

# GEMS observational data flow for RAQ data assimilation

WP 2.3

## Preceding remark to this presentation

- quick, incomplete and extemporized view
- in depth assessment see related ESA-GSE-PROMOTE document,
- however data described is mostly restricted to PROMOTE data providers

# Requirements

- 2003 high resolution analyses
  - quality controlled data
  - a posteriori observation error (co)variances
  - provide type of in situ station, if applicable (remote, mountain, rural, suburban, urban)
- operational routine forecasts
  - near real time provision
  - delay time dependent on operation cycle, presumably < 12 hours

# In Situ

<b>Data origin</b>	<b>availability</b>	<b>QA/QC</b>	<b>Constituents</b> <b>EU dir. - benzene</b>
EMEP	~ 2 a	strict QA/QC	yes
EEA	weeks - months	?	yes
national/regional EPAs	Germany: NRT, ftp UK: NRT, web others: NRT indiv. or unclear	NRT not  archived mostly yes	yes
MOZAIC	as yet not NRT	good	no O <sub>3</sub> , CO (for AQ)

# Satellite retrievals

<b>Data type</b>	<b>availability</b>	<b>QA/QC</b>	<b>origin</b>
<b>NO2 trop. col</b>			KNMI, IFE Uni Bremen, DLD-DFD, IUP Uni Heidelberg
GOME	NRT (spatially limited since July 2003)	QA/QC, but ongoing maturing	
SCIAMACHY	partly NRT	QA/QC, but ongoing maturing	
GOME 2	presumably NRT		
<b>SCIAMACHY CO, HCHO, SO2, CH4 trop. col.</b>	partly NRT (?)		KNMI, IFE Uni Bremen, IUP Uni Heidelberg (?)
OMI O3, NO2	NRT aspired		KNMI
MOPITT CO	weeks	yes	NASA
MIPAS O3,HNO3 profiles	offline	yes	FZK-IMK ESA