Uncertainty Guided Recognition of Tiny Craters on the Moon

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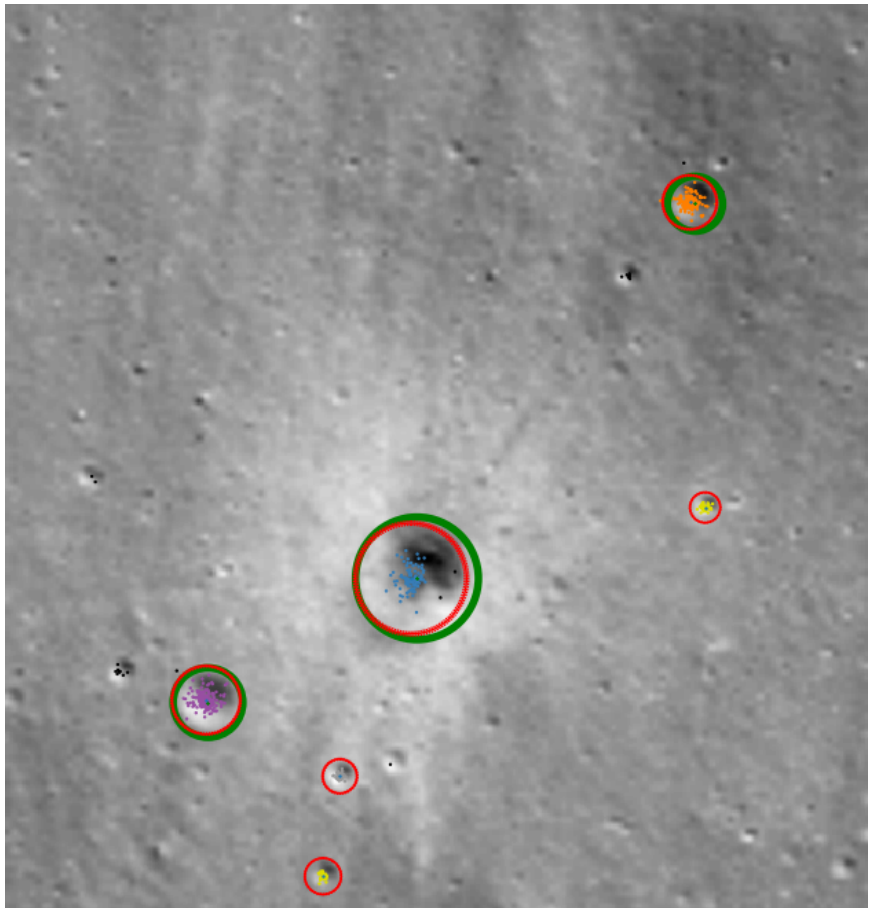
Crater Detection

- Age Estimation.
- Numerous.
- Time consuming.
- Challenging.
- Ambiguous.
- Small craters are only a few pixels large.
- Error prone.

Cutout from NAC image M126961088LE.

Detection

- Modified YOLO architecture [11]
- Detections tightly group (coloured).
- Occasional outliers (black).



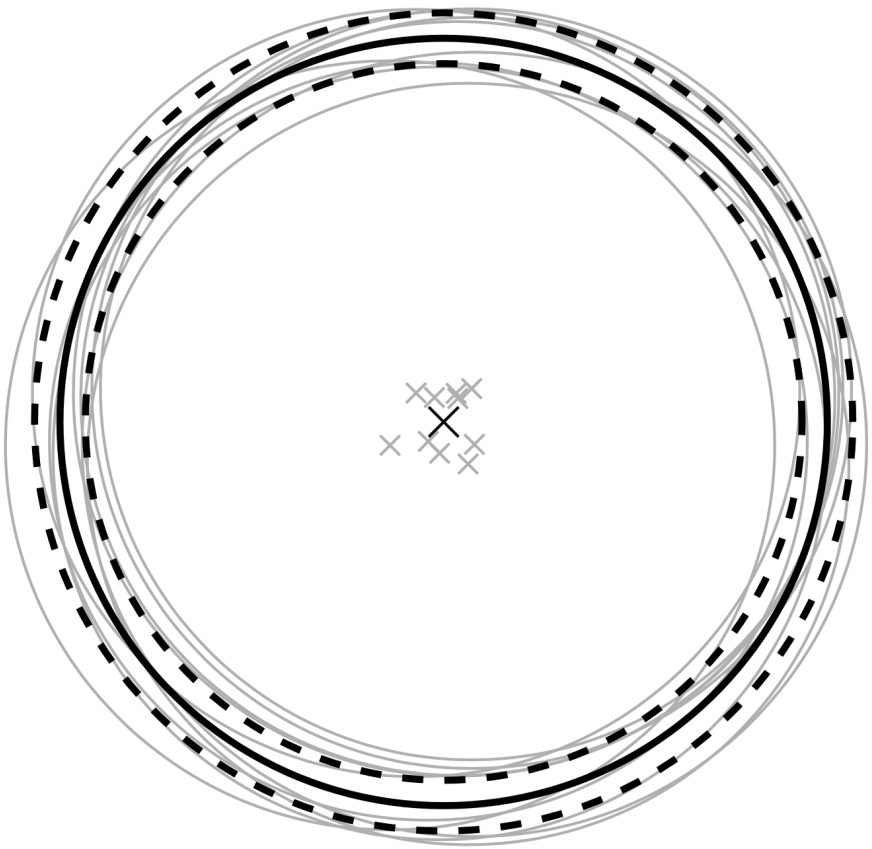
Cutout from NAC image M126961088LE.

Uncertainty Estimation

Group detections (OPTICS [19]).

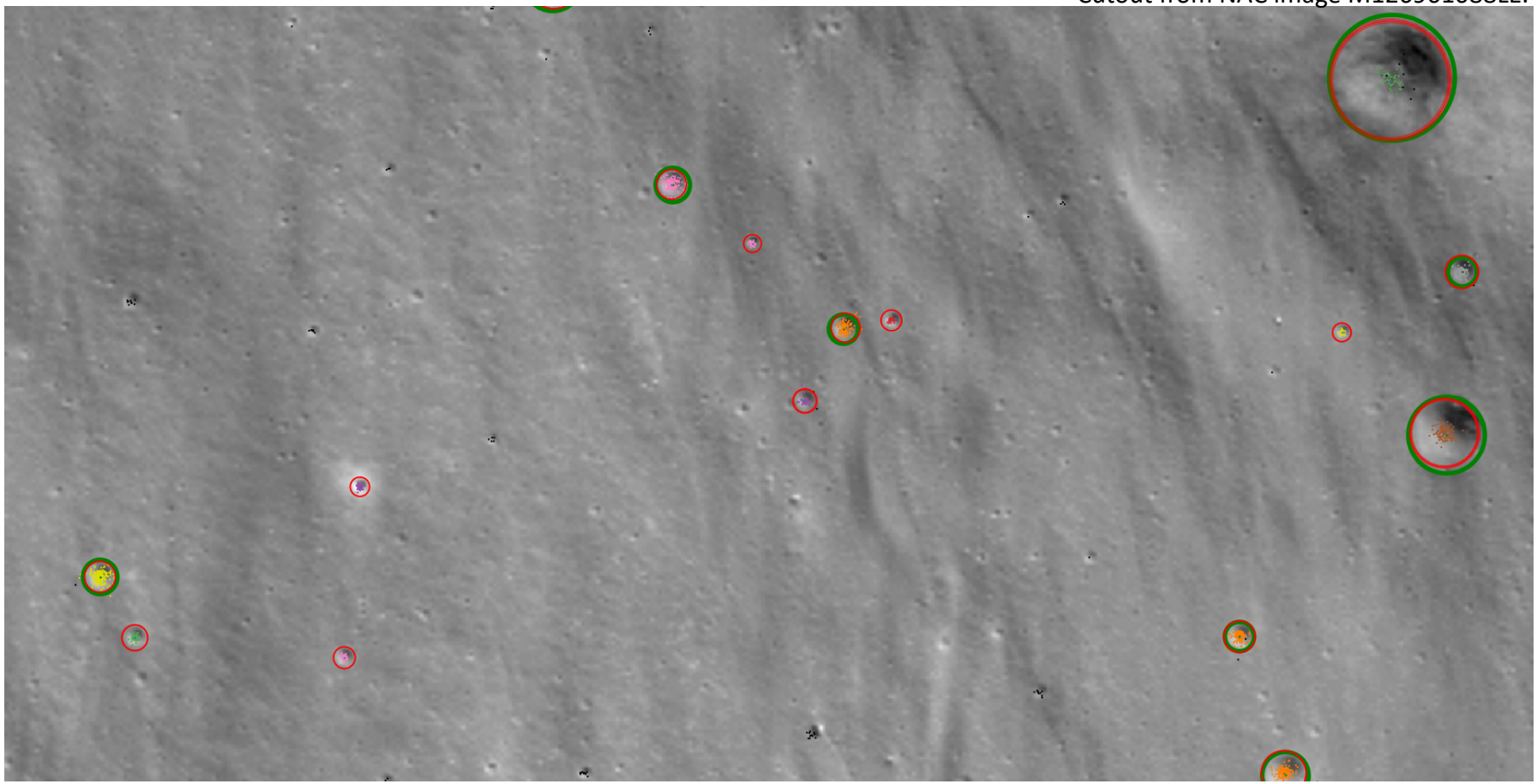
Compute average centre and radius.

Estimate the confidence intervals



Results

Cutout from NAC image M126961088LE.



Interested? Join me in PS T3.11, 4:30 PM CET, January 15, 2021