

Data Analysis Working Group meeting

Date: 06 June 2017

Time: 21-22 LT.

Location: SD'17 Workshop, SanQuirico D'Orcia, Tuscany

Present:

WG members

Pasha Ponomarenko, Keith Kotyk, Evan Thomas, Angeline Burrell

WG observer

Simon Shepherd

Others

Maria-Theresia Walach, Alexandra Fogg, Tomo Hori, Hannah Laurens, Lisa Baddeley, Andrew Keine, Colin Waters, Emma Bland, Jiaojiao Zhang, Nozomu Nishitani, Daniel Billett, Judy Stephenson, Erxiao Liu, Aurélie Marchaudon, Federica Marcucci (and maybe some other people)

1. FITACF3.0

It will become a default package in the next release of RST within the next 2-3 months.

In the meantime, FITACF2.5 will remain the default version. It is the most up-to-date version of the "old" FITACF providing reasonable estimates of velocity errors and resolving problems with processing the two-channel non-stereo (two-frequency) data.

At this stage FITACF3.0 can be installed as a stand-alone package so that the outputs of these two packages can be easily compared.

Linux installation instructions for both RST4.0 and FITACF3.0 are there and will be further updated/modified by Evan and Keith in order to help with both git (developers) and non-git (users) installation. Mac and possibly Windows instructions would be desirable too.

Further testing will be carried by Emma and Colin, but anyone else's help is also welcome.

2. RST4.1

The intention is to release RST4.1 before September 2017.

It is necessary to produce “RST for Dummies/PIs” with a brief description of the main components, functionalities and installation details (Lisa). Emma and Simon volunteered to produce this document.

The necessity to generate a detailed description of RST has also been expressed by Aurelie. Evan and Keith are already doing this with respect to selected parts of the code. There is an old HTML guide to RST written by Rob Barnes, but it has to be updated to accommodate the recent changes to the RST structure and content.

There are lots of routines whose functionality is unknown. In order to find out if they are vital to the package functionality or can be safely removed, Colin volunteered to liaison with Rob. It was also suggested to organise some sort of the discussion group on the web where this sort of inquiries could be posted and discussed.

It would be useful to formulate a minimum set of test procedures required for validation/approval of changes to RST, like, e.g., processing stereo mode data etc.

Evan clarified what parts of the current package will be modified in RST4.1:

- FITACF3 (default, with a 2.5 switch)
- Gridding
- AACGM-v2
- Plotting
- Map potential
- Statistical models
- Virtual height model (Chisham-Yeoman)
- DLMs to speed up the calculations
- Etc

3. Miscellaneous

Emma suggested moving the official hardware file depository from VT to the current RST github.

Colin proposed that changes to the hardware files should be approved by the respective PIs. In order to expedite this process, Keith and Evan suggested doing it through github so that an invitation will be emailed to the PI with a **clear description** of the changes (e.g. a new value of tdiff) so that he/she would only need to press the appropriate button on the git webpage. In order to inform the community of these changes, an email should also be sent to the sdarn-users list so that the users will be able to update their hardware files in a timely manner.

* At the WG report session Mark suggested to introduce a deadline for the PIs' responses (two weeks or more), after which the changes will be automatically implemented. Jean-Pierre suggested that a final warning should be given a day or two before the deadline.