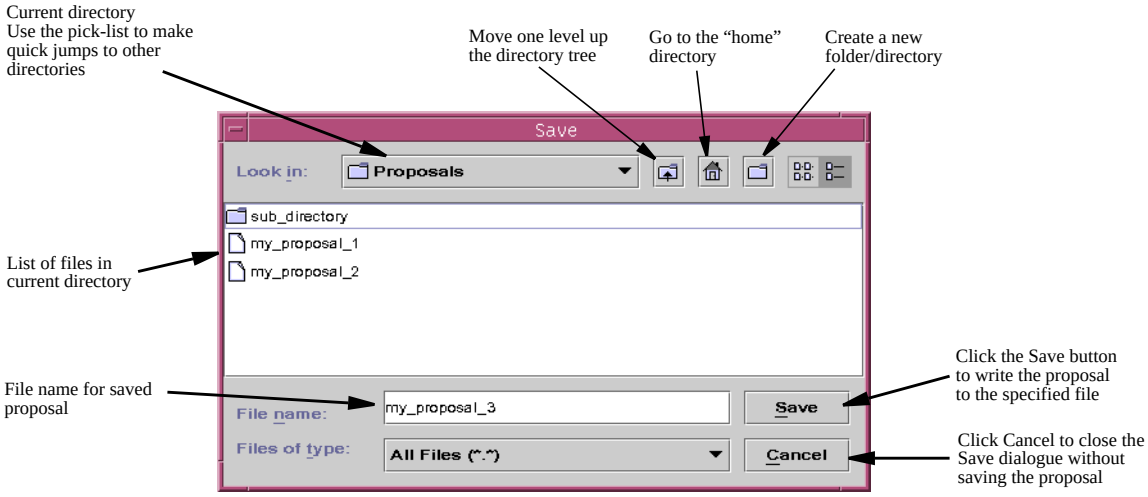

Figure 9 The Save Dialogue

The Save dialogue allows you to navigate around a local filesystem. The area in the centre of the display shows the files and directories contained in the current directory. The current directory is shown in the pick-list at the top of the display. You can move between directories by double clicking on a directory icon or by choosing a directory from the pick-list.

To save your proposal, type a file name into the box provided and click the **Save** button. This will save your proposal into the directory shown at the top of the display using the file name you gave.

If you change your mind about saving a proposal, click the **Cancel** button.

4.2 Loading

To load a proposal, select the **Open** menu entry in the *File* menu of the Main Panel (see Fig. 7). The Open dialogue will appear and this looks very similar to the Save dialogue, described above. Indeed, you can navigate around your local filesystem in exactly the same way as you would in the Save dialogue.

When you locate the proposal you wish to load, either double click on its name in the file list, or click once on the name (the name will appear in the *File name:* box) and click the **Open** button.

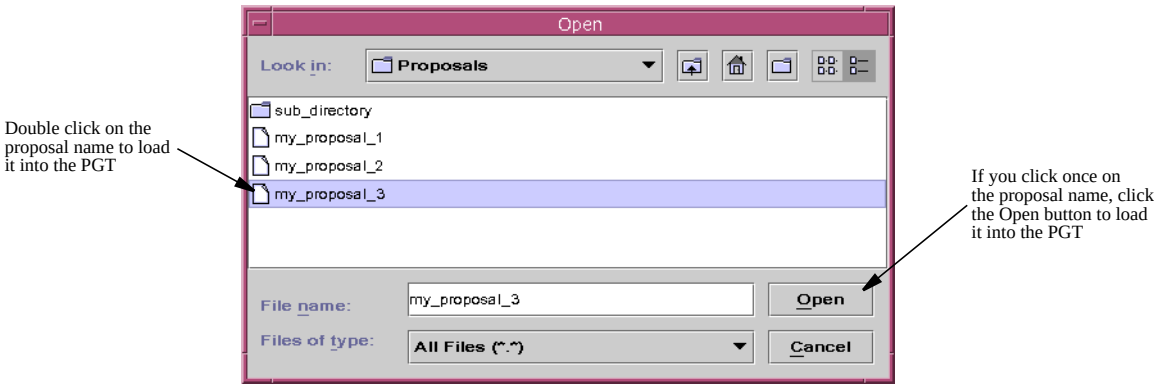

Figure 10 The Open Dialogue

4.3 Printing

4.3.1 The Print Options Dialogue

The paper size and the font used for printing can be chosen using the Print Options dialogue. To open this, select the **Options** menu entry from the *Print* submenu in the *File* menu of the Main Panel (see Fig. 7).

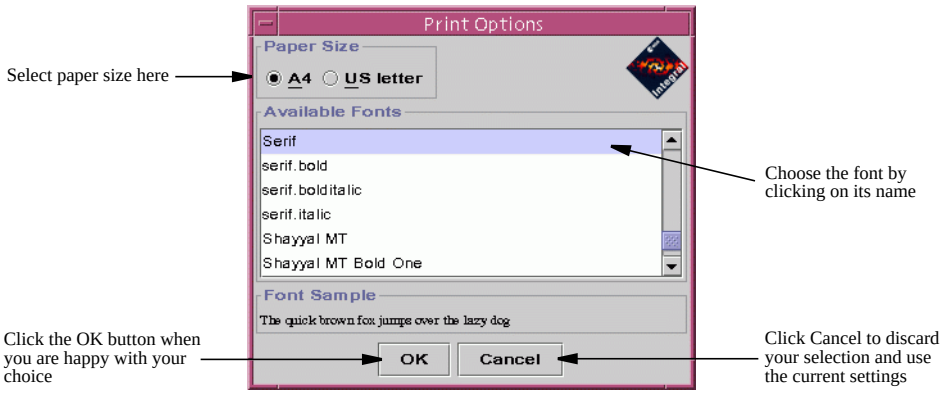

Figure 11 The Print Options Dialogue

Two paper sizes are supported, A4 and US letter. Click on the appropriate button at the top of the dialogue to choose the paper size.

The central part of the dialogue lists the fonts available on your system. This list will vary from one machine to another, but there are five standard fonts which are available on every system. These are: Dialog, DialogInput, Monospaced, SansSerif and Serif. A sample of the selected font is shown below the font list.

To make the selected font and paper size the current (active) choices, click the **OK** button. To disregard the selections and close the dialogue, click the **Cancel** button.

4.3.2 Printing an Entire Proposal

To print a complete proposal, including all observations, choose the **Proposal** menu entry from the *Print* submenu in the *File* menu of the Main Panel (see Fig. 7). A Print dialogue will appear which will allow you to select a destination for the print job (printer or file) and to start the print job. The exact appearance of this dialogue will depend on the platform you are using.

4.3.3 Printing Admin Details

The data entered in the Admin Details Panel (see section 5.2, page 15) can be printed separately by choosing the **Print** menu entry from the *Panel* menu of the Admin Details Panel.

4.3.4 Printing Proposal Details

The data entered in the Proposal Details Panel (section 5.3, page 16) can be printed separately by choosing the **Print** menu entry from the *Panel* menu of the Proposal Details Panel.

4.3.5 Printing Observations

The **Print** submenu in the *Panel* menu of the Observation Details Panel (see Fig. 6) allows you to print individual observations or all the observations in the proposal.

To print an individual observation, make sure the observation is displayed in the Observation Details Panel (see section 5.4, page 17) and choose the **Current Observation** menu entry from the *Print* submenu, described in the previous paragraph. To print all the observations, choose the **All Observations** menu entry from the same menu.

4.3.6 Printing the Observation Summary

A summary of all the observations in the proposal (one observation per line) can be printed by choosing the **Summary** menu entry from the *Print* submenu in the *Panel* menu of the Observation Details Panel (see Fig. 6).

5 Entering Data

5.1 The Main Panel

When the PGT is first started, it is the Main Panel which is displayed. This panel acts like the parent for all other panels and it is from this panel that you can access the other panels which make up the PGT.

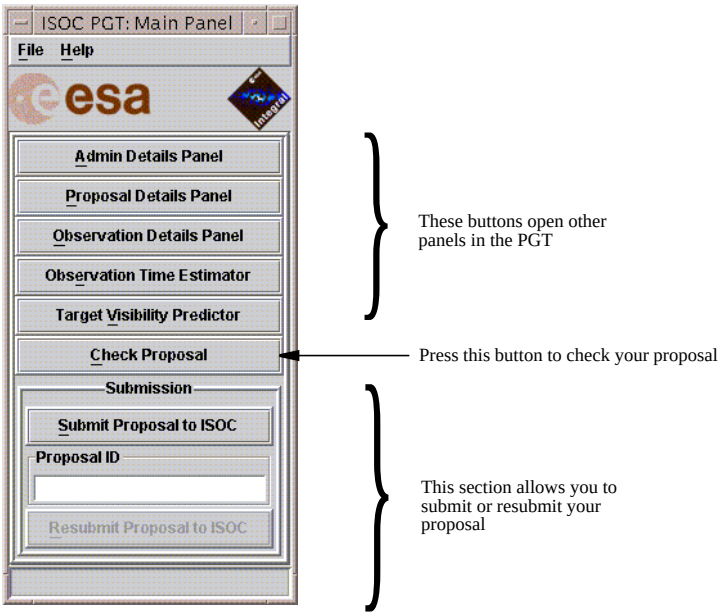

Figure 12 The Main Panel

The Main Panel is divided into two sections. The top half of the panel contains buttons which open other panels. These panels are described in later sections of this document. In addition, there is a **Check Proposal** button which will run through a series of checks on your proposal and list anything which is wrong or incomplete. This check can be performed at any time.

The lower half of the Main Panel is devoted to proposal submission. With the **Submit Proposal to ISOC** button you are able to electronically send your proposal, via the Internet, to the ISOC. See section 7, page 24, for more details on submitting a proposal.

5.2 The Admin Details Panel

To open the Admin Details Panel, select the **Admin Details Panel** button on the Main Panel. When the panel first appears, only the upper part of the body of the panel is visible. To see the lower part, click in the empty space below the scrollbar on the right-hand side of the panel.

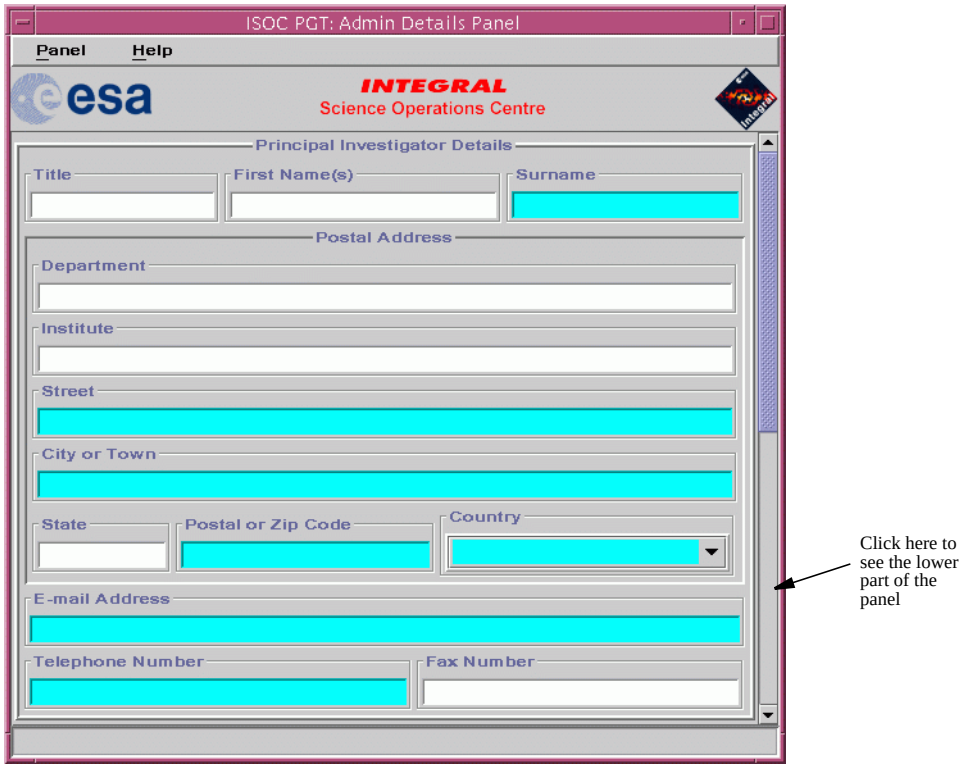

Figure 13 The Admin Details Panel (upper part)

The Admin Details Panel contains fields which are used for administrative purposes. They are self-explanatory. The lower part of the panel concerns co-investigators and data distribution. As this is also self-explanatory, the lower part of the panel is not shown in this document.

5.3 The Proposal Details Panel

To open the Proposal Details Panel, select the **Proposal Details Panel** button on the Main Panel (see Fig. 12). As with the Admin Details Panel, this panel is sized to show only the upper part of the body of the panel when first opened.

5.3.1 Attaching the Scientific Justification

At the bottom of the Proposal Details Panel is a button marked **New Attachment**.

Figure 14 Adding Attachments

Pressing this button will open the Attach dialogue, a dialogue very similar to the Open dialogue described in section 4.2, page 12. You can use this dialogue to attach a scientific justification, but only if the file containing your scientific justification is in PostScript or PDF format.

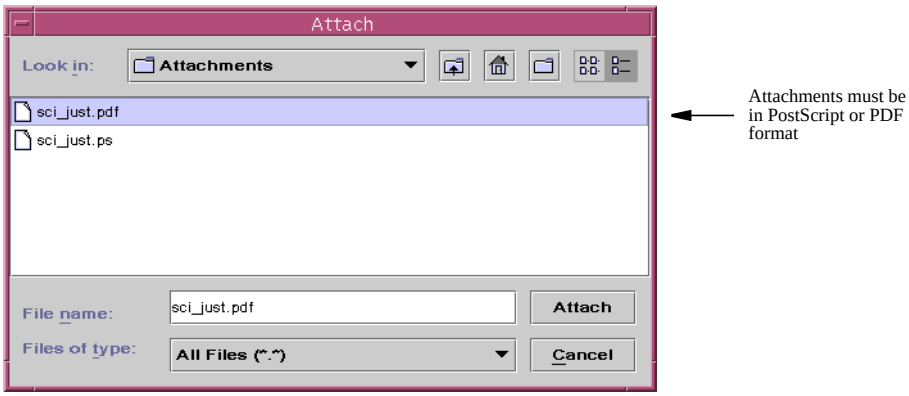

Figure 15 The Attach Dialogue

Once you select the **Attach** button, the name of your attachment will be shown in the *Current Attachment* box of the Proposal Details Panel (see Fig. 14). If you save your proposal, the attachment will be saved with it (in compressed form), so there is no need to re-attach the file every time the proposal is loaded. However, if you make changes to your scientific justification after attaching the file to your proposal, you will need to re-attach the changed file.

Note that it is not possible to remove an attachment on its own (you can select **Reset** from the *Panel* menu and this will remove the attachment, but it will also clear the other fields). However, you can replace the existing attachment with another one at any time, simply by using the Attach dialogue again.

5.4 The Observation Details Panel

To open the Observation Details Panel, select the **Observation Details Panel** button on the Main Panel (see Fig. 12). As with the Proposal Details Panel, this panel is sized to show only the upper part of the body of the panel when first opened.

5.4.1 Observation Numbering

Each observation in a proposal is numbered sequentially, as shown in the *Number* field on the left of the tool bar at the top of the panel (see Fig. 16). Here, you can see the number of the currently displayed observation and the total number of observations in the proposal.

Whenever an observation is added to a proposal, it is added at the end of the list. For example, adding an observation to a proposal which contains ten observations

will result in the new observation being given the number eleven. When removing an observation, those observations with a higher number than the observation which was removed will have their numbers reduced by one. For example, removing observation number five from a proposal which contains ten observations will result in observation numbers six to ten being renumbered five to nine respectively.

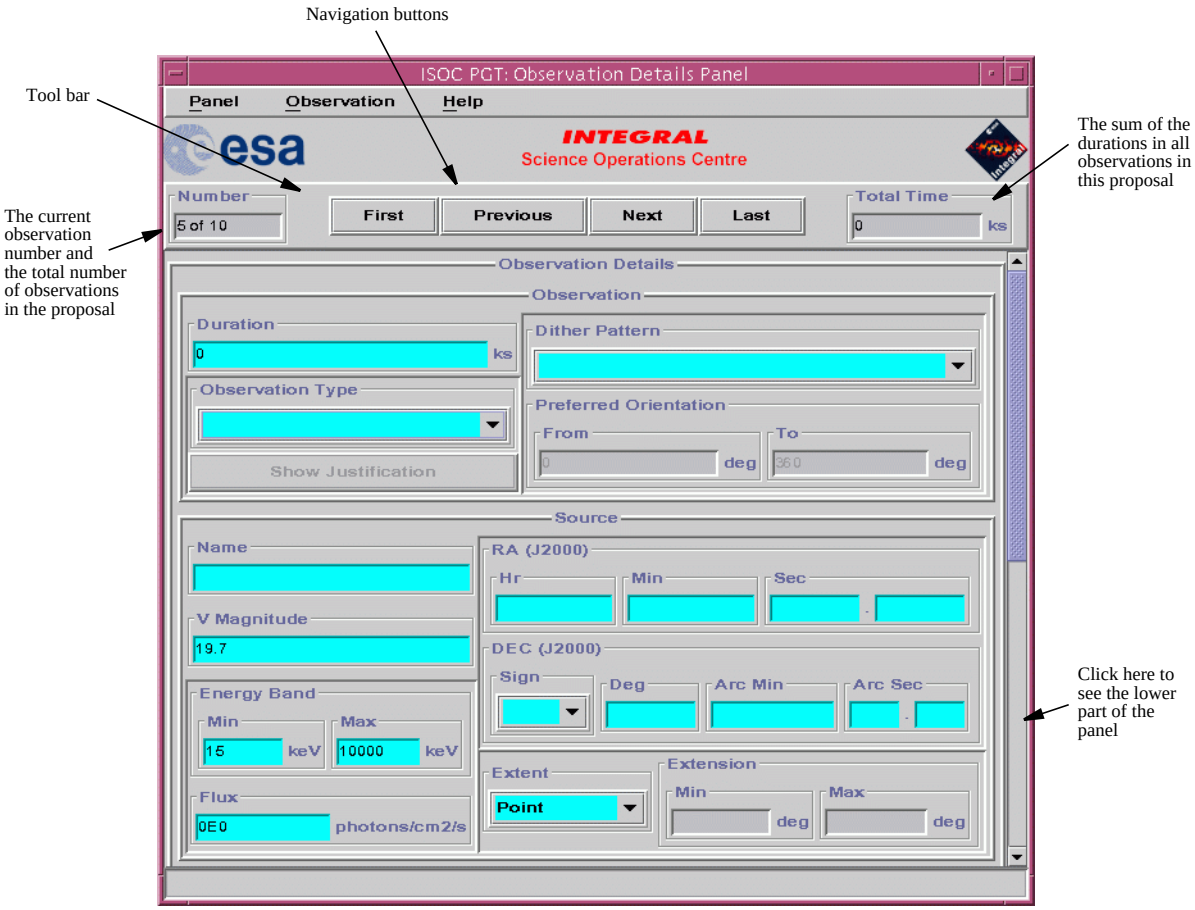

Figure 16 The Observation Details Panel (upper part)

5.4.2 Displaying Observations

Only one observation may be displayed at a time. To display a different observation, use the navigation buttons on the tool bar. The **First** button always causes observation number one to be displayed. The **Last** button causes the last observation which was added to the proposal to be displayed (this is always the observation with the highest number, because observations are always added to the end of the list). The **Next** button causes the current observation number to increase by one, i.e. pressing this button repeatedly will cause each observation to be displayed in numerical order. The **Previous** button works in the reverse manner to the **Next** button, i.e. the current observation number will be decreased by one. Note that this button does not necessarily return you to the observation you were looking

at previously, so if the proposal contains three or more observations and you click the **First** button, then the **Last** button and then the **Previous** button, you will not be looking at observation number one, but rather, observation number n-1, where n is the number of observations in the proposal.

5.4.3 The Observation Menu

The Observation Details Panel has an additional menu, named *Observation*.

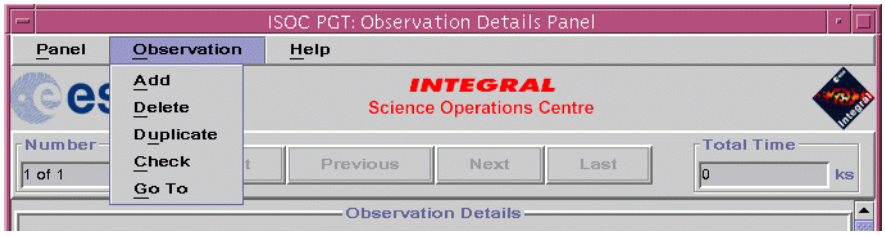

Figure 17 The Observation Menu

Using this menu you can manipulate observations in your proposal. The menu entries should be self-explanatory: to add a new observation, select **Add** (the display will show the new observation); to remove the currently displayed observation, select **Delete**; to copy the currently displayed observation, select **Duplicate** (the display will show the copied observation); to check the currently displayed observation, select **Check**; to display a particular observation, select **Go To**.

5.4.4 Instrument Settings

In the lower half of the Observation Details Panel you can choose certain instrument settings. The number of modes and parameters available will depend on the privileges allowed in the version of the PGT you are using. For example, the General Observer (public) version of the PGT only allows two parameters for the JEM-X 2 instrument to be set and the choice of two modes for the OMC instrument.

If an instrument has only one mode available for selection, the *Mode* pick-list for that instrument will be disabled, as there is no choice to make. Similarly, if there are no parameters to set for an instrument, the **Parameters** button for that instrument will be disabled.

5.4.5 JEM-X TM Formats

If you click the **Parameters** button for the JEM-X 2 instrument, the Mode Parameters panel for that instrument will be displayed. This panel allows you to set the Primary and Secondary TM Formats. The allowed Secondary TM Formats are dependent on the Primary TM Format selected and correspond to a matrix of allowable Primary and Secondary TM Format combinations, see RD-10 and RD-11.

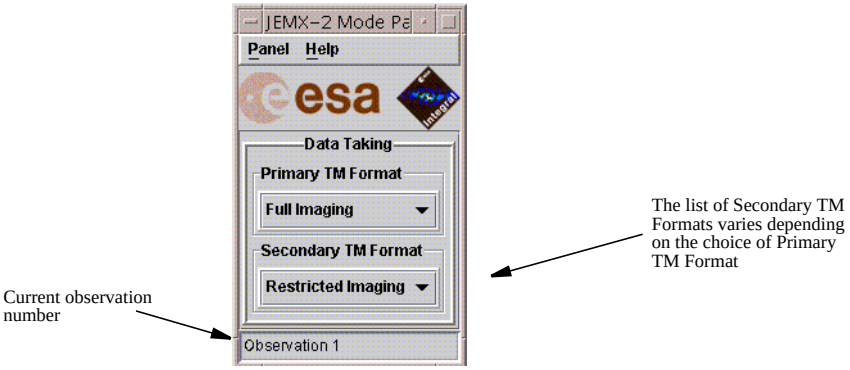

Figure 18 JEM-X 2 Mode Parameters Panel

6 Online Tools

Two online tools are provided to aid proposal writing: the Observation Time Estimator (OTE) and the Target Visibility Predictor (TVP). To use either tool, your computer must be connected to the Internet.

6.1 Observation Time Estimator

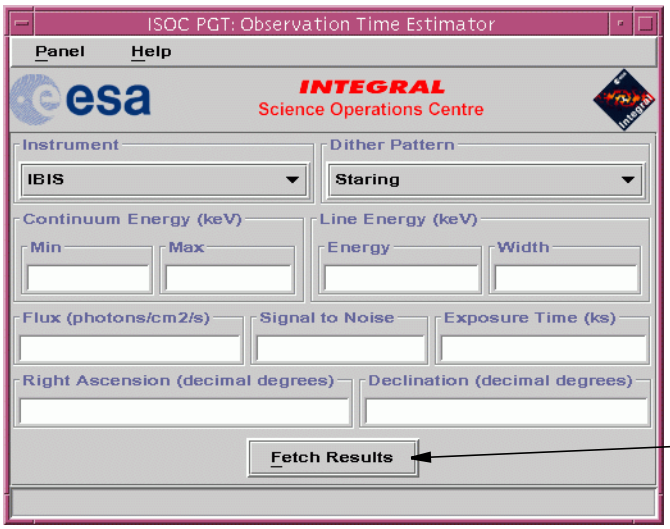

Figure 19 The OTE Panel

Inputs to the OTE should be chosen from the pick-lists and/or entered into the boxes provided. Some boxes have mutually exclusive relationships between them; they are the *Continuum Energy* and *Line Energy* boxes, and the *Signal to Noise* and *Exposure Time* boxes. For example, if you enter a value into either of the *Continuum Energy* boxes, the *Line Energy* boxes will be disabled. To re-enable the *Line Energy* boxes, delete the text from the *Continuum Energy* boxes. Similarly, if you enter a value into the *Signal to Noise* box, the *Exposure Time* box will be disabled. To re-enable the *Exposure Time* box, delete the text from the *Signal to Noise* box.

The PGT will not perform any checking of the values you enter (all checking is performed remotely by the OTE), so you should note the following points:

- One of either the *Signal to Noise* or *Exposure Time* fields must be completed
- The OTE will accept values in exponential format e.g. 1e-6 or 1E4
- The *Signal to Noise* ratio should be entered as a number i.e. 3 not 3:1
- The *Right Ascension* and *Declination* fields are optional and may be left blank

When you have completed all the relevant fields and you wish a calculation to be performed, click the **Fetch Results** button. The PGT will then attempt to contact

ESTEC, via the Internet, and pass your inputs as arguments to the OTE running remotely on a machine at ESTEC. When the calculation has been performed, the OTE will return the results and they will be displayed in a separate panel.

To perform another calculation, change the inputs as required and click the **Fetch Results** button again. The results will be displayed in a new panel, leaving your old results available for comparison.

6.2 Target Visibility Predictor

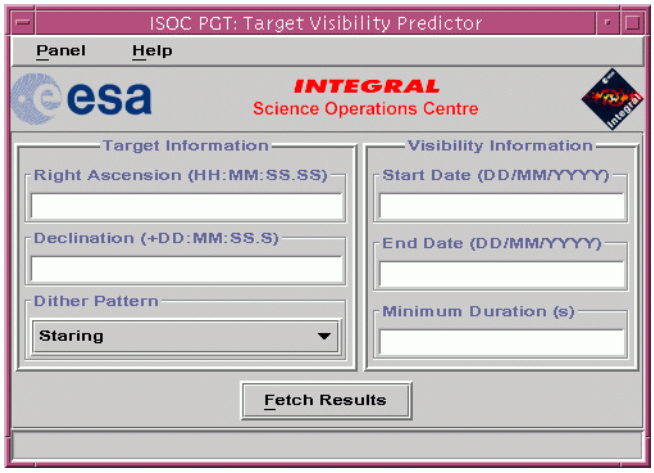

Figure 20 The TVP Panel

Inputs to the TVP should be chosen from the pick-list and/or entered into the boxes provided.

The PGT will not perform any checking of the values you enter (all checking is performed remotely by the TVP), so you should note the following points:

- The *Right Ascension* and *Declination* may be entered in two formats: either as a decimal value in degrees, or as hours:minutes:arcseconds (for RA) or degrees:minutes:arcseconds (for DEC), where the values are separated by colons or spaces. If you include the sign (either + or -) for *Declination*, make sure there is no space (or any other character) between the sign and the degrees value
- All fields must be completed

When you have filled in all the relevant fields and you wish a calculation to be performed, click the **Fetch Results** button. The PGT will then attempt to contact ESTEC, via the Internet, and pass your inputs as arguments to the TVP running remotely on a machine at ESTEC. When the calculation has been performed, the TVP will return the results and they will be displayed in a separate panel (see Fig. 21).

To perform another calculation, change the inputs as required and click the **Fetch Results** button again. The results will be displayed in a new panel, leaving your old results available for comparison.

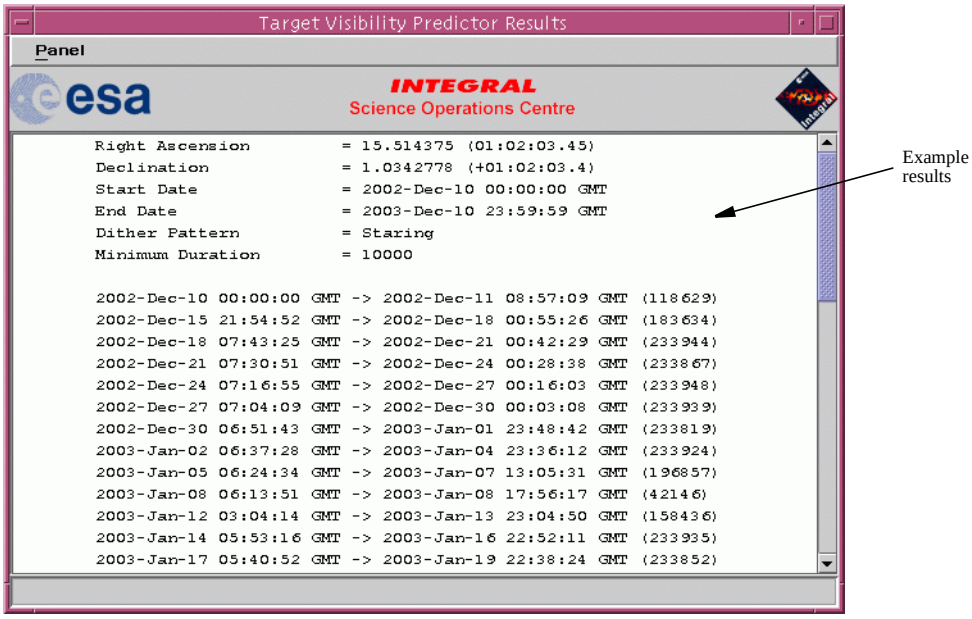

Figure 21 TVP Results Panel

6.3 Printing Results

If you wish to print the results of a calculation made by the OTE or the TVP, it is recommended that you select the “Monospaced” font, using the Print Options dialogue (see section 4.3.1, page 13). This will ensure that columns line up properly and will make the printout more readable.

7 Submitting a Proposal to ISOC

The PGT allows you to send your proposal electronically to the ISOC. In order for this to work, your computer must be connected to the Internet.

7.1 Submitting for the First Time

The lower half of the Main Panel (see Fig. 12) allows you to submit your proposal to the ISOC when it is complete and you are happy with it.

Clicking the **Submit Proposal to ISOC** button starts the submission process. First, the PGT will check your proposal. If it fails any checks, the submission process will be aborted and you will need to correct the errors shown in the Failed Checks Panel. If it passes the checks, a panel is displayed showing a summary of the proposal. Click **Submit** to send the proposal, **Cancel** to abort the submission.

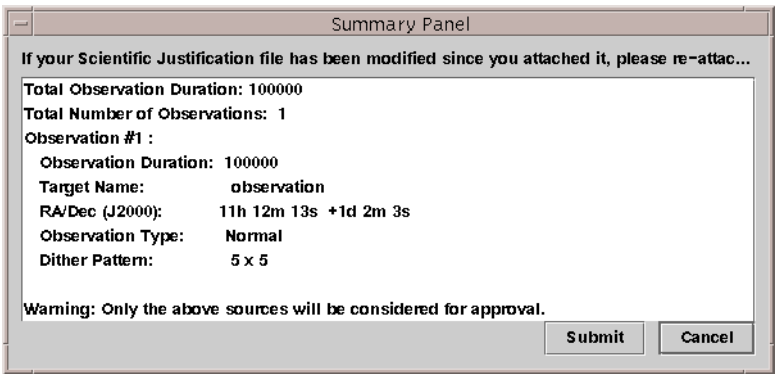

Figure 22 The Summary Panel

If you click **Submit**, the PGT will attempt to establish contact with a computer at the ISOC which has been set up to receive proposals. Once contact is established, your proposal will be sent. If the proposal was sent successfully, the dialogue shown in Fig. 23 will be displayed.

Figure 23 Successful Submission Dialogue

When it receives your proposal, the computer at the ISOC will check the proposal (these checks are different from those performed by the PGT) and return an email message to you confirming receipt and providing a *Proposal ID* for your proposal (you will need this ID if you want to resubmit the proposal). The message will also tell you whether your proposal has been accepted (it passed the checks) or rejected (it failed the checks).

7.2 Repeating a Submission

If you realise you have made a mistake, or you just want to make changes to a proposal you have already submitted, you can resubmit a proposal using the *Proposal ID* you received when you submitted the proposal for the first time.

Make the changes you wish to make to the proposal and enter the *Proposal ID* in the box provided at the bottom of the Main Panel (see Fig. 12). The **Resubmit Proposal to ISOC** button will be enabled and the **Submit Proposal to ISOC** button will be disabled (to prevent you pressing the wrong button). When you click the **Resubmit Proposal to ISOC** button, the PGT will repeat the proposal submission process, described in section 7.1.

The computer at ISOC will use the *Proposal ID* you provide to find your old proposal in the ISOC database. If it is found, your amended proposal will replace the old one in the ISOC database. If it can't be found, the email message which is returned to you will inform you of that fact (make sure you have entered the *Proposal ID* correctly).

NOTE: The PGT cannot prevent you submitting the same proposal multiple times. Each time you submit a proposal, you will receive a new *Proposal ID*. It is not possible to undo a submission, so if you want to avoid having duplicate (or very similar) proposals in the ISOC database (each of which will be reviewed by the TAC), use the **Resubmit Proposal to ISOC** button when you need to make changes to a previously submitted proposal.

7.3 Obtaining a Copy of a Submitted Proposal from ISOC

Once you have submitted your proposal, you should save it (see section 4.1, page 12) to ensure you have a copy on your local system for your own reference, or to allow you to resubmit the proposal at a later date.

However, life is full of surprises and mistakes happen occasionally, so if you accidentally delete your proposal, or your machine catches fire, do not despair! You can request a copy of your proposal by sending an email to the ISOC Helpdesk at the email address shown in section 1.5, page 1. Just state in the body of the message that you would like a copy of your proposal and give the *Proposal ID* of the proposal. The proposal will be emailed to you at the email address you entered into the proposal. If this email address is wrong, you should provide the correct address in your email to the Helpdesk.

8 Extra Features

8.1 Autosave

To prevent you losing precious hours of work through a problem with your computer, an autosave feature is available which will automatically save your proposal every so often. The frequency at which your proposal is saved and the file name used for the saved proposal can be defined by you.

The autosave feature is enabled by editing the PGT.lax file in your PGT installation directory. Open the PGT.lax file in an editor and find the following lines:

```
AutosaveSeconds=0
AutosaveFile=
```

By default, the autosave feature is disabled. To enable autosaving, set the `AutosaveSeconds` variable to a value which represents the number of seconds you would like to elapse between successive saves of your proposal. For example, to have your proposal automatically saved every five minutes, edit the line to read:

```
AutosaveSeconds=300
```

You must also specify a filename for the saved proposal by editing the `AutosaveFile` variable. For example, to save the proposal as “my_proposal” in a directory called “tmp” (which must already exist) on the top level of your disk drive, you would edit the line as follows:

On a UNIX system:

```
AutosaveFile=/tmp/my_proposal
```

On a Windows system:

```
AutosaveFile=C:/tmp/my_proposal
```

NOTE: Use / (slash) characters, not \ (backslash) characters and do not put spaces around the = (equals) symbols.

8.2 Changing the Mandatory Item Colour

By default, the background colour for mandatory items is cyan. This can be changed by editing the PGT.lax file found in your PGT installation directory. Open the PGT.lax file in an editor and find the following line:

```
MandatoryItemColour=Cyan
```

The colour specified to the right of the equals symbol may be set to one of the following values:

`Black`, `Blue`, `Cyan`, `DarkGray`, `Gray`, `Green`, `LightGray`, `Magenta`, `Orange`, `Pink`, `Red`, `White` or `Yellow`.

NOTE: These names are case sensitive. Do not put spaces anywhere on the line.

The text colour is always black, so setting `MandatoryItemColour=Black` is not terribly useful. Similarly, the non-mandatory colour is always white, so setting `MandatoryItemColour=White` means you will not be able to tell the mandatory items from the non-mandatory items.

Appendix A: Keyboard Shortcuts

A.1 Main Panel

Table 1: Main Panel Keyboard Shortcuts

Key Press	Function
ALT-A	Open the Admin Details Panel
ALT-C	Check Proposal
ALT-E	Open the Observation Time Estimator
ALT-F	Open the File menu
ALT-F E	Exit the PGT
ALT-F O	Open the Open dialogue
ALT-F P	Open the Print submenu
ALT-F P O	Open the Print Options dialogue
ALT-F P P	Print the Proposal
ALT-F S	Open the Save dialogue
ALT-H	Open the Help menu
ALT-H A	Open the About dialogue
ALT-H O	Open the Overview Panel
ALT-H N	Open the Main Panel Help
ALT-O	Open the Observation Details Panel
ALT-P	Open the Proposal Details Panel
ALT-V	Open the Target Visibility Predictor
CTRL-E	Exit the PGT
CTRL-H	Open the Main Panel Help
CTRL-O	Open the Open dialogue
CTRL-S	Open the Save dialogue

A.2 Admin Details Panel

Table 2: Admin Details Panel Keyboard Shortcuts

Key Press	Function
ALT-H	Open the Help menu
ALT-H N	Open the Admin Details Panel Help
ALT-H O	Open the Overview Panel
ALT-P	Open the Panel menu
ALT-P E	Close the Admin Details Panel without losing data
ALT-P R	Reset the Admin Details Panel fields to their default settings
ALT-P T	Print the admin details
CTRL-E	Close the Admin Details Panel without losing data
CTRL-H	Open the Admin Details Panel Help
CTRL-P	Print the admin details
CTRL-R	Reset the Admin Details Panel fields to their default settings

A.3 Proposal Details Panel

Table 3: Proposal Details Panel Keyboard Shortcuts

Key Press	Function
ALT-H	Open the Help menu
ALT-H N	Open the Proposal Details Panel Help
ALT-H O	Open the Overview Panel
ALT-P	Open the Panel menu
ALT-P E	Close the Proposal Details Panel without losing data
ALT-P R	Reset the Proposal Details Panel fields to their default settings
ALT-P T	Print the proposal details
CTRL-E	Close the Proposal Details Panel without losing data
CTRL-H	Open the Proposal Details Panel Help
CTRL-P	Print the proposal details
CTRL-R	Reset the Proposal Details Panel fields to their default settings

A.4 Observation Details Panel

Table 4: Observation Details Panel Keyboard Shortcuts

Key Press	Function
ALT-H	Open the Help menu
ALT-H N	Open the Observation Details Panel Help
ALT-H O	Open the Overview Panel
ALT-O	Open the Observation menu
ALT-O A	Add an observation to the proposal
ALT-O C	Check the current observation
ALT-O D	Delete the current observation from the proposal
ALT-O G	Go to a specific observation
ALT-O U	Copy an observation and add it to the proposal
ALT-P	Open the Panel menu
ALT-P E	Close the Observation Details Panel without losing data
ALT-P R	Reset the Observation Details Panel fields to their default settings
ALT-P T	Open the Print submenu
ALT-P T A	Print the details of all observations
ALT-P T C	Print the details of the current observation
ALT-P T S	Print a summary of all observations
CTRL-E	Close the Observation Details Panel without losing data
CTRL-H	Open the Observation Details Panel Help
CTRL-P	Print all observation details
CTRL-R	Reset the Observation Details Panel fields to their default settings

A.5 Observation Time Estimator Panel

Table 5: OTE Panel Keyboard Shortcuts

Key Press	Function
ALT-F	Fetch Results
ALT-H	Open the Help menu
ALT-H N	Open the OTE Help
ALT-H O	Open the Overview Panel
ALT-P	Open the Panel menu
ALT-P E	Close the OTE panel without losing data
ALT-P R	Reset the OTE panel fields to their default settings
CTRL-E	Close the OTE panel without losing data
CTRL-H	Open the OTE Help
CTRL-R	Reset the OTE panel fields to their default settings

A.6 Target Visibility Predictor Panel

Table 6: TVP Panel Keyboard Shortcuts

Key Press	Function
ALT-F	Fetch Results
ALT-H	Open the Help menu
ALT-H N	Open the TVP Help
ALT-H O	Open the Overview Panel
ALT-P	Open the Panel menu
ALT-P E	Close the TVP panel without losing data
ALT-P R	Reset the TVP panel fields to their default settings
CTRL-E	Close the TVP panel without losing data
CTRL-H	Open the TVP Help
CTRL-R	Reset the TVP panel fields to their default settings