

VESPA

Implementation Workshop :

- USET Sunspot group data
- ROB SPoCA CH data

Véronique Delouille, Freek Verstringe,
Benjamin Mampaey, Sabrina Bechet

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Royal Observatory
of Belgium



USET sunspot group

Data: metadata concerning a collection of 82 years (and counting) of solar sunspot drawings made at ROB; sunspot group catalog with parameters computed from the drawings

Useful for: spatial evolution of solar activity; solar cycle studies, solar flare probability predictions in support of space weather services

What to expect from publishing it through VO/EPN-TAP?
Curating of metadata, enhanced access to solar community

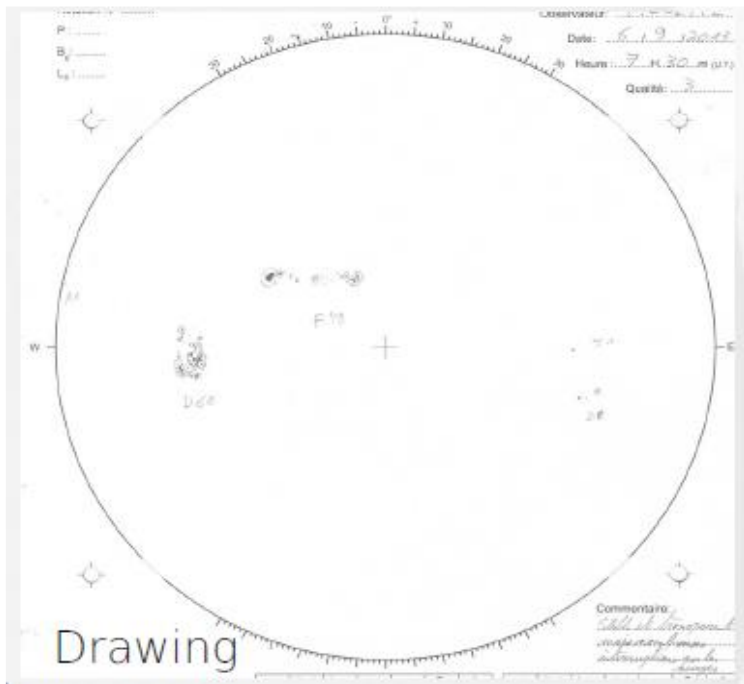
Data content and format

- Drawings (jpg format) are available from a web interface :
<http://www.sidc.be/uset/searchFormDrawing.php>
- USET Sunspot group catalog is inserted into a ROB Event DB (not yet publicly available but used for space weather operations).
- DB in MySQL, currently 50MBytes, continuously increasing

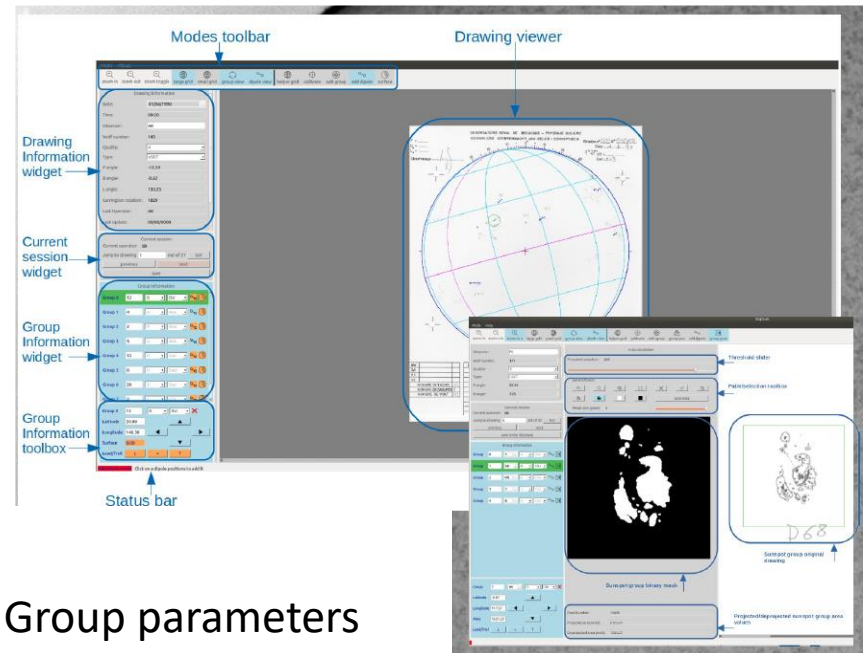
What attributes should be published?

Two sets tables: drawings and groups

table_drawings



table_groups



Installation of a local DaCHS server at ROB

- table_drawings.rd; table_groups.rd
 - Check if the current files are sufficient and/or if there are missing parts.

ROB SPoCA-CH

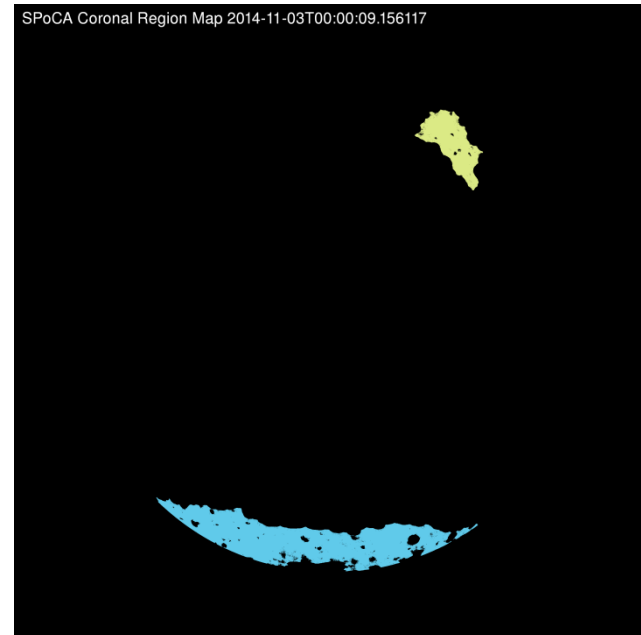
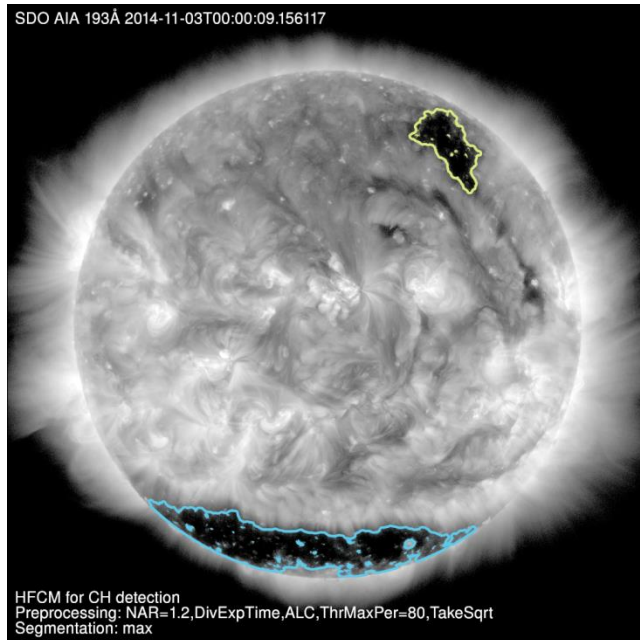
Data: catalog of coronal holes computed with fuzzy clustering algorithm called SPoCA

Useful for determining: 1/ characteristics of CH for feeding into solar wind model; 2/ open magnetic flux

What to expect from publishing it through VO/EPN-TAP? Curating of metadata, enhanced access to solar community

Data content and format

- Processing level: derived product from SDO/AIA and SDO/HMI images
- Format: catalog item, with URL to maps of tracked CH.
- The size of the DB \sim 7MBytes/month (748 Mbytes since 2010).



What attributes should be published?

- *Main table*: location of CH (center, bounding box), URL link to CH maps, statistics on pixel intensity values in AIA and on magnetic flux value in HMI
- *Tracking table*
- Information about parameters values used in the SPoCA algorithm

granule_uid, granule_gid, obs_id?

The CH are tracked over time (using de-rotation and graph model), each CH receives a 'color' in the CH map and keeps this 'color' over time. We propose:

- **granule_uid**: indicates the CH number and the time
 - **granule_gid**: identical for all the detections of a same CH
 - **obs_id**: provide the information to find back the original AIA 193 images (lots of websites are providing AIA data)
- **granule_uid** :
spoca_coronalhole_198_20100112_120000
 - **granule_gid**:
spoca_coronalhole_198
 - **obs_id**:
aia_193_20100112_120000

granule_uid, granule_gid, obs_id?

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