

# configure for SV users

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## "configure" - WEAVE field-configuration tool

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Welcome to the webpage for the "configure" software. Please note that this page is currently **intended for use only by open-time PIs**.

Before WEAVE is open to open-time PIs, configure will be made publicly available with relevant guidance and support.

**No support will be provided for configure for PIs of SV projects at this stage.**

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## What is configure?

In a nutshell, configure is the software that allows us to configure fields to be observed by WEAVE, i.e., to allocate fibres to objects for a particular WEAVE field.

The configure software is written by David Terrett.

## Where can I run configure?

A general configure user should download the latest version of configure and run this on their own machine.

## Download configure

To identify the version you are running, run configure with the `--version` command line option and the version number will be printed on standard out. For macOS, after moving the app to Applications, run `/Applications/configure.app/Contents/MacOS/configure --version`.

| latest configure version number                                                                                                                                                                                                                                                                               | date released     | linux                                                                                                                                                        | mac                                                                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3.3.2                                                                                                                                                                                                                                                                                                         | 5 April 2022      | <a href="#">configure-3.3.2-Ubuntu-20.04.tar.gz</a><br><a href="#">configure-3.3.2-Ubuntu-18.04.tar.gz</a>                                                   | <a href="#">configure_3.3.2.dmg</a>                                                                                                                    |
| 3.3.4                                                                                                                                                                                                                                                                                                         | 21 June 2022      | <a href="#">configure-3.3.4-Ubuntu-22.04.tar.gz</a><br><a href="#">configure-3.3.4-Ubuntu-20.04.tar.gz</a>                                                   | <a href="#">configure_3.3.4.dmg</a> (macOS 11.0)<br><a href="#">configure_3.3.4-Catalina.dmg</a> (macOS 10.15 - <i>caveat emptor: not yet tested</i> ) |
| 3.3.5<br>Corrects the mapping of positioner x/y to the sky (it was rotated by 180 degrees). The mapping has now been verified on sky.                                                                                                                                                                         | 13 July 2022      | <a href="#">configure-3.3.5-Ubuntu-20.04.tar.gz</a><br><a href="#">configure-3.3.5-Ubuntu-22.04.tar.gz</a><br><a href="#">configure-3.3.5-CentOS7.tar.gz</a> | <a href="#">configure_3.3.5.dmg</a><br><a href="#">configure_3.3.5-Catalina.dmg</a> (macOS 10.15 - updated 02.08.2022)                                 |
| 3.3.6<br>Correct multiple problems (see the updates page for details) but most of the issues are being corrected by the WASP when it gets an XML from 3.3.5 so there is no need to reprocess. The exception is for high declination dithered fields and Scott will be in contact if you need to rerun dither. | 14 September 2022 | <a href="#">configure-3.3.6-Ubuntu-20.04.tar.gz</a><br><a href="#">configure-3.3.6-Ubuntu-22.04.tar.gz</a><br><a href="#">configure-3.3.6-CentOS7.tar.gz</a> | <a href="#">configure_3.3.6.dmg</a><br>This version should run on MacOS 10.15 or later                                                                 |

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| <p>3.3.11</p> <p>Updated test version for workflow testing – <i>this is the release candidate for 3.4</i></p> <p>New configure option <code>--enable_fibre_catagory</code>.</p> <p>This version is built with fibre status's matching the current state of the positioner which means that many fibres that are due to be repaired soon are disabled. The <code>--enable_fibre_catagory</code> option allows fibres that are disabled for a specific reason to be enabled. The catagories due for repair are "Bad Ferrule" and "No Magnet". To enable them use:</p> <p><code>configure --enable "bad ferrule" --enable "no magnet"</code></p> | <p>23<br/>February<br/>2023</p> | <p><a href="#">configure-3.3.11-CentOS Linux-7.tar.gz</a></p> <p><a href="#">configure-3.3.11-Ubuntu-18.04.tar.gz</a></p> <p><a href="#">configure-3.3.11-Ubuntu-20.04.tar.gz</a></p> <p><a href="#">configure-3.3.11-Ubuntu-22.04.tar.gz</a></p> | <p><a href="#">configure_3.3.11.dmg</a></p> |
| <p>3.4</p> <p><del>Use this version for Science Verification</del></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <p>10 March<br/>2023</p>        | <p><a href="#">configure-3.4-CentOS Linux-7.tar.gz</a></p> <p><a href="#">configure-3.4-Ubuntu-18.04.tar.gz</a></p> <p><a href="#">configure-3.4-Ubuntu-20.04.tar.gz</a></p> <p><a href="#">configure-3.4-Ubuntu-22.04.tar.gz</a></p>             | <p><a href="#">configure_3.4.dmg</a></p>    |
| <p>3.4.1</p> <p>Fixes a bug in <code>--enable</code>. Only effects MOS mode; v3.4 configurations are valid but won't have as many allocated fibres as they should.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <p>21 March<br/>2023</p>        | <p><a href="#">configure-3.4.1-CentOS Linux-7.tar.gz</a></p> <p><a href="#">configure-3.4.1-Ubuntu-18.04.tar.gz</a></p> <p><a href="#">configure-3.4.1-Ubuntu-20.04.tar.gz</a></p> <p><a href="#">configure-3.4.1-Ubuntu-22.04.tar.gz</a></p>     | <p><a href="#">configure_3.4.1.dmg</a></p>  |

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| <p>3.4.5</p> <p>The collisions diagnostics are now just produced when the "Check" button is pressed but now includes details of which fibres the positioner would chose to park.</p> <p>List of disabled fibres updated.</p> <p>Use <b>this</b> version for MOS Science Verification</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <p>26 June 2023</p>     | <p><a href="#">configure-3.4.5-CentOS Linux-7.tar.gz</a></p> <p><a href="#">configure-3.4.5-Ubuntu-18.04.tar.gz</a></p> <p><a href="#">configure-3.4.5-Ubuntu-20.04.tar.gz</a></p> <p><a href="#">configure-3.4.5-Ubuntu-22.04.tar.gz</a></p> | <p><a href="#">configure_3.4.5.dmg</a></p> |
| <p>3.4.6</p> <p>"configure --max_runtime n" kills the configure command line process after n seconds (with exit status 2). n=0 (the default) disables this feature. This is a workaround for the occasional infinite loop in the sky search phase.</p> <p>List of disabled fibres updated.</p> <p><b>Notes 4 September:</b></p> <ul style="list-style-type: none"> <li>Use <b>this version</b> (3.4.6) for trimester 2023B2.</li> <li>MOS and mIFU (SV) users: Guide fibre 1005 on plate A is currently disabled due to a missing magnet but is the highest priority fix (this note will be removed when that occurs). In the meantime, please check your configuration to make sure that you have <b>&gt;3 guide fibres</b> discounting 1005.</li> <li>mIFU (SV) users: mIFU bundle 19 is currently disabled due to a missing magnet. This is a high priority fix, and this note will be removed when that occurs.</li> </ul> | <p>02 August 2023</p>   | <p><a href="#">configure-3.4.6-CentOS Linux-7.tar.gz</a></p> <p><a href="#">configure-3.4.6-Ubuntu-18.04.tar.gz</a></p> <p><a href="#">configure-3.4.6-Ubuntu-20.04.tar.gz</a></p> <p><a href="#">configure-3.4.6-Ubuntu-22.04.tar.gz</a></p> | <p><a href="#">configure_3.4.6.dmg</a></p> |
| <p>3.4.7</p> <p>List of disabled fibres updated.</p> <p>Tier 2 fibres made 3mm shorter</p> <p>Infinite loop in sky search fixed</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <p>28 November 2023</p> | <p><a href="#">configure-3.4.7-CentOS Linux-7.tar.gz</a></p> <p><a href="#">configure-3.4.7-Ubuntu-18.04.tar.gz</a></p> <p><a href="#">configure-3.4.7-Ubuntu-20.04.tar.gz</a></p> <p><a href="#">configure-3.4.7-Ubuntu-22.04.tar.gz</a></p> | <p><a href="#">configure_3.4.7.dmg</a></p> |

As of version 3.0.0 the input XML must specify the data model version. Old XMLs can be fixed so that configure doesn't complain by adding `datamver="8.00"` as an attribute of the root element. However, note that old XMLs are **not** guaranteed to produce the same output, as (1) configure is regularly updated with new information about the fibres and (2) configuration is an intrinsically random process.

## Documentation

| configure documentation | date | more information | downloadable document |
|-------------------------|------|------------------|-----------------------|
|-------------------------|------|------------------|-----------------------|

|                          |               |                                                                                                                                                                                                                                       |                                                                                                                          |
|--------------------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| user manual              | 31 Mar 2020   |                                                                                                                                                                                                                                       | <br>WEAVE-POS-016 ...ure Manual.pdf   |
| configure XML definition | 29 April 2020 | <ul style="list-style-type: none"> <li>- document describing format of input field definition</li> <li>- specifies what configure and the positioner software requires (with the exception of quality assessment criteria)</li> </ul> | <br>WEAVE-ICD-025 C... Definition.pdf |

## Feedback

If you spot any bugs, please contact [Scott Trager](#) and [Shoko Jin](#).

## LIFU fields

configure\_lifu is an analogue of configure for creating XML descriptions of LIFU observations. It reads an input file that looks like a input to configure except that it only contains one target and doesn't contain most of the stuff needed by configure to drive the configuration process. All it does is update the field centre to match the target and generates new targets for each of the remaining LIFU fibres. The intent is that LIFU observations have an XML description that is sufficiently close to that for a MOS field that they can be treated in the same way for much of the rest of the dataflow.

The program is command line only and has -f and -o command line options for specifying the names of the input and output files.

Here are example input ([lifuField.xml](#)) and ([lifuConfig.xml](#)) files. (These use the "new" attributes - "targra" instead of "RA\_D" etc. etc.)

The dither program is also needed if you plan to dither your LIFU observations.

Here's a typical run of these two programs (and xmllint for checking the xml):

```
% lifu_configure --epoch 2020 -i output/WC_2021A1-lifu_01-tgc.xml -o output/WC_2021A1-lifu_01-tgcs-tmp-orig.xml
% dither -i output/WC_2021A1-lifu_01-tgcs-tmp-orig.xml -o output/WC_2021A1-lifu_01-tgcs-orig.xml
% xmllint --c14n output/WC_2021A1-lifu_01-tgcs-orig.xml | xmllint --format --encode utf-8 --output output
/WC_2021A1-lifu_01-tgcs.xml -
```