

Monitoring volcanic plume height and fountain height using webcams at the 2021 Fagradalsfjall eruption in Iceland



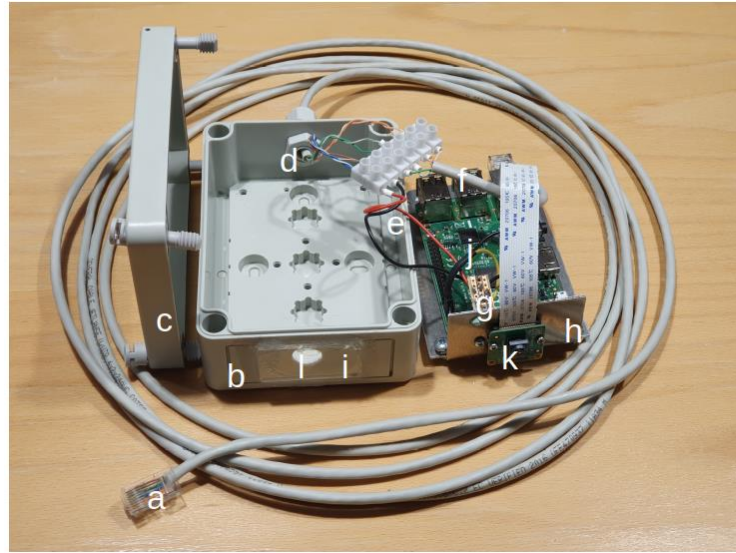
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¹ Icelandic Meteorological Office

² Department of Civil Protection and Emergency Management

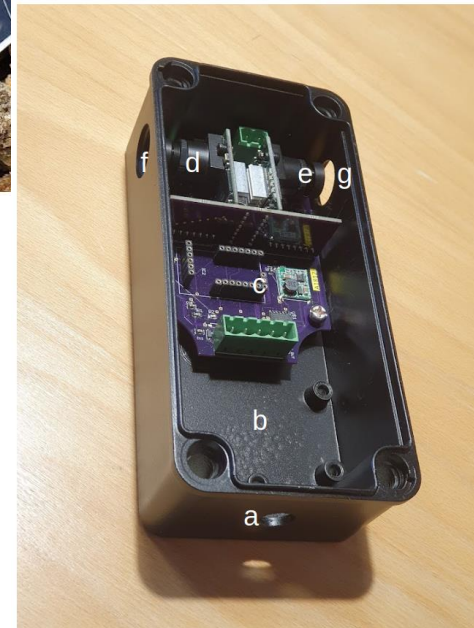


1. Two webcamera types designed and built in house:

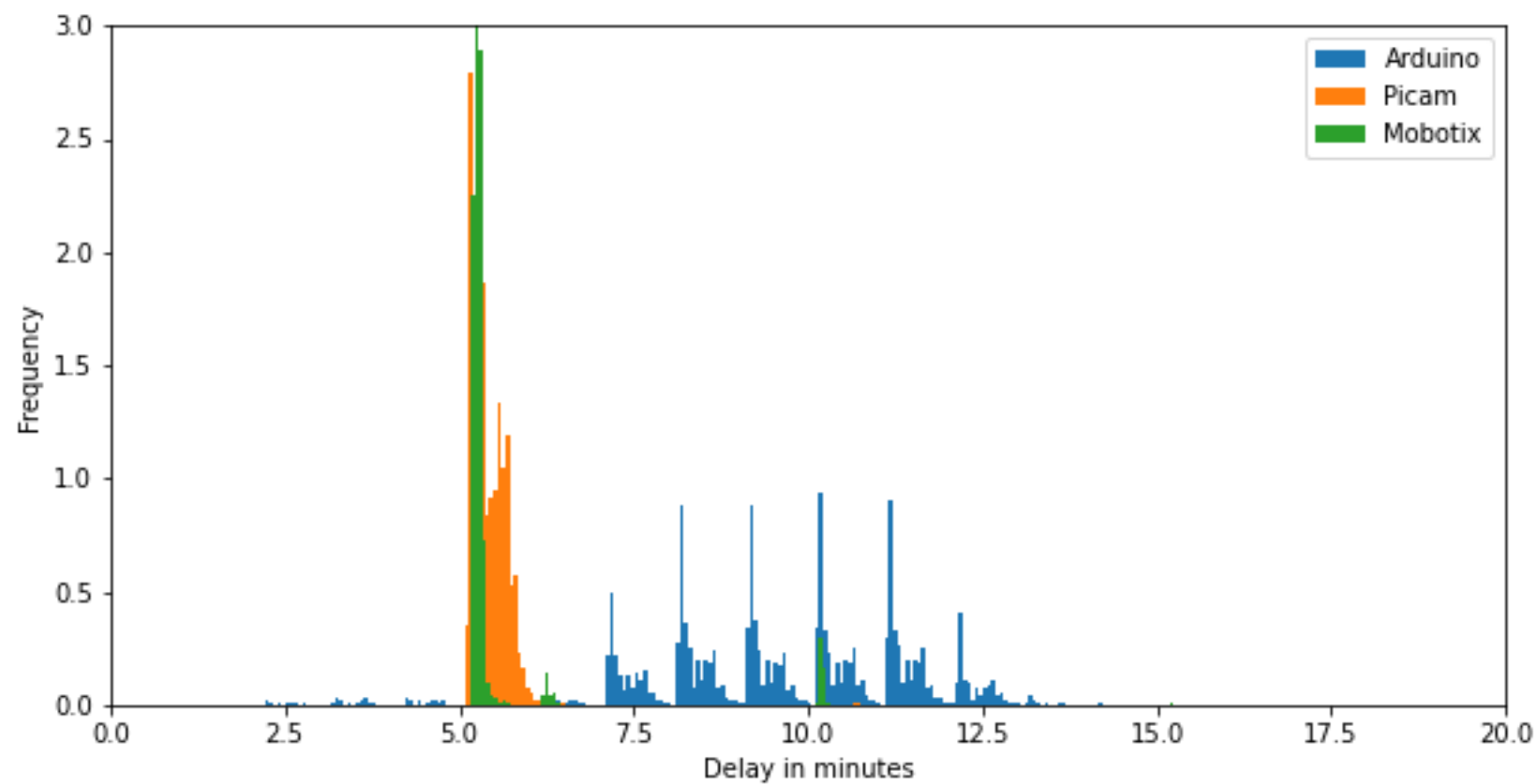


RaspberryPi Picam based system

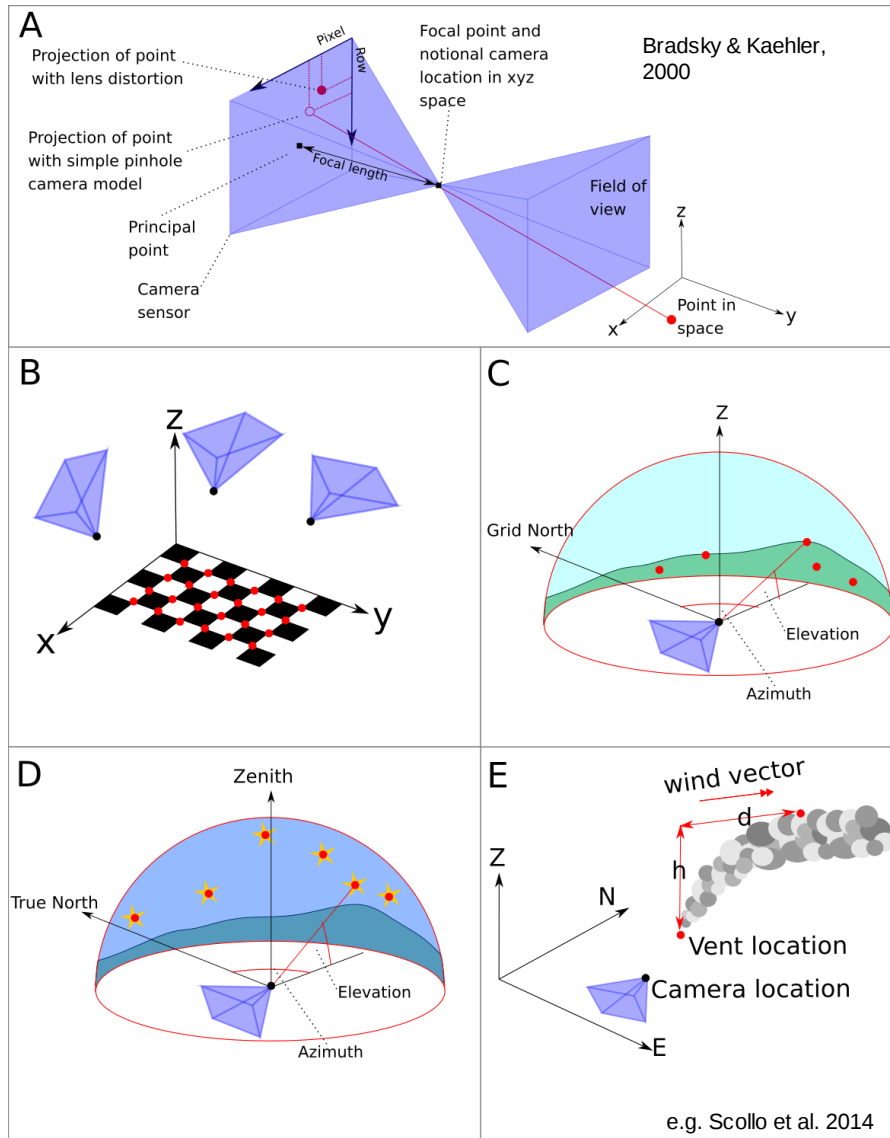
Arduino based system



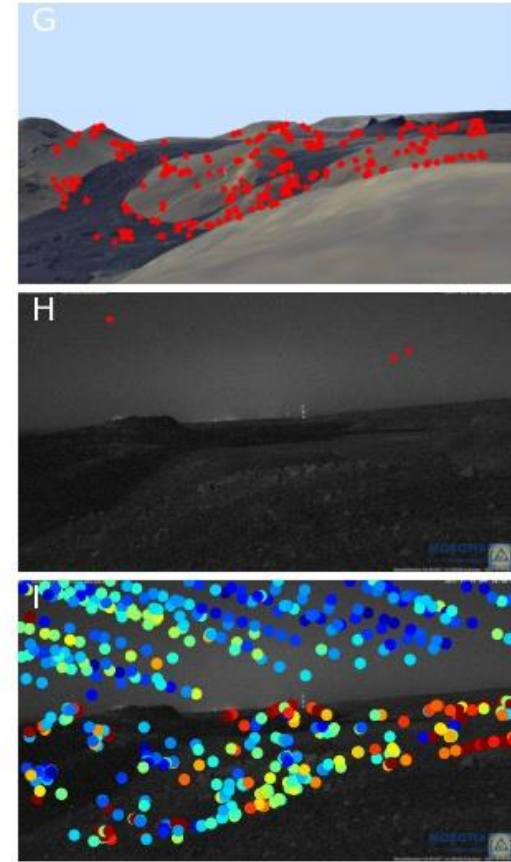
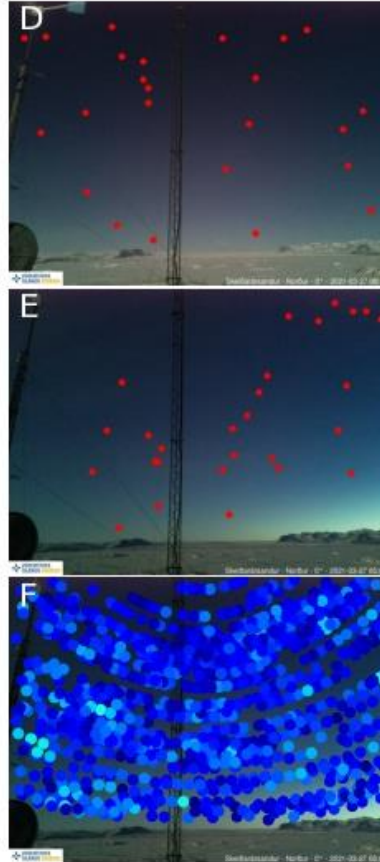
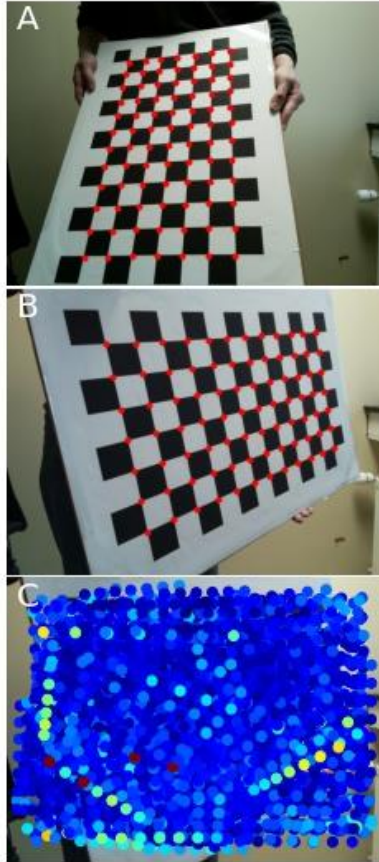
2. Timeliness



3. Geometry

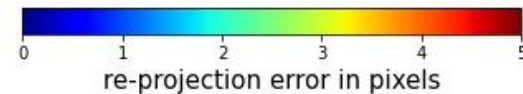


3. Calibration examples

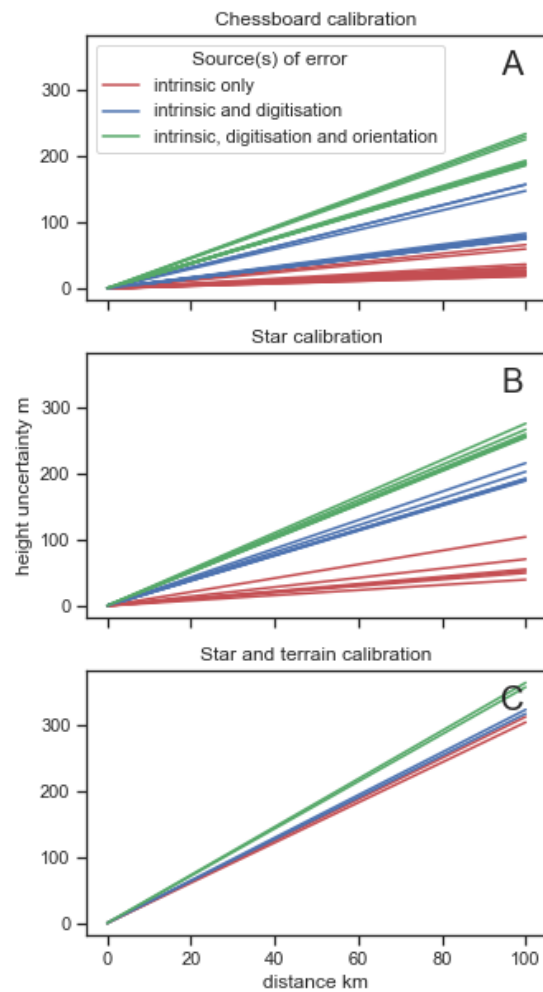


based on data from the
Icelandic Institute of
Natural History,
Institute of Earth
Sciences and National
Land Survey of Iceland

Will be made available as an open source
python package



4. Uncertainty



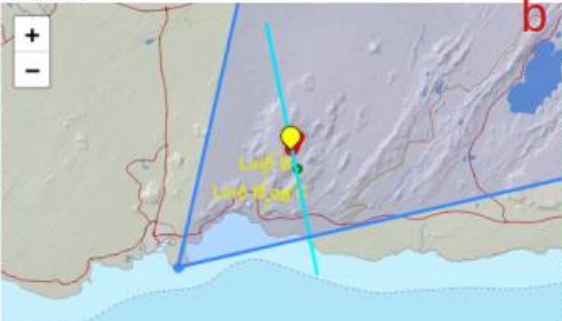
5. Web interface

Vefmyndavél: REYKJANES Lidarkerra

Dagsetning og tími: 2021-08-06 23:00

Veðurlíkan: /harmonie/harmonie_2021080618.05

Góðstöðvar:



Leaflet | Icelandic Met Office | National Land Survey of Iceland | © OpenStreetMap contributors

Plume parameters:

63.88903945 Lat -22.2707769 Lon

Hæð gosmakkar / m y.s. 2806

Wind bearing (clockwise from grid north) 169.59245827237825

Speed 6.726710739868801

Vindátt 0

Fjarlægð undan vindi / m 143

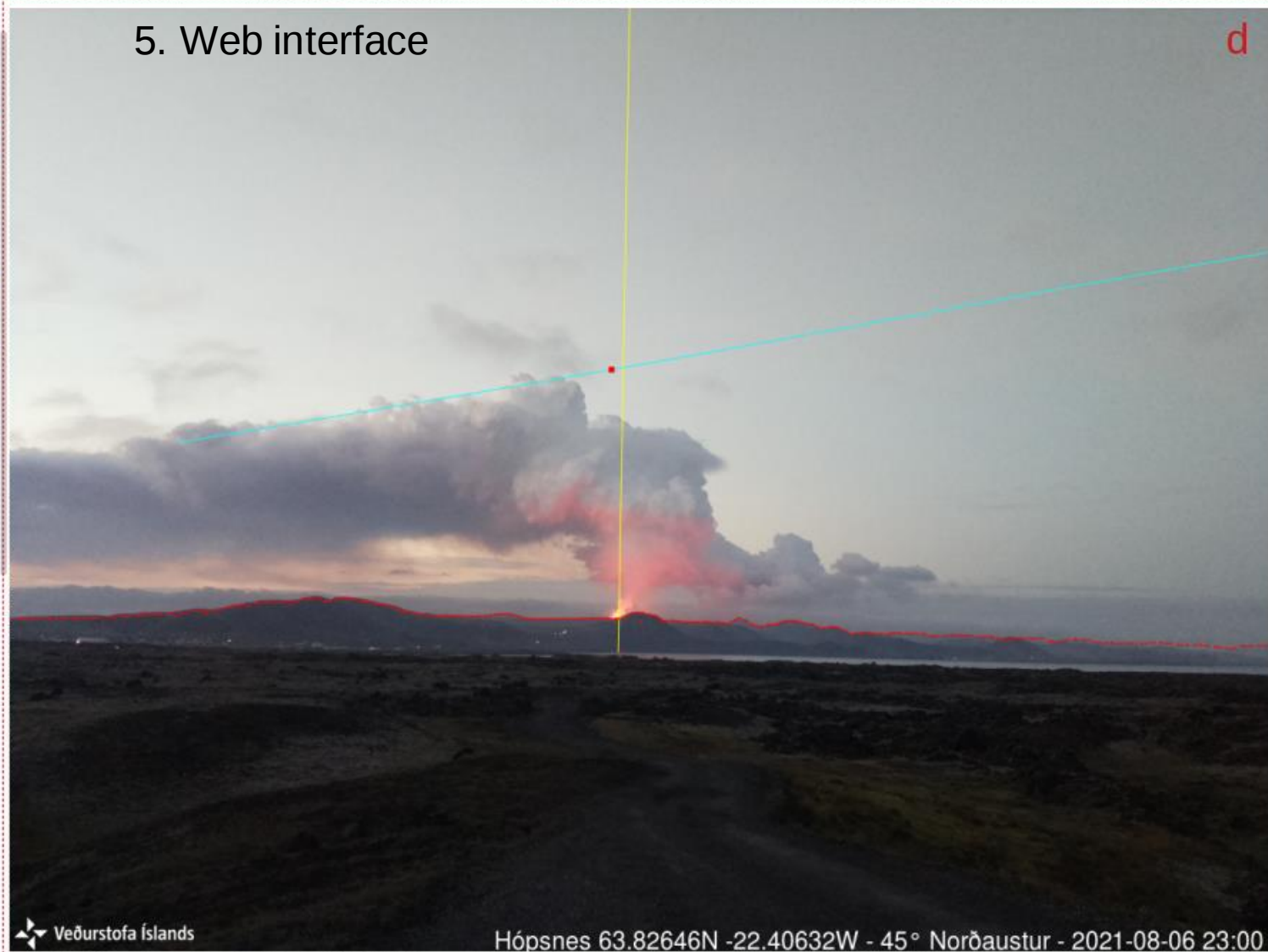
Camera parameters:

Focal Length (Only change for zooming video streams) 1023.0841523185625

Yaw 45.46986046853226

Pitch 9.74028251722399

Roll -0.916732472209318



6. Web interface

Vindátt



Fjarlægð undan vindi / m

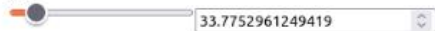


Camera parameters:

Focal Length (Only change for zooming video streams)



Yaw



Pitch

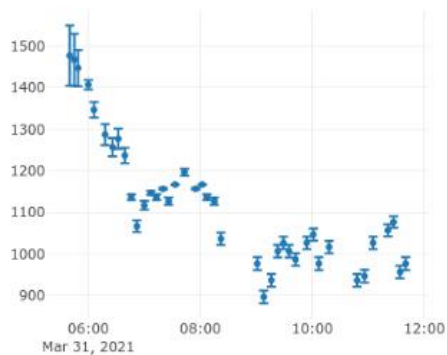


Roll



save plume height

delete plume height



DELETE THIS TIMESERIES

DELETE ALL TIMESERIES

EXPORT TO CSV

7. Plume and fire fountain heights

