May 2022 software release

The May 2022 release of our software provides many new features, improvements and fixes!

ecCodes

ecCodes, the heart of GRIB and BUFR handling, brings several new features, improvements and fixes in version 2.26.0:

- support for Fire GRIBs in MARS
- latest GRIB/BUFR WMO tables
- support for JasPer v3.x
- improvements in GRIB CCSDS packing
- full support for BUFR operator 203
- miscellaneous bug fixes
- see ecCodes Release Notes for full details

Please note:

The ecCodes Python 2 interface is no longer being developed and will be removed in 2023. Users are strongly advised to migrate to Python 3

Also note that the CMake option ENABLE_AEC is now ON by default. AEC (Adaptive Entropy Coding) provides the WMO GRIB CCSDS compression and decompression of data. To force the build without it, use -DENABLE_AEC=OFF

Magics

Magics, ECMWF's plotting library, brings more improvements in version 4.12.0 including:

• EPSG:3035 projection

```
map = magics.mmap(
subpage_map_projection = 'EPSG:3035',
)
```



· Automatic adjustment of the projection according to the data extent

area = magics.mmap(subpage_map_projection = 'EPSG:3035', subpage_map_area_definition = "data")



Automatic selection of the best suited projection according to the data extent

map = magics.mmap(



• Introduction of a new way to work with palette of colour lists.

contour = magics.mcont(legend = 'on', contour = 'off', contour_shade = 'on', contour_label = 'off', contour_level_selection_type = "count", contour_level_selection_type = "count", contour_level_count = 30, contour_level_count = 30, contour_interval = contour_interval, contour_level_tolerance = 0, contour_level_tolerance = 0, contour_shade_method = 'area_fill', contour_shade_palette_name = "colorbrewer_RdBI", contour_shade_colour_list_policy = "dynamic", contour_shade_colour_reverse_list = contour_shade_colour_reverse_list, contour_shade_colour_method = "palette")



• Thinning of the wind when using NetCDF data.

You can try all the new features on the release notebook.

Metview

& launch binder

Metview 5.16.0 brings a mix of new features, fixes and improvements including:

- the ability to mask GRIB and Geopoints data to an arbitrary geographic polygon using the new poly_mask() function
- improvements in the Cross Section module including more options to handle vertical levels and a fix when plotting 3D wind
- improvements in vertical Hovmoeller generation including more options to handle vertical levels and point selection
 functions mean() and sum() now have an option called missing to control how to handle missing values during the computations this allows means and sums to be computed at gridpoints where there are a mixture of missing and valid values
 improvements in functions mvl_ml2hPa(), ml_to_hl(), mvl_geopotential_on_ml() mean that they are now several times faster than before
 added the new EPSG:3035 projection to geoview()

- and more see the release notes!



The new poly_mask() function opens up the possibility to mask data using shapefiles and other means of defining polygons



Improvements in cross sections include handling of wind and other values close to the orography

Metview's Python interface version 1.12.0 brings new features, including:

- add 'reverse' and/or operators between Fieldsets and bools (e.g. True & my_fieldset)
 see Metview Python Release Notes for more information

Metview is built at ECMWF with all the versions of our libraries listed in the table below, and all are included in the The Metview Source Bundle.

The software versions of this release are available on all ECMWF computer systems as "new" versions. Versions on conda should be available in the coming days. If you encounter any issues please feel free to use the ECMWF Support Portal.

ecCodes	2.26.0	Latest news
Magics	4.12.0	Latest news
Metview	5.16.0	Latest news