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APPLAUSE: archive building

www.plate-archive.org

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APPLAUSE: from plates to catalogs

Organising physical historic material:

- collect plates, envelopes, logbooks, and observer notes
- collect data about location, site, and instrumentation

Ordering into coherent collections

- chosen approach: an *archive*
 - has the following basic characteristics:
 - Institution
 - Site
 - Instrument



APPLAUSE: from plates to catalogs

Digitising process:

plates, envelopes, logbooks, and observer notes

all material (= Cultural Heritage) objects get digital images as counterparts

- plates *plate_id*
 - previews of plates preserve the original image *preview_id*
 - scans of plates are taken after cleaning *scan_id*
- logbooks, observer notes *logbook_id, logbook_type*
 - scan (or digital photo) of each page and book cover *logpage_id*
page_num
- envelopes *logpage_id*
 - scan (or digital photo) of each



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Metadata: transcription of information about CHO for digital processing:

- plates (from envelopes, logbook pages, observer notes)
coordinates, emulsion, exposure time, observation date, ...
(*plate_id* \Leftrightarrow *logpage_id*, *preview_id*, *scan_id*, *archive_id*)
- logbooks, observer notes, envelopes
type, book metadata
(*logbook_id* \Leftrightarrow *logpage_id*, *logpage_type*, *archive_id*)
(*logpage_id* \Leftrightarrow *logpage_type*, *plate_id*, *archive_id*, (*logbook_id*))
- content of logpage pertaining to plate transcribed into table
- filenames for each digitised entity (CHO)
- FITS header extension & database tables design



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FITS header:

Phase I: include all relevant metadata
for CHO

Phase II: include all relevant metadata
from processing and extraction



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FITS header:

Phase I:

FITS Header for Photoplates

1 Introduction

2 Proposed FITS header format

2.1 Group 1 – mandatory and array-description keywords

2.2 Group 2 – original data of the observation

2.3 Group 3 – information about the photographic plate

2.4 Group 4 – computed data of the observation

2.5 Group 5 – scan details

2.6 Group 6 – data files

2.7 Group 7 – World Coordinate System (WCS)

2.8 Group 8 – modification history and acknowledgements

3. [Sample Header](#)

3.1 Complete sample header (new)

3.2 Complete sample header (2011)

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Phase II:

APPLAUSE: from plates to catalogs

Environment, hardware, setup

DR3:

ca. 100TB for scans, previews, other material and processing

ca. 100TB for processed material

(FITS files, image files, database)

backup, tape archive space ~80 TB

compute facilities: 32 cores, 2GB RAM/core on 2 workstations

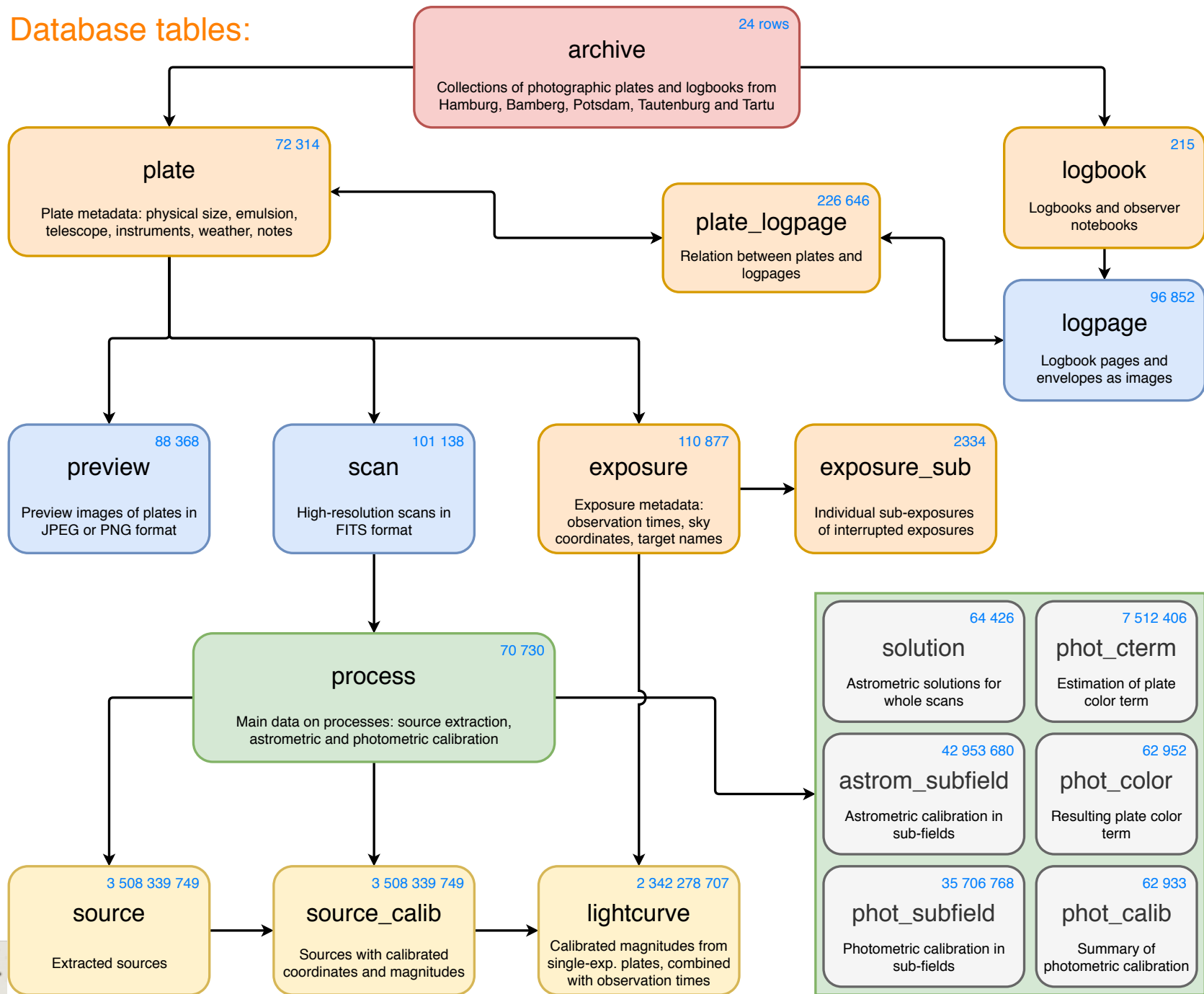
directory structures setup (and maintenance)

sync processes with other source archives (Bamberg, Hamburg,...)

database for ingest, database for publication



Database tables:



APPLAUSE: publication services

Daiquiri framework:

publication of scientific tabled data and other data formats

- Generic SQL query interface
- VO compliant API (TAP, ADQL) (scriptable)
- Basic plotting facility
- Specialised query forms (cone search for plates, or sources)
- Europeana compliant viewer (and OAI-PMH API)
- User table space
- Project description and documentation of published material
- DOI for each published CHO



APPLAUSE: Summary

- Collect ample metadata along with your data
- Keep good documentation records
- Keep also auxiliary data (temperatures, general weather info, etc.)
- Make provisions for publication of your data
- Start to build with tools available, not from scratch
- Share your code, your methods, your data, your tools
- Document your processing + pipelining

