

Emoslib

What is EMOSLIB

The Interpolation library (EMOSLIB) includes Interpolation software and BUFR & CREX encoding/decoding routines. It is used by the ECMWF meteorological archival and retrieval system ([MARS](#)) and also by the ECMWF workstation [Metview](#).

This software covers :

- Interpolating fields
 - spectral coefficients to spectral coefficients
 - spectral coefficients to rotated spectral coefficients
 - spectral coefficients to regular latitude-longitude grids
 - spectral coefficients to regular gaussian grids
 - spectral coefficients to quasi-regular gaussian grids
 - regular latitude-longitude grids to regular latitude-longitude grids
 - regular latitude-longitude grids to regular gaussian grids
 - regular gaussian grids to regular gaussian grids
 - regular gaussian grids to regular latitude-longitude grids
 - quasi-regular gaussian grids to regular latitude-longitude grids
 - quasi-regular gaussian grids to regular gaussian grids
- encoding/decoding of [WMO FM-94 BUFR](#) BUFR code messages
- encoding/decoding of [WMO FM-95 CREX](#) CREX code messages
- handling pure binary unix files
- multiple(Temperton's) FFT routines (from release 000340 onwards)

For the encoding/decoding of [WMO FM-92 GRIB](#) GRIB code messages we strongly recommend the use of the [ecCodes](#).

A new cycle of this public version is created from time to time to consolidate operational extensions.

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- [Reference guide](#)
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- [Known bugs or issues](#)
- [History of changes](#)

Report a bug or issue


Please send an email to software.support@ecmwf.int or go to [Issues](#) if you have any suggestions for improvements or have discovered a bug with this software package.

Releases

 **Emoslib 4.3.x series**

Version 4.2.1 of Emoslib was the first version which introduced full support for the new octahedral reduced Gaussian grid which ECMWF will use in its forecast system from Spring 2016 onwards. We were aware that this version had a suboptimal performance. This was addressed in the latest versions from 4.3.0 onwards by rewriting parts of the necessary code. Tests have shown that the performance has been greatly increased and accuracy improved, but causing values to change in some cases. We are happy that these changes are correct, but currently still evaluate them further. We will update this page when we finished our evaluation.

Therefore we ask users **to test and evaluate Emoslib 4.3.x carefully before using it operationally** and provide us with feedback when necessary at Software.Support@ecmwf.int.

 **Emoslib > 4.1.1**

From version 4.1.1 on, by default, Emoslib aborts execution on GRIBEX calls as its functionality is deprecated (this change of behaviour was introduced in internal version 4.1.0). As alternative, the package can be configured to avoid aborting, by configuring with:

```
cmake -DENABLE_GRIBEX_ABORT=OFF ... /path/to/libemos
```

File

Modified

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ZIP Archive libemos-4.3.7-Source.tar.gz Performance improvements for reduced Gaussian grids, and fixes on interpolation to sub-areas. Please read note above!	Feb 03, 2016 by Pedro Maciel
ZIP Archive libemos-4.3.3-Source.tar.gz Performance improvements for reduced Gaussian grids. Please read note above!	Dec 03, 2015 by Stephan Siemen
ZIP Archive libemos-4.2.1-Source.tar.gz First version with full support for the new octahedral reduced gaussian grid	Dec 03, 2015 by Stephan Siemen
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File libemos-4.0.6-Source.tar.gz First release version with CMake based build system	Dec 03, 2015 by Stephan Siemen
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