

The Present and Future of DM

Streak Masking

DM Team Meeting — February 16, 2022

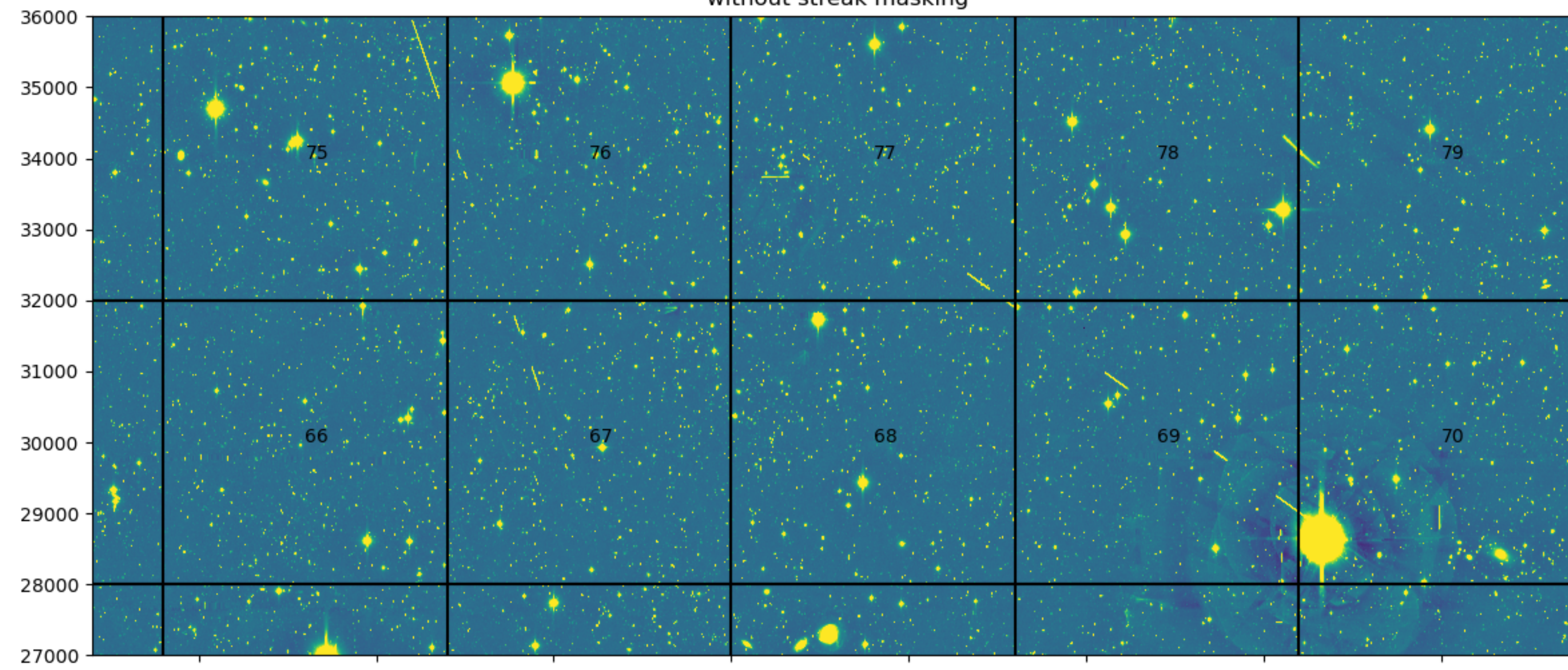
Clare Saunders

Overview of the Current Procedure:

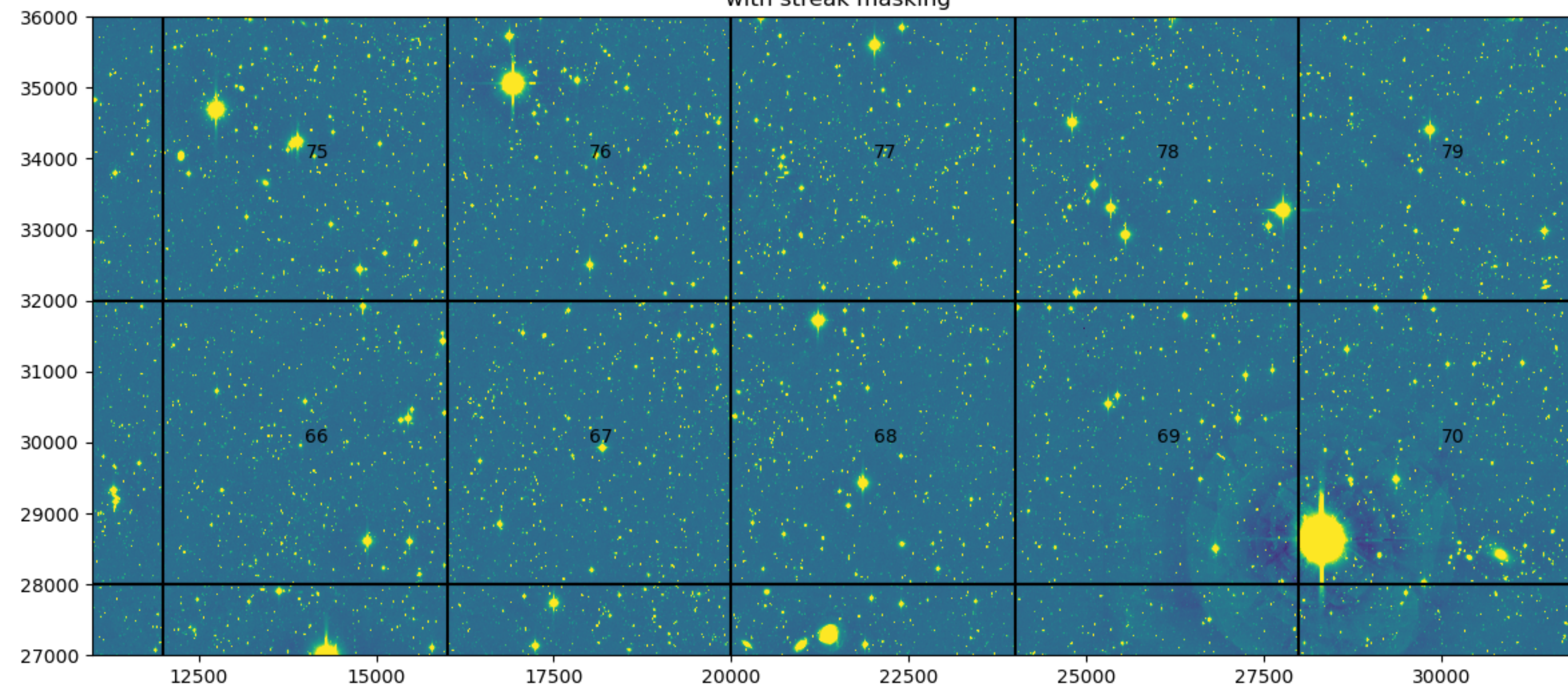
- Streak masking happens at the same time as temporal artifact rejection in `assembleCoadd`
- As such, it is done on a patch-by-patch basis.
- The streak masking procedure takes the detection mask and tries to detect straight lines using the Kernel Hough Transform.
- The model of the streak is fit assuming a Moffat PSF with no variation along the line and that the streak extends to the edges of the detector.
- A final mask is made using the intersection of the detection mask and the pixels where the streak model is above a given threshold.
- See DMTN-197 for more details.

Coadds in Tract 9615

without streak masking

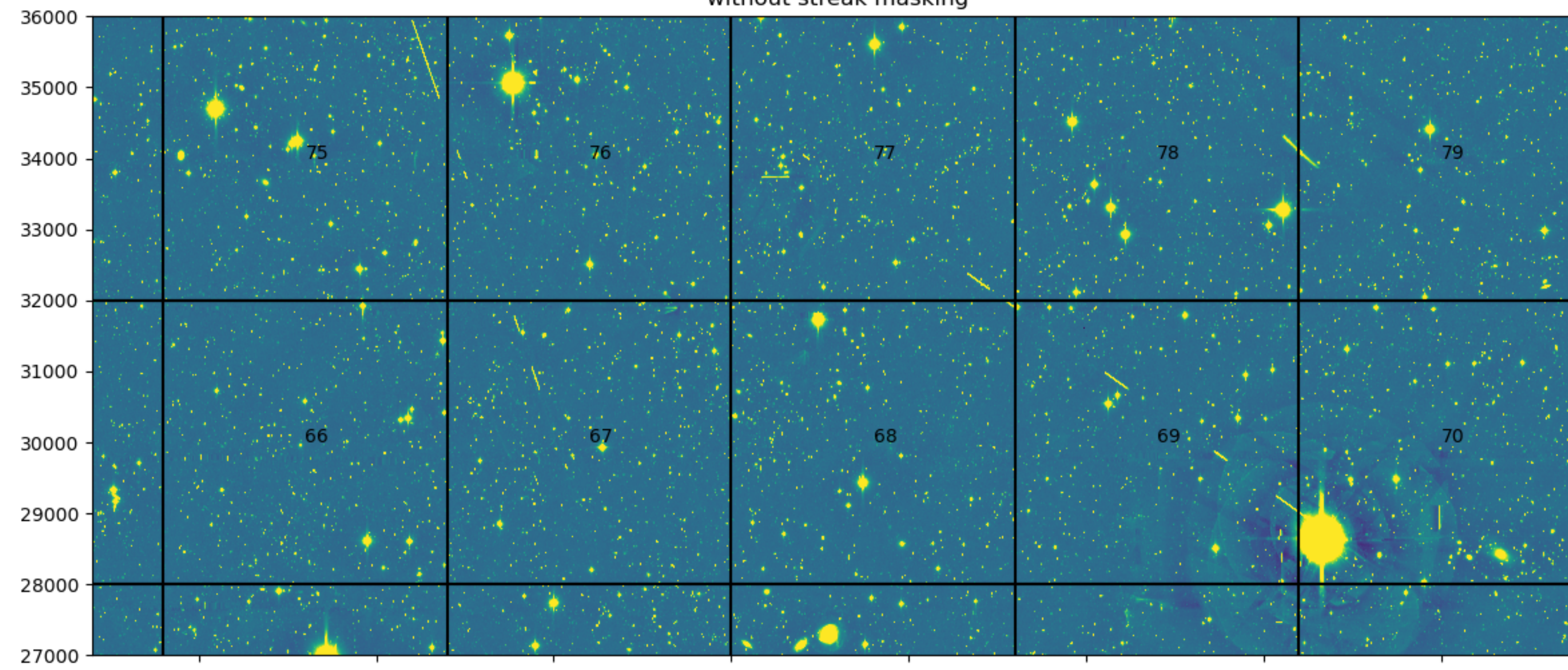


with streak masking

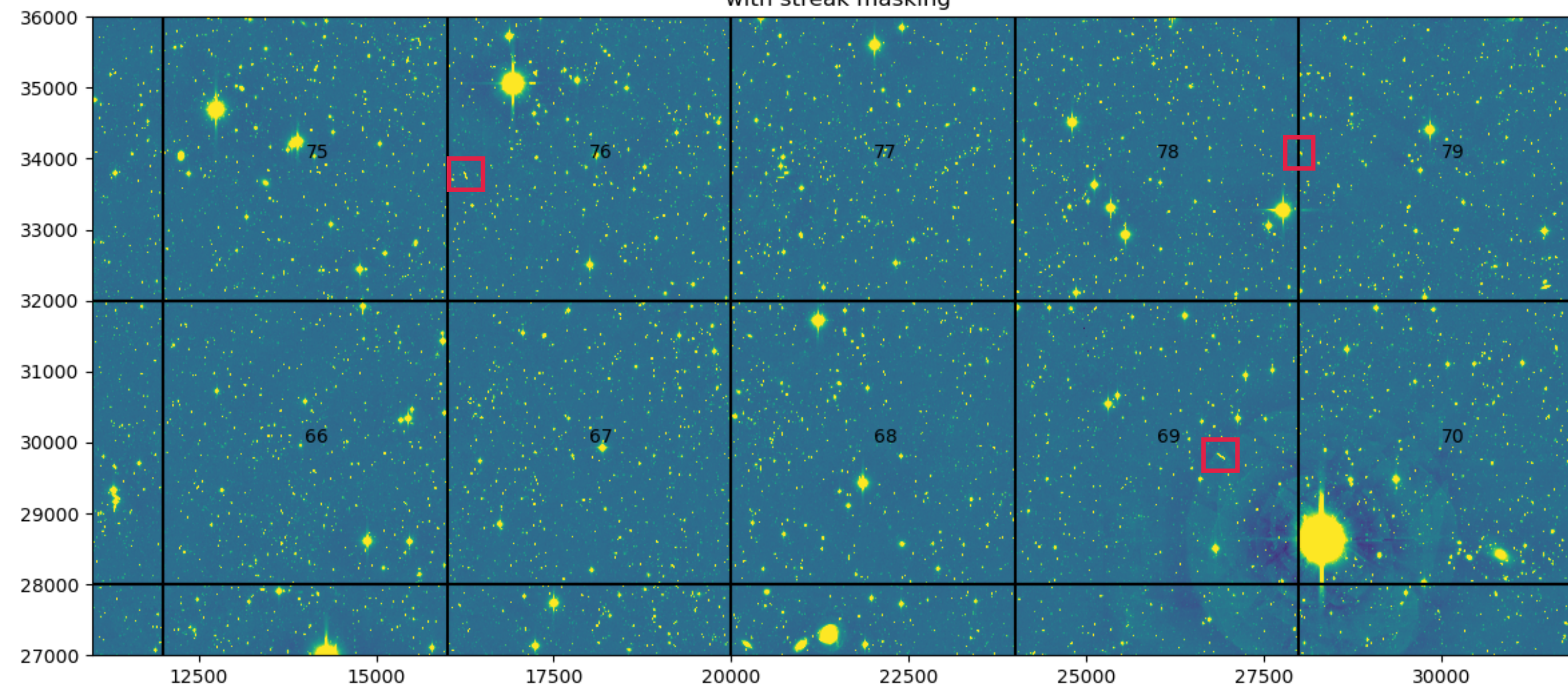


Coadds in Tract 9615

without streak masking



with streak masking



Adding metrics for streak masking

Possible helpful metrics:

- Numbers detected on short and long scales
- Brightness of the detected streaks
- Position on the field of view

Low Surface Brightness Wings of Satellites

Are they a problem?

