



ILMATIETEEN LAITOS
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Tools for model-measurement comparison and data processing

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“HOW-TO :”

- ... merge and compare 2 independent, not fully regular data sets (holes, irregular averaging, ...) ?
- ... derive the common picture from several similar data sets: model ensemble ?
- ... make these easily ?



Model and Measurement Analysis Software

- ... merges two arbitrary time-dependent data sets
- ... computes series of statistical functions for the merged sets
- ... presents the results in ASCII text output and graphic binary formats



Merging the data sets

Model & measurements analysis tool

MEASUREMENT DATA SET LIST
c:\tools\example\mmas\meas_ex.lst [Browse]

MODEL DATA SET LIST
c:\tools\example\mmas\mdl_ex.lst [Browse]

SUBSTANCE LIST
c:\tools\example\mmas\substances.lst [Browse]

MASTER SET Measurement Model

OUTPUT
c:\tools\example\output\mmas\files\ [Browse]

Averaging:
As master set [v] Use old sorted files
 Suppress absent data

Synchronisation of data sets:
Stat.+subst. matched + date synch [v] Allow incomplete deps
 Make SUMMARY

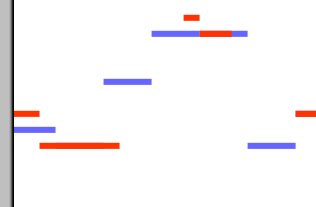
INI file loaded. Ready

Full RUN SORT only SUMMARY only

Configure SUMMARY Exit Help

Output data set
(merged)

Model



Summary configuration

Months to consider File names (may be common)

Month	File name
Jan <input checked="" type="checkbox"/>	c:\tools\example\output\mmas\compl...
Feb <input checked="" type="checkbox"/>	c:\tools\example\output\mmas\compl...
Mar <input checked="" type="checkbox"/>	c:\tools\example\output\mmas\compl...
Apr <input checked="" type="checkbox"/>	c:\tools\example\output\mmas\compl...
May <input checked="" type="checkbox"/>	c:\tools\example\output\mmas\compl...
Jun <input checked="" type="checkbox"/>	c:\tools\example\output\mmas\compl...
Jul <input checked="" type="checkbox"/>	c:\tools\example\output\mmas\compl...
Aug <input checked="" type="checkbox"/>	c:\tools\example\output\mmas\compl...
Sep <input checked="" type="checkbox"/>	c:\tools\example\output\mmas\compl...
Oct <input checked="" type="checkbox"/>	c:\tools\example\output\mmas\compl...
Nov <input checked="" type="checkbox"/>	c:\tools\example\output\mmas\compl...
Dec <input checked="" type="checkbox"/>	c:\tools\example\output\mmas\compl...

Allow negative values Min completeness, %: 49 74
 Keep pairs with negat Min number of points: 1 1

Create summary GrADS file

File with the station \WORLD co-ordinates
c:\tools\example\data\st_hirlam_world.coord [Browse]

File with the station MAP co-ordinates
c:\tools\example\data\st_hirlam_europe.coord [Browse]

MAP type Radius of influence, cells
HIRLAM, Europe, 76x80 3

OK Cancel Help Load setup Save setup



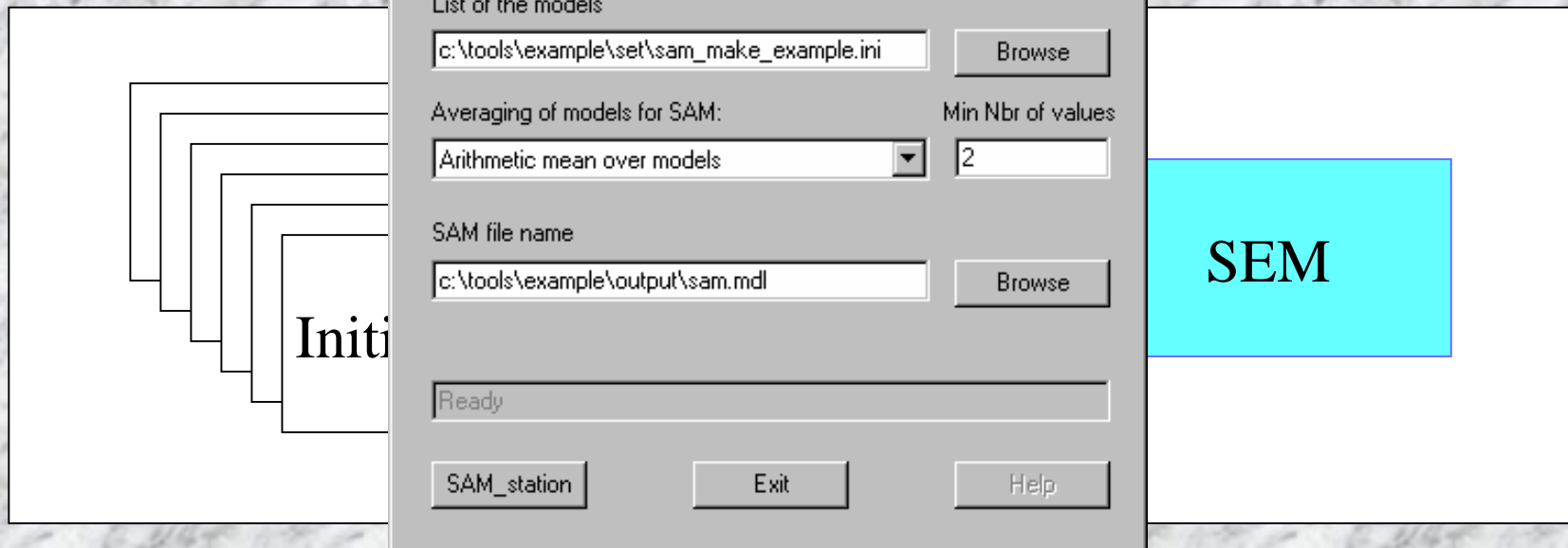
MMAS. Output parameters

- Over 20 different statistics describing site-wise temporal agreement between the provided datasets: averages, correlations, biases, linear regression, figure of merit, trends, arrival and departure of plumes, etc.
 - All computed variables are provided with confidence estimates
- Data are provided as ASCII files and as GrADS binary maps for further spatial analysis of the datasets correspondence



Statistical Ensemble creation Tool

- ... creates an ensemble average from several data sets with similar features:
Statistical Ensemble Model (SEM)





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Right tools may save your efforts...

