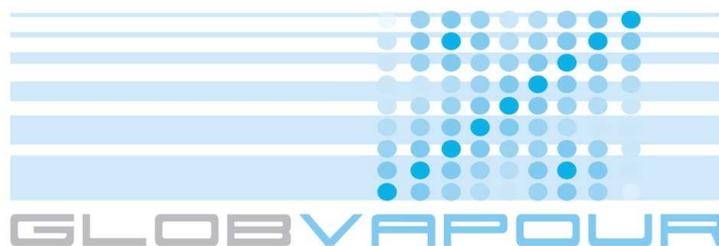




DUE GLOBVAPOUR

Progress Meeting 3

Minutes of Meeting



GLOBVAPOUR

Issue 1 Revision 0

29 March 2011

Project nr: ESRIN/AO/1-6090/09/I-OL

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Participants

[BB] Bojan Bojkov (ESA)	[MS] Marc Schröder (DWD)
[JF] Jürgen Fischer (FUB)	[MSt] Martin Stengel (DWD)
[RP] Rene Preusker (FUB)	[TS] Theo Steenbergen (DWD)
[TW] Thomas Wagner (MPI)	[MB] Martin Bötcher
[SS] Sander Slijkhuis (DLR)	[MS] Matthias Schneider (KIT)
[HG] Hans Gleisner (DMI)	

Agenda

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|------|-------|---|---------------------------------|
| (1) | 13:00 | Welcome and Opening | Schröder, Bojkov |
| (2) | 13:15 | Actions from last meeting | Schröder |
| (3) | 13:30 | GOME(2) - SCIAMACHY
(update on improvements, also albedo issue) | Loyola/Wagner |
| (4) | 13:45 | Combined SSM/I + MERIS retrieval
(update on improvements, also adjacency effect) | Stengel/Lindstrot |
| (5) | 14:00 | AATSR: First steps
(collocation) | Preusker |
| (6) | 14:15 | SEVIRI+IASI
Review of plans, first results and decision on updates | Schröder |
| (7) | 14:45 | Processing System | Krämer |
| | 15:15 | <i>Coffee break</i> | |
| (8) | 15:45 | Papers | Schröder/all |
| (9) | 16:15 | Newsletter, Web | Steenbergen |
| (10) | 16:30 | Workshop: Link to / effect on GV
(also SEP) | Bojkov//Ringer/
Schröder/all |
| (11) | 17:15 | Next steps and PMP
Also: Documents and test products, UCM2, Next meeting | Schröder/Bojkov |
| (12) | 17:45 | Summary: Actions and Decisions
Decide on final versions | Schröder/Bojkov |
| | 18:00 | <i>Expected end</i> | |

Top	Issue	Com	Cat	Content	Actionee	Ref.	Status	Deadline
1.	Opening	MS, TW	I	MS and BB opened the meeting and welcomed all participants.		Item 1		
2.	Action Status	MS	I	<p>Discussion of the status of previous Actions from PM1.</p> <p>#1 Closed. A new action is opened for updating the ATBD (see below).</p> <p>All other actions closed.</p> <p>Discussion of the status of previous Actions from PM2.</p> <p>#1 adjacency effects: RP reports on this in his presentation.</p> <p>#2 - still open.</p> <p>#3 - closed.</p> <p>#4 - closed.</p> <p>#5 - PVRs done, cross-comparison still open.</p> <p>#6 - closed.</p> <p>#7/8 - closed.</p> <p>#9 - still open. Story (data story including GEWEX results) to be published in next two weeks.</p> <p>#10 - closed (deliverables accepted by ESA).</p> <p>#11 - closed.</p> <p>#12 - NOAA will respond in next two weeks, KIT will not be ready before end 2011; maybe postpone IASI assessment.</p> <p>#13 - still open, pending comparisons done by Bruno Picard.</p>		Item 2		
3.	Action #1	MS	A	Update L2 MERIS ATBD on adjacency effects.	RP	Item 2		30.04.2011
4.	Presentation	TW	I	<p>The status of updated/improvements regarding GOME(2) - SCIAMACHY is shown.</p> <p>Different methods are proposed, of which the best one (at spectral level) would be very laborious. Consistency is found with the S. Mieruch paper.</p>		Item 3		
5.	Presentation	MSt	I	SSM/I L1 processing has been delayed by problems		Item 4		

Top	Issue	Com	Cat	Content	Actionee	Ref.	Status	Deadline
				<p>regarding L1 calibration issues.</p> <p>In the new L3 products, a ‘case flag’ (combined surface type and scatter/cloud /snow+ice) and a quality check (for unrealistic values) has been added. Also new is that the background for the retrieval can be chosen prior to generation of the L2 products.</p> <p>The results of the sensitivity studies (just SSMI/F13) are presented as well (MSt, = PM1 Action#1). The conclusion seems that the Hybrid and ERA-Int solutions are equally good. Sometimes the Hybrid solution is better than the full solution. Uncertainty remains about the effect of the temperature error on the WV retrieval error.</p>				
6.	Decision	MS	D	<p>The choice of background for SSM/I retrieval as made on the GEWEX work shop: The SSM/I 1D-Var will be run with the Hybrid background solution (using ERA-Interim background for all necessary parameters, except water vapour coming from climatology) to produce the test months of the SSM/I-MERIS product.</p> <p>This decision is based on the results of sensitivity studies addressing the impact of the different background settings on the SSM/I 1D-Var accuracy. These show that similar quality in the TCWV retrieval can be reached with the mentioned hybrid solution (compared to the use of ERA-Int WV fields), which provides independence of the retrieved water vapour fields from ERA-Interim.</p>		Item 4		
7.	Presentation	RP	I	<p>The MERIS coastal problems are presented. Error in the multiple scattering term regarding adjacency effects were discovered. Corrected data show large MERIS retrieval improvement in the coastal area, but</p>		Item 4		

Top	Issue	Com	Cat	Content	Actionee	Ref.	Status	Deadline
				also over land. The Aeronet comparison (8500 collocated measurements over land) shows a significant (wet) bias.				
8.	Action #2	MS	A	Contact FMI on snow/ice behaviour, that could possibly be used for the SSM/I retrieval.	MSt/BB	Item 4		15.04.2011
9.	Presentation	RP	I	It is shown that AATSR 1D-VAR is good for surface temperature, but for WVC large errors of up to 20% are found. FUB will continue processing the one year of data and perform validation as planned, preliminary result are expected for June. KIT provides a quick look into the intercomparison results of various ground-based instruments.		Item 5		
10.	Presentation	MS	I	The signal of IASI reference is clearly visible for the (descending) morning orbit (low bias), at least in the bottom layer, but not for the evening one. The results are preliminary. BB encourages to publishing a paper on this, which is already in the pipeline in the WACMOS context anyway. It is suggested to continue the study, at least to get confidence on the present results. The findings will be presented at the next PM in June.		Item 6		
11.	Decision	MS	D	Discussion during the GEWEX water vapour workshop supported the inclusion of NOAA IASI processor results as well as of the revised EUMETSAT version 5 retrieval. Considering that the NOAA and EUMETSAT results, at least for a subset of considered reference stations and time periods, are expected to be available soon, the final analysis of the IASI assessment is postponed until these data have been		Item 6		

Top	Issue	Com	Cat	Content	Actionee	Ref.	Status	Deadline
				received.				
12.	Presentation	MB	I	<p>The design of the Processing System is presented, with detailed diagrams for each processing chain.</p> <p>It is suggested that the L2/L3 products input to the blending should be stored, so that this step could be repeated any time.</p> <p>No great changes/evolution is expected in all of the processors at this stage. The first processor to start with will be SSMI/MERIS. GOME may still evolve a bit on the cloud flagging. AATSR will be kept to last.</p> <p>BB mentions that the Qualification Review should be kept simple and practical, so as to be able to run it in one working day.</p>		Item 7		
13.	Decision	MS	D	A IASI-SEVIRI processor is no longer required.		Item 7		
14.	Action #3	MS	A	Clarify the L3 processing system for GOME, and report on this to BC.	BB/DL	Item 7		01.04.2011
15.	Decision	MS	D	The final plans for papers will be synthesized in PM_4 in June.		Item 8		
16.	Presentation	TS	I	<p>The Newsletter and Website status and plans are presented.</p> <p>Suggested subjects for the next NL are the presented AATSR retrieval and the 'coastal issue' of the MERIS retrieval. The web site will be updated in agreement with the NL.</p>		Item 9		
17.	Action #4	MS	A	Provide input for the next Newsletter.	RP/RL/ MS	Item 9		15.06.2011

Top	Issue	Com	Cat	Content	Actionee	Ref.	Status	Deadline
18.	Discussion	MS/BB	I	The strategy for the GEWEX meeting regarding the approach of GlobVapour end users is discussed. The GlobVapour participants will inform BB with their impressions of the meeting.		Item 10		
19.	Discussion	MS/BB		Proposed plans and time lines are OK with BB. BB stresses that the PUG is very important; one section per product shall be included.		Item 11		
20.	Decision	MS/BB	D	The DDF will be prepared by BC (incorporating the TN already started).		Item 11		
21.	Decision	MS/BB	D	PM_4 is (preliminarily) planned for 21-22 June in Copenhagen (pending confirmation from HG).		Item 11		
22.	Action #5	MS/BB	A	Check with the Contract Officer to change the User Consultation to Test Data set as Payment Milestone.	BB	Item 11		01.04.2011
23.	Decision	MS/BB	D	UCM_2 will tentatively be held in conjunction with the EUM Conference in September in Oslo.		Item 11		

Conclusions

By keeping PM3 on 7 March 2011 in Frascati, the project could take benefit from the subsequent GEWEX Water Vapour Workshop organised at ESRIN. Progress was made and presented in all processor development, processing and validation packages. In particular the MERIS retrieval at coastal area, but also over land, has been significantly improved. Generation of upgraded SSM/I products has been slightly delayed, but should be ready soon for integration with the improved MERIS products. Efforts on the Level 2 validation of IASI+SEVIRI to demonstrate added value of the merging will be continued. The results for AATSR show reservations regarding water vapour retrieval. In general, only minor issues are foreseen for further improvements of the processors. Integration into the processing system by Brockmann Consulting will be started in the next months.

Additional deliverables (updated versions of the PMP, PVRs, ATBDs and prototype products) have been discussed and reviewed. Minor issues on the ATBDs remain due. New deliverables for the test phase (PUG, DDF, updated PVRs and ATBDs) will be due next.

The promotion of the project and the results has advanced well. The webpage has been further extended and improved (a.o. with data access through ftp server) and the second issue of the GlobVapour Newsletter has been released. Website actualisation and preparations for the third Newsletter, which is due in July, will commence in the next months.

In summary, the project seems to proceed well in phase 2, and despite of slight delays (e.g. on SSMI/MERIS) the production and validation of the test products (2006-2008) is not jeopardised. The next PM4 is planned for June 2011 in Copenhagen.

Action list

Status O = Open, C = Closed

#	Agenda #	Issue	Actionee	Ref	Status*	Deadline Date	Response Date	Response
1.0 RER								
1	RER 13	FUB and MPI to analyse the albedo effect on water vapour retrievals from MERIS and GOME. MPI will send 630 nm GOME albedo data to FUB for inter-comparison.	JF, TW		C	31.08.2010	17.06.2010	Superseded by action PM_1_Action_5 (IDL tool sent to MPI also used for albedo calculation).
2	RER 16	ERA Interim data to be made available from DWD to DLR. A IASI assessment plan is to be prepared.	TS, MSt	DAP	C	15.04.2010		No ERA Interim data are needed at DLR.
3	RER 19	DMI to clarify the access and property rights of the radio-occultation (RO) datasets used for validation, regarding distribution to external parties.	HG		C	01.05.2010	28.04.2010	<p>The RO data that will be used as a part of the validation data within the GlobVapour project is derived from UCAR data using DMI software. The validation data will only be used internally within the project and will not be stored in a publicly available data base. For these reasons we do not consider that any formal access rights is required.</p> <p>Note: For reasons explicated in a mail from HG to MS 26/3 2010, it is preferred not to include the RO data as a part of the GlobVapour humidity data set. The RO data should be a part of the validation data set as planned from the start of the project. MS agreed to this view in a mail on 29/3 2010.</p>

4	RER 20	DMI and DWD to clarify the contents of the radio-occultation (RO) data.	HG, MS		C	01.05.2010	28.04.2010	The RO data will as a minimum include the following: - temperature profile (K) - specific humidity (g/kg) - pressure and geopotential height - uncertainty estimates and/or quality flags - surface pressure, geopotential height - time - longitude/latitude - units (following a suggestion by MS in mail on 29/3 2010)
5	RER 27	UKMO to further investigate/consolidate the user requirements in view of the User Workshop.	RS		C	01.05.2010	13.11.2010	RBD V1.1 (13.11.2010) and UF V1.1 (11.11.2010)
6	RER 34	Clarify the spectral response function (SRF) of MWR.	BB	TSD	C	16.04.2010	23.04.2010	SRF delivered.
7	RER 45	FUB to purchase the 'globvapour.info' (or .eu) domain, and finalise a draft version (first page) of the GlobVapour website.	JF		C	15.04.2010	29.03.2010	Domain purchased, first version available.
9	RER 48	Brockmann Consult to send out a questionnaire on the Processor software development details (programming language, hardware constraints, interface description, etc.).	UK	SDP	C	01.05.2010	08.06.2010	Questionnaire send to DWD. Recommendation from BC: Clarify open issues of the questionnaire in phone calls with developers.
10	RER 50	DWD to provide the metadata description of all GlobVapour netCDF output products. Clarify compliance with INSPIRE.	TS		C	10.06.2010	22.06.2010	Document "Metadata Definition".

2.0 PM1

1	PM1 05	Perform tests with background fields other than ERA-Interim as input to the retrieval, in order to investigate the effect of different temperature profiles.	MSt		C	31.10.2010	04.03.2011	Internal email with attached figs MSt 17.11.2010 & 03.12.2010. Cleanup & regenerated figs 10.02.2011. Merged into Word doc TS 10.02.2011. (TS) Doc 'GlobVapour_L2_Validation' sent to ESA & FUB 04.03.2011.
2	PM1 10	A consequence of TOP 9 is that no gaps will be filled. It was consensus that gap filling should be avoided for MERIS and for consistency reasons also for SSM/I. However, the User Group will be contacted and asked what their opinion about this issue is. If gap filling is considered useful the User Group is asked to propose a method on how gap filling should be done and how uncertainties should be assigned. This will be send to UKMO (Roger Saunders) for discussion within the User Group.	MS, RS		C	15.07.2010		It has been decided in PM2 that no gap filling will be done.
3	PM1 16	Provide input to website in order to have updated webpage ready until ESA Living Planet Symposium.	All		C	18.06.2010	18.06.2010	Input received and forwarded by NS. Updated page presented on 21.06.2010.
4	PM1 19	Provide Lidar NDACC data.	BB		C	15.07.2010	07.07.2010	Email BB with link.
5	PM1 26	Send the formula for calculation of sun-glint affected areas to MPI-C.	RP		C	18.06.2010	17.06.2010	IDL module 'calc_glint_ana.pro' sent by MSt.
6	PM1 27	Provide comments to the DUE GlobVapour website.	BB		C	18.06.2010	15.06.2010	Emails BB received and implemented. Continuous updates with a.o. Newsflashes.
3.0 PM2								
1	PM2 07	Report on adjacency effects in the User Workshop in Frascati (March 2011).	RP		C	10.03.2011	07.03.2011	Presentation RP. New Action /PM_3) on ATBD update.
2	PM2 08	Compare new algorithm for MERIS retrieval with the operational one.	RP		O	30.06.2011		

3	PM2 10	Explain pixel filling details in current version of ATBD.	MSt		C	10.12.2010	21.03.2011	(NS) Doc 'GlobVapour_D07_ATBD_L3_SSMI_MERIS_V 1.0' updated/finalised.
4	PM2 18	Preparation of a detailed WP for AATSR investigations with defined milestones. To be discussed with ESA (RP/BB) in Frascati next week.	RP		C	15.11.2010		AATSR WP
5	PM2 20	PVRs: Better explain the term 'difference' used in the tables; update statistics in tables (break down the MERIS/SSMI validation to land/sea/coast; only use collocated observations of intercomparisons for all instruments; apply a weighting function to compensate for the latitude effect). Cross-comparison of SSMI-MERIS vs GOME etc. are to be put into the next major version of PVRs.	TS		O	10.12.2010	18.01.2011	- SSMI+MERIS PVR - GOME+SCIAMACHY PVR - IASI+SEVIRI PVR Still to be done: Cross-comparison.
6	PM2 21	ATBDs: Issue of albedo for GOME to be added. Theoretical uncertainties are to be put in the next major version of the ATBDs.	TW, RP		C	10.12.2010	12.01.2011 03.03.2011	- GOME: Email TW 12.01.2011 with info for ATBD, implemented by TS 24.01.2011. ATBD Update (V1.1) approved by TW 25.01.2011. - SSMI: (NS) Doc 'GlobVapour_D07_ATBD_L2_SSMI_V1.0' updated/finalised. (MSt) Doc on L3 see Action #3
7	PM2 23	Input to NL form partners.	All		C	19.11.2010	19.11.2010 17.11.2010	TW (MPI) Marc Ringer (UKMO) RP (FUB) & TS, MSt (DWD) already there.
8	PM2 24	Generate the next Newsletter.	NS		C	10.12.2010	07.12.2010	NL #2.
9	PM2 26	MPI to supply popular-scientific info material (pictures and movies) for the updated web page, to be approved by ESA (BB).	TW/BB		O	31.01.2011 01.06.2011		Deferred by BB (31.01.2011) to June 2011, cq. for discussion in PM_3

10	PM2 30	Update the PMP, considering: - AATSR report from RP on next steps. - Proposal on next steps related to IASI+SEVIRI. - IASI assessment plan and comparison protocol.	MS		C	10.01.2011	10.01.2011	(MS) Doc '20091021_GlobVapour_pmp_v2.0' finalised.
11	PM2 31	Update the User Info for MS.	BB		C	19.11.2010		
12	PM2 32	Contact NOAA & KIT for the IASI Assessment.	MSt		C	17.12.2010		Still awaiting answer from NOAA & KIT.
13	PM2 33	Provide MWR comparisons.	MSt		O	30.11.2010		Awaiting work done by Bruno Picard (who will do the comparisons).
4.0 PM3								
1	PM3 03	Update L2 MERIS ATBD on adjacency effects.	RP		O	30.04.2011		RL: No adjacency effects; the new Aerosol scattering term, which improves the retrieval, will be added to the ATBD.
2	PM3 08	Contact FMI on snow/ice behaviour, that could possibly be used for the SSM/I retrieval.	MSt/BB		O	15.04.2011		Email BB 07.03.2011 to Finish group.
3	PM3 14	Clarify the L3 processing system for GOME, and report on this to BC.	BB/DL		C	01.04.2011	28.03.2011	Diego will provide the L3 processor to BC for implementation.
4	PM3 17	Provide input for the next Newsletter.	RP/RL/ MS		O	15.06.2011		
5	PM3 22	Check with the Contract Officer to change the User Consultation to Test Data set as Payment Milestone.	BB		C	01.04.2011	28.03.2011	Test Data as Payment Milestone confirmed.