

A illustrated guide to creating an account and MERLIN proposal
using the web-based proposal tool:

NorthStar

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1 Introduction and Overview

NorthStar is a web application that has been developed as a tool to prepare and submit observation proposals for (radio-) telescopes. It is developed as part of the RadioNet "Synergy" activity funded by the EU FP6 programme.

In addition to MERLIN, NorthStar is currently being used for the submission proposals to the Westerbork Synthesis Radio Telescope and to the NL Time Allocation Committee for the Isaac Newton Telescope (INT), the James Clark Maxwell Telescope (JCMT) and the William Herschel Telescope (WHT). The further development of NorthStar is underway, along with plans to extend its use to other telescopes.

The following help files are specific to the MERLIN version of NorthStar.

1.1 General concepts used in NorthStar

When you first log into NorthStar you will see a welcome page that will allow you to create one or more proposals and see a list of all proposals which you are an author on. Each of your proposals will be kept in a database so that you may save them and return to editing them at a later time. You will also be able to go back to previous proposals to revise them for resubmission during another proposal cycle. Proposals may also be withdrawn up until the proposal deadline. In order to protect your proposal information, a login (username and password) will be required to gain entry to NorthStar.

To initially create a new proposal simply click on the Create new proposal button at the bottom of the screen. Following this action please choose from the list of different proposal categories (e.g. Regular proposal, Target of Opportunity etc. This will create a new proposals and enter you into the tool.

Alongside each of the listed proposals, its current status will be indicated. If you are an active participant of a proposal which is still in preparation buttons allowing you to Edit, Copy, Delete, Submit or View will be seen. Once this proposal is submitted, but the proposal deadline has not been passed, the Submit button will be replaced with a retract button. This retract button will allow you to withdraw this proposal and then either edit and resubmit it or delete it. Following the proposal deadline the retraction of proposals is not possible.

After you have logged into the proposal tool and created a new proposal or begun to edit an existing draft you will be presented by a web-page environment consisting of four Tabs. Each of these tabs contains different categories of information required for the proposal. These categories are:

- **Applicants** : List of Authors and their contact information.
- **Justification** : Title, Abstract an Scientific justification upload.
- **Observing Request** : Detailed specification of targets to be observed and telescope configurations.
- **Additional Issues** : Information regarding other issues of the application.

To navigate around these sections click on tab at the top of these pages.

For the successful submission of a proposal necessary information on each of these tabs needs to be completed.

Entries that are mandatory are marked with a red asterisk. Please ensure that while you are working on a proposal that you save the session regularly by hitting the "Save and Continue" or the "Save and Exit" button at the bottom of the screen.



Figure 1: The MERLIN proposal tool login page. <http://proposal.merlin.ac.uk>.

2 Registering & Logging in

2.1 New user registration

To register as a new user of the MERLIN proposal tool involves 3 simple steps which supply the MERLIN user database with your contact details. The information you provide and it stores is secure and **not** provide to any outside parties.

Figure 2: The MERLIN proposal tool: New user registration page 1/3. Compulsory fields are marked with a *.

2.1.1 Step 0

From the front page <http://proposal.merlin.ac.uk> (see Fig.1) enter the registration section by clicking on the *Register as new user* button towards the bottom of the front page.

If you have previously logged into the MERLIN proposal tool, but cannot remember your password select the *Password forgotten* box and follow the prompts.

2.1.2 Step 1

The register as a new user you will be asked to provide a username (must be greater than 3 characters long) and personal contact information. Please fill in all the details (see Fig.2). The fields marked with a *.

Registration (Step 2/3) [help](#)

To add a new institute to the list.

Choose:

Add institution from list

Add new institution

Choose from list:

Institution: -- Choose institution --

< Back Next > Cancel

Click here to choose an institute that is already entered in the database.

Figure 3: The MERLIN proposal tool: New user registration page 2/3. Either select your current affiliated institute from the existing list or add a new institute to this list.

2.1.3 Step 2

On this second page enter the contact details of your affiliated institute. Either select you institute from the list within the drop down menu or add the contact details of a you institute if it is not present (see Fig. 3). **Please check that these details are correct.**

Upon the confirmation of these details an email containing you username and an initial password will be sent to the address you have specified. If you wish to change this password to something more memorable or edit any of you user information in the future simply select the *My account* button in the top left hand corner of the first page of the proposal tool after you have logged in.

Confirmation (Step 3/3) [help](#)

Personal information:

username: **A_new_user**
title: **Dr**
first name: **NEW**
last name: **USER**
email: **rbeswick@jb.man.ac.uk**
phone(first): **+44 1477 571321**
phone(second):
fax:

Institution:

institute: **University of Manchester**
department: **Jodrell Bank Observatory**
address: **Lower Withington**
city: **Macclesfield**
state: **Cheshire**
country: **the United Kingdom**
zip code: **SK11 9DL**
Website: **http://www.jb.man.ac.uk**

Position:
Remarks:

If all data is correct, press on the "Register" button to finish registration.
A generated **password** and **public key** will be sent to **rbeswick@jb.man.ac.uk**.

[< Back](#) [Register](#) [Cancel](#)

Figure 4: The MERLIN proposal tool: New user registration page 3/3. Check and confirm that your details are correct.

2.2 Registered users

If you already have a user account and password, for example from a previous deadline or proposal which used the MERLIN NorthStar tool, simply enter these in the appropriate fields on the login page.

If you have forgotten your password but remember your username enter this information in the *Password forgotten* form (accessible at the bottom of the login page). This will generate a new password for you which will be forwarded to you email account.

If you forget both your password and username please email proposaladmin@jb.man.ac.uk for assistance.

3 A simple proposal

3.1 Proposal list

Once successfully logged into the NorthStar tool you will be presented with a proposal list screen (see fig. 5). This screen will list all of your MERLIN proposals. This list of proposals will include previously submitted proposals (both recently submitted for pending deadlines and those from past deadlines) as well as editable versions of proposals you currently have in preparation. This list of proposals will include both proposals which you are the contact author or principle investigator, and any proposals where you are a co-investigator.

All exist proposals and drafts will be listed towards the bottom of this screen (see Fig. 7). These proposals may can be copied, edited, viewed, deleted and submitted from this list using the selection of buttons on the right-hand side of the screen. Note that once a proposal has been submitted it can also be retracted, edited and resubmitted or deleted at any point prior to the proposal deadline. Following the deadline this proposal is considered as submitted to the TAC and hence cannot be retracted.

You will have edit permissions on all proposals for which you are a *Active Investigator*. However you may only submit, retract or delete proposals where you are listed as the *contact author* - see Applicants description in either below or in the on-line help for more details of these roles.

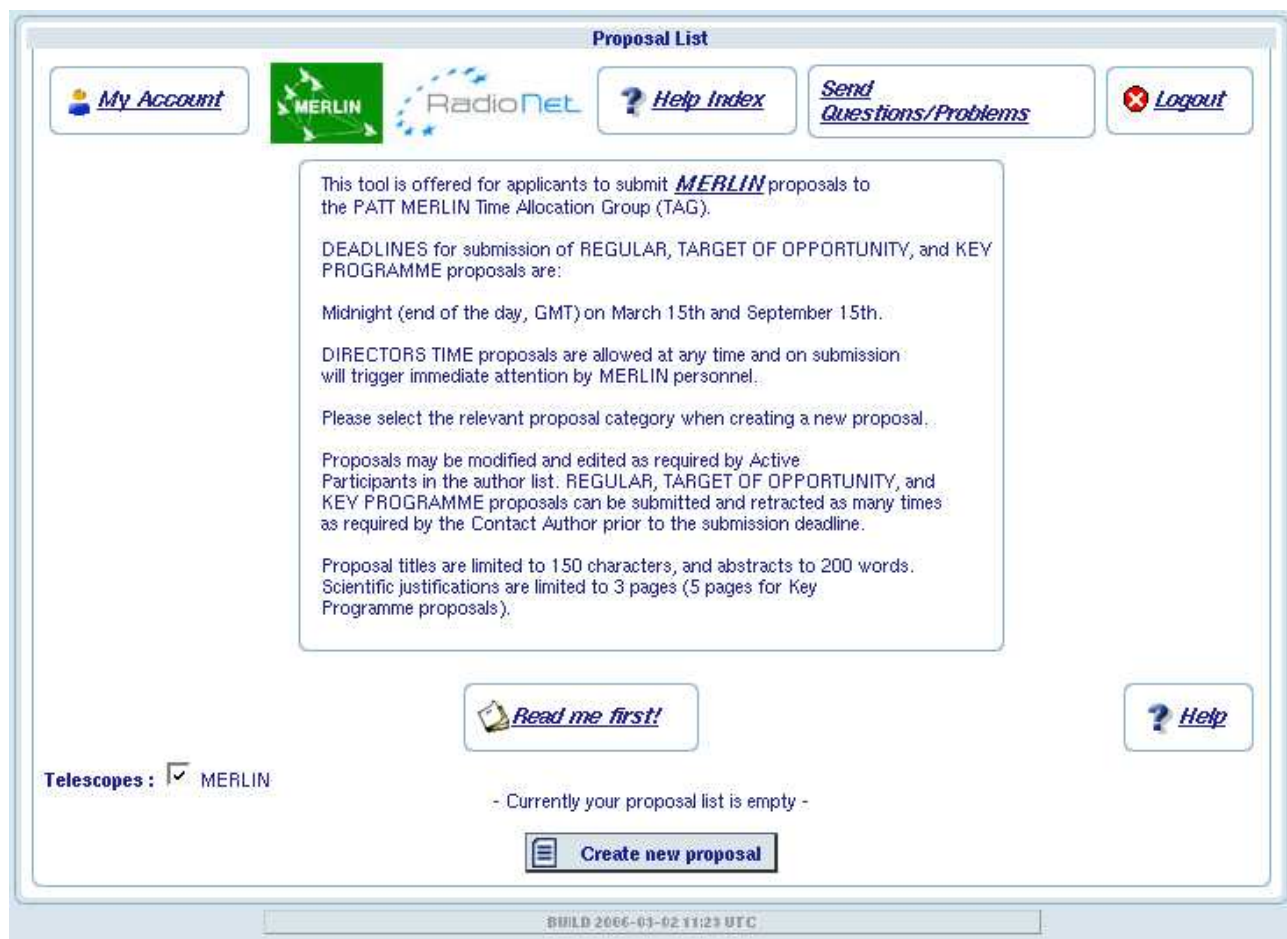


Figure 5: The MERLIN proposal tool: First page, proposal creation and lists.

3.1.1 Creating a new proposal

To initially create a proposal within NorthStar click on the *Create New proposals* button at the bottom of the proposal list screen. This action will produce a screen (see Fig. 6) giving you a drop-down menu

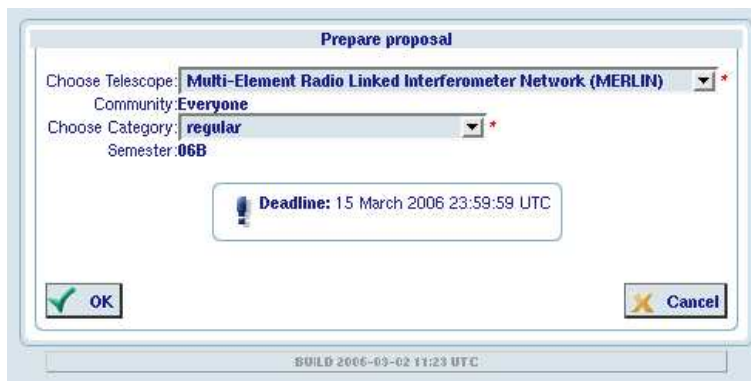


Figure 6: Selecting and creating a new proposal.

allowing you to choose the category of proposal you wish to create. These categories are **Regular**, **Target of Opportunity**, **Key project** and **Directors discretionary time**. If you are unclear as to which of these categories is applicable to your proposal, please see either the on-line help, which is accessible from NorthStar or the MERLIN web-pages at <http://www.merlin.ac.uk>.

Once the new proposal is created click on the *edit* button next to the new proposal in order to begin to complete the proposal form.



Figure 7: The MERLIN proposal tool: The proposals list containing one draft proposals.

The screenshot shows the 'Applicants' tab of the MERLIN Proposal tool. At the top left is the MERLIN logo, followed by the title 'MERLIN Proposal' and the RadioNet logo. On the top right, there is a 'Help Index' link and a box indicating 'Community: Everyone', 'Category: regular', and 'Semester: 06B'. Below the header is a navigation bar with tabs for 'Applicants', 'Justification', 'Observing Request', and 'Additional issues'. A 'Help' link is also present. The main content area features a table with the following data:

Active Participant	Contact Author	PI	Name	Affiliation	Country	Email	Potential Observer		
yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DR Rob Beswick	JBO	UK	rbeswick@jbo.man.ac.uk	<input type="checkbox"/>		
invited after next save	<input type="checkbox"/>	<input type="checkbox"/>	Rob Beswick2	JOB	UK	rb@ast.man.ac.uk	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
no	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Tom Muxlow	JBO	UK	twbm@jbo.man.ac.uk	<input type="checkbox"/>	<input type="button" value="Invite"/>	<input type="button" value="Edit"/>

Below the table are several buttons: 'Add applicant', 'Save and Continue', 'Save and Preview', 'Save and Exit', 'Save and Submit', and 'Quit without saving'. At the bottom, a status bar shows 'BUILD 2006-03-02 11:23 UTC'.

Figure 8: The MERLIN proposal tool: Applicants tab 1.

3.2 The Applicants

The first of the four **TAB** environments, all of which will require editing to complete the proposal, is the *Applicants tab*.

This page (see Fig. 8) contains a list of all of the investigators named in this proposal. As the creator of the proposal you will be listed and initially assigned to be both contact author and principle investigator. Once you have added other authors to this application you can re-assign these roles to them. For example although you may wish to be the contact author (solely responsible for submitting the proposal) you may wish to assign the principle investigator role to another author. This can be achieved by checking the appropriate box.

The order of you and your fellow authors can be adjusted using the arrows down the left-hand side of the applicants tab.

3.2.1 Adding a new applicant

To add a new applicant simply click on the *Add applicant* box on the left hand side of this page. This will ask you to enter the name, affiliation, email and country of this applicant (see Fig. 9). If you choose to leave the box marked *invite as Active participant* checked, this author will be sent an email, upon the next time you save the proposal, informing him or her that a new MERLIN proposal has been created and that you are inviting them to be a co-applicant. If this new applicant logs in to NorthStar he or she will be able to edit this proposal.

Note that safe guards are in place to ensure that not more than one applicant can edit a proposal at the same time, however all collaborations are assumed to be in good faith. If you log onto NorthStar and one of your co-authors is editing a proposal a locked symbol will appear next to the proposal on the initial proposal list page.

It is wise to use the *save and continue* button once you have completed filling in any section. Regular use of this will minimise the chances of losing any of your work

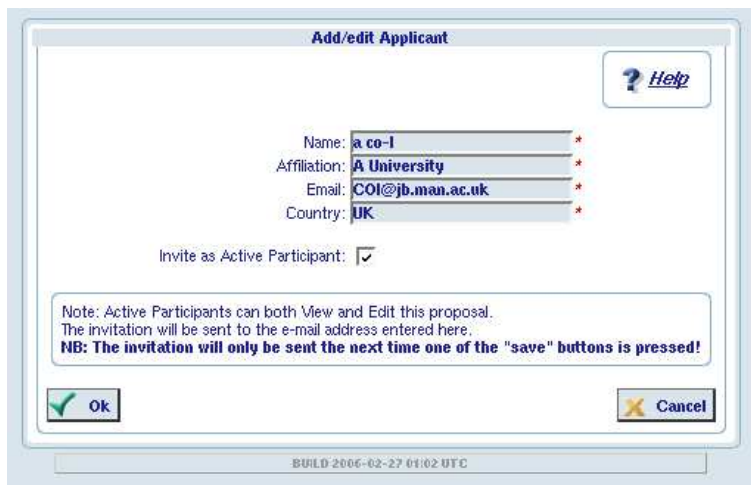


Figure 9: The MERLIN proposal tool: Adding a new applicant.

3.3 The Justification

The second tab environment is the Justification (see Fig. 10 below). Within this page the title, abstract and science justification for the proposal need to be completed.



Figure 10: The MERLIN proposal tool: The Justification tab.

- **Title:** Type the full title of your proposal into the first open box. Your title must be less than 150 characters long (including spaces). Note that the number characters entered is counted on the right-hand side of this box.
- **Abstract:** Either type or copy the text of your abstract into the second open field. The abstract must be less than, the quite generous, limit of 200 words. The number of entered is shown to the right-hand side of this box.

Formulae and special characters both the abstract and title are reproduced as ascii and thus no provision is given for special characters. If the use of these is unavoidable, LaTeX type commands can be used, however these will not be processed through LaTeX and hence will appear as they are typed.

- **Justification files:** The science justification for your proposal should be prepared externally to the proposal tool, using your preferred word processing software. This file can be either a postscript (.ps) or portable document format (.pdf). You should carefully read and adhere to the page length limits for the appropriate type of proposal being made. Details of these can be found within the on-line help pages.

You will note (see Fig. 10) it is possible to load three files. Of these only the first justification file is **mandatory** and this (.ps or .pdf) file may include any associated figures and technical details. If you wish to separate this justification into two uploaded files you may also use the second upload selection. Also if it is easier to upload figures separately this can be done using the bottom upload. Figures uploaded in this window should be of either a .jpg or .gif format. If multiple justification files are uploaded these are reproduced on adjacent pages within the final proposal.

3.4 The Observing Request

The third tab environment contains all of the specific technical information regarding the proposed observations (see Fig. 11). This page allows you to specify all of the details needed to scheduled the proposed MERLIN observations. MERLIN is scheduled from the information provided within the approved proposals so it is **important that the information given in this section is as accurate as possible.**

The screenshot shows the 'Observing Request' tab in the MERLIN Proposal tool. The interface includes a header with the MERLIN logo, 'MERLIN Proposal' text, and the RadioNet logo. A navigation bar shows 'Applicants', 'Justification', 'Observing Request', and 'Additional issues'. The main content area contains a form with the following fields and options:

- Hours requested this proposal (target plus phase reference): [text input] * (total time on targets in list: 0 hours)
- Is long term status required?: Yes No
- Choose a science category: -- None Specified --
- Choose telescope requirements: All available telescopes
- Choose observation modes: [dropdown menu with options: Continuum, Wide-field, Spectral line, Phase referencing, Full polarisation, Interleaved short scans, Monitoring, Other]
- Choose scheduling: Dynamic
- Location for data reduction: JBO
- Help Required: -- None Specified --

At the bottom, there are buttons for 'Save and Continue', 'Save and Preview', 'Save and Exit', 'Save and Submit', and 'Quit without save'.

Figure 11: The MERLIN proposal tool: The observing request tab. No fields have been filled in.

3.4.1 Filling in the global Observing Request Page

This page consist of a series open fields, check boxes and drop down menus. Each entry that has * next to it is **mandatory**. These entries refer to the proposal as a whole rather than individual source that are to be observed. Particular information regarding the individual source is entered in when a specific source entry is created or edited. Below are described each of these global entries:-

- **Hours requested:** This is a numeric field that contains the number of hours that this proposal requests. This value should be the sum of the hours requested per source and should include the time on target plus any time needed for phase referencing (typically 30% of time on target).
- **Long term status:** If this proposal is requesting long term status (i.e. observations to be made over several semesters) then please check the yes box. If *yes* is selected a new field will be opened where you can specify the number of semesters that you wish this project to run over.
- **Science Category:** Choose from this drop-down menu the broad science area that this proposal primarily addresses. These answers are used for statistical purposes.
- **Telescope Requirements:** From this drop-down menu specify which telescopes of the MERLIN array are required. Most proposals request *all available telescopes* or if high sensitivity is required the *inclusion of the Lovell telescope* may also be requested. A small number of specialised experiments also request a *subset* of the MERLIN array. If you request with the inclusion of the Lovell telescope or the use of a small subset of MERLIN telescopes please specify and justify this within your main scientific and technical justifications.
- **Observation Modes:** Please check all of the appropriate observing modes that this proposal requests. These fields are not mutually exclusive.
- **Scheduling:** This box refers to the scheduling of the observations within the proposal as a whole. MERLIN is normally dynamically scheduled by the MERLIN staff on timescales of at most a few days. This process allows the instrument to be efficiently used, and allows observations to be scheduled during the best conditions for a particular project. This is the default practise. However for the success of some experiments, observations need to be made on a specific date. If this is the case select **User specified (dates)**. This selection will then open a new field where you must specify these dates and why. Similarly, some experiments that do not necessarily require observations on a specific date, may require the observations to be scheduled in a specific way. If this is the case select **User specified (scans)** and then detail these requirements in the resultant open field.
- **Location for data reduction:** Please specify, from the drop down menu the location where you plan to reduce the data. Some initial calibration of MERLIN data can only presently be achieved at JBO, using local software. Additionally expert user support is provided (by prior arrangement with MERLIN staff [email: merlin@jb.man.ac.uk]) for the data reduction of MERLIN data. Consequently it is recommended (especially for new users) that a visit to JBO to reduce the data be made.
- **Help required:** Select from this drop down menu the level of user support you believe you require with regard to this proposal.

An example of this page once complete is shown in Fig. 15.

It is wise to use the *save and continue* button once you have completed filling in any section. Regular use of this will minimise the chances of losing any of your work.

3.4.2 Specifying the Target sources

To complete the *Observing request* page the details of your target sources need to be completed.

Specifying a single target and observation:

To add a single target source, and its associated observing setup, to you target list click on the *Specify new target/observation* button at top of the observing request. This will enter you into an new page were specific information regarding this source and the requested observing setup is defined. An two examples of this page, one for a wide continuum observation and for a spectral line observation are shown in Figs. 12 and 13, respectively.

Specific entries:

- **Source Name:** Enter your target source name (e.g. m101). **Note:** if this is a ToO observation this may not be known in advance. It is however a mandatory field so enter a generic name eg. Type-II SNe etc.
- **Source position in RA & Dec.** Enter an *accurate* source position. The use of the Simbad button next to the source name field will auto fill the source position. However, since MERLIN is a high resolution instrument please ensure that the positions entered are correct. **Note:** This is mandatory in all cases apart from a ToO proposal which maybe for a particular class of objects rather than a particular source.
- **Equinox:** Select the equinox used for the source position entered above.
- **Total requested hours:** Enter the number of hours request for this observation. Include the time required for both source and phase reference observations (phase referencing typically requires ~30% of the total time requested). Note you ordinarily do not need need to include the time required for other calibration observations, such as observations of flux calibration sources, since these will be scheduled by the MERLIN staff at a convenient point in the whole observing schedule.
- **Essential scheduling constraints:** Within this box enter any essential scheduling constraints that refer to this particular target source.
- **Preferred scheduling constraints:** Within this box enter any non-essential, but desired scheduling constraints that refer to this particular target source.
- **Frequency band:** From the drop down menu select the receiver band that your require for these observations. **Note 1:** If you wish to do multi-frequency synthesis continuum observations at L-band select either upper or lower L-band. In this case the multiple frequencies used will be selected from with both of these frequency ranges. **Note 2:** If this is a target of opportunity observation you may select either any or a particular band.
- **Peak Flux:** Enter an estimate of the target's peak flux density as maybe observed with MERLIN in mJy/bm.
- **Total flux:** Enter an estimate of the target's total flux density as maybe observed with MERLIN in mJy.
- **Largest Angular Size:** Enter an estimate of the largest angular size of any individual object likely to be observed.
- **Total field to be imaged:** Enter the size of the total field you wish to image.
- **Three sigma noise level:** Enter an estimate of the required 3 sigma noise level.
- **Calibration sources:** By default MERLIN staff will choose the most appropriate calibration sources for your experiment. However, if you wish to specify a particular calibrator to be used, select this option from the drop down menu and then specify the details in the free form box.

Merlin Observation

[? Help](#)

Source name: **NGC4194** * [Get RA & Dec from Simbad](#) NB: proposers should check coordinates

Right Ascension: **12:14:09.6600** [HH:MM:SS[.SSSS] *
 Declination: **+54:31:35.1998** [+|-]dd:mm:ss[.SSSS] *
 Equinox: **J2000**

Total requested in hours: **16** *

Essential Scheduling constraints:
 Preferred Scheduling constraints:
 (Empty text boxes)

Frequency Band: **C-band (4500-5200 MHz)** *

Peak Flux: **5** (mJy/bm) *
 Total Flux: **10** (mJy) *
 Largest Angular Size of individual sources to be imaged: **2** (arcsec) *
 Total field to be imaged: **5** (arcsec) *
 Three sigma noise level: **0.003** (mJy/bm) *
 Calibration Source(s): **Selected by Merlin Staff**

Correlator Requirements :

Choose correlator: **Continuum (wide field) - Pseudo sp** *

Frequency Specification: Chosen by MERLIN staff User specified
 Central Frequency: Default

Polarisation Products: **LL + RR** *
 Bandwidth at each frequency: **16 MHz** *
 Number of channels: **32 x 500.00 kHz channels** *

Figure 12: The MERLIN proposal tool: Specifying a target. A Wide-field continuum observation at C-Band.

Correlator requirements:-

At the bottom of this page the correlator set-up and configurations of your observations need to be specified. The required information will depend upon which type of observation you are making (e.g. simple continuum, wide-field continuum, spectral line etc). Initially you must specify one of these options from the drop down menu. These individual options are outlined in detail within the on-line help pages.

Note: If you are an expert MERLIN user and plan to make an observation that falls outside of the options available, specify complex/other in this menu. This will allow you to enter and detail in text your particular requirements.

Below we will illustrate two common observations types **1.** Wide - field continuum and **2.** a simple spectral-line experiment:

Wide-field continuum: See Figure 12.

- **Correlator configuration:** In this example Continuum (wide-field) is selected.
- **Frequency specification:** Usually MERLIN staff will select the precise observing frequency used from within the requested frequency band (in the case of this example [see fig. 12] C-band (4500-5200 MHz)). This frequency will be the currently recommended frequency within this band. This is the default. However if you wish to specify a precise central frequency check the appropriate box and enter this frequency in the field beneath this. Do ensure that this frequency is within the receiver band and at least 8 MHz away from its edges.
- **The following three fields depend upon each other. Different choices within the first field will provide you with different options in the latter fields and are limited by the correlator capabilities.**
 - **Polarisation products:** Choose the polarisation products. In this example LL+RR have been chosen. *This option will allow double the number of spectral channels to be requested compared to choosing ALL*
 - **Bandwidth:** Select the required bandwidth per polarisation. For the vast majority of continuum observations the widest bandwidth available will be desired. In this example 16MHz is chosen.
 - **Number of channels:** select the number of channels you require. Please consider the field size that you wish to image and the effect of bandwidth smearing on these observations.

Spectral line: See Figure 13.

- **Correlator configuration:** In this example spectral line mode is selected.
- **The following three fields depend upon each other. Different choices within the first field will provide you with different options in the latter fields and are limited by the correlator capabilities.**
 - **Polarisation products:** Choose the polarisation products. In this example LL+RR have been chosen. *This option will allow double the number of spectral channels to be requested compared to choosing ALL*
 - **Bandwidth:** Select the required bandwidth per polarisation. For the vast majority of continuum observations the widest bandwidth available will be desired. In this example 8MHz is chosen.
 - **Number of channels:** Select the number of channels you require. The choice given in this field has been limited by the two prior choices (polarisation and bandwidth). In this experiment the a spectral resolution of 125kHz is desired which is the finest spectral resolution available with the two previous choices.
If a higher spectral resolution is needed then you need to either reduce the number of polarisations recorded and/or the bandwidth. This is a scientific choice.
- **Frequency specification:** For a spectral line experiment either the precise observing sky frequency or the spectral line rest frequency and redshifted velocity need to be defined.
 - **Direct sky frequency:** If you wish to observe at a specific direct sky frequency with NO Doppler tracking applied over the duration of the observation, check the direct sky frequency box and then enter the appropriate central frequency
 - **Specifying a line and velocity:** The default spectral line set-up is to define the rest frequency of the line you wish to observe and its velocity. Such observations will be observed with the Doppler tracking to correct for the Earth's motion throughout the observation. If this is desired check the line and velocity box.

Merlin Observation

[? Help](#)

Source name: **NGC4194** * [Get RA & Dec from Simbad](#) NB: proposers should check coordinates

Right Ascension: **12:14:09.6600** [hh:mm:ss[.ssss]] *

Declination: **+54:31:35.1998** [+|-]dd:mm:ss[.ssss] *

Equinox: **J2000**

Total requested in hours: **16.00** *

Essential Scheduling constraints:

Preferred Scheduling constraints:

Frequency Band: **L-band (1330-1430 MHz)** *

Peak Flux: **10.0** (mJy/bm) *

Total Flux: **40.0** (mJy) *

Largest Angular Size of individual sources to be imaged: **5.0** (arcsec) *

Total field to be imaged: **30.0** (arcsec) *

Three sigma noise level: **0.05** (mJy/bm) *

Calibration Source(s): **Selected by Merlin Staff**

Correlator Requirements :

Choose correlator: **Spectral Line** *

Polarisation Products: **LL + RR** *

Total bandwidth at each frequency: **8 MHz** *

Number of channels: **64 x 125.00 kHz channels** *

* = Data rate limitations, Short integration time not permitted (see help for more details).
= High data rates, extra readout time will be required (see help for more details).

Frequency Specification Mode: Direct Sky Frequency Line and Velocity

Fill in the line frequency and velocity :

Select predefined spectral line:	Rest frequency:	Velocity:	Velocity system:
HI (1420.405752 MHz)	1420.405752 MHz	2560.0 km/s	Radio LSR (dynamical) velocity

Figure 13: The MERLIN proposal tool: Specifying a target. A simple spectral line observation at L-Band.

If the line and velocity box is checked, either select a pre-defined spectral line from the list, or if the line you aim to observe is not shown enter it's rest frequency in the second field. Following this you **must** enter the redshifted velocity of your source and the velocity system associated with this velocity.

3.4.3 Uploading a List of Targets

In many circumstances you may wish to upload an existing list of sources and observe them all in a similar manner. This can be done via the **Upload target list button**. This will enter you into a page where you can outline the observing parameters, in an analogous way to outlined above, to be applied to all sources in your uploaded list (see Fig. 14).

Target List:

In order to do this your source list must be prepared as an ASCII file with the following format:

```
Identifier RA Dec Equinox [ObsTime Velocity Velocity_convention]
```

For example,

```
M82 09:55:50.69424 +69:40:43.6912 j2000 12h 225 VRAD-LSR
```

In this form only the Identifier, RA, Dec and Equinox are mandatory. The other entries, if desired, can be filled in within the proposals tool, either globally for all sources, within the upload page or individually by editing individual observation set-ups.

The screenshot shows a web form titled "Upload target list" with a "Help" button in the top right. The form contains several input fields and dropdown menus, many with red asterisks indicating they are required. The fields are: "Total requested in hours" (text input), "Essential Scheduling constraints" (large text area), "Preferred Scheduling constraints" (large text area), "Frequency Band" (dropdown menu, currently set to "-- None Specified --"), "Peak Flux" (text input, unit "(mJy/beam)"), "Total Flux" (text input, unit "(mJy)"), "Largest Angular Size of individual sources to be imaged" (text input, unit "(arcsec)"), "Total field to be imaged" (text input, unit "(arcsec)"), "Three sigma noise level" (text input, unit "(mJy/beam)"), and "Calibration Source(s)" (dropdown menu, currently set to "Selected by Merlin Staff"). Below these is a section titled "Correlator Requirements" with a "Choose correlator" dropdown menu (currently set to "-- None Specified --"). A "Format reminder" section provides the field format: "Fieldname RA Dec Equinox [Exposure_time] [Velocity] [Velocity convention]" and lists conventions: "VRAD-LSR, VOPT-HEL, VRAD-HEL, VOPT-LSR, VELO-HEL and VELO-LSR". An example line is shown: "m35 06:45:59.93 -20:45:15.1 j2000 13h". At the bottom, there is an "Upload observations file" text input with a "Browse..." button. The form has "Upload" and "Cancel" buttons at the bottom corners.

Figure 14: The MERLIN proposal tool: Uploading a list of sources.

MERLIN Proposal RadioNet

Community: **Everyone**
Category: **regular**
Semester: **06B**

Applicants | **Justification** | **Observing Request** | Additional issues

Field	RA	Dec	Equinox	Exposure (hrs.)	Freq. Band	Frequency	Bandwidth	Channels	Velocity	
NGC4194	12:14:09.6600	+54:31:35.1998	J2000	16.00	C-band (4500-5200 MHz)	Default	16.0MHz	32 x 500.00 kHz channels		[Edit] [Copy] [Delete]
NGC4194	12:14:09.6600	+54:31:35.1998	J2000	16.00	L-band (1330-1430 MHz)	1420.405752 MHz	8.0 MHz	64 x 125.00 kHz channels	2560.0 km/s VRAD-LSR	[Edit] [Copy] [Delete]

Specify a new target/observation | Upload target list

Hours requested this proposal (target plus phase reference): **16** (total time on targets in list: 32 hours)

Is long term status required?: Yes No

Choose a science category: **Extragalactic**

Choose telescope requirements: **All available telescopes**

Choose observation modes:

- Continuum
- Wide-field
- Spectral line
- Phase referencing
- Full polarisation
- Interleaved short scans
- Monitoring
- Other

Choose scheduling: **Dynamic**

Location for data reduction: **JBO**

Help Required: **Consultation**

[Save and Continue] [Save and Preview] [Save and Exit] [Save and Submit] [Quit without save]

Figure 15: The MERLIN proposal tool: The observing request tab - completed.

3.4.4 The observing request completed

When completed all of the mandatory field within both the observing request page and each individual source definition must be complete. At this point save the proposals tool (you should be doing this regularly anyway!) and check the accuracy of all entries. This is important as MERLIN staff will schedule your observations on the basis of the information you have entered.

Note: If you save and preview your proposal the resultant pdf file will contain a brief summary of the information added here on page two. Plus a more detailed description of all of the information you have filled in regarding each individual source and observing setup is included on the pages immediately following your scientific justification. Please check these. If there are any mandatory fields you have failed to fill in they will be marked on this pdf in **red** – this is true for all stages of the proposal. An example of the completed observing request page is shown in figure 15.

Are there linked proposals? : Yes No

Related approved proposals on other facilities, or related proposals submitted elsewhere : **10 hrs of VLA A-configuration time to observe the H1 absorption in this galaxy. It is planned that these VLA data will be combined with the MERLIN H1 absorption data proposed for here.**

List allocations on this telescope in the previous 3 years : **H1 absorption in nearby starburst galaxies" PI Beswick MN/XXB/XXX 6 runs observed. Currently 2 papers have been published: Beswick et al 2002, MNRAS, XXX, XXX; Student, Beswick et al 2003, MNRAS, XXX XXX**

Information about all Students involved :

Student	Applicant	Supervisor	Applicant	Expected completion date	Data required		
A student	No	DR Rob Beswick	Yes	2008/10	Yes		

Related publications: **Beswick et al, 2004, MNRAS 352, 49; Beswick et al 2005 A&A, 444, 791**

Explain who will perform the reduction and data-analysis: Describe the schedule of the work from data-analysis to publication : **The data reduction and analysis will be done by A. Student. It is planned she will visit JBO following these observations**

Additional Remarks :

Save and Continue Save and Preview Save and Exit Save and Submit Quit without saving

Figure 16: The MERLIN proposal tool: The additional issued tab - completed.

3.5 Additional Information

The final page that is required to be filled in is the *Additional information* page. In this page you are requested to add information regarding current and previous telescope applications, published material related to this project. The layout of this page can be seen in figure 16.

Individual entries in the Additional information page:

- **Linked proposals:** This refers to any proposals that are assessed by the MERLIN TAC that are linked to this proposals. If there are any please check *yes* and then enter further details within the new field. By default this question is checked as *no*.
- **Related approved proposals:** If this project has related approved observing time on another instrument. In the open box add any details, such as facility, proposals codes, project title and time allocated. This field is **not** mandatory so if this not relevant to this proposals leave this field blank.
- **Allocations on this telescope:** List any previous observations that you or your fellow investigators have been granted on the MERLIN array. Include details regarding the current status of these projects.
- **Information about students involved in this project:** If there is a student involved in this proposal, named investigator on the proposals or not, please add their or your details. To add these details click on the *Add new student* box and then complete the form (see Fig 16).
Note: If there are multiple students and or student projects involved in this work you may add multiple students.

Figure 17: The MERLIN proposal tool: Associating a student with this proposal.

- **Related publications:** In this field enter the titles and references for any publications particularly related to this proposal.
- **Who will perform the reduction and data analysis:** Add a details of who will do the work (if known!). Include possible an approximate schedule?
- **Additional remarks:** In this last box please add any further pertinent remarks regarding this proposal.

Once you have completed the additional information save your proposal and view the preview in order to check that you have not failed to fill in any information.

4 Submitting the final proposal

4.1 Pre-submission checks

Even when you think that your proposal is ready to be submitted there are always several things that are prudent to check first.

1. Save and View the proposal preview. This is how your proposals will be viewed by the referees. Does it look good??
2. Check that your authors list is complete and that the details of all applicants are correct.
3. Proof read your title and abstract!
4. Are you and your fellow investigators happy with the science justification
5. Make sure that the science case is neither too long or too hard to read. Any font size less than 11 is probably too small. *In the end you don't want to put off the referees!*
6. **Check all of the detailed specifications of your targets.** Are the positions and velocities correct? Have you detailed anything that is not standard? Have you got the right observing configuration defined for the science you wish to achieve?
7. etc

Proposal List

[My Account](#)


[Help Index](#)
[Send Questions/Problems](#)
[Logout](#)

This tool is offered for applicants to submit **MERLIN** proposals to the PATT MERLIN Time Allocation Group (TAG).

DEADLINES for submission of REGULAR, TARGET OF OPPORTUNITY, and KEY PROGRAMME proposals are:

Midnight (end of the day, GMT) on March 15th and September 15th.

DIRECTORS TIME proposals are allowed at any time and on submission will trigger immediate attention by MERLIN personnel.

Please select the relevant proposal category when creating a new proposal.

Proposals may be modified and edited as required by Active Participants in the author list. REGULAR, TARGET OF OPPORTUNITY, and KEY PROGRAMME proposals can be submitted and retracted as many times as required by the Contact Author prior to the submission deadline.

Proposal titles are limited to 150 characters, and abstracts to 200 words. Scientific justifications are limited to 3 pages (5 pages for Key Programme proposals).

[Read me first!](#)
[Help](#)

Telescopes : MERLIN

Proj_ID	Contact Author	PI	Title	Telescope	Status	Options				
	Beswick	Beswick	This is the title of the pr...	MERLIN	in preparation					

[Create new proposal](#)

Figure 18: The MERLIN proposal tool: The proposals list containing one draft proposals.

If you are happy with everything then your ready to submit. Submission can be achieved from any page using the save and submit button or you can submit from the proposal list page.

To get to the proposal list page simply click on the *save and exit* button at the bottom of the screen. From the proposal list page (see Fig. 18) you will see a list of all of your proposals.

To submit the proposal simply click on the *submit* button!..

Validation

Upon submission NorthStar will validate all of the mandatory fields within your proposal. If there is missing information you will, upon submission, be presented with a list of these fields. If this is the case re-enter the editing phase of the proposal and amend these errors.

What happens next?

Now your proposal has been submitted into the MERLIN tool. At this point both you and all of the co-authors of the proposal will receive an email letting you know that the proposals is submitted.. If you are still happy with everything your job is done – go have a nice cup of tea and pat yourself on the back!

5 Reporting problems

Throughout preparing and submitting your MERLIN proposal if you encounter any technical problems with NorthStar please report them to proposaladmin@jb.man.ac.uk. If you have any scientific questions regarding your MERLIN proposal please email merlin-proposals@jb.man.ac.uk.