

Wavelength Solutions in PFS

Robert Lupton, Princeton University

**DRP Team Meeting
2022-09-07**



PFS



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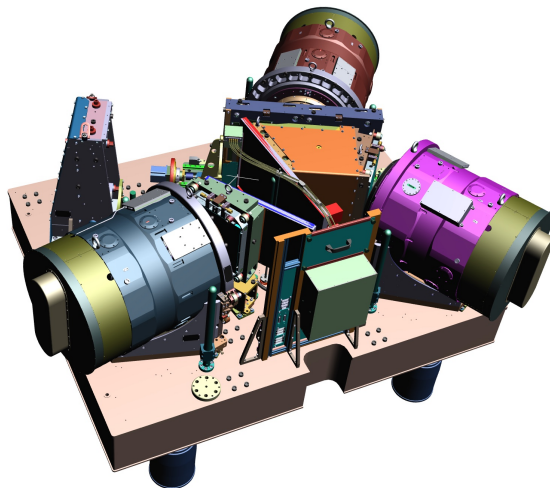
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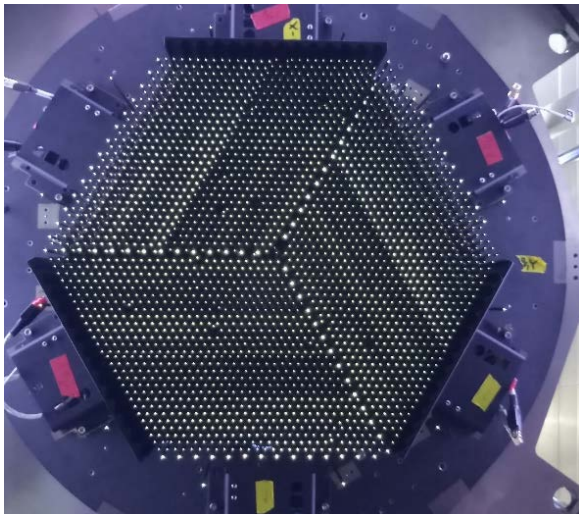
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- A total of $c. 1.25 \text{ deg}^2$







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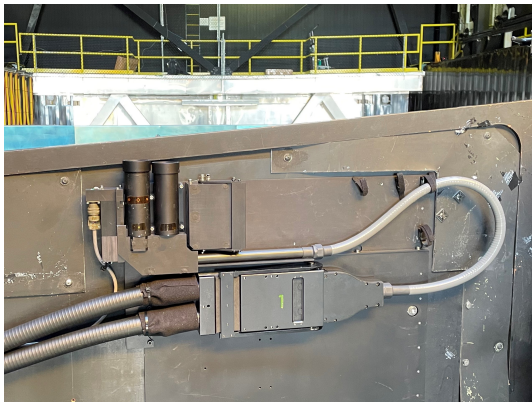


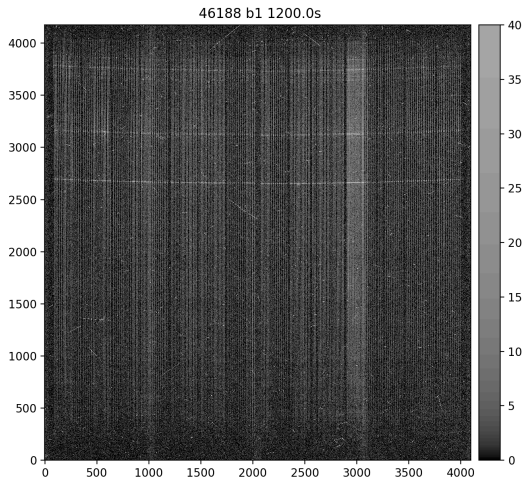
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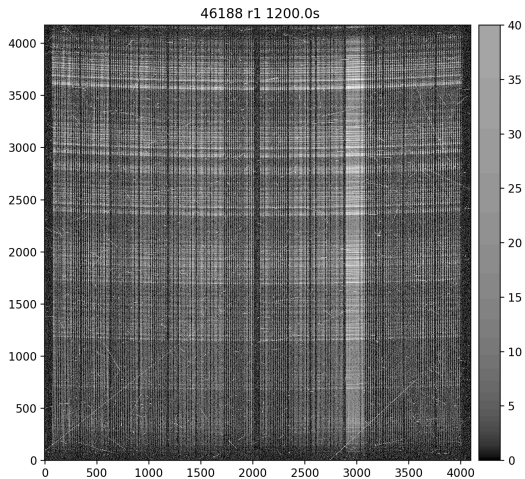


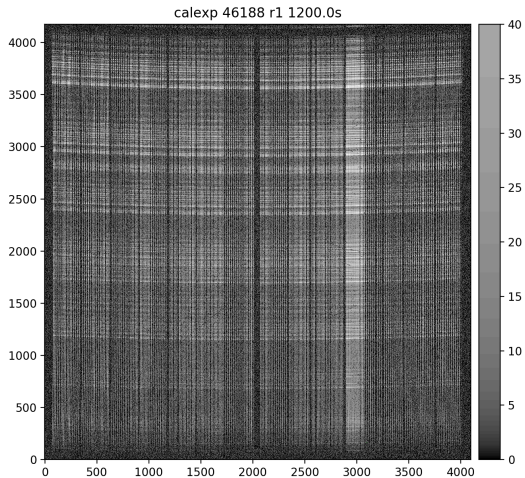


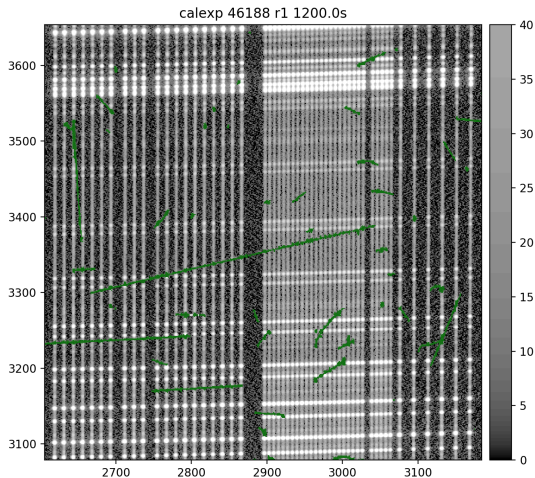
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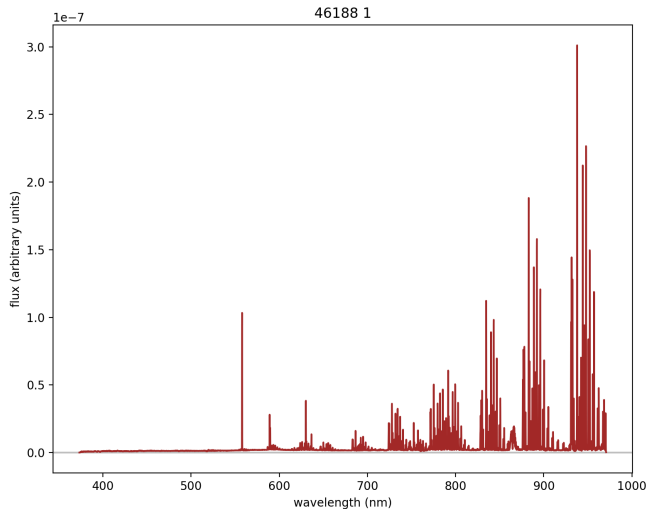






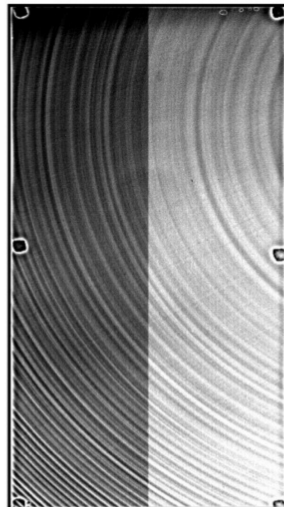
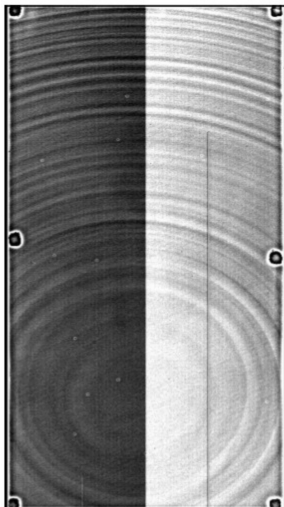


The Sky

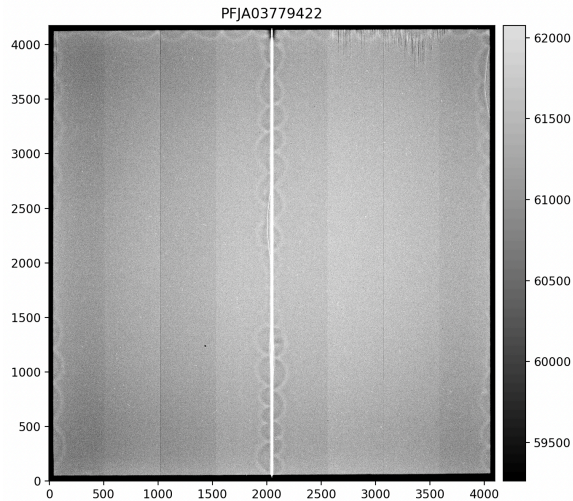




A brief detour away from PFS



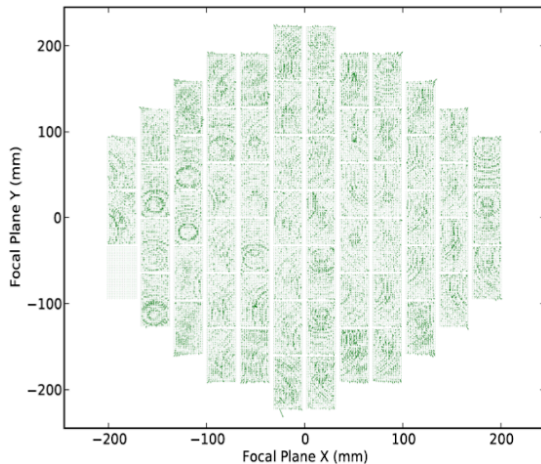
Plazas + Bernstein



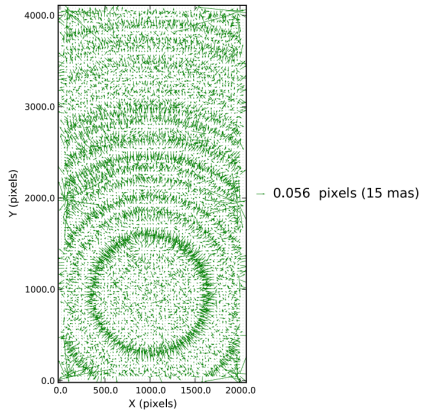
PFS, Le Fur



- 0.056 pixels (15 mas) DES astrometric residuals per CCD
All exposures, all filters.



Plazas + Bernstein



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The DetectorMap



[Back to PFS](#)



The DetectorMap



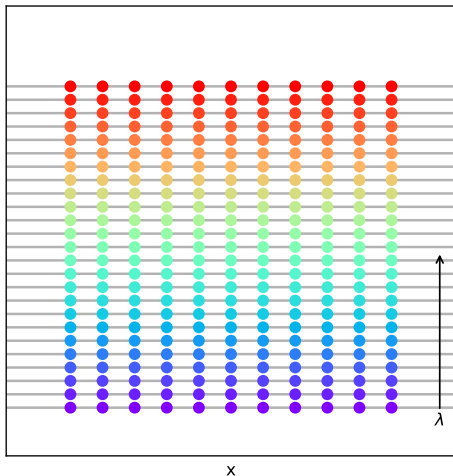
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The DetectorMap



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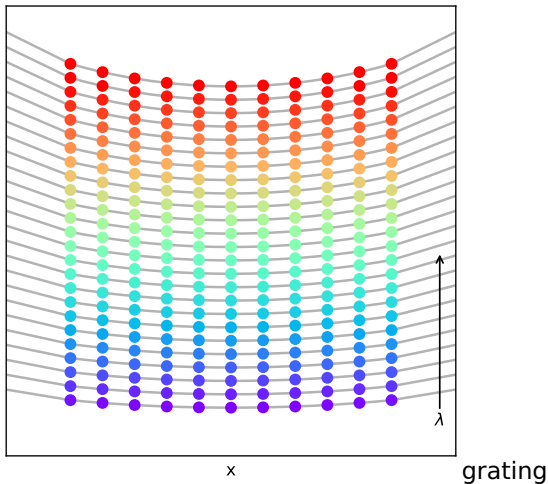




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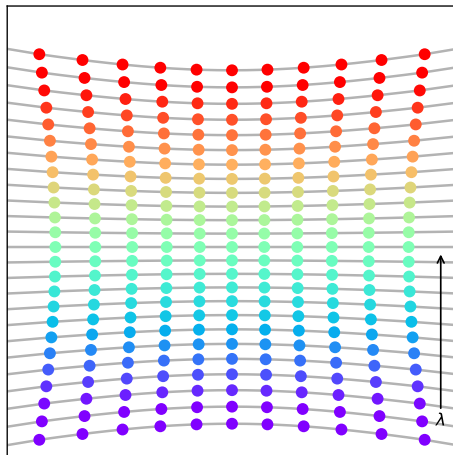




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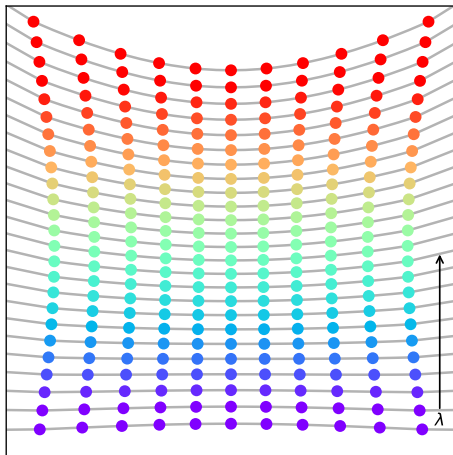
distortion



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grating + distortion



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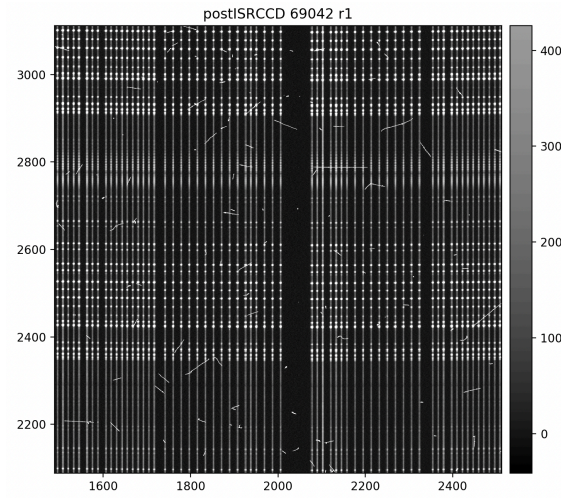
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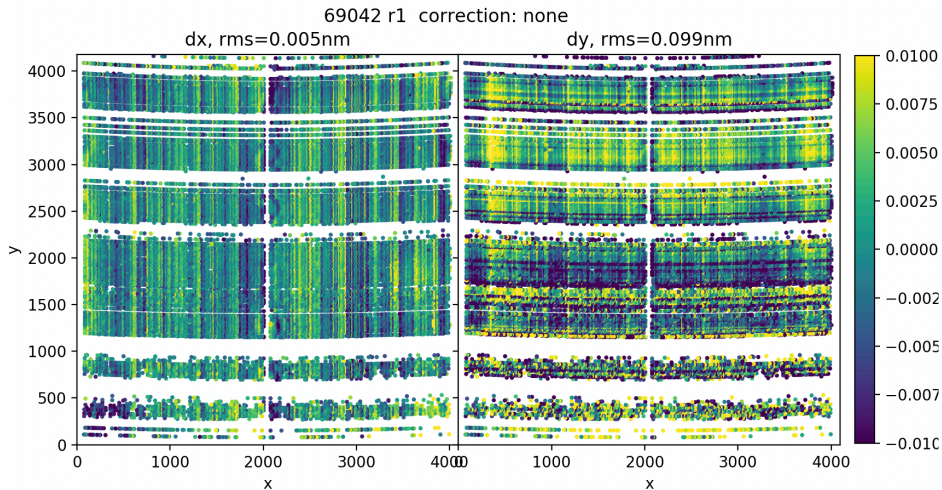
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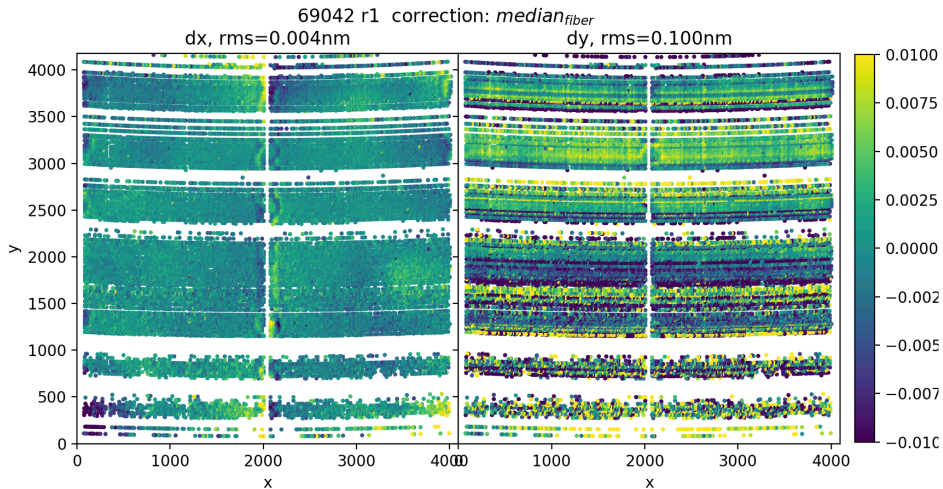
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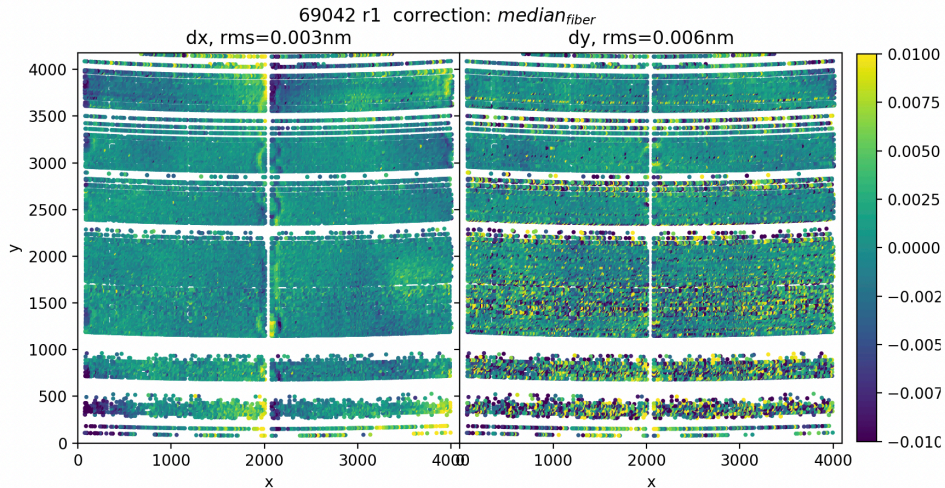
Then for every exposure we use the measured positions of lines (typically sky lines) and continuum to fit a further low-order set of distortions in 2-D.

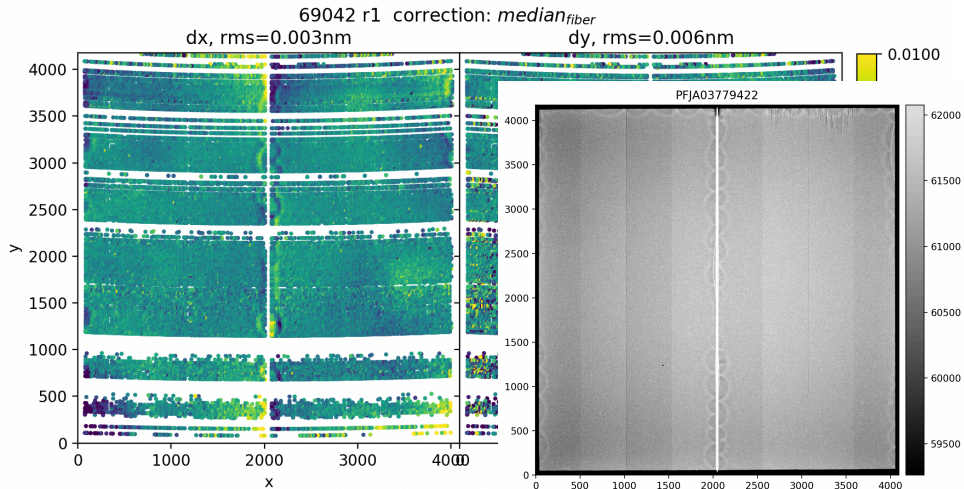


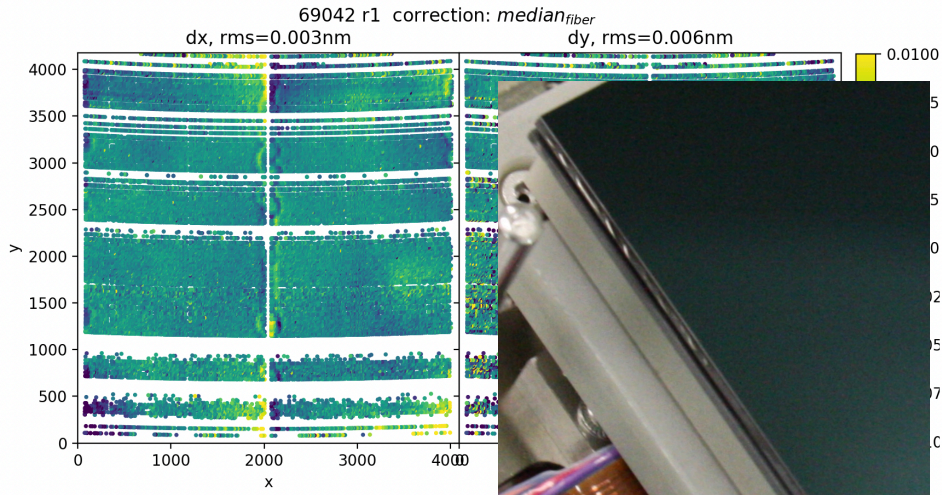
Measure the positions of all the lines, update the detectorMap, and look at the centroid errors













The End