

PURPOSE : Final meeting

CLASSIFICATION :

STARS Teleconference

UNCLASSIFIED

ATTENDEES	FIRM	SIGNATURE	ATTENDEES	FIRM	SIGNATURE
C. Donlon (CD)	ESA		G. Noer (GN)	Met.no	
Øyvind Sætra (ØS)	Met.no				
Y. Gusdal (YG)	Met.no				
P.E. Isachsen (PEI)	Met.no				
S.Eastwood (SE)	Met.no				
Birgitte R. Furevik (BF)	Met.no				
WRITTEN BY: Y. Gusdal					

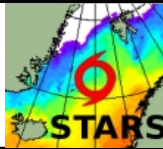
Final meeting ESTEC

DISTRIBUTION :
ATTENDEES

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ACTION :

FOR INFORMATION:

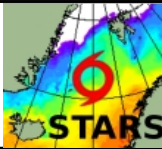
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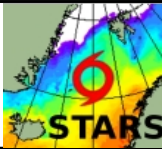
Agenda:

10:00 Welcome, introductions and Introduction to the project (CD)
 10:15 Overview of the project, Task 1 & CCN, Task-7 (web site) and Task-2 (Literature Review) (ØS)
 10:45 Task-3 (data set collection) and Task-4 Polar Low classification development and results (ØS and YG)
 11:15 Task-9 Polar Low Indicator development and results (GN)
 11:45 Task-8 Extension of impact assessment - data set (SE and BF)
 12:15 Break and lunch
 13:15 Task-9 (and Task-6) Impact assessment using models (PEI)
 13:45 Task-10 Polar Low Community Development (ØS)
 14:15 Final Outcomes and future recommendations to ESA (ØS)
 14:45 Final discussion
 15:00 Contractual Issues and AOB (CD)
 15:20 Close and thanks (CD)

- **Introductions by Craig D.**
- **Project overview (Task1, Task2, Task 7 and CCN) by Øyvind S.**
 - A warming signal in SST after a Polar Low event during Thorpex, triggered the starting of the STARS project.
 - Øyvind goes through each task in STARS Phase 1 and phase 2
 - To set up a coupled model system in Phase 1, was changed in STARS phase 2! In Phase 2 a stand alone ocean model was run to study the Polar Low impact on SST and SLA.
 - Øyvind presents the new web site and the quick look
 - **Action:** The good feedback on the Web page and the quick look must go in to the final report
 - **Action:** STARS-DAT should prepare for more SAR data with Sentinel 1 (Craig can send us information about test data)
 - **Action:** Documents from the STARS project and final presentations should be made available on the Web-page if OK by the STARS team
- **Task3 by Øyvind S - Character of polar lows in the Nordic Seas using STARS-DAT**
 - ØS shows how difficult it is to get SLA observations along the Polar Low tracks
- **Task4 by Yvonne G. – Polar Low classification development and results**
- It was decided to put the plot of polar low first observed, on the web page
- Include in final report that confirmation on the hypothesis regarding the February nadir is one of the major achievements of STARS
- Support from Trond Iversen on the usefulness of the STARS-data set
- **Task9 by Gunnar N. - Polar Low Indicator development and results:**
 - Gunnar Noer gives an introduction on how polar lows are forecasted with classic methodology



- It was also shown how the Temperature potential is one of the most important tool when the forecasters are forecasting polar lows (Especially events where there are multiple Polar Lows)
- **Action:** Write about the legacy of STARS for the forecasters in the Final report, like the temperature potential, and the understanding of the sea surface dependency.
- **Action:** In the Final report, mention the paper by Gunnar Noer and how STARS-DAT is used.?? (Gunnar Noer)
- **Task8 by Steinar E. - Extension of the STARS-DAT, part 1**
 - SE explains the STARS Data set.
 - In phase 1, the data set covered 5 years while in phase 2 it was extended to cover 10 years
 - He mention how met.no wants to extend the data set in the future. The tracking should still be a manual task but the collection of data should be automated (therefore today's methods has to be updated)
 - **Action:** Have a link with e-mail address on the quick look site for people to give feedbacks.
 - **Action:** Follow up the work building the image based data-set with input from Gunnar Noer.
 - **Action:** Final report: make a big deal on the STARS DAT and how it supports Polar low science
- **Task 8 by Birgitte Furevik - part 2 (SAR and Scatterometer study)**
 - **Action:** Final report: Document what SAR is showing and the potential of the SAR data (not seen in the AVHRR images)
 - **Action:** Mention in the final report how students are using the SAR images and how the STARS data set is triggering students interest.
 - **Action:** In the Final report, mention the work on Radarsat in a project with the Norwegian Space Centre. (Birgitte Furevik)
 - **Action:** In the final report, remember to include comments to ESA about the use of EOLI, both good and bad.
 - **Action:** Mention in the final report how important it is to get the Sentinel 1 SAR data to met.no. Results from STARS shows that the SAR data is important for forecasting polar lows:
 - It leads to earlier detection of a polar lows.
 - An excellent source of the surface wind patterns.
 - The sharp wind gradients are better seen with the SAR images.
 - As of 2012, there is not sufficient coverage of SAR data for operational use, however Sentinel 1 may be better for operational use with access to data within the hour/minutes.
 - **Final report:** Sentinel 1 is coming!!
 - **Action:** There should be a study on blending SAR and scatterometer
- **Task 9 by Pål Erik I. - Impact assessment using models:**
 - Shows the ocean response to polar lows both from observations and model results
 - It is a complicated task to study the ocean response to polar lows, so future

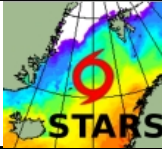


idealized studies would be useful.

- **Task10 by Vineland S - Polar Low community Development**
 - **Intention for the Workshop:**
 - To reinvigorate the European Polar Low Working Group
 - The International IPY brought new momentum to polar low research
 - The workshop was convened by EPLWG (sponsored by ESA)
 - A workshop report is currently accepted for publication in BAMS.
- **Øyvind Sætra: Final Outcomes:**
 - Focused study on use of satellite data and NWP models for polar low forecasting.
 - Investigation of ocean response to polar lows
 - Established a climatological updated study on polar lows which was published in the Quarterly Journal of Royal Met. Soc.
 - **Action:** This will be an important article in the polar low community! Remember to mention this in the Final report
 - **Action:** Final report: Mention how forecasters and scientist has been working together in the STARS project.
 - One of the legacy after STARS: Extended use of SAR data in polar low forecasting.
 - Established an extensive data set for further polar low studies
 - We know that the following institutions are using the STARS data set: University of Trier, Redding, Oslo and Bergen.
 - **Action:** Good feedbacks should be mentioned in the Final report
 - **Action:** Ask for a letter from Zeppa
 - **Action:** Mention in the final report how simultaneous observations of SLA and SST would be nice fore the next satellite mission!
- **Craig D: Final discussion:**
 - We have a lot of data that can be re-written to peer-reviewed papers
 - **Action:** In the final report mention Future activities.
 - **Action:** Mention in the final report the number of papers that has been written, positive and negative things.....etc.
- **Craig D: Contractual Issues and AOB**
 - Have problems sending the invoice to ESA using ESA-P
 - **Action:** Email Craig with details and problems and the information Asta have and what we need to get this right
 - **Action:** Deliverable 17,18,19 (outcomes from the Final meeting)
 - **Action:** Write the final report with copy of all that has been done.
 - **Final report:** Write what we need from Setinel 1 and what the forecasters need to get it operational etc.
 - The monthly reports: OK
 - **Action:** Technical data package, 20 DVDs: It is important to Name the deliverables as they are given in the SoW.
 - We can apply for CCN extension if we like (up to 15 – 20K). For instanse set up a system to extend STARS-DAT easily. Set up a short application and attach the letters with good feedback on STARS-DAT.



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MINUTES OF MEETING

PLACE : ESTEC

- **Craig D: Close and thanks**

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