



ILMATIETEEN LAITOS
METEOROLOGISKA INSTITUTET
FINNISH METEOROLOGICAL INSTITUTE

Documenting your system of measurements (ASMO project)

**14th WMO-GAW Brewer Users Group Meeting,
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**Tapani Koskela and Kaisa Lakkala
Finnish Meteorological Institute
tapani.koskela@fmi.fi**



MOTIVATION

- Improve long-term continuity
- Identify gaps in the production process
- Identify duplicated efforts
- Helps when speaking with decision-makers





PROJECT REPORT

1. INTRODUCTION

The purpose of the measurements

- measured long-term data
- solar spectral irradiance, O₃, and T_{aer}
- of high and of known quality
- for weather service and for research



WHY?
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2. DATA FLOW

2.1. The instruments #037, 107, and 214

2.2. Data types

UV

NRT and reprocessed

total ozone

(sorry, Irina, no um)

diagnostic data

hg, hp, sl, dt, rs, sr,
etc.

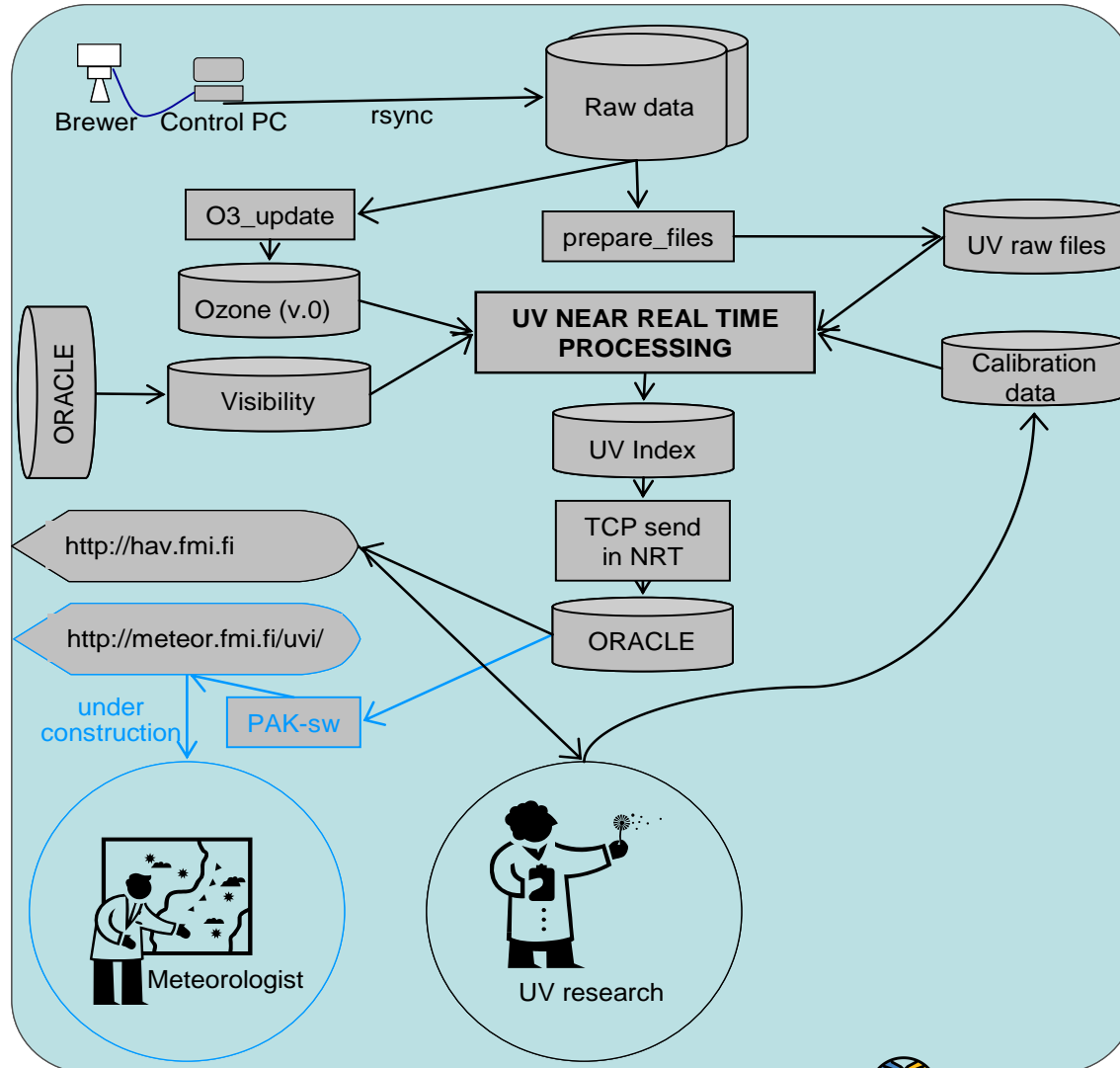
WHY?
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2. DATA FLOW:

Near-Real-Time UV



WHY? 1 2 3 4 5 6 7 8 9 10





3. TECHNICAL MAINTENANCE

Daily tasks on-site *at risk*

Weekly tasks on-site *OK*

Infrequent tasks on-site *OK*

Quasi-annual tasks *OK*

4. TROUBLESHOOTING

Sufficiently well organized except for holidays

WHY?
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5. QUALITY CONTROL

5.1. UV

Data processing: tools for reanalysis; for *NRT data visual check*

Intercomparisons: *regular audits*

5.2. Ozone and AOD: *manual and irregular*

5.3. Diagnostic data: *manual and irregular*

5.4. Uncertainty budgets: *incomplete*

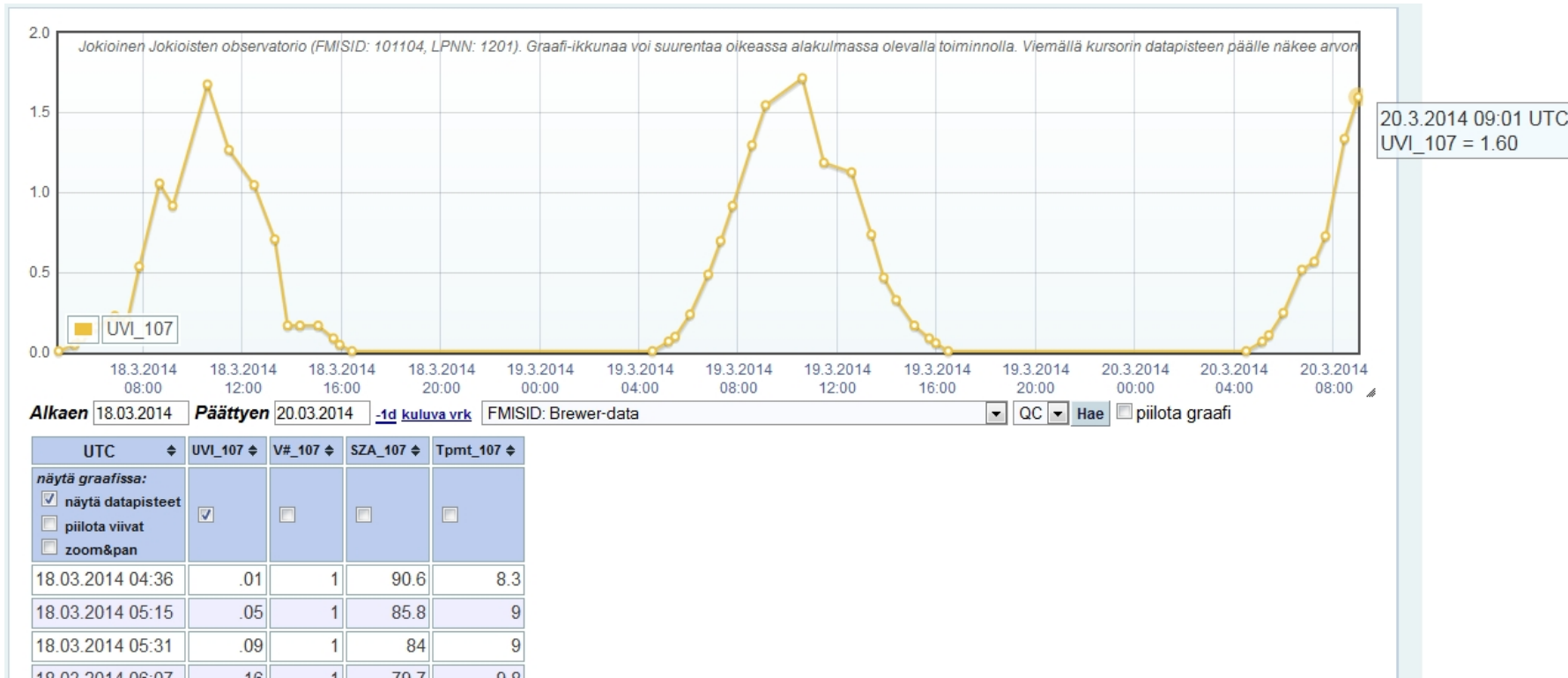
WHY?
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5. QUALITY CONTROL

... *visual check of NRT data*



WHY?
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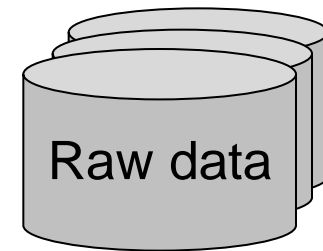
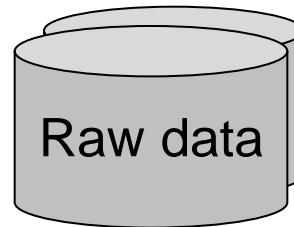
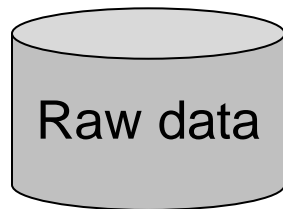


6. DATA STORAGES

6.1. Brewer #107

6.2. Brewer #037

6.3. Brewer #214

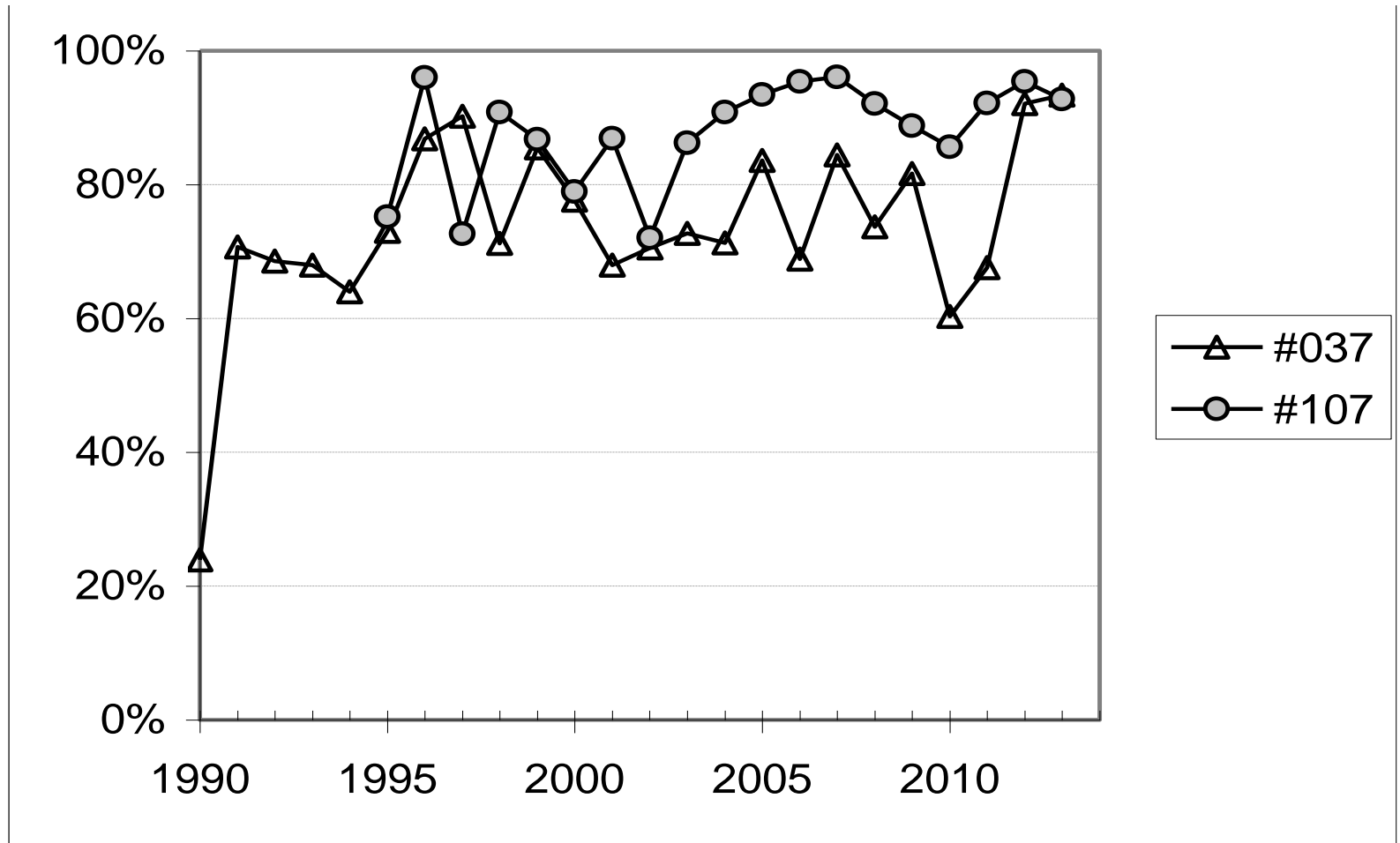


WHY?
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7. AVAILABILITY OF DATA



The yield of daily sums in April-August



WHY?
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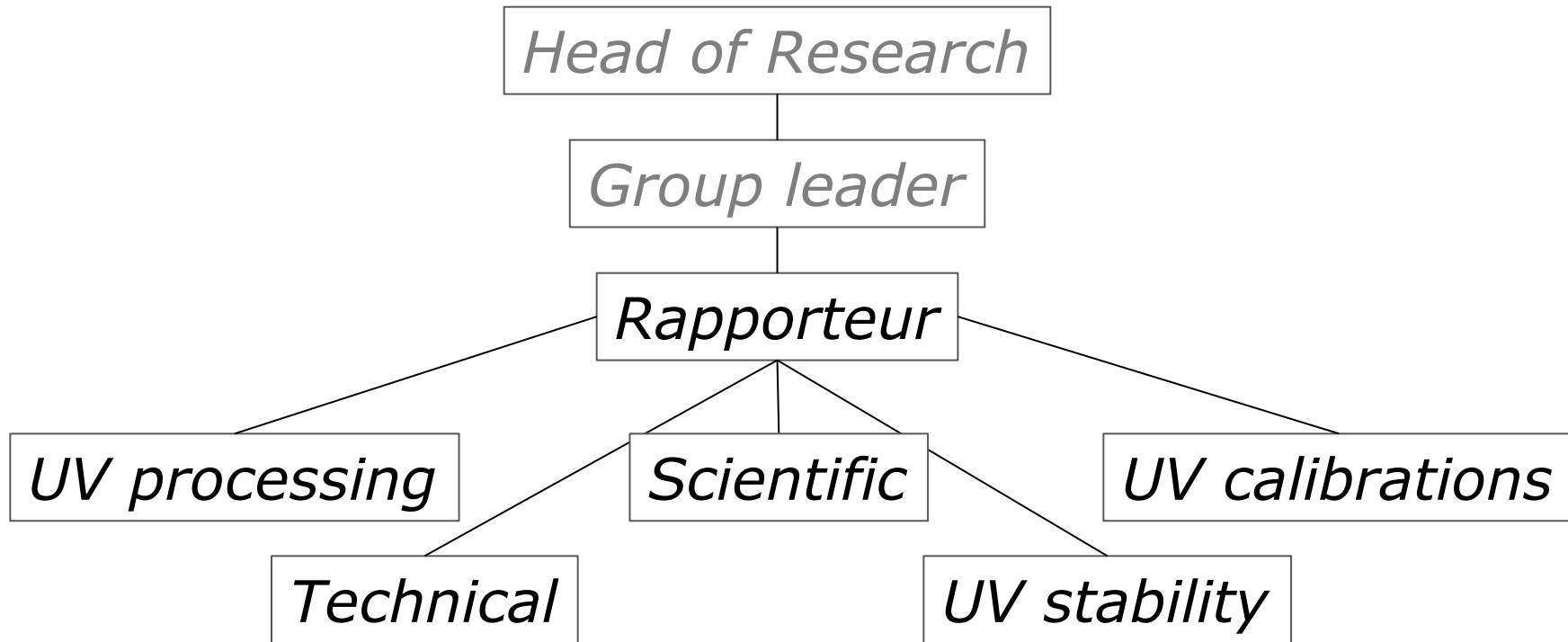


8. RESPONSIBILITIES

8.1. The experts

names

8.2. Share of tasks



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9. CALIBRATION

9.1. UV

Characterization

Irradiance calibration: $R(\lambda) = S(\lambda) / I_{\text{cert}}(\lambda)$

Wavelength calibration

9.2. Ozone column

9.3. Aerosol optical depth

10. LITTERATURE

(30 pages)



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Thank you!

