MIPAS QWG #12 – Minutes and Action Items

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L2: Claudio Belotti (IFAC)
Revision: F. Niro, 09/03/2007
T. Fehr, 15/03/2007

MIPAS QWG#12
14 – 16 February 2007
Frascati, ESRIN

List of attendants

Ginette	Aubertin	BOMEM	14-15 February 2007
Sven	Bartha	ASTRIUM	14-16 February 2007
Manfred	Birk	DLR	14-16 February 2007
Claudio	Belotti	IFAC	15-16 February 2007
Gabriele	Brizzi	UB	15-16 February 2007
Bruno	Carli	IFAC	14-16 February 2007
Massimo	Carlotti	UB	14-16 February 2007
Simone	Ceccherini	IFAC	14-16 February 2007
Marta	De Laurentis	ESA	14-16 February 2007
Anu	Dudhia	OU	15-16 February 2007
Thorsten	Fehr	ESA	14-16 February 2007
Herbert	Fischer	IMK	14-16 February 2007
Anne	Kleinert	IMK	14-16 February 2007
Peter	Mosner	ASTRIUM	14-16 February 2007
Bianca	Maria Dinelli	ISAC	14-16 February 2007
Fabrizio	Niro	ESA	14-16 February 2007
Enzo	Papandrea	UB	15-16 February 2007
Gaetan	Perron	BOMEM	14-15 February 2007
Chiara	Piccolo	OU	15-16 February 2007
Piera	Raspollini	IFAC	14-16 February 2007
Marco	Ridolfi	UB	14-16 February 2007
Georg	Wagner	DLR	14-16 February 2007

ACTION ITEMS

AI ID	AI description	Responsability	Due date
	Level 0		
AI_L0_12.01	ESA to provide on uranus ftp server the new IODD documents of L1B and L2 products for the next IPF v5.0 release	ESA(TF)	Closed
AI_L0_12.02	ESA(MdL) to perform a test to reinject plan angles in CFI planning tool to check if obtained angles are the same as the planned angles.	ESA(MdL)	Closed
	Level 1		
AI_L1_12.01	ESA/BOMEM/EADS to discuss the impact of changing the #sweeps per scan definition in L1B MPH products for L2 retrieval	ESA(TF) / BOMEM(GP) / EADS(SB)	March 1st
AI_L1_12.02	BOMEM(GA) to update L1B IODD v5 A for wrong format definition in L1B IODD v5	BOMEM(GA)	Closed
AI_L1_12.03	IMK(AK) to check if other bands are affected when band D is corrupted due to sunlight scattered into MIPAS FOV by low altitude clouds	IMK(AK)	Next QWG
AI_L1_12.04	BOMEM(GP) to check the number of bits in ADC counts representing noise on raw data IF16 measurements.	BOMEM(IMK)	Next QWG
AI_L1_12.05	ESA(FN) to redo the analysis with Gain vs NESR on same spectral range.	ESA(FN)	Next QWG
AI_L1_12.06	DLR(MB) to contact Martin Endemann to check temperature effect on FCEs	DLR(MB)	Next QWG
AI_L1_12.07	ESA (FN), to provide Restituted files for validation campaign L0 products not processed yet due to problem of generating Restituted file covering time period around midnight. BOMEM(GA) to process L0 products with Restituted files.	ESA(FN) BOMEM(GA)	Closed
AI_L1_12.08	AI_L1_12.07 ESA(MdL) to check if it would be possible to have IF16 done in sideways	ESA(MdL)	Next QWG
AI_L1_12.09	OU(AD) to simulate the effect of microvibrations on the L2 retrieval	OU(AD)	Next QWG
AI_L1_12.10	BOMEM(GA) for F/R problem, to truncate high resolution to low resolution and check if same oscillations as in high resolution. Reprocess L0 products (NRT, OFL) with L1B prototype	BOMEM(GA)	Next QWG
AI_L1_12.11	BOMEM(GP) to process orbit 8740 with L1B prototype corresponding to IPF 4.61, to process also with new L1B prototype and IMK(AK) to verify if oscillations are present	BOMEM(GP) IMK(AK)	Next QWG
AI_L1_12.12	BOMEM(GP) to process orbit 8740 with L1B prototype corresponding to IPF 4.61, to process also with new L1B prototype and IMK(AK) to verify if oscillations are present	BOMEM(GP)	Next QWG
AI_L1_12.13	BOMEM (GP), to assess the impact of using a	BOMEM(GP)	March 15th

	pre-compute table for the interpolation vs truncation of interferagram.		
AI_L1_12.14	BOMEM(GA) to provide time of the year of 19581 L0 product used for spectral calibration in AI_L1_11.17	BOMEM(GA)	March 1st
	Level 2		
AI_L2_12.1	Astrium (Michael Schmitt) to modify ML2PP to avoid that a sweep for which a band is corrupted is flagged as corrupted sweep.	Astrium (MS)	Next QWG
AI_L2_12.2	ESA (F. Niro) to send to Astrium one orbit for which only band D is corrupted.	ESA (FN)	Next QWG
AI_L2_12.3	ESA (M. De Laurentis) to plan 4 decontaminations per year	ESA (MdL)	Next QWG
AI_L2_12.4	OU to reduce the error associated to the ILS width of a factor of 10 in the next microwindows selection	OU	Next QWG
AI_L2_12.5	DLR to write a TN about the strategy to assess the gain error in the cases of FR and RR. Different results because they look to different effects	DLR	Next QWG
AI_L2_12.6	H. Oelhaf to consider unifying the floating altitude laws for Nominal mode and UTLS-1.	IMK (HO)	Next QWG
AI_L2_12.7	IFAC to correct the bug found in the Marquardt Algorithm in the scientific prototype and deliver the required documentation on the correction.	IFAC	Next QWG
AI_L2_12.8	IMK to check in December 2006 L1 for evidence of F/R signals.	IMK (AK)	Next QWG
AI_L2_12.9	IMK to check on the error estimate of the retrieved tangent altitudes	IMK (AK)	Next QWG
AI_L2_12.10	ESA to ask ECMWF the requirements for NRT operations (products/height)	ESA (TF)	Next QWG
AI_L2_12.11	ESA to estimate the feasibility of MIPAS NRT operations.	ESA (TF)	Next QWG

Presentations:

All meeting presentations are available on the Uranus server:

ftp://pcf:Ur0Fr0@uranus.esrin.esa.it/MIPAS/To_QWG/20070214-QWG12/Presentations

0) Level 0

Welcome and Introduction by T.Fehr (ESA)

0.1 Introduction (T.Fehr/ESA)

- Current expected lifetime until 2010.
- The new L2 processor will be used to process RR over-sampled data will be about 3.5 more time consuming with respect to the processing of FR data. Going to 50% duty cycleand above has to be negotiated with the ground segment.
- IMK(AK) asks when the new IPF 5.0 will ready to reprocess FR/RR products. ESA(TF) said that IPF 5.0 should be ready in about 6 months but it requires first a 2 months verification period. The ground processing update will be done in 2 steps: 1) new processor with current AIX ground segment 2) processing on the new LINUX environment. The gain in speed for L2 processing with the new ground segment is not yet clear.

AI_L0_12.01: ESA(TF) will provide on uranus ftp server the new IODD documents of L1B and L2 products for the next IPF v5.0 release

0.2 Action Item Status (F.Niro/ESA)

Presentation of AI status (was done on February 15th)

- AI_L1_8.10: closed by BOMEM(GA) presentation. It remains the F/R problem already covered by other action items.
- AI_L2_9.14: still open. UO(AD) waiting for ILS error (2nd derivative error)
- AI_L1_10.06: IMK(AK) there is no correlation with Spectral calibration. Close the AI.
- AI_L1_10.13: Waiting for Astrium(SB) program. Still open
- AI_L1_10.26: DLR(MB) to write a TN about effect of ice on Non-Linearity. Modify AI description.
- AI_L1_11.10: Closed. Microvibrations were already present on ground.
- AI_L1_11.11: On going
- AI_L1_11.12: A discussion offline must be done before deciding if closing.
- AI_L1_11.15: Closed, new numbers on SCHIMACHY. ESA to forward information.
- AI_L1_11.16: On going. No response for GOMOS
- AI_L2_11.02: Closed
- AI_L2_11.06: Closed
- AI_L2_11.07: Merge with AI_L2_10.13
- AI_L2_11.09: Closed by presentation

0.3 Mission Planning Status (M.de Laurentis, ESA)

- Action Items resulting from ST and QWG (AI_l1_9.03, L0_10.1, L1_11.2 are closed)
- Sideways LOS will start to be planned on 8 March 2007. Orbit 26246 will have no roll, no pitch commanded.
- IF16 correctly acquired, 2 orbits in 2005 (19146, 19147), 1 orbit in 2007 (25426, 25427). There was previously a problem with ground segment processing causing the IF16 L0 products creation failure.

- Position of the datagap is basically at the same place in the orbit since October 2006
- Campaigns
  - ECOWAR campaign will be supported
  - Kiruna Balloon campaign: Feb-April 2007
  - Teresina/SCOUT campaign October-December (tbc)
- New Planning:
  - MA/UA planned more frequently
  - Baseline Scenario over 10 days
  - Sideways LOS: Two Consecutive sideways LOS cannot be commanded, one orbit will be used
- Full orbit across-track
  - Science team needs to provide the corresponding input

AI_L0_12.02: ESA(MdL) to perform a test to reinject plan angles in CFI planning tool to check if calculated angles are the same as the planned angles.

0.4 Data Acquisition Status (F. Niro/ESA)

- IF16 planned and acquired
- Level0 availability
  - Currently L0 availability at 95% with respect to the planned time
  - Level 0 duty cycle approaching 50 %

0.5 Mission Plan Document Status (Science Team)

- No presentation
- Most of the update already presented by ESA (MdL)
- Document will be delivered by Hermann Ölhaf to QWG when ready

0.6 Instrument Status (P. Mosner/Astrium)

Extremely reduced error rate

Overall Instrument Status:

- Higher Duty Cycle > 50 %
- INT anomalies further improved
- Cooler operates more stable due to the more frequent decontamination

INT anomaly:

- Cold environment (like in February/August) is more prone to Turn-Around error
- Heater-on and better cooler performance reduces the amount of errors significantly, particularly the amount of "Turn-Around" errors. None since 4.5 months.
- Start-up errors slightly increased.
- 4% error unchanged in the last 7 months, in particular the increase of duty cycle did not change the frequency of this error

Motor current analysis:

- Motor current January 2007 data is good
- Startup failure: Acceleration in the wrong direction. Seven times in the last Quarter, two times in the last six weeks
- Since April 05 stable failure rate
- Discussion with DLR(MB) if there could be ice formation on IDU when heater is OFF. EADS(PM) said that should be no ice formation at -40C giving the pressure conditions around ICU

Cooler / Thermal Performance:

- INT colder by about 1K compared to last year
- Temperatures of all elements are significantly cooler than last year due to the better performance of the cooler:

- Performance always increased following decontamination (planned or PMSOL/EQSOL)
- Cooler balance looks good, no "loose" parts
- Since May 2006 acceleration level is always well below warning

Software:

- No ICU anomaly Oct 2006 – Jan 2007
- 6 Feb 2007 SPE Processing timeout, this is a known problem: re-occurrence of error already seen in Dec-03

Conclusions:

- INT performance improved
- Cooler performance is very good.

Recommendations:

- Decontamination: one in May and one or two more
- Increase duty cycle from 50% to 70% within next months
- Return to manual recovery instead of auto recovery. This needs to be discussed at the next IOP meeting.

1) Level 1B

1.1 Level 1B Configuration Status ESA (FN)

- New Baseline IPF 5.0
- ADFs v7.0 with start validity date "1 January 2005".
- For L0 products containing more than one scenario (ex: Nominal and UTLS mode) with different #sweeps per scan, leads to confusion about the value to put in the L1B MPH field "#sweeps per scan".

AI_L1_12.01 ESA/BOMEM/EADS to discuss the impact of changing the #sweeps per scan definition in L1B MPH products for L2 retrieval.

AI_L1_12.02 BOMEM to update L1B IODD v5 A about a wrong format in IODD v5 scan ADS information for spectral quadratic coefficients.

1.2 L0 and L1B Anomaly Investigation Status ESA (FN)

- Corrupted band D anomaly (AI_L1_11.03)
  - Correlation with clouds
  - Not due to band D gain setting
  - Not due to sunlight FOV
  - It is due to sunlight scattered into the FOV from low clouds
- Discussion about reducing PAW gain in band D vs NESR:
  - DLR(MB) PAW gain can be lowered without reducing the NESR if number of bits in ADC count representing the noise is large (~10 bits).
  - IMK(AK) said she needed to lower gain by factor 16 in presence of scattered sunlight.
  - No actions are recommended to ESA resulting from the investigation, in particular as Band D is not used in operational L2 retrievals.

AI_L1_12.03 IMK(AK) to check if other bands than band D were impacted by sunlight scattered into MIPAS-B FOV from low altitude clouds.

AI_L1_12.04 BOMEM(GP) to check the number of bits in ADC counts representing noise on raw data IF16 measurements.

1.3 Level 0 and Level 1B Monitoring ESA(FN)

- Gain long term monitoring
  - Slope of the gain increase is decreasing showing that the instrument is more and more "clean" due to the frequent decontamination and PLSOL
- Gain Vs NESR:
  - NESR variation in band A is linked to gain variation
  - It would be interesting to plot the Gains Vs NESR including spectral variation.

AI_L1_12.05 ESA(FN) to redo the analysis with Gain and NESR on the same spectral range.

- FCE long term analysis:
  - The FCEs are strongly related to INT stability and IDU temperature.

AI_L1_12.06 DLR(MB) to contact Martin Endemann to check the temperature effect on FCEs.

1.4 Status of the L1B prototype BOMEM (GP)

- Review of the validation L1B dataset processing

AI_L1_12.07 ESA (FN), to provide Restituted files for validation campaign L0 products not processed yet (due to problem of generating Restituted file covering midnight period). BOMEM(GA) to process L0 products with Restituted files.

1.5 L1B Investigation Status

a) Pointing BOMEM (GP)

- Noise verification for LOS channel D1/D2
  - Noise level did not increase since orbit 8808
  - In rearward LOS no roll can be retrieved from the model when looking at the dependence on azimuth angle
  - Sideways LOS: last successful March 2003. Not conclusive: -10 to -24 mdeg.
- Pitch
  - SCHIMACHY similar
  - For MIPAS is ~ 25 mdeg
- Roll
  - No roll larger than 50 mdeg observed by other instruments
  - No roll from MIPAS rearward LOS measurements
  - Roll larger than 50 mdeg is seen only with Level 2 retrieval
- Possible conclusion:
  - Bug/Misuse/wrong input to CFI Software used to compute the tangent height altitude.
- Others:
  - DLR(MB) pointing jitter in rearward (few 100 meters)
  - First sideways continuous has to be tested successfully.

AI_L1_12.08 ESA(MdL) to check if it would be possible to have IF16 done in sideways .

b) Microvibrations on Radiometric Accuracy DLR (MB)

- No change in the µvibration from the on-ground measurements during the mission
- Intrinsic to the mirror drive
- No specifications of this effect
- Offset by a factor of about 1% going to zero at the high frequency border of the band
- Maximum microvibration induced error in the order of the NESR
- Systematic error
- Spectral dependent and tangent altitude dependent
- Does not affect the gain as it will be cancelled out in the averaging
- Discussion about microvibrations effect on L2 processing:
  - IFAC(BC) Level 2 will compensate with the continuum. Might be a possible reason why the continuum do not fit the expected atmospheric continuum
  - DLR(MB) said that it should be possible to simulate the effect of microvibrations and see the impact on L2 retrieval. Any candidate from L2 team to do the simulation?
  - OU(AD) will do the simulation. If effects of microvibrations < noise, everyone from QWG gets a beer. If effects of microvibrations > noise, MB gets a beer.

AI_L1_12.09 OU(AD) to simulate the effect of microvibrations on the L2 retrieval (beer award!).

c) Forward / Reverse IMK (AK)

- No oscillation in the RR data (F-R), no bias
- Stronger oscillation FR in band B/C, connected to processing
- NRT does not show the oscillations, only OFL
- Oscillations might have an effect on the retrievals
- Substantial differences in the versions 4.55/4.59 and 4.61
- Strong oscillations in v4.61
- Only bands A, AB, C
- Differences in the order NESR/10
- In reduced resolution F/R difference is removed
- BOMEM(GP) oscillations seen also on the Gain
- Further inversigations on orbit 8740

AI_L1_12.010 BOMEM(GA) to truncate high resolution to low resolution and check if same oscillations as in high resolution. Reprocess L0 products (NRT, OFL) with L1B prototype.

AI_L1_12.11 BOMEM(GP) to process orbit 8740 with L1B protype corresponding to IPF 4.61, to process also with new L1B prototype and IMK(AK) to verify if oscillations are present.

AI_L1_12.12 BOMEM(GP) to provide gain functions corresponding to the investigated orbits.

d) LOS retrievals IMK (AK for Michael Hopfner)

- Too large $\_^2$ in IMK RR mode
- Change the width of the SINC function

AI_L1_12.13 BOMEM(GP) to assess the impact of using a pre-compute table for the interpolation vs. truncation of interferogram.

e) AI_L1_11.17 investigation BOMEM (GA)

- OU(AD) High variations on peak height for CO_2 at different latitudes could be explained by time of the year.

AI_L1_12.14 BOMEM(GA) to provide time of the year of orbit #19581.

- Alternative ways to do the spectral calibration processing
- Using long term results instead of calibration along the orbit
- IFAC(BC) : the spectral calibration requirement for RR mode changes from FR by SQRT(2.5)

f) AI_L1_10.08 SABER Comparison investigation BOMEM (GA)

- Forward/Reverse offset problem
- Results are confirmed by AK investigations about F/R problem.

1.7 Review Level 1B workplan (BOMEM/All)

Highest priority:

- Improve LOS calibration
- Improve detector non-linearity modelling

Medium priority:

- Revise spectral calibration/correction

2) Level 2

2.1) Level 2 Configuration Status (Fabrizio Niro, ESA)

- ADF 6.0 for RR-27 delivered, used to process 200 orbits with ml2pp 5.0 on GRID environment. New L2 files cannot be read with old tools, ASCII dump possible with a tool developed by Astrium. BEAT will be updated soon to read the new file version.
- IPF processor will be upgraded as soon as possible.

2.2) Anomaly Investigation Status (Fabrizio Niro, ESA)

- There are no updates since last QWG meeting
- L2 missing data at the South Pole is cause by band D corruption (due to saturation), in the current baseline a sweep is considered corrupted if any band is flagged as corrupted.
- A discussion is made about changing the current approach as in this case could lead to missing profiles. Moreover OU is delivering backup OM to retrieve data if a band is missing; this backup option is never used.
- TF proposes to keep this approach during the verification of RR measurements vs. correlative measurements, as data loss is small. After the completion by Astrium of the already scheduled documentation delivery, Astrium will change the code to avoid that a sweep for which a band is corrupted is flagged as corrupted sweep. This modification will be tested analysing one orbit that TF will provide to Astrium, for which only band D is corrupted.

2.3) Level 2 Monitoring (Fabrizio Niro, ESA)

- L2 daily monitoring is updated; there are no results since there are no L2 data files.
- Request for suggestions on monitoring baseline evolution.

2.4) ML2PP Status (S. Bartha, ASTRIUM)

- Since the delivery of ml2pp 5.0 (10 October 2006) software change requests were cured by patches, in particular correction to use the ILS quadratic coefficient from L1 and floating altitudes.
- Two minor bugs in the IODD will be corrected with version 5.0b wrong spare field length and averaging kernels output precision).
- SB proposes a schedule for the open work:
  - DPM completion by the end of March
  - TDD/TDS by the end of April

2.5) Level 2 Investigation/Study Status

+ L2_11.05 Optimisation of decontamination occurrence, Claudio Bellotti (IFAC)

- MIPAS operation in discontinuous mode considered
- Suggests a method to determine the frequency of decontaminations
- Recommendation is to decontaminate every 65-130 days.

AI L2_12.3 ESA (M. De Laurentis) to plan 4 decontaminations per year.

+ Level 2 tests on selected microwindows, Simone Ceccherini (IFAC)

- On 30 October 2006 a new set of microwindows for pT retrieval was delivered by OU
- SC presents tests made on orbit 10798 (full resolution and artificially reduced resolution) using this new set of microwindows.
- The new set solves the issue caused by discontinuity in the OM that was observed in the previous release of pT microwindows, but we see an increase on the $_{}^{2}$ for T retrieval and a decrease for the other species. Analysing $_{}^{2}$ differences between day/night measurements it is observed that significant differences were found for pT and O3, this could suggest a Non-LTE effect
- Anu Dudhia suggests that $_{}^{2}$ increase is to be expected as more microwindows are now used reducing the random error; this could also be the cause of the day&night differences as long as systematic error due to non-LTE remained the same.

+ L2_10.08 Investigations on ILS error causes, Piera Raspollini (IFAC)

- Piera R. reports on the test made to understand the discrepancies in IFAC and OU results.
- Different effects were analysed by the two teams.
- She demonstrates that 2nd derivative of the spectrum does not give information on the line width for all the possible line shapes. A possible cause of the correlations found by OU is identified in the ILS/AILS truncation.
- AD states that other error causes could be found for the correlations between residuals and 2nd derivative and he agrees to reduce the error associated to the ILS width of a factor of 10 as found by IFAC tests.

AI L2_12.4 OU to reduce the error associated to the ILS width of a factor of 10 in the next microwindows selection.

- BC asks which other error estimations could be changed to improve the next microwindows selection.
  - AD suggests better assessment of Gain error.
  - This is not going to significantly affect the microwindows selection but only the total error budget.

AI L2_12.5 DLR to write a TN about the strategy to assess the gain error in the cases of FR and RR. Different results because they look to different effects

+ Level 2 Auxiliary data V6.0, Piera Raspollini (IFAC)

- PR reports on ADF V6.0 delivery. Both Nominal and UTLS-1 mode can be processed with the same ADF2 files with the exception of the PS2 aux files.
- Three PS2 files were provided to ESA. The difference is due to the different floating altitude law adopted for Nominal measurements before 3 June 2005, after 3 June 2005 and for UTLS-1.
- Discussion on the reasons why the floating altitude laws are slightly different. Decision was taken by the Science Team

AI L2_12.6 H. Oelhaf to consider unifying the floating altitude laws for Nominal mode and UTLS-1.

- Presentation continues showing the comparison between ORM performances for NOM and UTLS-1 measurements: Similar performances are obtained in the common altitude range. A bug was found in Marquardt Algorithm implementation leading to never-ending loops.

AI L2_12.7 IFAC to correct the bug found in the Marquardt Algorithm in the scientific prototype and deliver the required documentation on the correction.

+ PS2 parameters optimized at University of Bologna (M. Ridolfi)

- Presents about optimisation of Levenberg-Marquardt parameters and convergence criteria. He explains the criteria used to optimise the parameters and the results.
- AD asks if it was checked that the optimised parameters obtained from the analysis of one orbit was optimized also for other orbits.
- MR answers that this time he had not verified that, but during the commissioning phase the optimised parameters for one orbit was checked to be optimized also for other orbits.
- Furthermore, the results in term of number of iterations and χ^2 values shown by P. Raspollini for different orbits confirmed that these parameters were appropriate.

+ Retrieval of (15)N/(14)N isotopic ratio profile (G. Brizzi, UB)

- He presents on the feasibility of the retrieval and on the adopted strategy.
- Good retrieval up to 30 km, above little or no information

+ 2.5.7 CO2 distribution in the stratosphere from MIPAS (M.Carlotti, UB)

- He presents results on the retrieval of CO2 in the stratosphere where there is a lack of study in the literature
- The entire mission was processed using GMTR upgraded with CO2 line-mixing.
- Monthly averages over 10 deg lat bins were used to reduce the random error (negligible).
- The systematic error is significant (3-8%), mostly due to O3
- No correlation was found with the pT retrieval.
- CO2 VMR not constant in the Stratosphere, but systematic error prevent final conclusion
- JR suggests a more conservative choice of the CI thresholds (i.e. 4.5)

+ 2.5.8 Cloud detection and associated errors (J. Remedios, UL)

- He presents that CI and mesowindows for FR and RR are characterised by very minor differences.
- He presents the strategy to estimate the error on the cloud index from NESR. He reports on an analysis made on data of July 2003.
- A TN will be available soon.

+ 2.5.9 pT microwindows (A. Dudhia, OU)

- He presents latest selection (MW#361-366) and AE mode for December 2006 data. Reports on issues with engineering altitudes.

+ 2.5.10 DEC06 Nominal mode & DEC06 Middle Atmosphere Mode (C. Piccolo OU)

- CP presents results on nominal mode data from December 2006, some issues are identified for the various target species.
- She presents a study on MA mode applying nominal microwindows and specialized ones. Reports discrepancies between the two retrievals for the various target species. Indications of F/R induced oscillation in H2O

AI L2_12.8 IMK to check in December 2006 L1 for evidence of F/R signals.

+ 2.5.11 IMK results on MIPAS RR mode (A. Kleinert, IMK)

- She presents IMK results and comparisons with MIPAS-B and MLS.
  - Temp IMK/MLS are in good agreement
  - For MIPAS-B only preliminary results with IMK L2, for H2O: no strong bias, while a positive bias is observed for O3
- She estimates an absolute error on engineering tangent altitudes up to 2 km with latitude dependency due to incorrect roll angle.
- Some retrieval results of RR measurements were presented. χ^2 is increased in RR mode.

- HNO3 retrievals in presence of PSC, IMK approach is to use a more conservative CI threshold.

AI L2_12.9 IMK to check on the error estimate of the retrieved tangent altitudes

2.6) Feedbacks from validation activities

- ACVE-3 Review (Thorsten Fehr, ESA)
- Status Validation Dataset for new Baseline (Thorsten Fehr, ESA)

2.7) Level 2 Workplan (IFAC/ALL)

- PR reports on next activities: upgrade of ADF2, code and documents.
- Concerning the generation of ADF2 for NRT, two strategies are proposed, adaptation of the current ADFs or dedicated ADFs to better account for systematic errors and optimisation in computing time.
- The choice depends on when the IPF 5.0 will be ready to operate in NRT

AI L2_12.10 ESA to ask ECMWF the requirements for NRT operations (products/height)
AI L2_12.11 ESA to estimate the feasibility of MIPAS NRT operations.

3.4 AOB

MIPAS QWG#13 Meeting

Place: IFAC, Florence
Date: Tuesday, 12 June 2007, 14:00-18:00
Wednesday, 13 June 2007, 9:00-18:00
Thursday, 14 June 2007, 09:00-13:00
(Start and end times are tentative)

MIPAS QWG#14 Meeting

The date was optimised such that the meeting can take place in Bologna without overlap to major trade fairs

Place: U Bologna, Bologna
Date: Tuesday, 09 October 2007, 14:00-18:00
Wednesday, 10 October 2007, 9:00-18:00
Thursday, 11 October 2007, 09:00-13:00
(Start and end times are tentative)