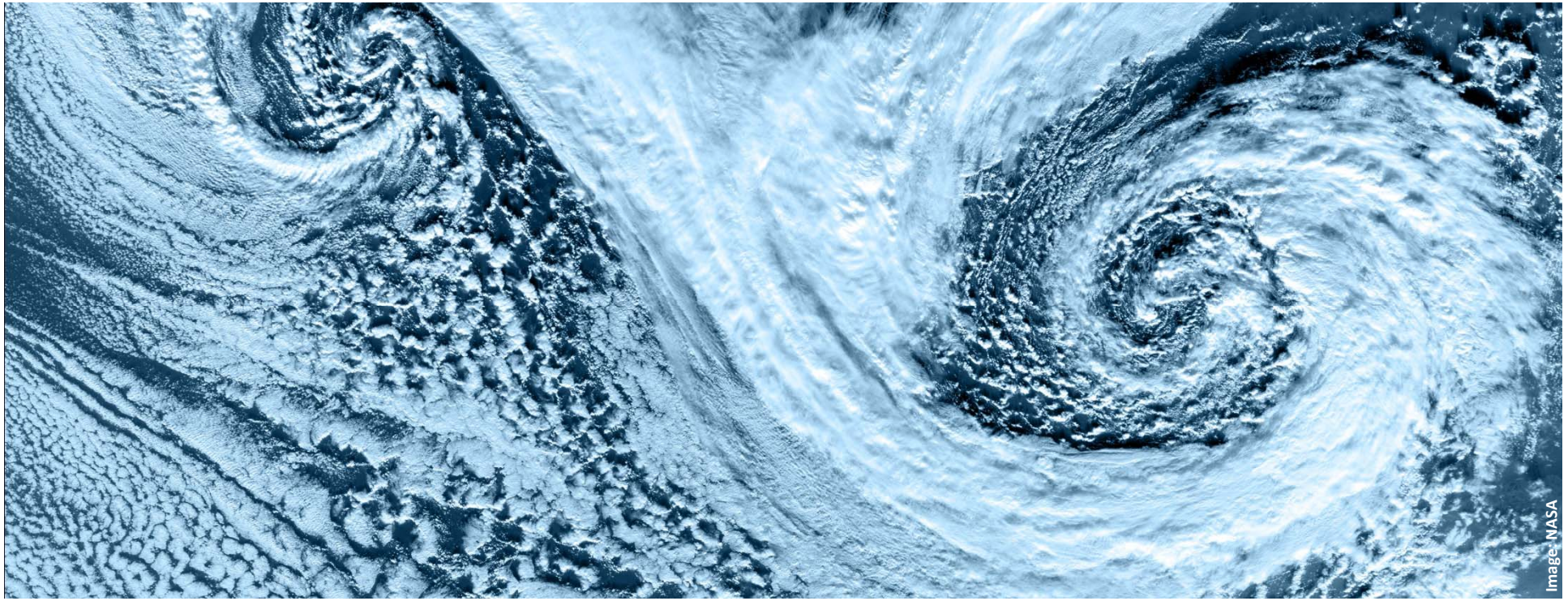
C2SM
Center for Climate
Systems Modeling

ETH
Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

Extpar: status and future plans

Katie Osterried



Extpar: current status

- Last Extpar release: v4.0 in 9/2016
- WebPEP web generation tool functioning again (as of 08/29/2018)
- Current activities:
  - Merge of DWD and ICON versions of Extpar into official version (release 5.0)
  - Development of technical testsuite
  - Automatization of testing with Github and Jenkins

Extpar: Release 5.0 overview

- Work in progress to merge DWD version 2.10 with official COSMO version 4.0
- Release candidate has been distributed for testing to DWD (Jürgen Helmert) and MPI (Luis Kornblueh)
- Release candidate has been tested thoroughly for several COSMO resolutions and setups to ensure continuity with current Extpar version
- Anticipated release date: Autumn 2018

Extpar: release 5.0 Notes

- ICON now fully supported and tested
- GME not supported
- GRIB output currently not supported (Fieldextra conversion of netcdf output to grib- end of year)

- Code Changes
  - Problems with high resolution (< 5km) for NDVI, albedo, deep soil (python workaround)
  - Minimum value for roughness length (changes results)
  - Some new namelist parameters
  - ERA-I SST and T2M for ICON

Extpar code and access

- Code is currently hosted and developed at:

  github.com/C2SM-RCM/extpar

- Switch to official COSMO github after release 5.0 is finalized:

  github.com/COSMO-ORG/extpar

- Release notes and updated manual can be found on Github
- Email me to get access:

  katherine.osterried@env.ethz.ch

- WebPep online tool:

https://tools.clm-community.eu/web_pep/gui/web_pep.php

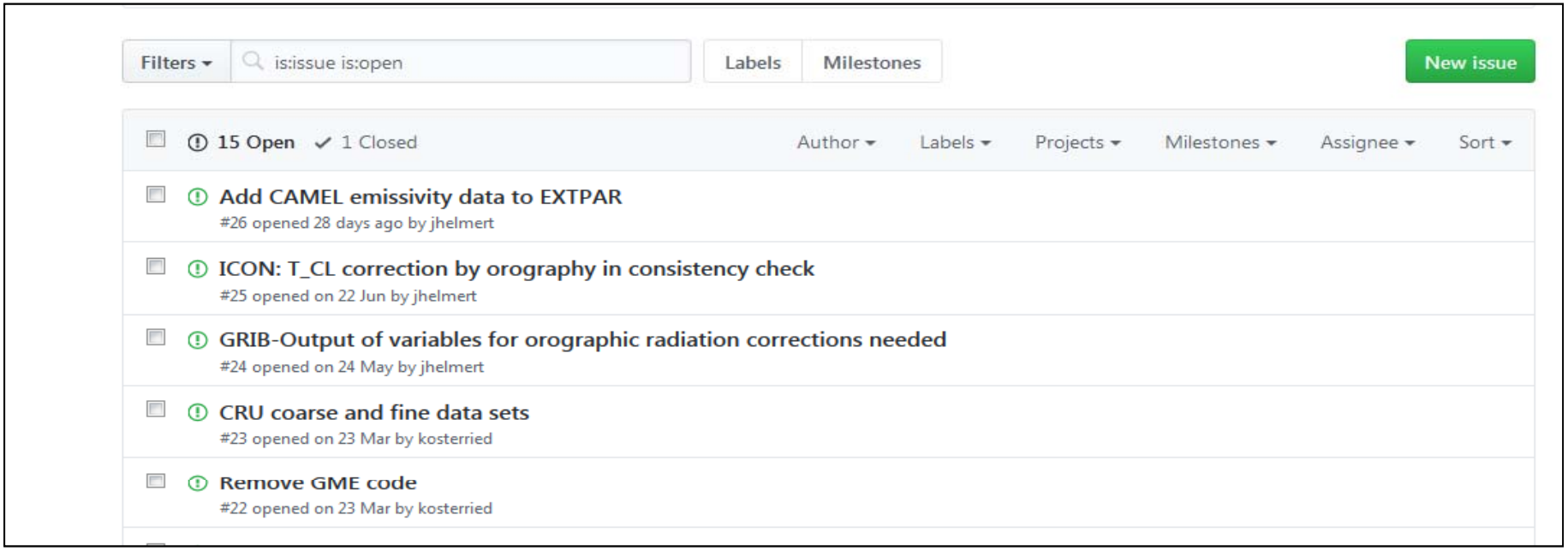
Extpar testsuite

- Based on COSMO technical testsuite
- Currently tests:
  - MeteoSwiss operational setup (COSMO7 and COSMO1)
    - Aster and Globe
  - DWD operational setup (COSMO)
  - EU-CORDEX climate setup (12km)

- Plans to include:
  - ICON operational and climate setups (from DWD and MPI)

Github and Jenkins

- Github provides tools for
  - Bug (issue) reporting
  - Code review (pull requests)
  - Automated testing with Jenkins
- Enables easy collaboration between developers in different institutions



Extpar: future plans

After the release is finalized, we plan to add new data sets and parameters to Extpar:

- Time-varying land use data (Landcover CCI): requested by SOILVEG group in COSMO-CLM community
- Time-varying aerosol data (not yet fully defined): requested by researchers at ETH Zürich
- CAMEL emissivity data set: requested by DWD
- Skin conductivity : developed by Jan-Peter Schultz