

Materials Science & Technology

# GAWSIS


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# GAW Strategic Plan: 2008 – 2015 (GAW Report 172)

- (Task 5.2) **Extend metadata information** within each WDC, and centrally, at GAWSIS – in line with the recommendations of the Inter-Programme Expert Team on Metadata Implementation (IPET-MI).
- (Task 5.6) **Implement the WMO core metadata profile in GAWSIS**, identify deficiencies and propose necessary extensions.
- (Task 5.8) Further develop and maintain central Internet sites for the GAW Station Information System (GAWSIS) and World Data Centres that **provide user friendly access to measurement data, metadata, quality assurance information, relevant meteorological information, and value-added products such as reports on measurement guidelines, quality assurance and technical issues.**

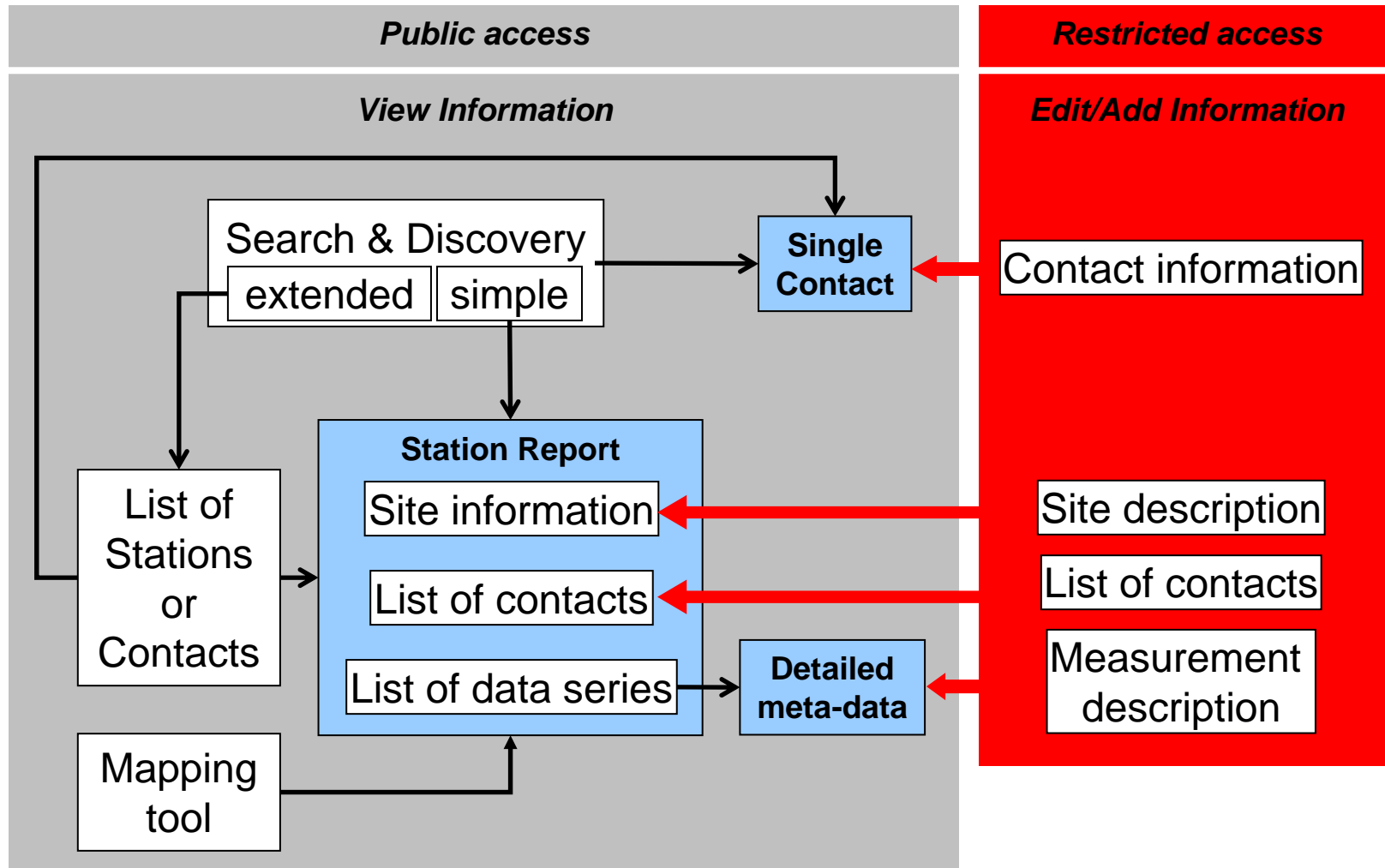
# Mandate and Scope of GAWSIS

- To integrate metadata across many variables
- To develop discovery-and-retrieval mechanisms across all variables within GAW
- To develop a 'clearing house' for identification of GAW and other atmospheric monitoring stations
- To provide direct links to data across WDCs (not yet for all)
- To increase the visibility of GAW and partner programmes
- To be a 1-stop shop for information about the ground-based GAW network(s)

 GAWSIS 'defines' the GAW ground-based observational network

 GAWSIS is a precursor for a GAW data portal

# GAWSIS: 1-Stop-Shop for (GAW) Metadata




<http://gaw.empa.ch/gawsis>

# Achievements since 2007

- Metadata flat file mechanism implemented with
  - WDCGG
  - WRDC
  - WDCA (not nearly complete)
- WDC ID system implemented
  - 289 stations have ID assigned (out of 788)
  - 103 sites outside GAW have ID reserved
- Bibliographic referencing system implemented
- Preliminary XML representation of GAWSYS available
  - <http://gaw.empa.ch/gawsis/xml>
- Migration of system to new server
  - <http://gaw.empa.ch/gawsis>

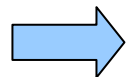
# Issues

- Automatic metadata intake not operational or not complete for all GAW WDCs
- WDCPC needs to be re-established and mechanisms for metadata exchange be developed
- Manually submitted information in GAWSIS incomplete, partly incorrect
  - Identification of responsible contacts often difficult
  - Users not very responsive to requests

 Users want a working, up-to-date, human- and machine-interactive discovery-and-retrieval system ... but are not willing to invest much

# Current plans for the future

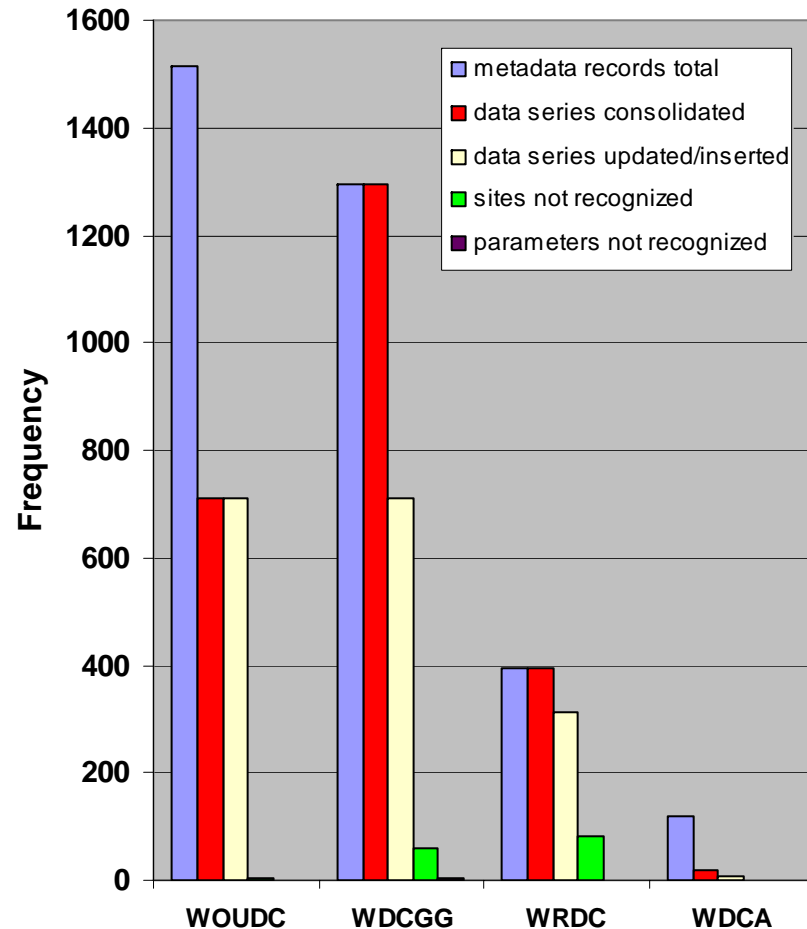
- Complete and update information in GAWSIS through 1:1 contact with stations
- Improve and formalize representation of (observational data) QA information in GAWSIS and establish a mechanism for interactive graphical navigation of such information
- Continue with development of ISO-compliant metadata representation of GAWSIS
- Interact with SAG PC to resolve data archiving strategy and integration into GAWSIS
- Interact more strongly with EMEP, NDACC, BSRN, EANET, NADP
- Contribute to and/or lead ET-GAW WDC GAW-GOS pilot project (to be discussed at this meeting)



All these activities require strong interaction with and support of other data center managers, WMO

# Status of GAWSIS-WDC Integration

- WOUDC
  - Metadata intake fully operational
- WDCGG
  - Metadata intake operational
  - Some work still needed
- WRDC
  - Status of some sites unclear
  - Data not easily accessible
- WDCA
  - Metadata intake operational
  - very few parameters covered
- WDCPC
  - Not operational
  - Integrate Regional DCs?








**Thank you for your attention**

# GAW SIS: GAW IDs



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ed-back

■ [About](#) ■ [Logout](#) ■ [GAW IDs](#)

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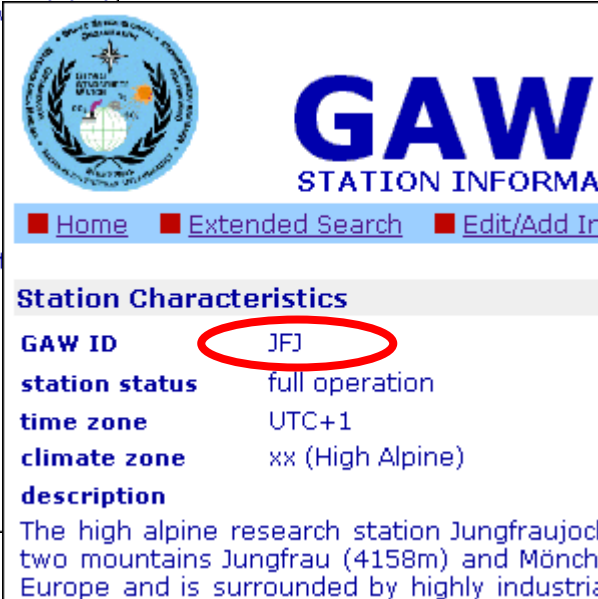
### Introduction

This web site is a managed list of unique station identifiers to also serves as the clearing house for registering such identifier ground-based fixed stations. The goal is to assign a unique 3-letter monitoring purpose. This process should be based on consensus because we would like these codes to find acceptance. Your approval. Please share this web address with anyone you know.

**Enter Station Identifier** ↑

**Request Station Identifier for a Registered Station**

**Register a New Station and Request Identifier**



**GAW STATION INFORMATION**

■ [Home](#) ■ [Extended Search](#) ■ [Edit/Add In](#)

**Station Characteristics**

<b>GAW ID</b>	JFJ
<b>station status</b>	full operation
<b>time zone</b>	UTC+1
<b>climate zone</b>	xx (High Alpine)
<b>description</b>	The high alpine research station Jungfraujoed two mountains Jungfrau (4158m) and Mönch Europe and is surrounded by highly industrial

# GAWSIS: Bibliography Database

- QA/QC reports
- Scientific publications
- ...

**GAWSIS**  
STATION INFORMATION SYSTEM

Extended Search Edit/Add Information Feed-back FAQs

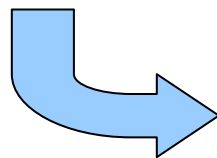
Welcome! You are logged on as GAWSIS administrator.  
You have permission to edit information relating to all stations know

**Edit and/or amend station information**

Station name Jungfraujoch

Type of information Bibliographic Reference(s)

Continue Cancel



**Jungfraujoch (Switzerland)** Global fixed station in WMO RA VI - Europe

**References**

Zellweger, Christoph, et al. (2006), System and Performance Audit of Surface Ozone Carbon Monoxide and Methane at the Global GAW Station Jungfraujoch, July 2006, WCC-Empa Report 06/4, [www.empa.ch/gaw/audits/JF2006.pdf](http://www.empa.ch/gaw/audits/JF2006.pdf) [BioTeX](#)

Reimann, S., et al. (2005), Low European methyl chloroform emissions inferred from long-term atmospheric measurements, *Nature*, 433, 506-508 [BioTeX](#)

Collaud Coen, M., et al. (2004), Saharan dust events at the Jungfraujoch: detection by wavelength dependence of the single scattering albedo and first climatology analysis, *Atmospheric Chemistry and Physics*, 4, 2465--2480, [www.atmos-chem-phys.net/4/2465/2004/](http://www.atmos-chem-phys.net/4/2465/2004/), ISSN:1680-7316 [BioTeX](#)

Gerasopoulos, E., et al. (2001), A climatology of Be-7 at four high-altitude stations at the Alps and the Northern Apennines, *Atmospheric Environment*, 35, 6347-6360 [BioTeX](#)

Bonasoni, P., et al. (1999), Stratosphere-troposphere exchanges: case studies recorded at Mt. Cimone during VOTALP project, *Physics and Chemistry of the Earth Part C-Solar-Te*, 24, 443-446 [BioTeX](#)

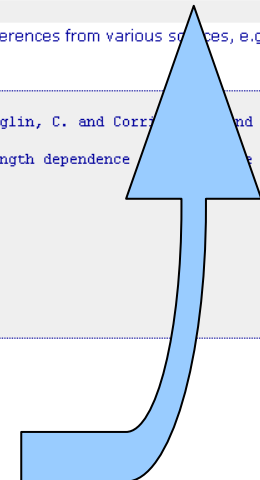
**Add Bibliographic References**

Please only submit reference(s) that are properly formatted in BibTeX. You can obtain references from various sources, e.g. EndNote or ACP. The following is an example:

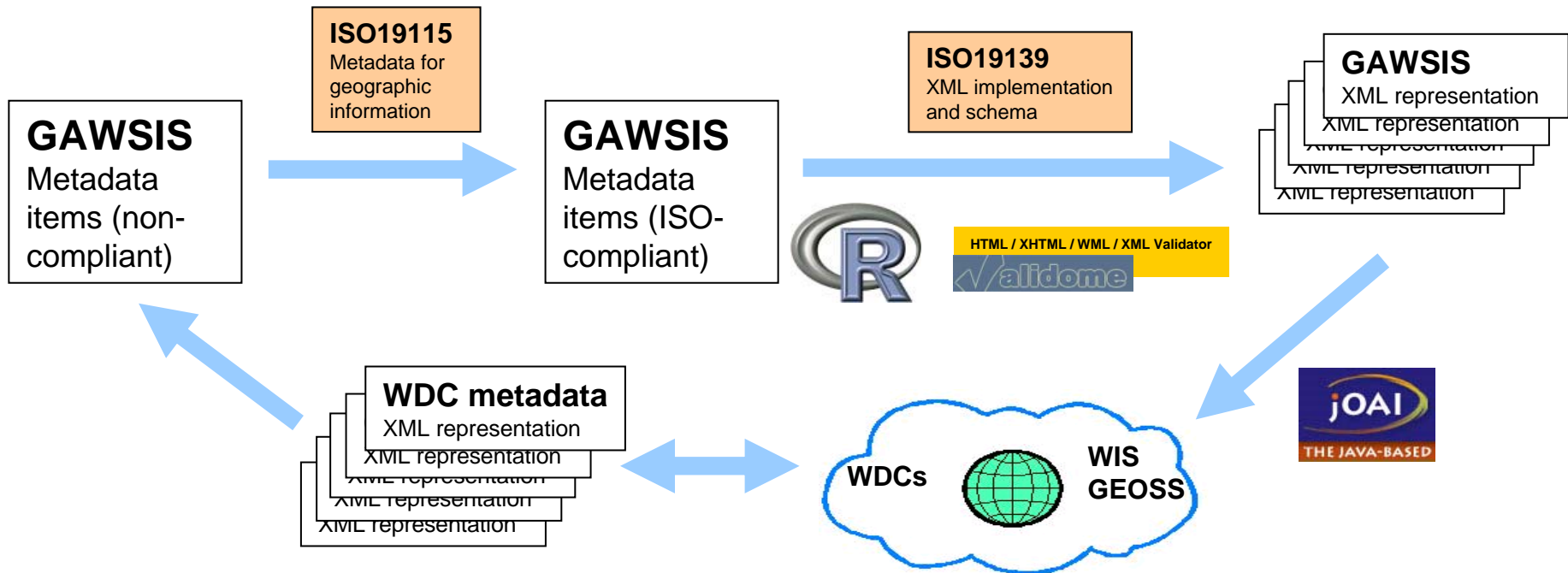
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  VOLUME = {4},  
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  ISSN = {1680-7316}  
}
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For more information, please visit [BibTeX](#).

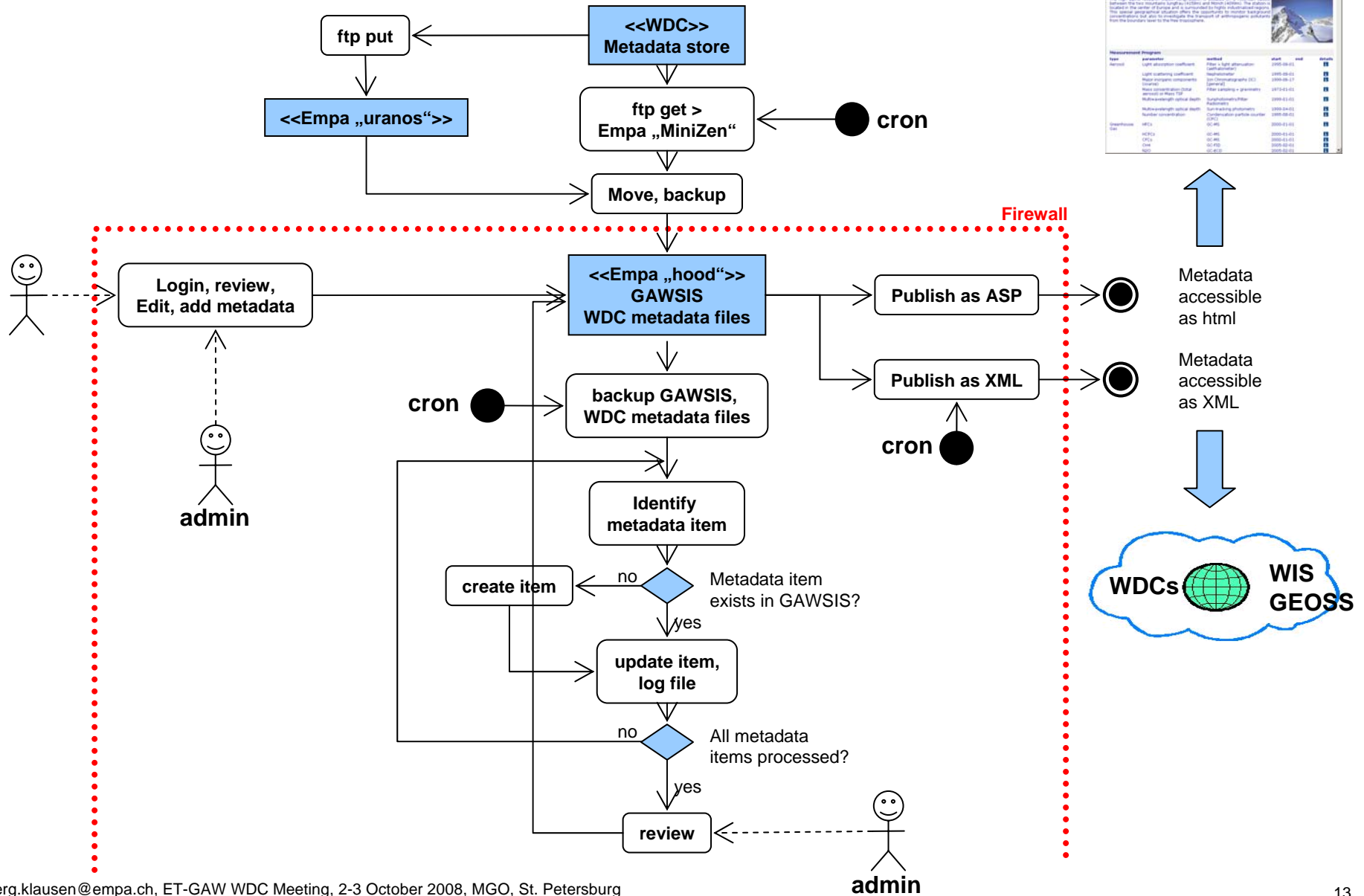
Submit Reference(s) Cancel Done



# GAWSIS-WDC Integration



# GAWSIS-WDC Integration



# GAW WDC 'Landscape'

- WOUDC
  - Total/Profile Ozone, UV
- WRDC
  - (Broadband) Solar Radiation
- WDCGG
  - Gases (incl. surface O<sub>3</sub>)
- WDCA
  - Aerosols
- WDCPC
  - Precipitation Chemistry
- WDC-RSAT
  - Satellite Remote Sensing

