Minutes of first Review meeting

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313238

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LOTUS First Review Meeting, 26 September 2013, 9:30-17:00.

REA

16, place Rogier

1210 BRUSSELS

Meeting room: COV2 17SDR1

Participants:

REA: Virginia Puzzolo (VP)
Stefano Vignudelli (SV) (REA Reviewer)

Advisory Board: Jerome Benveniste (JB) (observer), ESA/ESRIN, Italy (TBC)

Starlab: Alejandro Egido (AE), Laura Moreno (LM)

CLS: Pierre Thibaut (PT)

DHI: Henrik Madsen (HM)

DTU: Ole B. Andersen (OA), Karina Nielsen (KN), Per Knudsen (PK)

Agenda:

Introductory session:

1. Opening and welcome (REA)
2. Practical information (DTU)
3. Round-table (all)

Project overview including Q&A:

4. LOTUS project overview (DTU)

Coffee break (10:15-10:30)

Work packages – progress and status including Q&A:

5. WP1 Processing SRAL SAR mode waveforms over ocean (STARLAB)
    a. Overall objectives, work plan and status (STARLAB)
    b. Task 1.1 State of the art review (STARLAB)
    c. Task 1.2 Scientific Requirements Consolidation (CLS)
    d. Task 1.3 Selection of test areas (STARLAB)
    e. Task 1.4 Develop processing for Open Ocean (CLS)
    f. Task 1.5 Develop processing for Polar Ocean (DTU)
    g. Task 1.6 Develop processing for Coastal Zone (STARLAB)
6. WP2 Processing SRAL SAR mode waveforms over land (UNEW)
    a. Overall objectives, work plan and status (UNEW)
    b. Task 2.1 State of the art review (DTU)
    c. Task 2.2 Scientific Requirements Consolidation (DHI)
    d. Task 2.3 Selection of test areas (STARLAB)
    e. Task 2.4 Develop processing for River and Lake Levels (UNEW and DTU)
    f. Task 2.5 Develop processing for Soil Moisture (UNEW)
    g. Task 2.6 Develop processing for Snow Depths (STARLAB)
7. WP3 Definition of new data products and processing chains (CLS)
    a. Overall objectives, work plan and status (CLS)

b. Task 3.1: Definition and design of ocean data products (CLS)
c. Task 3.2: Definition and design of land data products (CLS)

8. WP4 Production of demo data and assessment (DTU)
    a. Overall objectives, work plan and status (DTU)

Lunch break (12:30-13:30):

Work packages – progress and status including Q&A:

9. WP5 Applications of new GMES data in value-adding ocean services (DHI)
    a. Overall objectives, work plan and status (DHI)
10. WP6 Applications of new GMES data in value-adding land services (STARLAB)
    a. Overall objectives, work plan and status (STARLAB)
11. WP7 Dissemination and exploitation (DTU)
    a. Overall objectives, work plan and status (DTU)
    b. Task 7.1 Project web site (DTU)
    c. Task 7.2 GMES land and ocean (STARLAB and UNEW)

Coffee break (15:15-15:30):

Project management session:

12. WP8 Management (DTU)
    a. Overall objectives, work plan and status (DTU)
    b. Informal correspondance
    c. Advisory board
    d. Consortium agreement
13. Data needs and access (DTU)
14. Formal reporting (REA)

Closing session:

15. AOB
16. Review of action items
17. Next meeting
18. End of meeting

Minutes:

Introductory session:

1. Opening and welcome (DTU)

PK welcomed everybody and started the meeting.

2. Practical information (REA)

VP gave some practical information regarding refreshments and facilities.

3. Round-table

SV and JB introduced themselves to the partners in the LOTUS project.

Project overview including Q&A:

4. LOTUS project overview (DTU)

PK gave an overview of the project and its currents status. PK informed that Sentinel-3 will operate in 100 percent SAR mode, hence the transition between modes will not be a problem as with CryoSat-2. However RDSAR may still be used in order to compare results with previous missions.

PK informed that University of Newcastle (UNEW) has become a new partner in the project. UNEW including Phillipa Berry will continue the tasks that formerly were associated with DMU. However, DTU will continue working on processing SAR data related to rivers and lakes, with feedback from UNEW. UNEW will lead the processing related to soil moisture. UNEW has hired the programmer Rob XX formerly employed at DMU, so they are ready to process the data.

PK informed that an advisory board has been formed.

PK informed that the Task 1.1 and deliverables D1.1, D1.2, and D2.2 are delayed but stated that subsequent WPs have started and are running in parallel.

Work packages – progress and status including Q&A:

5. WP1 Processing SRAL SAR mode waveforms over ocean (STARLAB)

a. Overall objectives, work plan and status (STARLAB)

AE presented the overall objectives. AE informed that the deliveries D1.1 and D1.2 have been delayed but insured that D1.1 and D1.2 will be delivered before 25 October. Due to delays AE suggested that the delivery of D1.3 is postponed from month 12 to month 15, since more testing related to the data processing needs to be done.

VP accepted that D1.3 will be delivered at month 15.

b. Task 1.1 State of the art review (STARLAB)

AE presented the state of the art review.

VP found that the purpose of the state-of-the-art review was unclear. A general discussion regarding the state-of-the-art review was initiated. PK stated that the state-of-the-art review should be the starting point for further research in the lotus project. SV stated that the state-of-the-art review lacked contributions regarding waves and wind speed. VP suggested that the project may be using information regarding waves and wind speed from other projects e.g. "My wave". VP agreed to get information about the project "My wave". PK stated that the state-of-the-art review should include

information regarding waves and wind speed.

c. Task 1.2 Scientific Requirements Consolidation (CLS)

PT presented an overview of the user and scientific requirements.

The user requirement analysis is based on results obtained for the CP40 project, and a questionnaire that has been distributed to a large number of potential users. The processing algorithms are currently being adapted to fulfil the needs of the users.

VP requested a better description of future core services and later downstream services. VP suggested to initiate a discussion with WP5 regarding their user requirements. SV stated that different users might have different requirements. PK stated that Starlab and DHI should provide input A.S.A.P. regarding their applications and user requirements to CLS. AE, LM, and HM agreed with this. PT stated that D1.2 can be delivered in 1 month, when input from DHI and Starlab has been provided.

d. Task 1.3 Selection of test areas (STARLAB)

Task 1.3 was presented by AE. AE informed that test areas have not been selected. VP stated that test areas should be selected by the end of November/December. The test areas should be chosen in order to fulfil both the core services and the downstream services. Hence, there should be collaboration between WP1 and WP5 (and between WP2 and WP6 on the land side).

PK suggested that the test areas are chosen according to the different services e.g. for calibration and the interest of the end user. LM Will look into user requirements and then suggest test areas. HM have potential areas, where other data and models are available.

PT questioned what data period that should be used.

JB stated that the ESA SAR mask can be changed according to the demand of the users. This can be done by emailing the suggestion to Jerome or Thomaso.

e. Task 1.4 Develop processing for Open Ocean (CLS)

PT gave overview of the new developments of SAR processing for Open Ocean. Algorithms to process FBR data have been developed, which allows for SAR and RDSAR to be processed simultaneously and that the SAR and RDSAR measurements will be collocated. New developments regarding retracking of L1 products were also presented. These included numerical retracking and the Halimi analytical SAR retracker. Further research regarding mispointing needs to be performed. JB ensures that Star tracker information will be available for Sentinel-3.

PT: We must agree on a date that processing should be started.

f. Task 1.5 Develop processing for Polar Ocean (DTU)

OA presented the new developments of SAR processing for Polar Ocean. DTU is building a retraking system “LARS” consisting of 13 retrackers both physical and empirical to derive accurate ranges in the Polar Ocean. Algorithms for detecting leads have been developed based on the pulse peakiness. Both the Arctic and Antarctic regions have been investigated. OA informed to VP that ESA corrections were applied to derive ranges.

g. Task 1.6 Develop processing for Coastal Zone (STARLAB)

AE presented an overview of the developments regarding processing for Coastal Zone. AE stated that

the current version of the SAMOSA retracker is running, and new adapted versions will be implemented. AE addressed the problem regarding the discontinuity between Open Ocean and Coastal data. How this issue is solved should be agreed upon within the LOTUS project, to deliver a merged data product.

Due to delays in task 1.1 and 1.2 STARLAB is not ready to data production. VP states that STARLAB must explain why this task is delayed, so action can be taken to minimize further delays. VP suggested postponing the delivery of D1.3 to month 15 in order to give STARLAB more time to implement and test different processing algorithms. VP further suggested dividing D1.3 into three separate documents with a common format, one for each sub theme, to avoid further delays of the other sub themes. PK Stated that data must be ready for processing by month 15, since the demo data needs to be ready. PK suggested running the WPs in parallel to keep up with the schedule.

6. WP2 Processing SRAL SAR mode waveforms over land (UNEW)

a. Overall objectives, work plan and status (UNEW)

PK Presented the overall objectives for processing of SAR mode waveforms over land.

b. Task 2.1 State of the art review (DTU)

KN presented an overview of the state-of-the-art review regarding the subthemes; Rivers and lakes, soil moisture, and snow depth.

VP again found the definition of "the state-of-the-art" unclear. The state-of-the-art should include a description of the algorithm that exists, and what that has been done in the field. SV asked for references regarding the section related to the snow depth, and mentioned that it more read as a description than actual state-of-the-art. The soil moisture part should also be updated and better explained. Further the section regarding the corrections should be updated in order to be more oriented towards land applications. SV will provide specific comments in the review of D2.1.

OA suggested having one of the DREAM regions in SAR mode and confirming this with ESA.

c. Task 2.2 Scientific Requirements Consolidation (DHI)

HM presented on overview of the user and scientific requirements. HM informed that a draft of D2.2 has been produced.

PK suggested that the delivery D2.2 should be delivered at the same time as D1.2 (end November). SV stated that the scientific requirements should also be included in D2.2.

d. Task 2.3 Selection of test areas (STARLAB)

Presented by AE. See discussion at 5 d (Task 1.3)

HM suggested the river Brahmaputra as a test area for inland water. This river has good geometry (E-W oriented optimal for CryoSat-2 tracks), good for comparison since other analysis exists.

e. Task 2.4 Develop processing for River and Lake Levels (UNEW and DTU)

OA presented an overview of the developments regarding processing for River and Lake Levels. Great process has been made within the last months. Retracked lake levels have been compared with the

SRTM DEM, and promising results are obtained. OA stated that one of the major challenges with deriving river and lake levels is the problem of “snagging”. Hence, a highly detailed water body mask is needed to account for this. OA further stated that the high spatial across-track resolution of CryoSat-2 has provided interesting new results and applications, something to consider for future missions.

VP: On sentinel 3: can the optical instrument be used to make a mask. might use sensors from other sentinels

JB: Can be obtained with Sentinel 1

PK: Added that the optical and infrared sensors onboard Sentinel-3 are looking forward (250M^2)

f. Task 2.5 Develop processing for Soil Moisture (UNEW)

PK presented Task 2.5 Develop processing for Soil Moisture on behalf of UNEW.

g. Task 2.6 Develop processing for Snow Depths (STARLAB)

AE presented Task 2.6 Develop processing for Snow Depths.

Due to delays in this task VP suggested to change the definition of WP4, so the data processing of the different sub themes takes place at different times. PK Stated that the river and lake subtheme will continue as planned, but agreed that WP2 and WP4 should be redefined in order to give the snow depth and soil moisture subthemes more time for testing and development.

7. WP3 Definition of new data products and processing chains (CLS)

PT presented WP3 Definition of new data products and processing chains. PT has suggested a common processing scheme for all partners. CLS will process FBR data and deliver L1B data to the different partners, which will process these. CLS will gather the processed data and apply corrections in order to produce L2 products, and later L3 and L4 products. The common processing ensures that the same datation is used. PT stated that CLS will start processing when input/special needs regarding the FBR processing are given by the partners.

This raised a general discussion since the different data products (ocean, coastal, polar, hydro, ..) will have different needs. PT stated that CLS will not provide different L1b data to the partners due to limitations of resources. PT Suggested to agree on a processing scheme, that fits the most requirements. PT further suggested to deliver two products one for ocean and another for land.

VP stated that PT must take action and contact the WP1 and WP2 leaders to get input regarding their needs in the FBR processing. VP further stated that it is important to understand how different FBR processing schemes affects the L2 data products; hence CLS should perform different L1B data for testing. PT agreed to do a limited number of runs.

PT raised the question if the format of the L2 data product should be 1Hz or 20Hz. Again this will depend on the product. OA stated that in order to preserve as much information as possible, river and lake levels should be given as 20Hz data.

8. WP4 Production of demo data and assessment (DTU)

PK presented an overview of WP4. PK stated that it is important that demo data are on time in relation to the applications. VP commented that it is important that some of the products must mature before the processing can start.

9. WP5 Applications of new GMES data in value-adding ocean services (DHI)

HM presented an overview of WP5.

10. WP6 Applications of new GMES data in value-adding land services (STARLAB)

LM presented an overview of WP6. LM stated that WP6 and also WP5 should start now instead of month 13, since the user requirements related to these WPs should be taken into account in relation to the data processing. PK appreciated the focus on the WP structure.

11. WP7 Dissemination and exploitation (DTU)

PK presented an overview of WP7. PK stated that the LOTUS project webpage has been up and running since the Kick off meeting (KOM). All presentations from the KOM are available on the webpage. Presentations from the RM will be uploaded to the webpage as well. It was agreed upon that the presentations should be protected by a password.

Project management session:

12. WP8 Management (DTU)

PK presented WP8.

b. Informal correspondence

PK requested that the partners should respond faster to mails!

c. Advisory board

The Advisory Board consists of Hans Bonekamp (EUMETSAT), Johnny Johannessen (MyOcean), Paul Bates (Uni. Bristol) and Giovanni Cecconi (Thetis), In addition, Jerome Benveniste (ESA) will attend as an observer.

d. Consortium agreement

No remarks

13. Data needs and access (DTU)

No remarks

14. Formal reporting (REA)

SV will compile a review report regarding deliverable D2.1 in one month (end of October).

Closing session:

15. AOB

None.

16. Review of action item

- VP will get information regarding the project “My wave”.
- Starlab and DHI should provide input A.S.A.P. regarding their applications and user requirements to CLS.
- Test areas must be selected by the end of November/December.
- PT must contact the WP1 and WP2 leaders to get input regarding their needs in the FBR processing.
- The delivery of 1.3 and 2.3 is postponed from month 12 to month 15.

17. Next meeting

VP Next review meeting in July 2014 at CLS. Two weeks in advance the technical part must be provided, even if it is a draft.

18. End of meeting