

QGIS user day 2024

Pic2map plugin

Mono-photogrammetry in QGIS

EPFL

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IG



parc
nazional
svizzer

Forêts, Faune
et Parcs

Québec

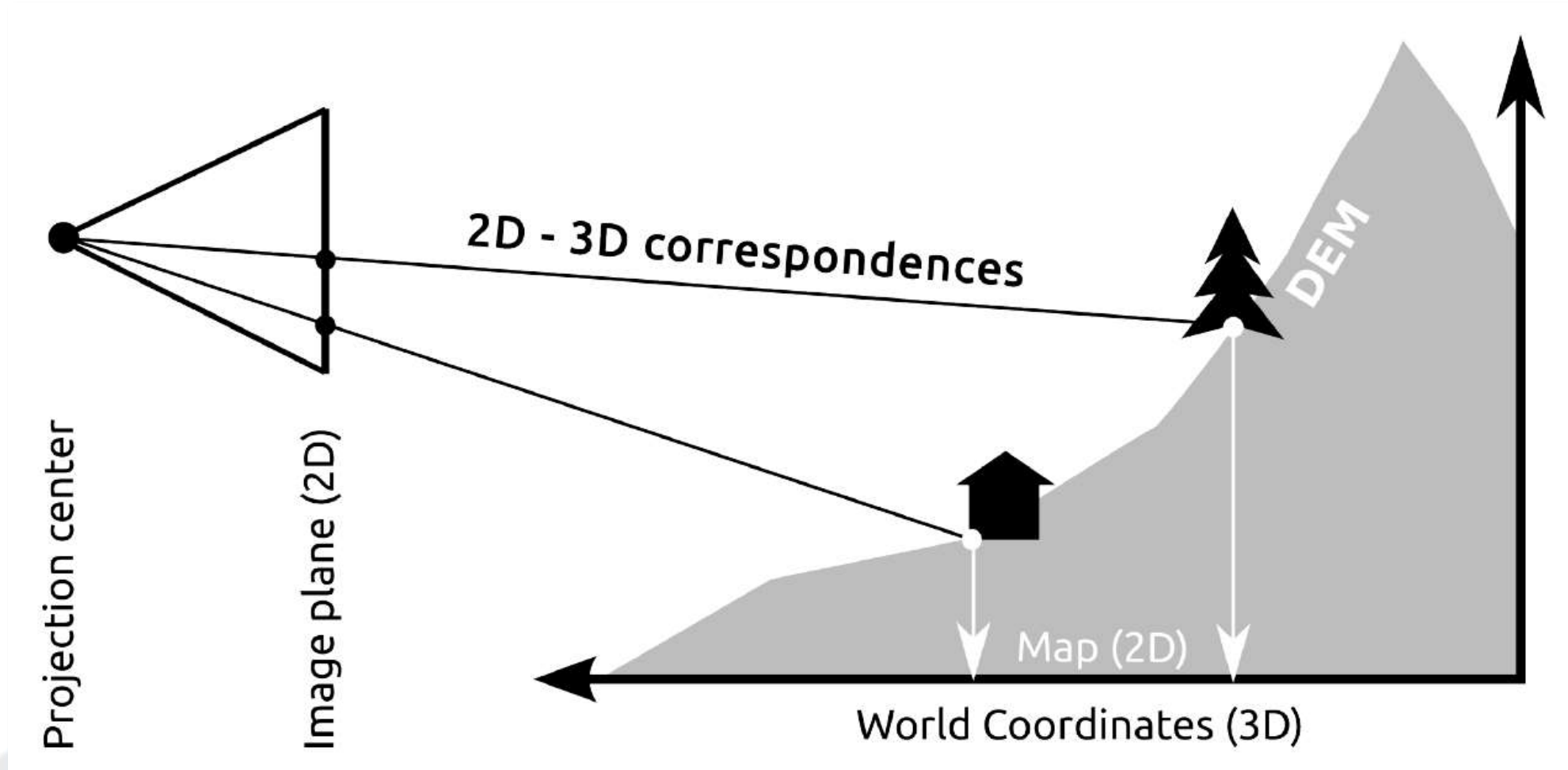
 **ig group**
ingénieurs & géomètres





1478. P. Z. — ALETSCHEGLETSCHER MIT ALETSCHEHORN

Principle



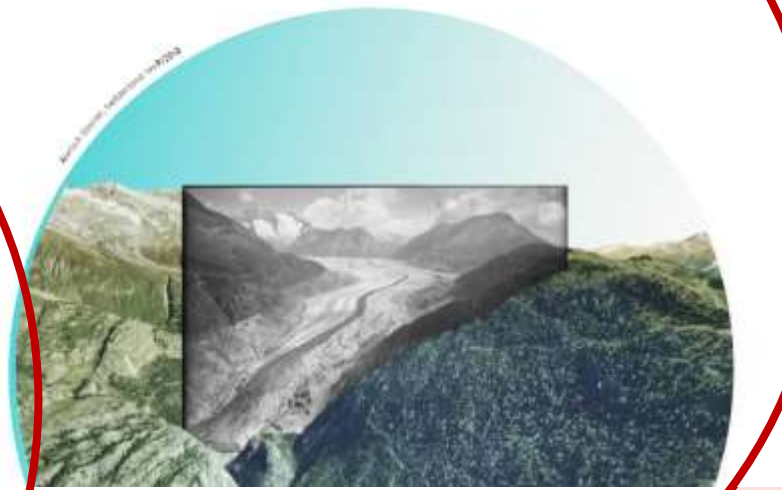
Pic2Map and linked projects

T. Produit,
Prof. J. Ingensand
Prof. D. Rappo
And many, many others
snapshot.heig-vd.ch



T. Produit
G. Milani
Prof. F. Golay
Prof. D. Tuia

The participative time machine
In the past there was no GPS, help us to generate historical images of the world.
Discover Contribute

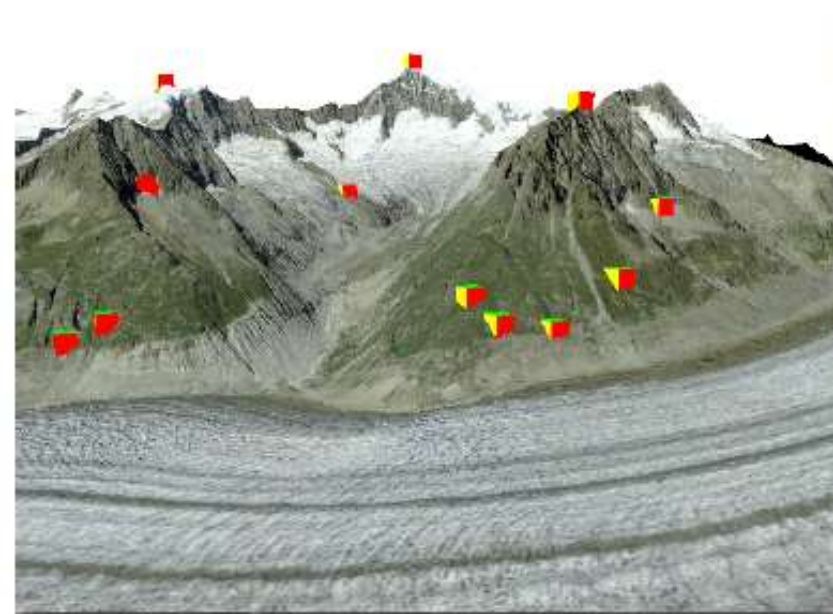
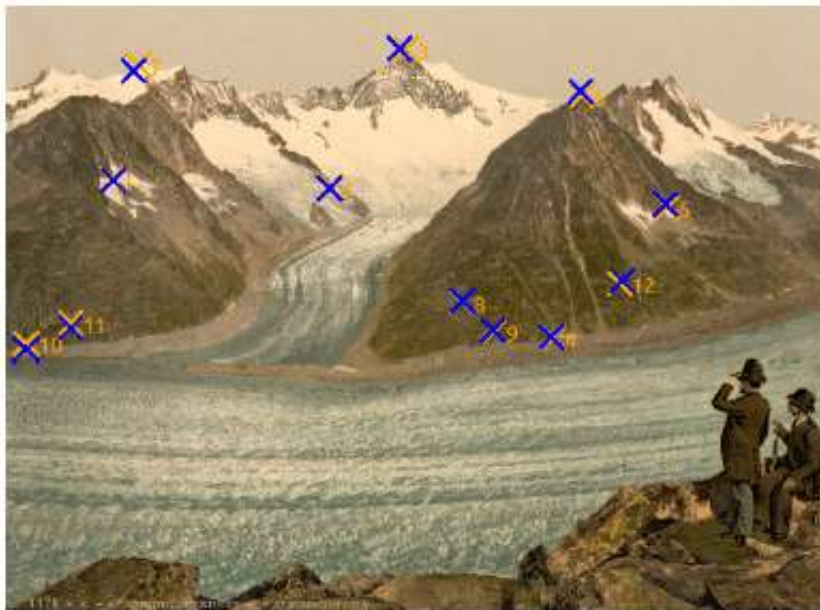


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C. Bozzini
WSL Monoplotting tool

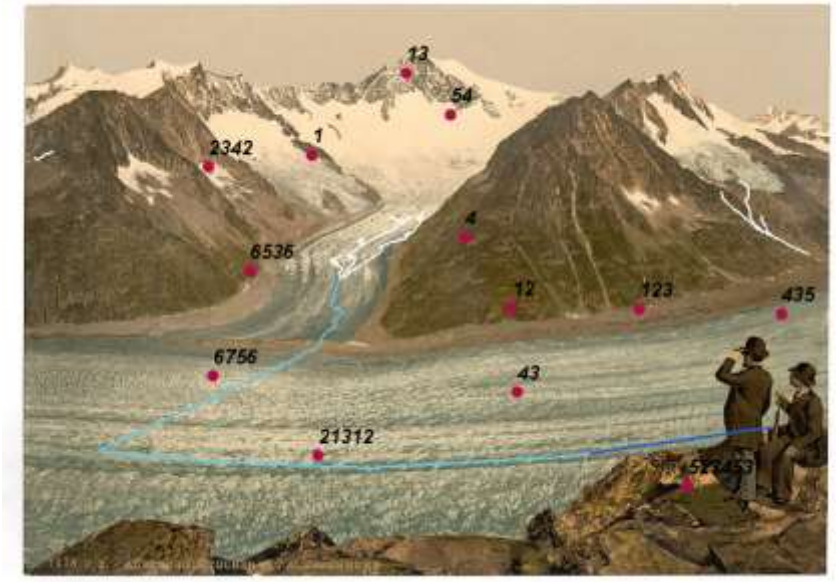
Georeferencing / pose estimation



	Picture_i	Picture_j	Local_x	Local_y	Local_z	Use as GCP	3D error
1	212.114	419.65	647226	142937	2387	Enable	85.1917
2	462.378	444.066	647909	143483	2252	Enable	137.917
3	114.813	155.507	645996	142745	3224	Enable	1640.61
2	194.133	85.7467	642580	146298	4096	Enable	236.842
5	694.693	149.693	647144	144904	3306	Enable	53.3824
6	851.606	368.476	644008	144712	7720	Enable	83.3657

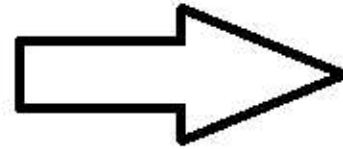
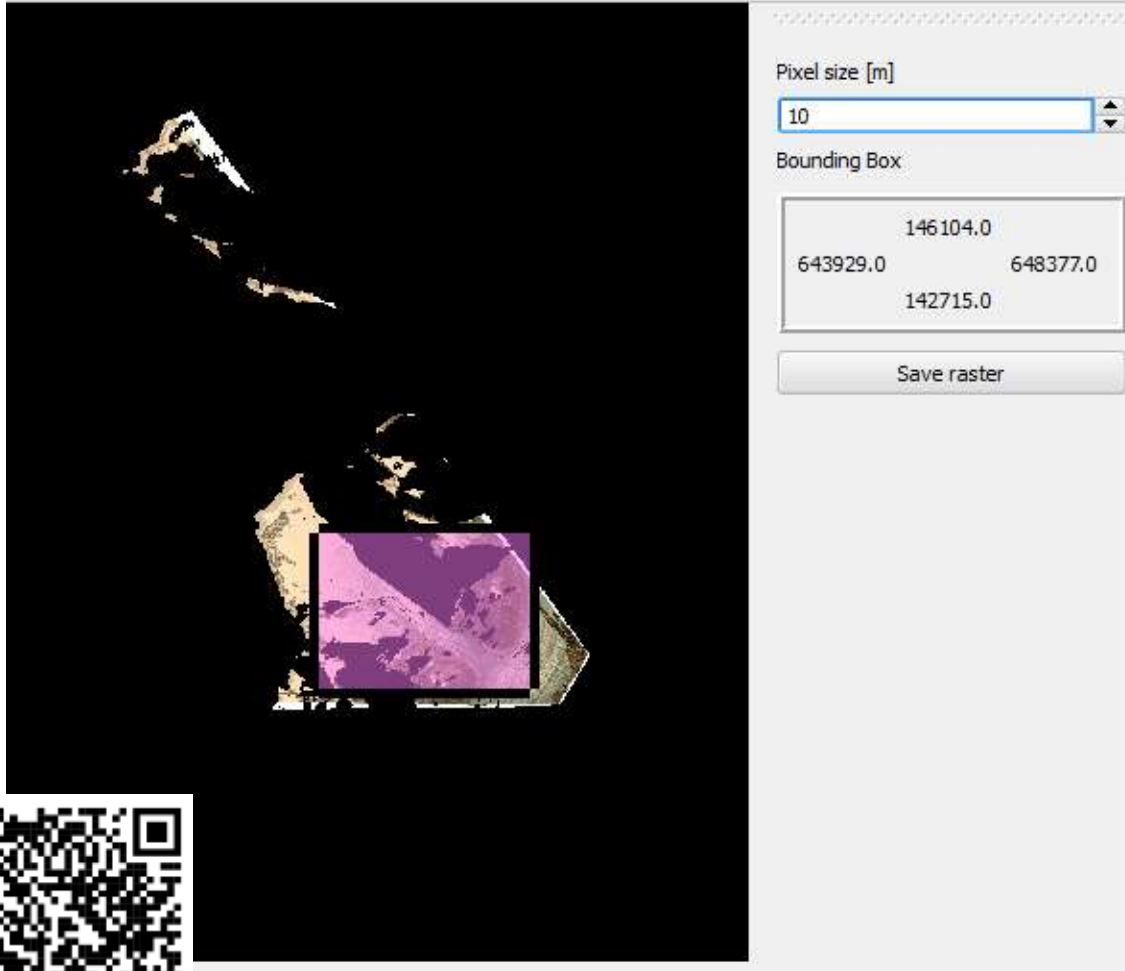
Ready

Monoplotting



- 2D and 3D canvas are directly related via the terrain model
 - The cursor move simultaneously in the image and map canvas
 - Simultaneous digitalisation in the picture and map
 - Vector data from the map are projected into the picture

And more...

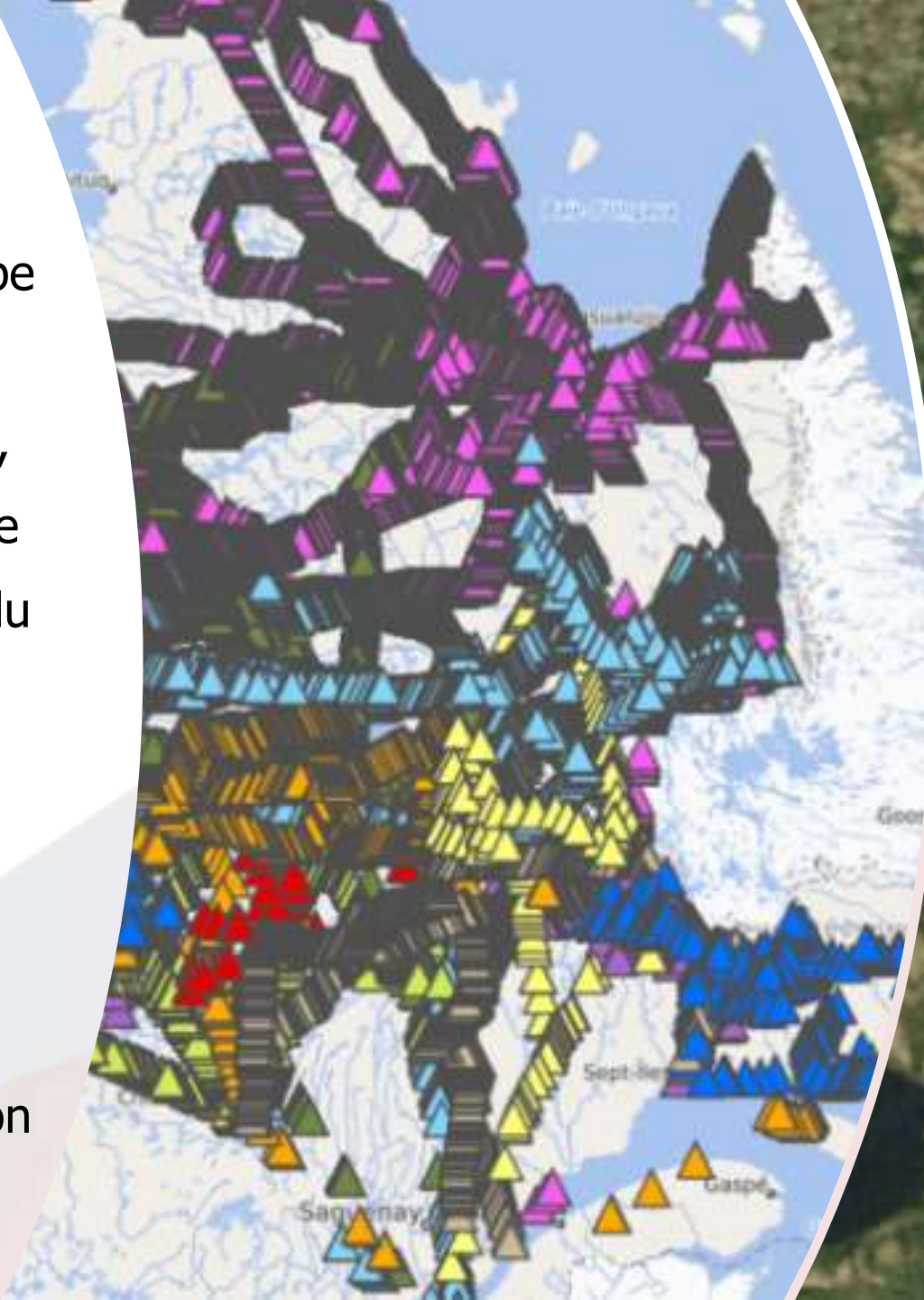


<https://www.youtube.com/watch?v=3Wic6PYUaKU>

Use cases

Environnement – landscape evolution

- *Jean-François Bourdon*,
Ministère des Forêts, de
la Faune et des Parcs du
Québec
- Georefencing aerial
images of the forest
beyond 51 degree
- Improve database with
footprint and orientation





Use cases

Environnement - natural hazards

- S. Gindraux, geoformer igp AG, Estimation du volume de glace en haute montagne
- Georeferencing and measurements in glacier photographs

Use cases

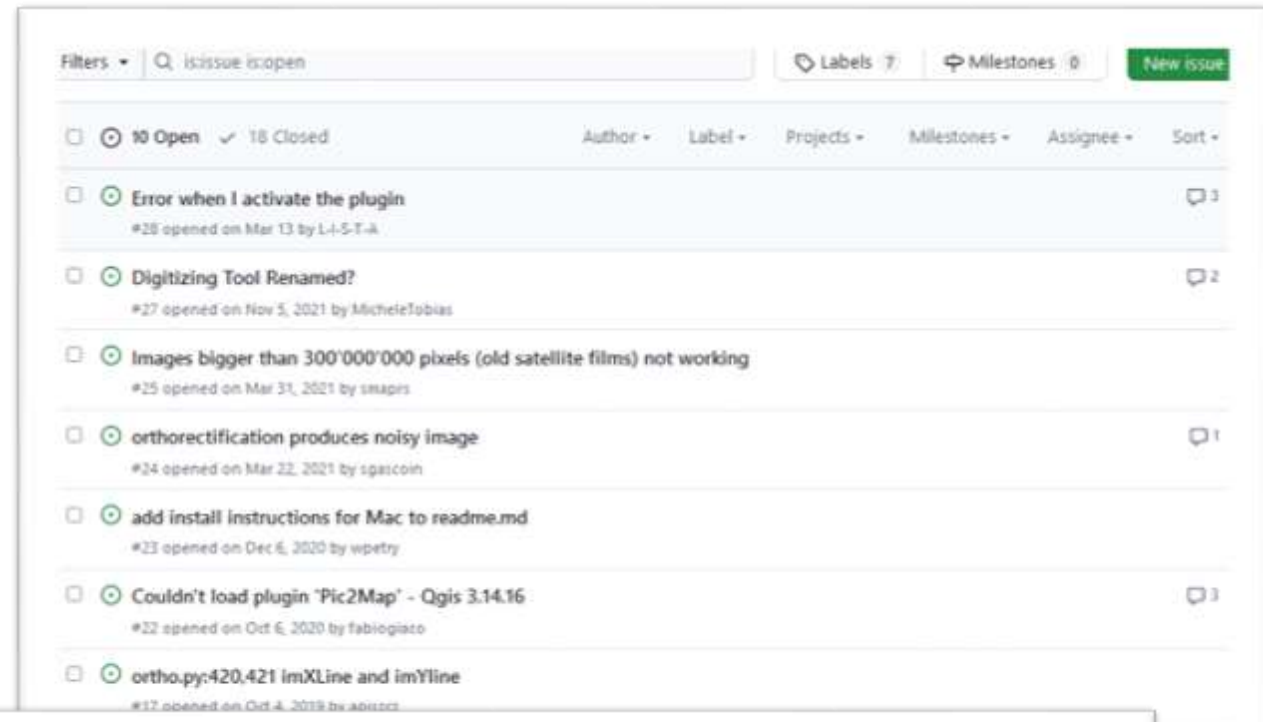
Cultural heritage

- T. Produit,
Rephotography –
Patrimoine de Leytron
- Georeferencing
historical image to
shoot the same picture



Pic2map now

- Almost abandonware
- Still interest: issues are raised but...
 - no one is willing to pay
- Required:
 - Update to current QGIS
 - Solve main issues
 - 10k CHF
- Opportunities:
 - Use QGIS 3D map view
 - Improve georefencing / pose estimation using snapshot pose estimation script
 - Use snapshot API to import historical images



Merci!

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