37th EWGLAM & 22nd SRNWP
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Belgrade

HARP activities

Alex Deckmyn, Kai Sattler, Andrew Singleton,
Xiaohua Yang, Christoph Zingerle

Outline

- The HARP idea
- Activities
  - HARP EPS verification tools
  - HARP spatial verification
- TODO's

christoph.zingerle@zamg.ac.at

HARP idea

Hirlam-Aladin R Package for verification
as modular toolbox

- Extraction and interpolation of forecasts for specific locations (e.g. synop stations) and fields (fc and obs, e.g. grib, hdf5, asii, …)
- Compilation of synop and temp observations into a database
  - ➔ To be adapted locally
- EPS / spatial verification score calculation
- Graphical routines
  in batch mode or via an interactive web interface

christoph.zingerle@zamg.ac.at

HARP idea

R as a common programming language for calculating scores and for visualization of results

- R-packages available at CRAN repository for
    - verification (verification, SpatialVx),
    - database handling (RSQLite)
    - data format handling (rhdf5, gridbase)
    - ploting and visulization (ggplot2, shiny)
- Harp-specific R-packages
    - grib and geographic representation packages

Utilities (shell, python)

- General program execution
- Data extraction and interpolation

christoph.zingerle@zamg.ac.at

Activities

Working week(s)

- Decisions on toolbox contents and design,
- code development and coordination,
- implementation for specific requirements (HarmonEPS, Glameps, single experiments, …)

Finally the first release is available (Alex and Andrew!)

HARP EPS

HARP v1 as from spring this year
(EPS tools are fully working)

- Get HARP from Git repository
- Install on ecgb or locally

Extensive online documentation on
- installation of HARP and other software and libraries needed to make HARP run locally
- use of HARP and the scores computed
- in- and output formats
- expanding HARP

christoph.zingerle@zamg.ac.at

HARP EPS

Users:

- HarmonEPS and GLAMEPS verification
- (online on Hirlam web page)

- Several research and model development tasks

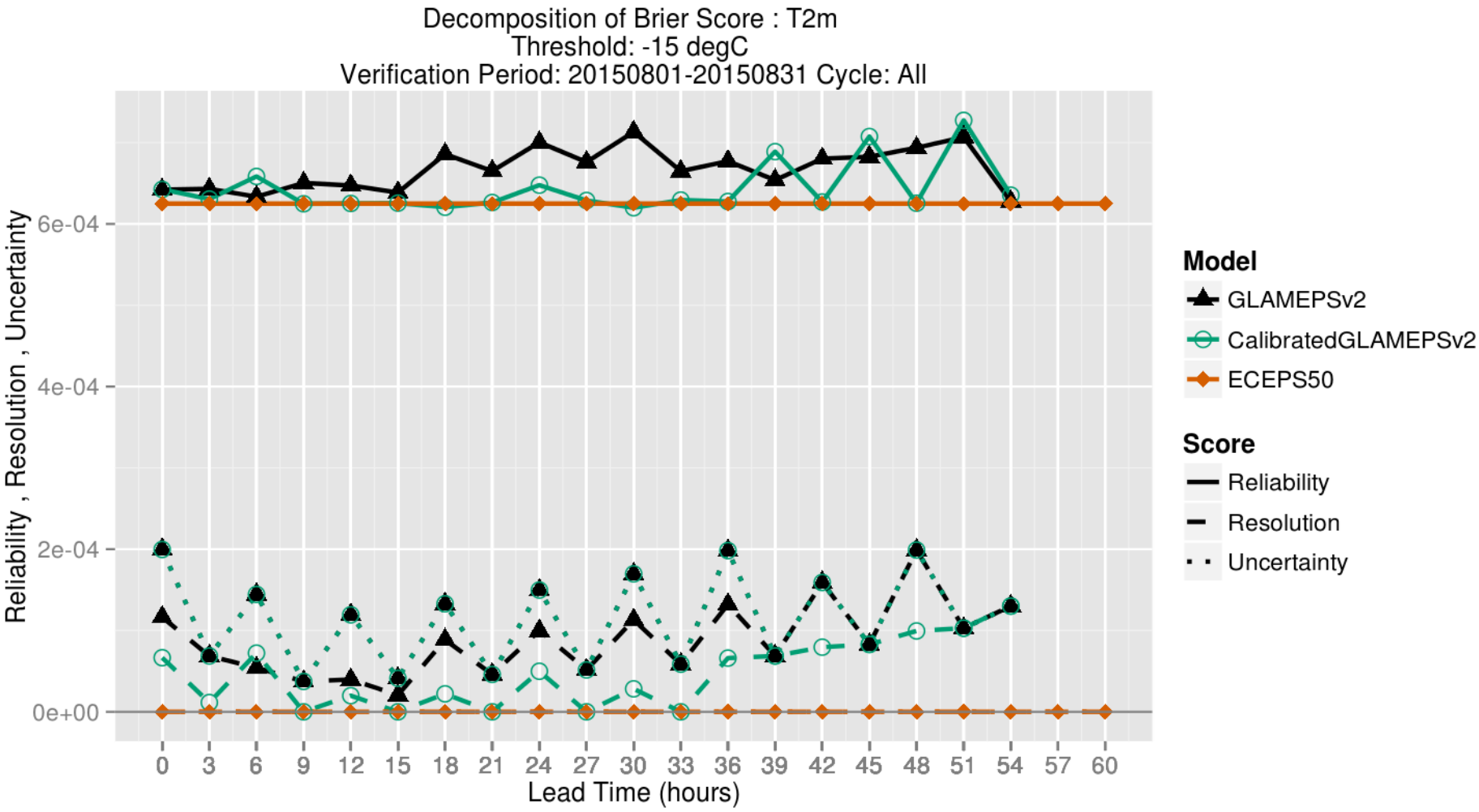
- Case studies

christoph.zingerle@zamg.ac.at

HARP EPS

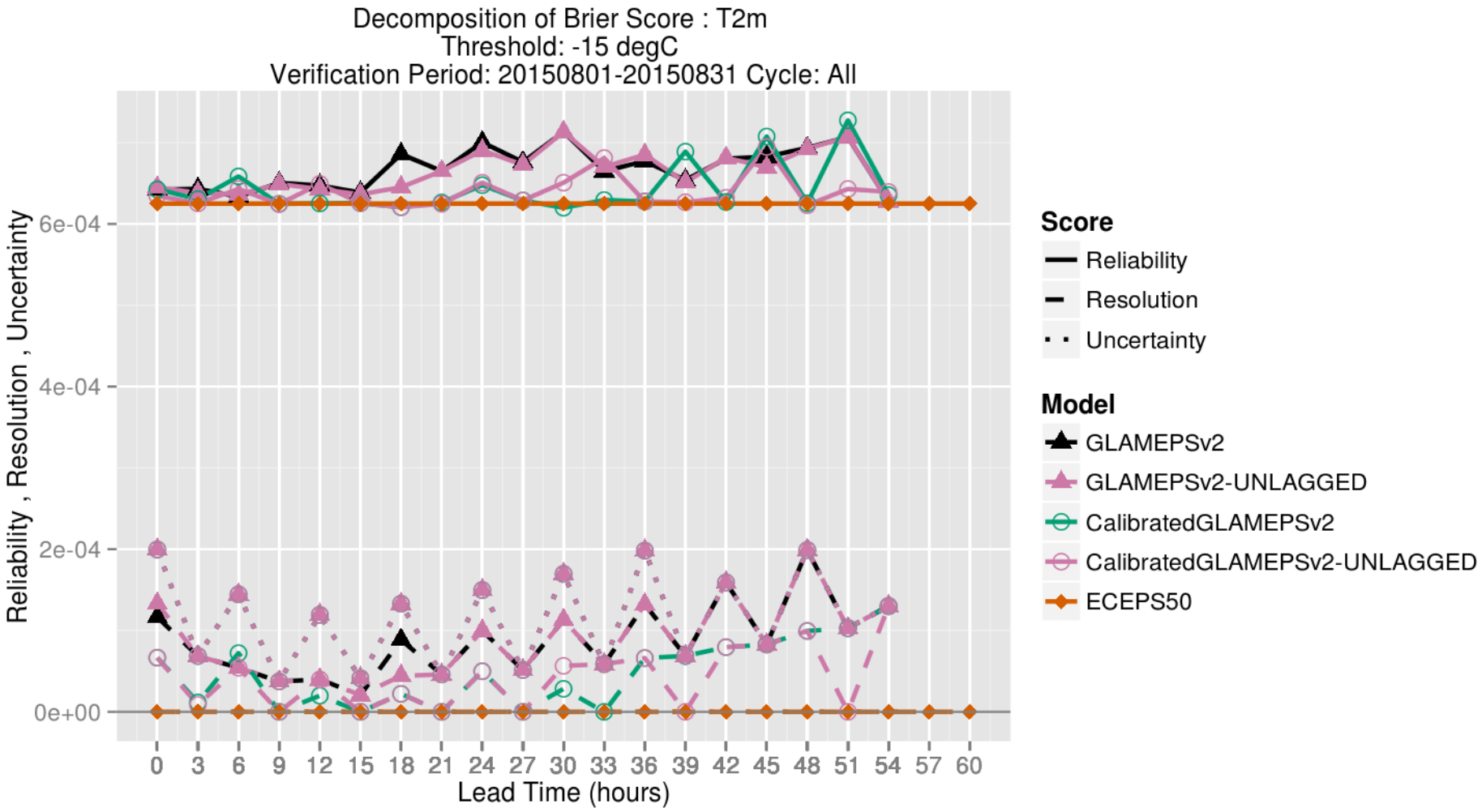
christoph.zingerle@zamg.ac.at

HARP EPS



christoph.zingerle@zamg.ac.at

HARP EPS



christoph.zingerle@zamg.ac.at

HARP spatial

Not yet in the official version (lack of resources), however

- Use of GRIB, hdf5 and radar specific format files,
- interpolation to common grid,
- working examples of spatial precipitation verification on several different domains ulitizing different Radar data and
- simple visulization tool

are available.

Intensivied work during last month:

- implementation of other spatial observation fields (INCA, cloudmask, satellite)
- keep up with the HARP-EPS and release of spatial tools planned still this year.

christoph.zingerle@zamg.ac.at

HARP spatial

HARP-2D: HIRLAM ALADIN R package for spatial verification - Mozilla Firefox

Datei Bearbeiten Ansicht Chronik Lesezeichen Extras Hilfe

HARP201403 – HIRLAM | Google Kalender | HARP-2D: HIRLAM ALADIN R pa... | Zingerle Christoph - Outlook W... | Verification of GLAMEPS V2 Fig:...

localhost:7487

Meistbesucht | openSUSE | Getting Started | Mozilla Firefox | Weather | Verification | Dictionaries | Coding | System | Conferences | See | Mails | Flug

HARP-2D: HIRLAM ALADIN R package for spatial verification

Select verification method

Fraction Skill Score (FSS)

Select a score to plot

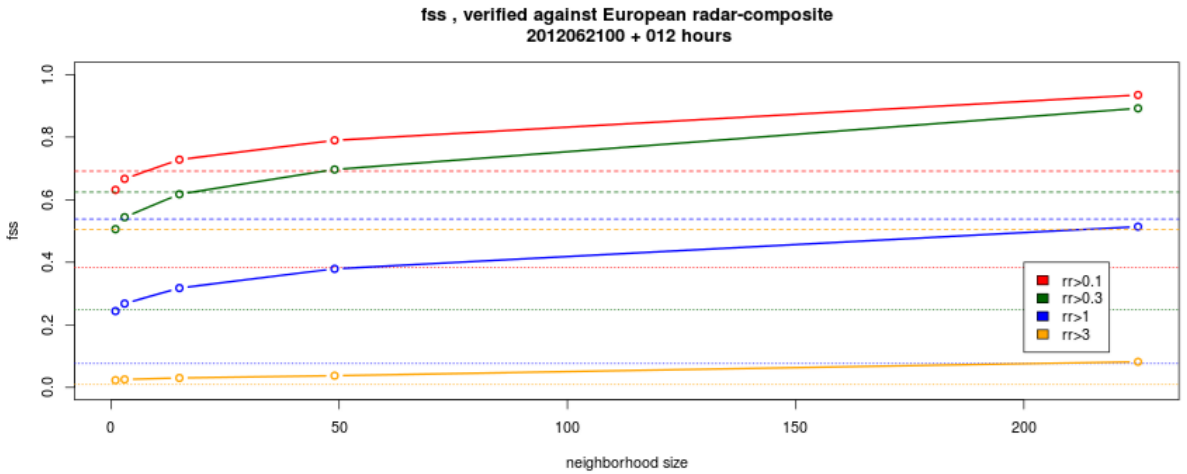
fss

Select leadtime

12

Select threshold

- [x] 0.1
- [x] 0.3
- [x] 1
- [x] 3



christoph | Firefox | Konsole | Okular | VirtualBox | 2 Erinnerun | Kalender | RStudio | 16:53 Ortszeit

christoph.zingerle@zamg.ac.at

TODO‘s

- Finalize spatial part to the level of EPS tools
- + update of installation instruction, documentation and examples

- Integrate new/more scores and verification methods

- Start work on spatial verification methods for EPS

→ **make use of HARP**

christoph.zingerle@zamg.ac.at

THANK YOU!

Alex Deckmyn
Kai Sattler
Andrew Singleton
Xiohua Yang
Christoph Zingerle

christoph.zingerle@zamg.ac.at