Sance Recica Landslide Monitoring

The First SAAF Installation in the Czech Republic

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Preliminary test with provided sample

- 1.6 meters long SAA
- 8 pieces of 20 cm segments
- testing frame
- Vista Data Vision - results vizualization

Wooden testing frame

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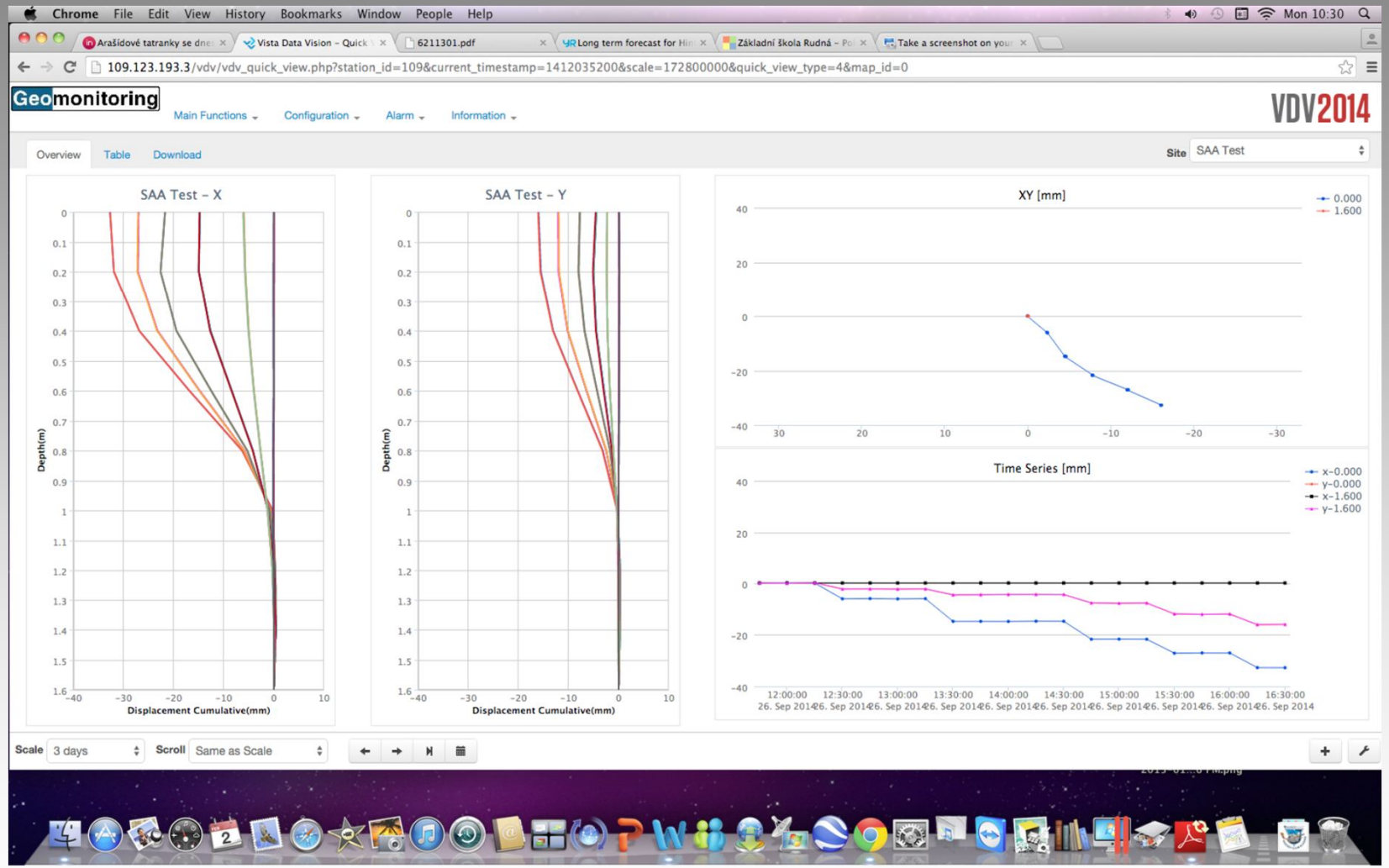
Test results - Vista Data Vision



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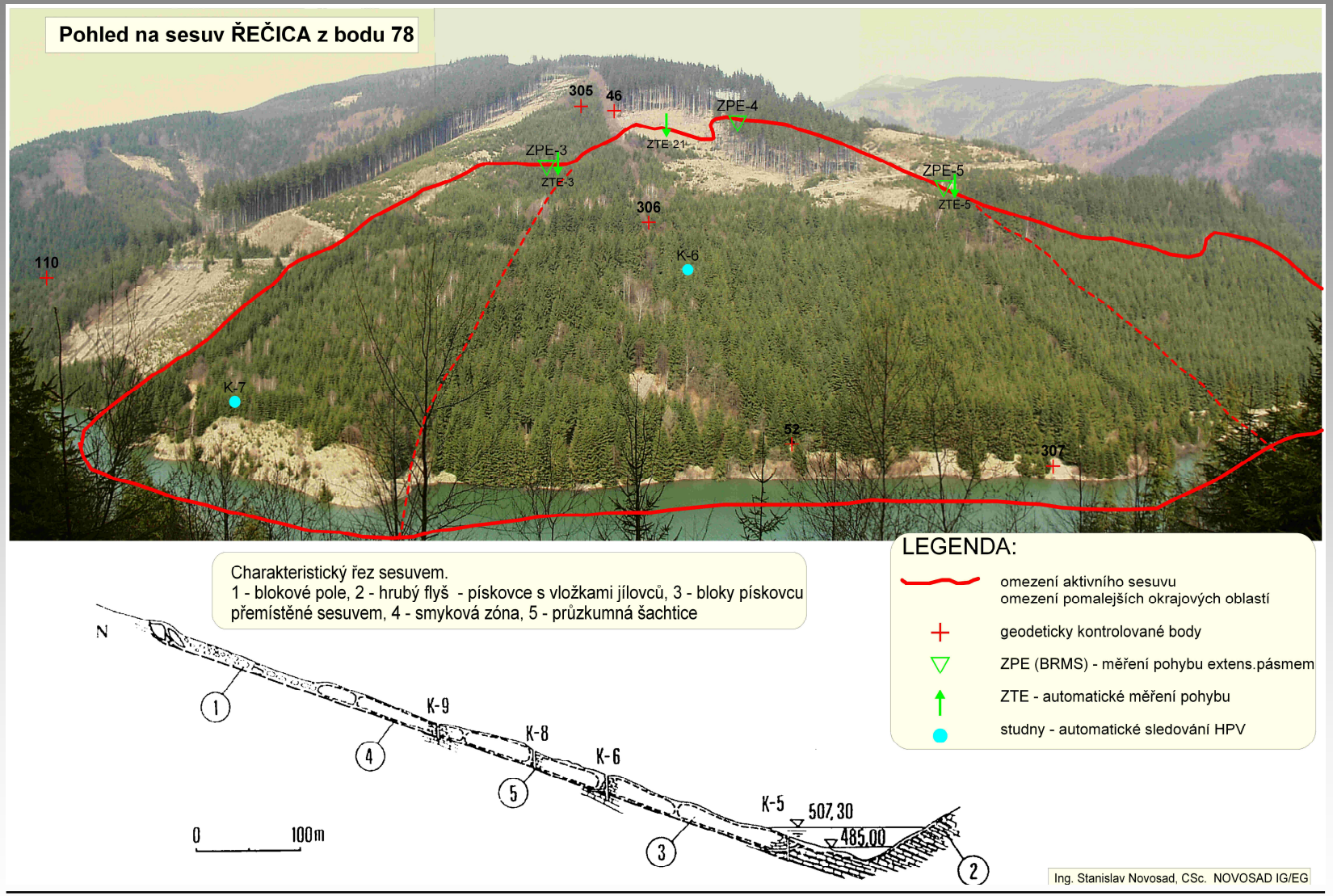
Landslide monitoring overview

- 45 years old landslide
- 3 inclinometer boreholes
- 3 rod type extensometers with Geokon Long Range Displacement Meters
- precipitation gage
- 4 piezometers for underground water level measurement
- new SAAF
- on-line mesurement with VDV presentation of the results for 1 LRDM, 1 Piezometer, 1 Precipitation gage and 1 SAAF

Sance Recica landslide photo



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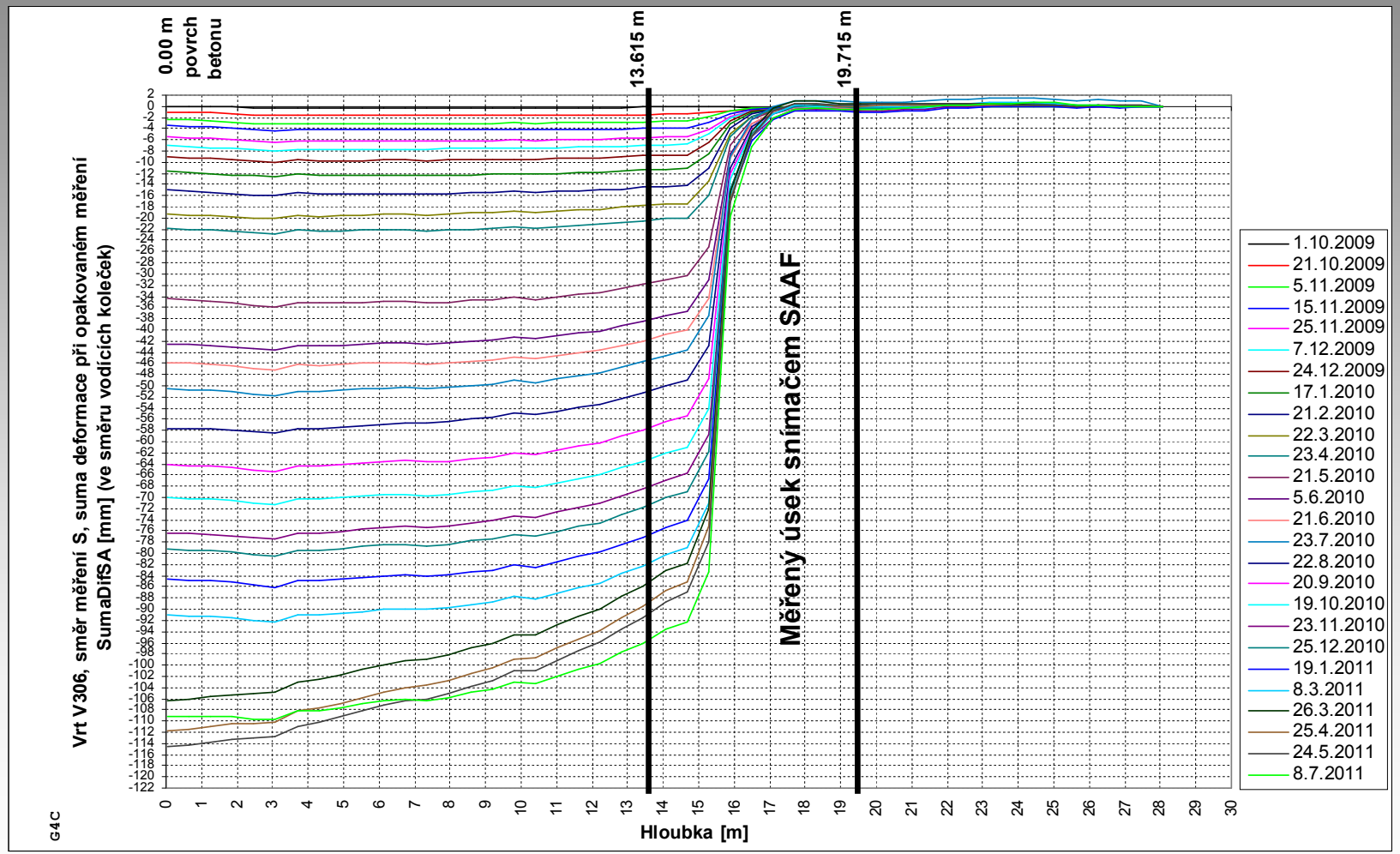
Former inclinometer borehole

- we used the information from inclinometer borehole IV306 which has already been closed due to landslide movement
- we knew the depth of the shearing zone
- we drilled a new borehole for SAAF next to the old one (50 cm)
- shearing zone was 14,66 – 17,71 m deep

Inclinometer measurement in the old borehole



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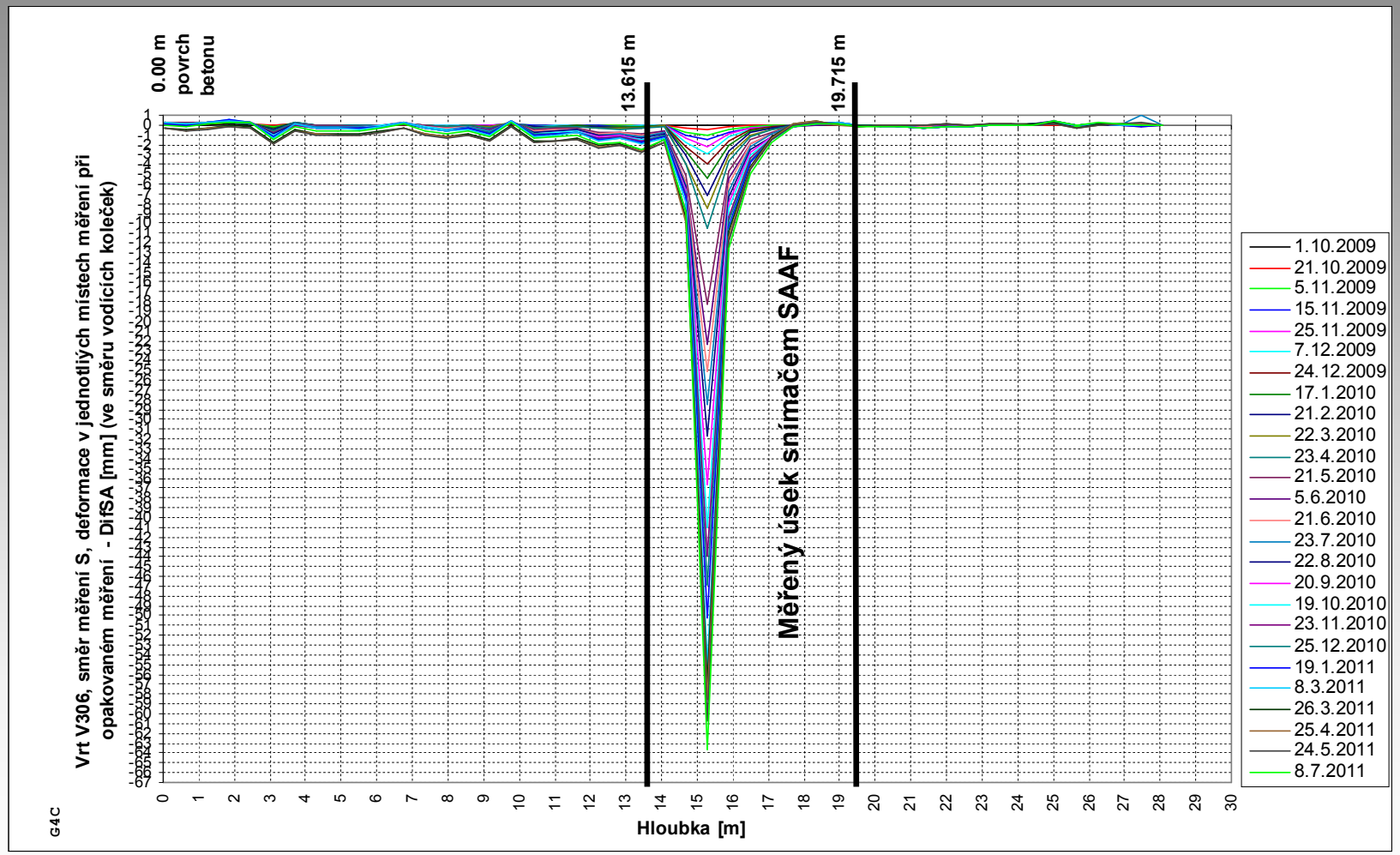
Inclinometer measurement in the old borehole



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What kind of SAAF

- we decided to instrument only shearing zone
- we chose 6.1 meters long SAAF, 302 mm long segments - 20 segments
- we installed it to the depth from 13.61 m to 19.71 m
- we attached one fully grouted Geokon 4500S piezometer to the PVC pipe

Distance between old and new borehole

Gluing couplings

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Pipe assembling on the ground

Piezometer attached to the pipe

Prepared for inserting

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Inserting SAAF to the borehole

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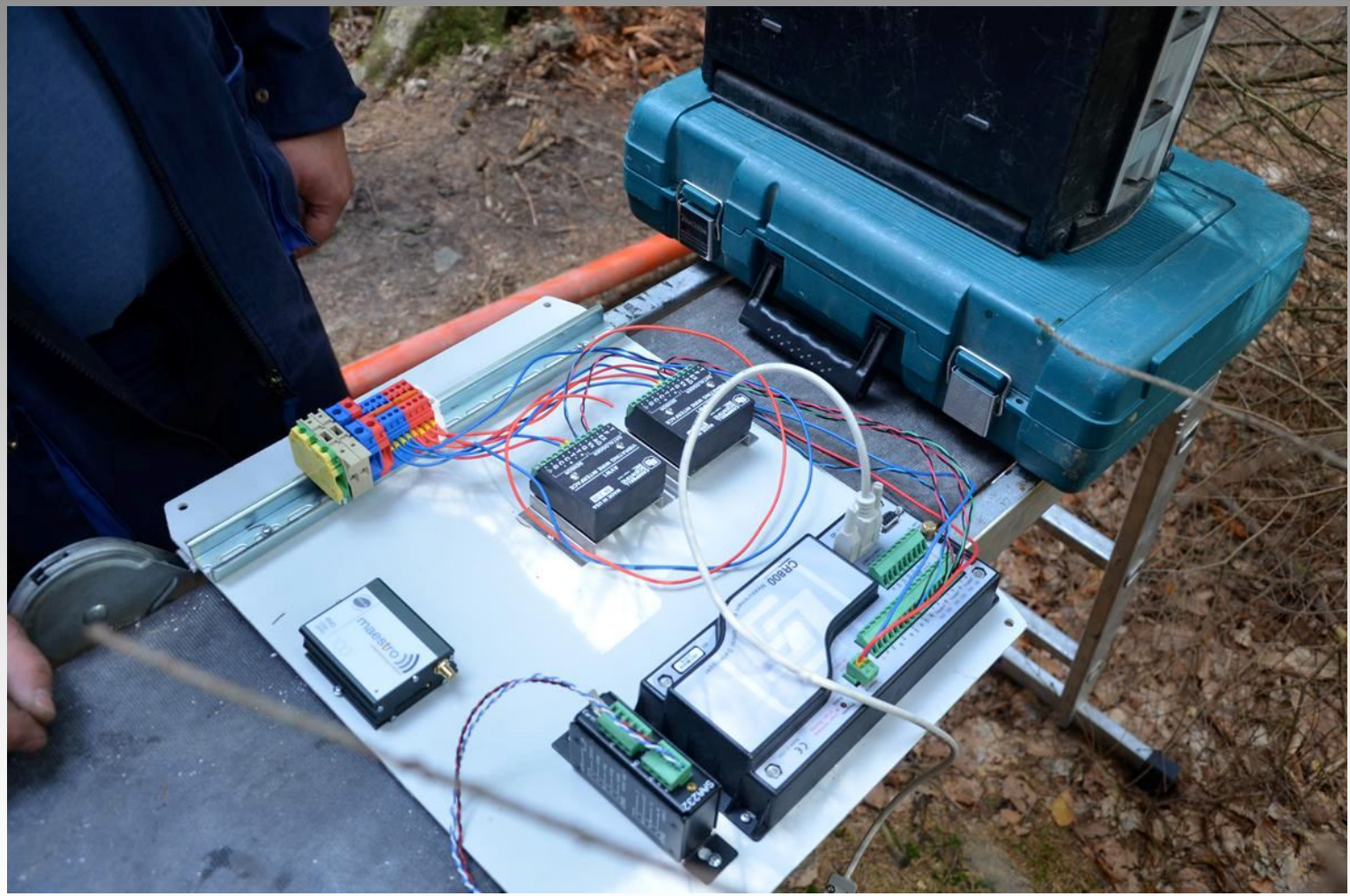
Beginning of grouting

Datalogger assembly



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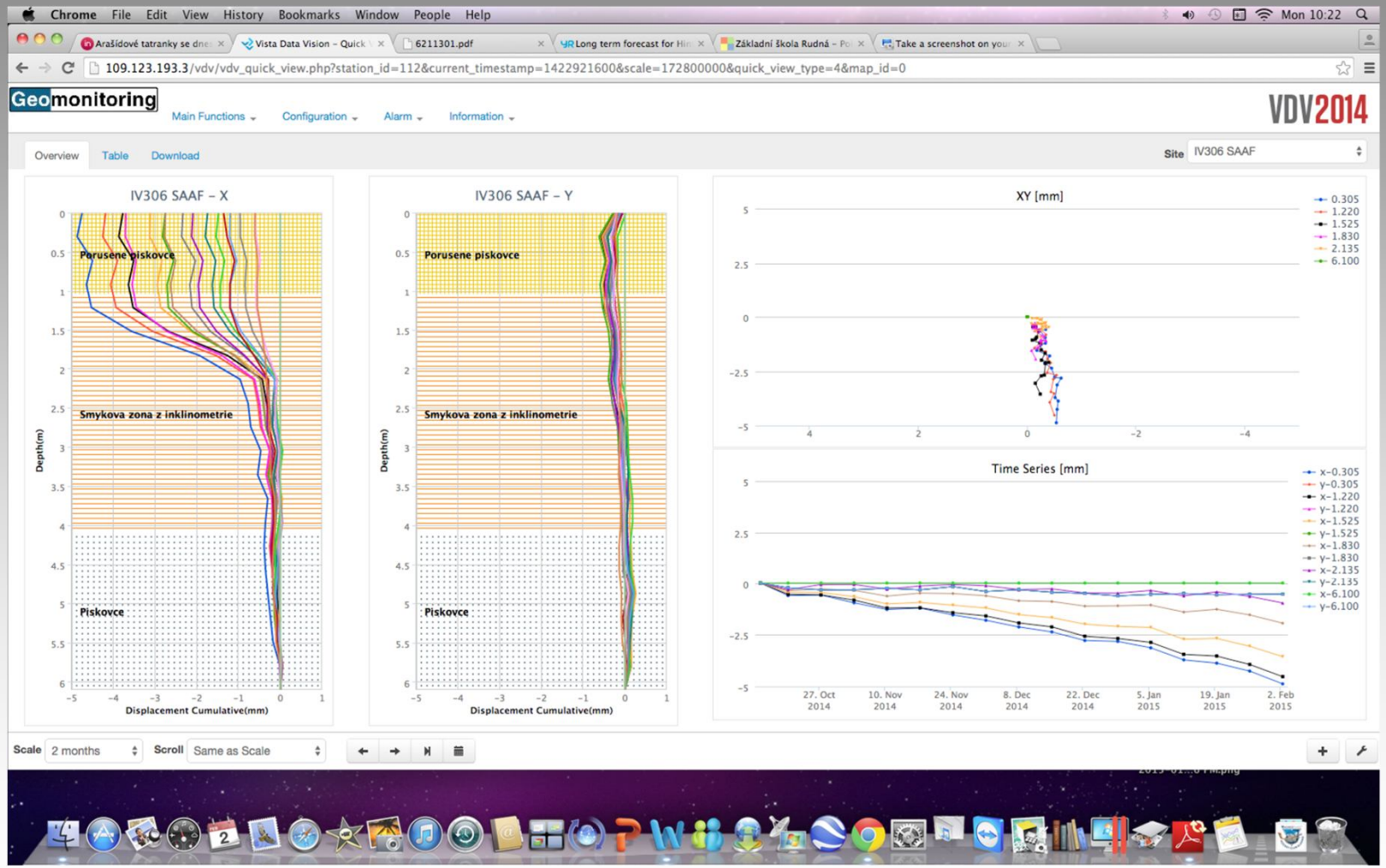
Solar panel power supply

VDV Quick View
Displacement cumulative



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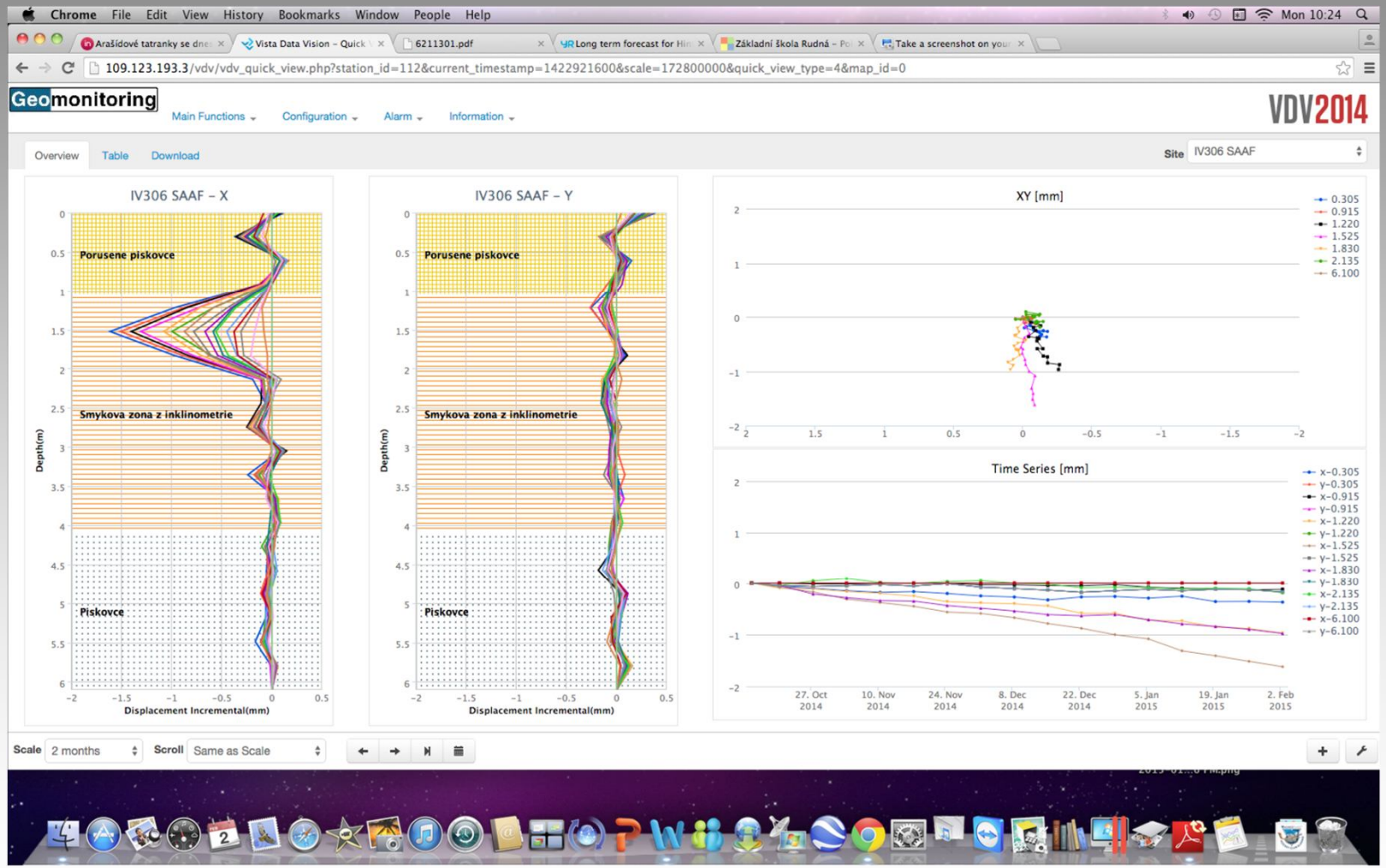
VDV Quick View
Displacement incremental



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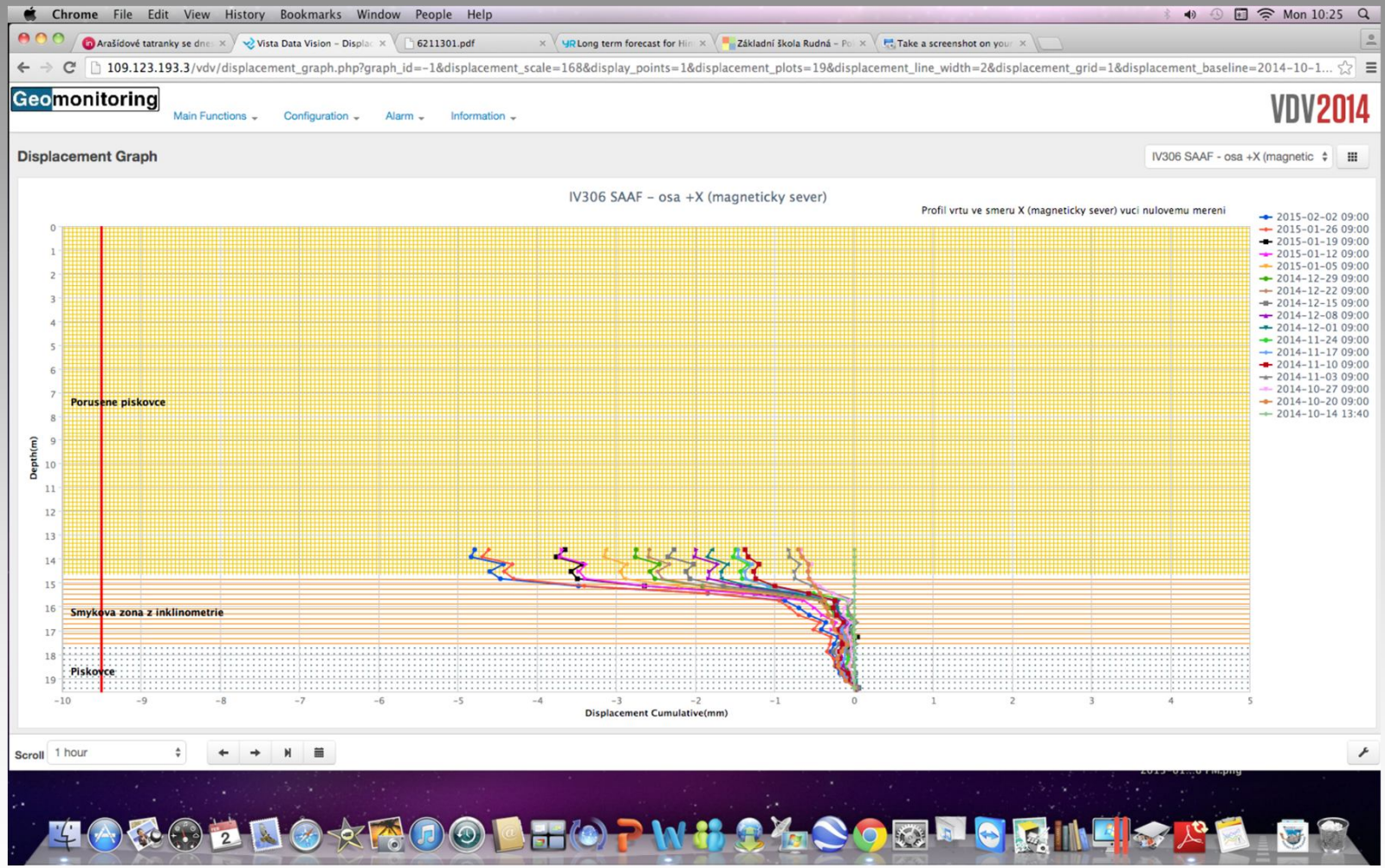
VDV Displacement graphs Cumulative



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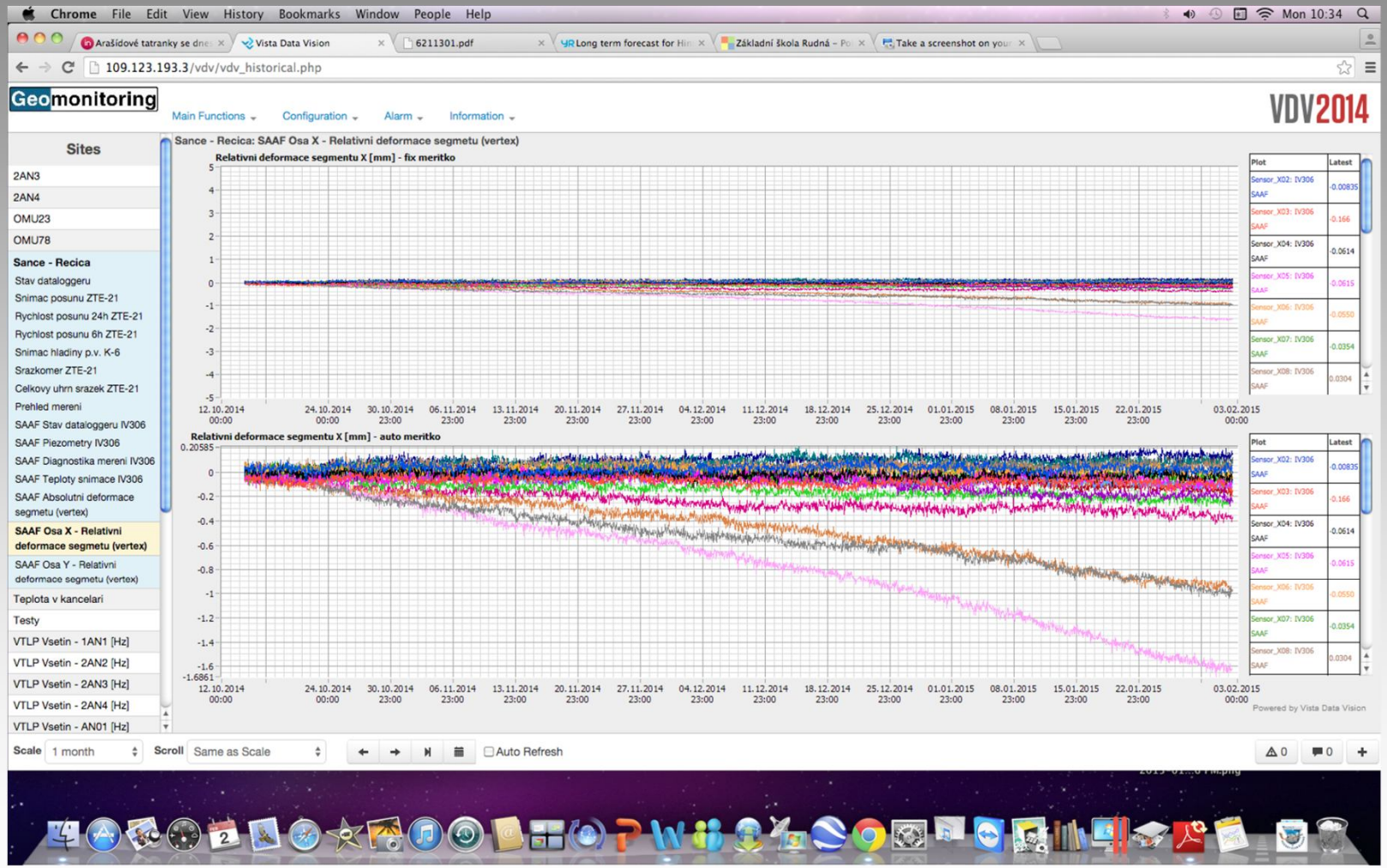
VDV Relative deformation X-axis at each vertex



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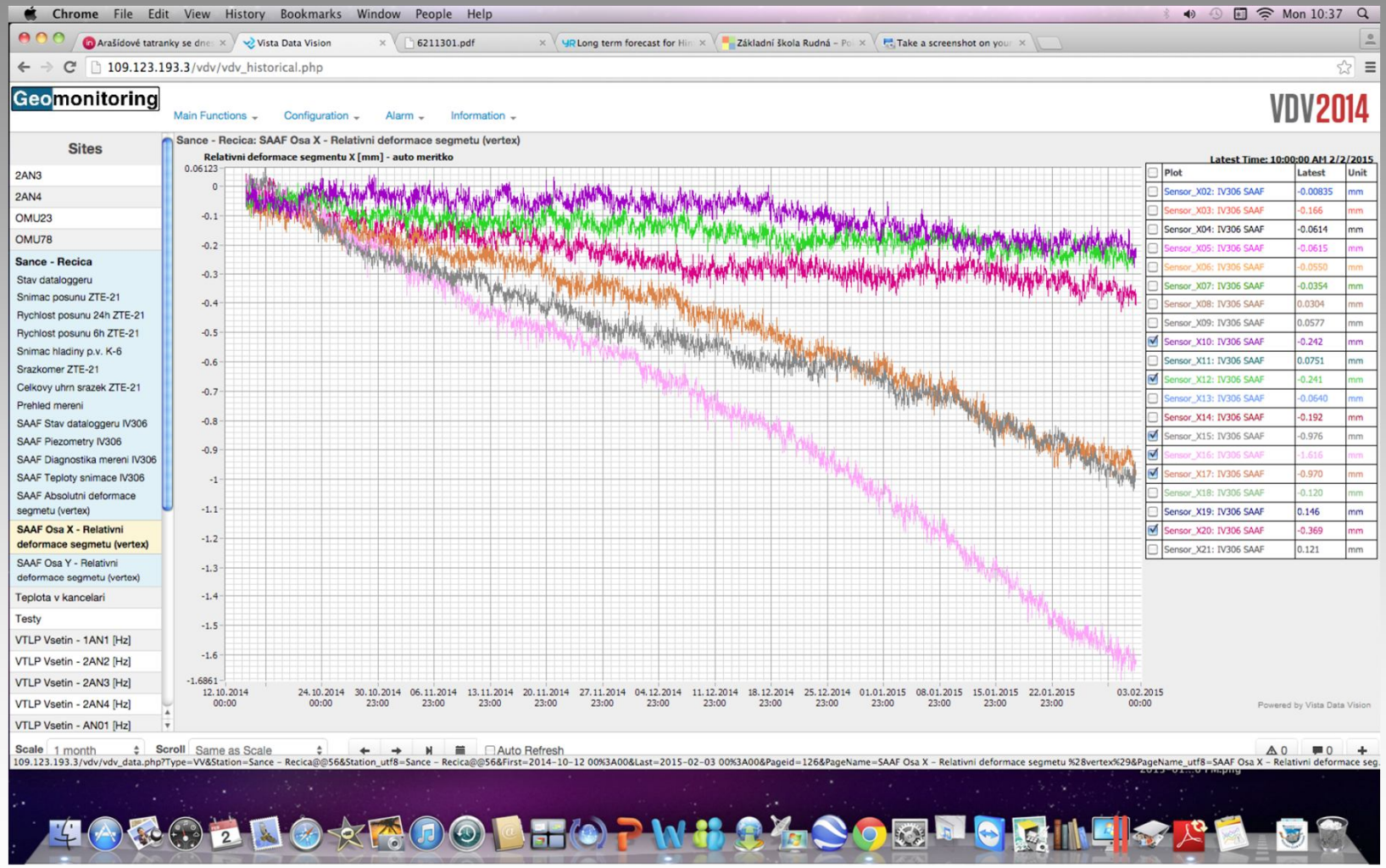
VDV Relative deformation X-axis at the most deformed levels



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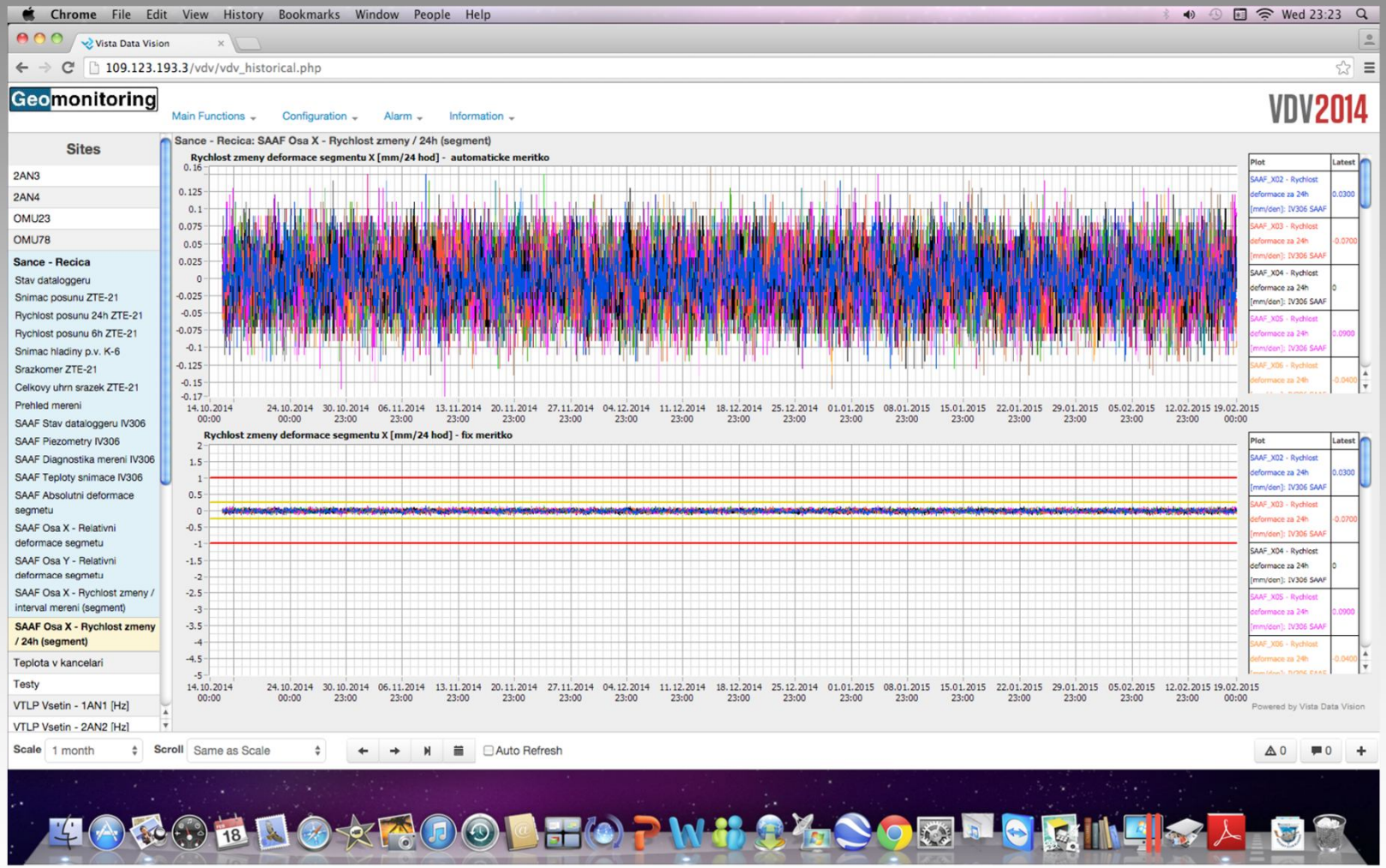
VDV 24 hours rate of change for all levels with alarm triggers- X axis



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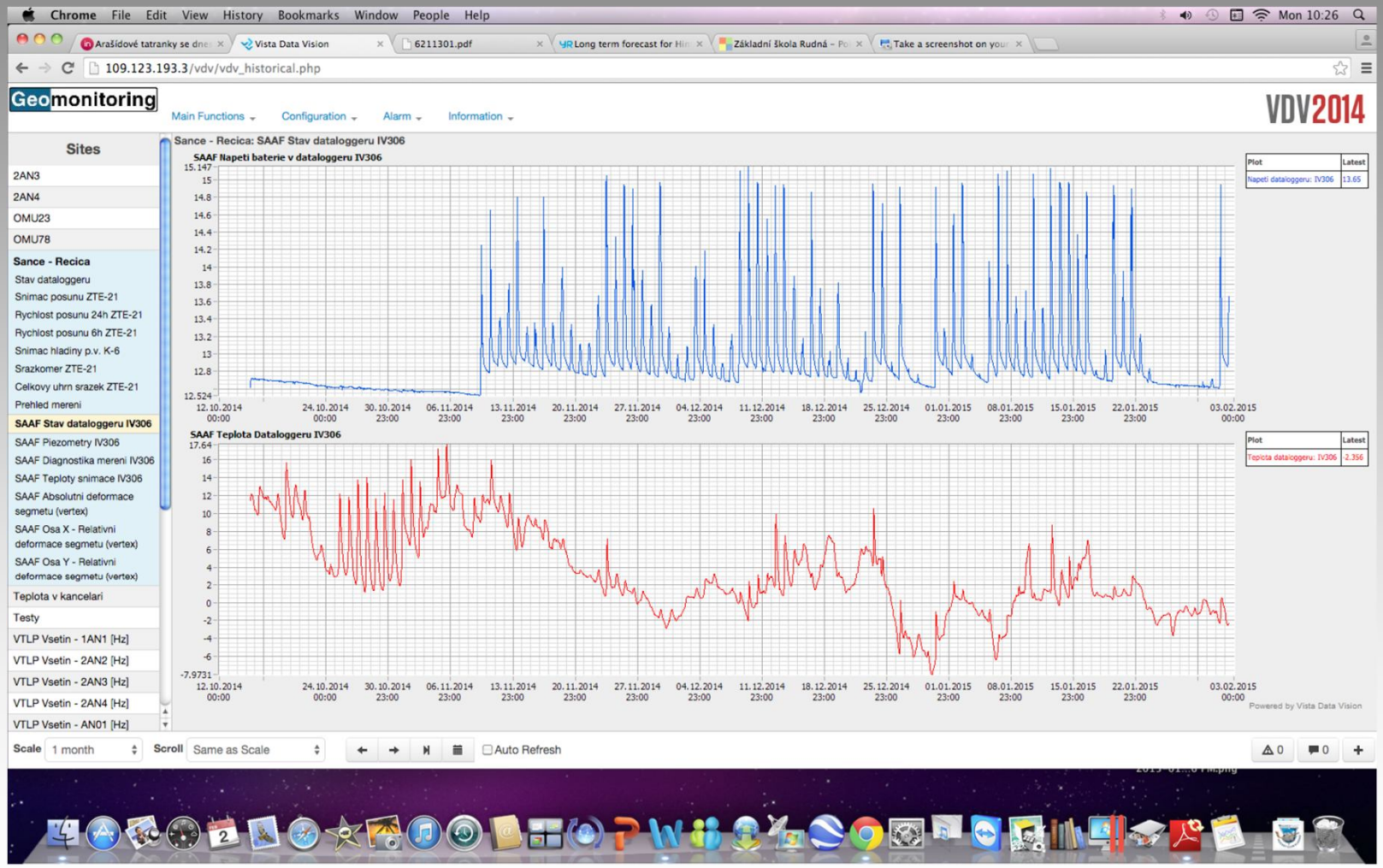
VDV Datalogger battery voltage and temperature



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Panoramatic view of the installation place

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Thank you...