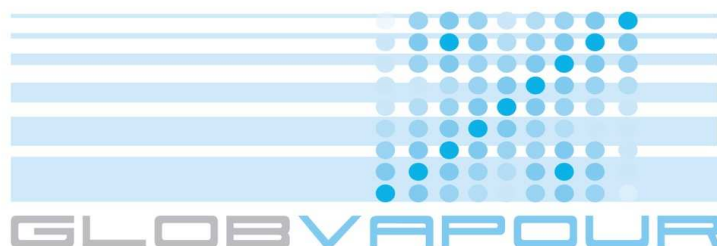




DUE GLOBVAPOUR

Progress Meeting 4

Minutes of Meeting



GLOBVAPOUR

Issue 1 Revision 0

25 November 2011

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

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Participants

Day 1

[BB] Bojan Bojkov (ESA)

[JF] Jürgen Fischer (FUB)

[RL] Rasmus Lindstrot (FUB)

[RP] Rene Preusker (FUB)

[TW] Thomas Wagner (MPI)

[SS] Sander Slijkhuis (DLR)

[KL] Katie Lean (UKMO)

[BP] Bruno Picard (CLS)

[MS] Marc Schröder (DWD)

[MSt] Martin Stengel (DWD)

[NS] Nadine Schneider (DWD)

[TS] Theo Steenbergen (DWD)

[MB] Martin Böttcher (BC)

[CB] Carsten Brockmann (BC)

[RB] Ralf Bennartz (UWisc)

Day 2

[BB] Bojan Bojkov (ESA)

[JF] Jürgen Fischer (FUB)

[RL] Rasmus Lindstrot (FUB)

[RP] Rene Preusker (FUB)

[TW] Thomas Wagner (MPI)

[SS] Sander Slijkhuis (DLR)

[KL] Katie Lean (UKMO)

[BP] Bruno Picard (CLS)

[MSc] Matthias Schneider (KIT)

[MS] Marc Schröder (DWD)

[MSt] Martin Stengel (DWD)

[NS] Nadine Schneider (DWD)

[TS] Theo Steenbergen (DWD)

[MB] Martin Böttcher (BC)

[TA] Thomas August (EUMETSAT)

[RB] Ralf Bennartz (UWisc)

[MH] Michael Hess (DLR)

Agenda

Day 1

- (1) 13:00 Welcome and Opening Fischer, Schröder, Bojkov
- (2) 13:15 Actions from last meeting Schröder
Status and next steps of development and processing
- (3) 13:30 GOME(2) - SCIAMACHY Loyola, Wagner
- (4) 13:45 Combined SSM/I + MERIS retrieval Stengel, Lindstrot
- (5) 14:00 SEVIRI+IASI N. Schneider, Schröder
- 14:30 *Coffee break*
- (6) 15:00 AATSR Preusker
- (7) 15:30 Initial Stand Alone Processing System Böttcher
- (8) 16:00 Validation of test products Steenbergen
- (9) 16:30 Product User Guide, Newsletter,
issue No. 3 and Web update Schneider, all
- (10) 16:45 User Consultation Meeting 2 Schröder, all
- (11) 17:15 Concluding discussions All
(User Group status, users, ...)
- 18:00 *End*
- 19:00 *Dinner at Luise*

Day 2

- (12) 09:00 IASI assessment (15 min each)
- „Recent IASI retrieval developments at EUMETSAT“ August
 - “Recent IASI retrieval developments at DLR” Hess
 - “Recent IASI retrieval developments at KIT” M. Schneider
- 10:15 *Coffee break*
- 10:45 IASI assessment progress Stengel
- 12:30 *Lunch*
- (13) 14:00 MWR Picard
- (14) 14:30 Review of PUG+ATBD and PVR updates Bojkov, all
(no presentation foreseen)
- (15) 15:00 Qualification Review Böttcher
- (16) 15:15 Impact of GRP/ GlobVapour Meeting Schröder, all
- (17) 15:30 Review of plans Schröder, Bojkov
- Updates to the Project Management Plan (PMP)
- Next meetings, conferences, ...
- (18) 16:00 AOB All
- (19) 16:15 Summary: Decisions and actions All
- 16:30 *End*

Top	Issue	Com	Cat	Content	Actionee	Ref.	Status	Deadline
1.	Opening	MS, TW	I	JF, 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. Details are in the attached action list.</p> <p>PM2 #5: Slides on (preliminary) validation; new separate PVR or TN with full validation.</p> <p>PM2 #9: Web story- closed; new Action with deadline 15 August (before EUM Conf).</p> <p>PM2 #13: BP ongoing work, opportunity for future research; will be presented tomorrow.</p> <p>PM3 #1, #2, #4: superseded.</p> <p>PM4 #1: No adjacency effects but aerosole effects; will be in next ATBD.</p> <p>PM4 #2: Contacted FMI; land products (snow over land), therefore at present not very relevant, but maybe when Snow-2 is there.</p> <p>PM4 #3: Closed.</p> <p>PM4 #4: NL deadline for input will be extended.</p> <p>PM4 #5: Closed.</p>		Item 2		
3.	Action #1	MS	A	Compare new algorithm for MERIS retrieval with the operational one (Supersedes Action PM_2 #2)	RP	Item 2		15.09.2011
4.	Action #2	MS	A	Supply popular-scientific info material (pictures and movies) for the updated web page, to be approved by ESA (Supersedes Action PM_2 #9).	TW / BB	Item 2		15.08.2011
5.	Presentation	SS	I	The test data have been delivered for GOME-2. The assimilation of the retrieval scheme to GOME and SCIAMACHY is finished. It is foreseen to finish		Item 3		

Top	Issue	Com	Cat	Content	Actionee	Ref.	Status	Deadline
				<p>homogenisation and processing of final products in early to mid October. In offline discussions it was agreed that availability of final products would be needed at 01 October 2011 in order to ease timely validation. Also, data for 2006 as well as weekly test products can be expected end of July. Finally, it was discussed that an updated ATBD which includes homogenisation can be expected in mid of August. An update of the processing system is considered to be uncritical as the Level2-to-Level3 processor requires reading and application of a few coefficients only.</p> <p>Finally, it was recommended to compare homogenised products with products from SSM/I.</p>				
6.	Presentation	TW	I	<p>The principles of merging the sensors are presented. The idea is to fit low resolution offset/trends (GOME-1 + SCIA collocation) to high resolution products.</p> <p>The influence of the clouds are discussed, as well as the differences between sensors being due to radiance sensitivities and calibration. It is suggested that possibly the seasonal offsets may be used.</p>		Item 3		
7.	Presentation	RL	I	<p>The updated retrieval mechanism and current status of MERIS is shown. A scattering correction is introduced using MOMO LUTs. The L2 validation results (2003-2005) exhibit high quality.</p> <p>Improvement of the cloud detection over snow can be feasible when using GlobSnow snow flag.</p> <p>The results over coastal area have been largely improved with the updated MERIS retrieval, and also over land the results reveal high quality in Level 2 validations. The ground-based MWR data are</p>		Item 4		

Top	Issue	Com	Cat	Content	Actionee	Ref.	Status	Deadline
				<p>considered to be most trustworthy as reference data.</p> <p>It is planned to use the GFS or ECMWF temperature profiles to test potential improvements in the future.</p>				
8.	Presentation	MSt	I	<p>The updates on the SSM/I retrieval are demonstrated.</p> <p>The term “global hybrid” is used to explain the utilisation of background information from climatology (water vapour) and ERA Interim (else).</p>		Item 4		
9.	Presentation	MS	I	<p>Progress on the SEVIRI+IASI is presented. In particular, the diurnal cycle of the difference of SEVIRI+IASI product and ground-based observations from MOL has been shown, exhibiting no clear added value of the merged product over the single sensor product.</p> <p>MS notes that a publication is planned, which briefly introduces the (powerful) method and explains why added value is not clearly evident in the validation.</p>		Item 5		
10.	Decision	BB/MS	D	<p>BB suggested that in view of the low cost/benefit ratio that the SEVIRI+IASI processing can be stopped. However, the information and explanation why it is not showing clear added value over individual products is useful in itself.</p>		Item 5		
11.	Presentation	RP	I	<p>First results of the AATSR 1D-VAR are shown, revealing relatively large errors for TCWV. The ATBD will be delivered by FUB next week.</p> <p>The data acquisition has been completed, and the prototype months have been processed. The processor is still under development, and is expected to be ready in August.</p> <p>AATSR was designed to be insensitive to WV.</p>		Item 6		

Top	Issue	Com	Cat	Content	Actionee	Ref.	Status	Deadline
				However, it has the advantage of a high spatial resolution (1 km) which is outstanding for WV retrievals over ocean.				
12.	Decision	BB/MS/ RP	D	It was decided that the processing of L2 AATSR products is sufficient. Thus, L3 validation (that is, a dedicated PVR) is not required. However, a comparison to MWR products will be carried out by FUB and a regional quality assessment by DWD, e.g. against SSM/I.		Item 6		
13.	Presentation	MB	I	The design and status of the Processing System are presented in detail. It was stated that processors should be provided to BC as shown for SSM/I.		Item 7		
14.	Presentation	TS	I	<p>The L3 validation of SSMI/MERIS and GOME test products are shown, together with first AATSR results and the cross-comparison of SSM/I+MERIS versus GOME-2 (four prototype months). Review comments were provided.</p> <p>It is suggested that the comparison to GUAN and AIRS on L3 basis should exclude the cloudy scenes, otherwise one should expect a dry bias in the 'clear sky' satellite retrieved monthly means of TCWV. The reason is that MERIS and GOME are monthly clear sky products.</p> <p>The quality of cloud clearance of AIRS data was critically discussed.</p>		Item 8		
15.	Action #3	BB	A	Analyse consistency between MERIS and SSM/I.	NS, MS, RL	Item 8		08 September 2011
16.	Presentation	NS	I	The PUG is briefly discussed and review comments		Item 9		

Top	Issue	Com	Cat	Content	Actionee	Ref.	Status	Deadline
				<p>were given (include information on flags and review limitation section).</p> <p>The next two NLs are introduced. Intended subjects for both are shown, with a call for contributions for NL3 (topics: UCM2, test data, GEWEX meeting). Suggested subjects for NL4 are the final products, processing system, outlook, and results from the IASI assessment.</p> <p>Also the Website is discussed. BC will continue hosting the website after the Project. After the projects end it should be clearly stated on the website that the project is finished, and a link for contact (to DWD) should be provided.</p>				
17.	Action #4	NS	A	Provide input to NL and release NL.	NS, RL, TW	Item 9		15 August 2011
18.	Action #5	MS/BB	A	It is considered important to have the test data available well before the UCM2. The SSMI+MERIS product will be provided in 0.5 deg resolution to ease utilisation. When available first final products will be added.	NS, RL	Item 9		01 August 2011
19.	Decision	MS/BB	D	<p>The UCM2 will be held on 8 September in Oslo in parallel with the EUM.</p> <p>Announcements shall be made on the GlobVapour Website, per email, and in the Poster Session at the EUM Conference.</p>		Item 10		
20.	Presentation	TA	I	<p>The EUMETSAT efforts on the operational IASI L2 development is demonstrated.</p> <p>JF suggests that using the solar spectral range in addition might further improve the TCWV retrieval.</p>		Item 12		

Top	Issue	Com	Cat	Content	Actionee	Ref.	Status	Deadline
				<p>RB suggests to make comparison of different climatologies to effect of background on product quality.</p> <p>TA expects that MOL data will be processed in the next few months and should be available before end 2011.</p> <p>TA formulated a series of questions for discussion.</p>				
21.	Presentation	MH	I	<p>The results of 4 months of MOL data processing are presented.</p>		Item 12		
22.	Presentation	MSc	I	<p>The recent IASI retrieval development at KIT are presented via Skype.</p> <p>In the next step, the focus will be on observations over land. A post-doc will start in August, first results are expected end of 2011.</p> <p>TA offers to assist in retrieving data from the EUM archive and discuss technical details offline.</p>		Item 12		
23.	Presentation	MSt	I	<p>The rather limited number of valid collocations hampers final conclusions on the IASI assessment.</p> <p>The IASI assessment framework was considered valuable and can be offered to e.g. EUMETSAT.</p> <p>NOAA data will be included in the short term, potentially also EUM V5 data later in the year. Updated results will be communicated to/with the direct participants in the IASI Assessment.</p> <p>It was discussed that box filtering might be included in processing of ground-based observations as weighting functions might not be available from all partners in time.</p>		Item 12		

Top	Issue	Com	Cat	Content	Actionee	Ref.	Status	Deadline
				<p>It was further discussed that the assessment would strongly benefit from the consideration of more stations to increase statistical significance. This feasibility of providing more data is currently discussed with partners.</p> <p>MS proposed to summarise results for publication in the GEWEX Newsletter.</p>				
24.	Presentation	BP	I	<p>Results for MWR comparisons are shown.</p> <p>The SSM/I dataset used by BP seemed to have a cut-off limit of about 60 kg/m2. The SSM/I Wentz dataset cuts off at 75 kg/m2. It would be good to know which SSM/I dataset has been used.</p> <p>RB notes that the (decreasing) trend shown in the SSM/I plot is opposite to the one observed in the SSMI Wentz.</p> <p>The newly processed SSM/I 1D-Var data will be made available on the DWD ftp-server.</p> <p>BP is invited on behalf of the project to present further MWR results at the UCM2 in Oslo, confirmation pending, and on behalf of ESA to the final meeting.</p> <p>Future plan: Process more data, with a focus on coastal area, and looking into trends compared to Radiosonde observations. Depending on quality BB suggests to consider 1D-Var retrieval method rather than continuing with neural networks.</p>		Item 13		
25.	Decision	MSt / BP	D	<p>Process ENVISAT MWR at DWD and implement in processing system, transfer to CLS, with further quality analysis done at CLS.</p>		Item 13		
26.	Discussion	BB	I	<p>Comments on the PUG have already been made at</p>		Item 14		

Top	Issue	Com	Cat	Content	Actionee	Ref.	Status	Deadline
				<p>Agenda Item 9.</p> <p>BB supplied a commented hard-copy of the SSMI+MERIS and GOME PVRs.</p> <p>ATBD updates have already been discussed.</p>				
27.	Discussion	MB / BB / MS	I	<p>The QRR shall be kept simple as discussed in PM_3, the presented plan can be kept. The final system can be delivered on as virtual machine at ESRIN premises. The presence of DWD at the review at ESRIN (or elsewhere) is not necessarily required.</p>		Item 15		
28.	Decision	MB / BB / MS	D	<p>In view of good progress in processor and processing system development QRR and ARR can be combined into a single review.</p>		Item 15		
29.	Discussion	BB / MS	I	<p>The GEWEX water vapour assessment will likely start its first phase in 2012, focussing on a few years from the last decade (2000-2010). The second phase will then focus on long-time series products.</p> <p>The project partners are encouraged to participate in the assessment with the GlobVapour water vapour products. It is further envisaged to transfer GlobVapour approaches into the assessment, in particular IASI assessment approaches.</p>		Item 16		
30.	Discussion	MS	I	<p>It was discussed that a short progress meeting might take place during the EUMETSAT conference. Date and was not decided. The number of participants is likely limited.</p>		Item 17		
31.	Decision	BB / MS	D	<p>Several IASI retrieval schemes with reasonable quality are already available (e.g., from EUM, NOAA, UKMO). The development and associated improvements are</p>		Item 17		

Top	Issue	Com	Cat	Content	Actionee	Ref.	Status	Deadline
				still ongoing at those institutes and covered with significant manpower. It was therefore decided to transfer remaining efforts from the IASI processing and processor development into the IASI assessment.				
32.	Decision	BB / MS	D	The SSM/I only product might be processed from 1991 onwards if time permits. In particular, this is considered beneficial for the validation of MWR products at CLS.		Item 17		
33.	Decision	MS / BB	D	Updated, likely final ATBDs for SSM/I+MERIS (also MWR), GOME/SCIAMACHY/GOME2 and AATSR are planned to be ready in mid of August.		Item 17		
34.	Action #6	MS	A	Final products need to be ready in early to mid October latest to allow for timely validation.	NS, RL, SS	Item 17		01 October 2011
35.	Decision	MS/BB	D	The final meeting will be held on 17/18 January 2012 at ESRIN in Frascati, Italy.		Item 18		

Conclusions

Progress was made and presented in all processor development, processing and validation packages. Except for homogenisation of GOME-like instruments the retrieval development can be considered as final. In particular, it could be shown that the updated MERIS retrieval exhibits superior quality over the previous version over coasts and land. The AATSR development is well advanced, and the AATSR product exhibits relatively low quality, as expected. Additional deliverables for the Test Phase (PUG, updated PVRs) have been discussed and reviewed. Minor issues on the ATBDs remain due for August. A more thorough analysis of added value of the merged SEVIRI+IASI product has been presented. The added value is not evident so that - also in view of the low cost/benefit ratio - the existing half year data set will not be extended. Remaining efforts from IASI (processor) development will be shifted to the IASI assessment. It was discussed that the 1D-Var MWR retrieval might be considered for implementation in altimetry. This will depend on quality relative to present algorithm, and further comparisons are foreseen. The processing environment has been defined, together with a draft version of the design definition. First processors (SSM/I L2, MERIS L2, and SSM/I+MERIS L3) have been successfully implemented.

The promotion of the project and the results has advanced well. The next User Consultation Meeting will be carried out in parallel to the EUMETSAT Users Workshop in Oslo on 8 September 2011. The newsflash on the webpage will be updated in July, announcing the UCM. It is foreseen to release the third Newsletter prior to UCM, that is, in August.

It is the declared plan of the project to participate with the majority of its products in the GEWEX water vapour assessment. It is further envisaged to promote e.g. the IASI assessment approach as basis for the GEWEX assessment.

In summary, the project seems to proceed well in phase 2, and despite of slight delays (e.g., SCIAMACHY/GOME2 products) the production and validation of the test products (2006-2008) is finished. It was noted by all partners that the finalisation of final products together with required documentation is ready in time to close the project as foreseen. The final meeting of the project is planned for 17/18 January 2012 at ESRIN, Frascati, Italy.

Action list

Status O = Open, C = Closed, S = Superseded

#	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		S	30.06.2011		Superseded with PM_4 Action #1.

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 First cross-comparisons have been shown at PM4. Cross-comparison will be extended to final products.
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		S	31.01.2011 01.06.2011		Deferred by BB (31.01.2011) to June 2011, cq. for discussion in PM_3, superseded by Action PM_4 #2

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		C	30.11.2010	07.07.2011	Presentation by BP, will be extended.
4.0 PM3								
1	PM3 03	Update L2 MERIS ATBD on adjacency effects.	RP		S	30.04.2011		No adjacency effects; the new Aerosol scattering term, which improves the retrieval, will be added to the ATBD. Superseded with PM_4 Action #1.
2	PM3 08	Contact FMI on snow/ice behaviour, that could possibly be used for the SSM/I retrieval.	MSt/BB		C	15.04.2011	07.07.2011	Email BB 07.03.2011 to Finish group. The products from FMI cover land only. An extension to oceans is foreseen but after GlobVapour end.
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	DL provided the L3 processor to BC for implementation.
4	PM3 17	Provide input for the next Newsletter.	RP/RL/ MS		S	15.06.2011		Superseded by PM_4 Action #4
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.