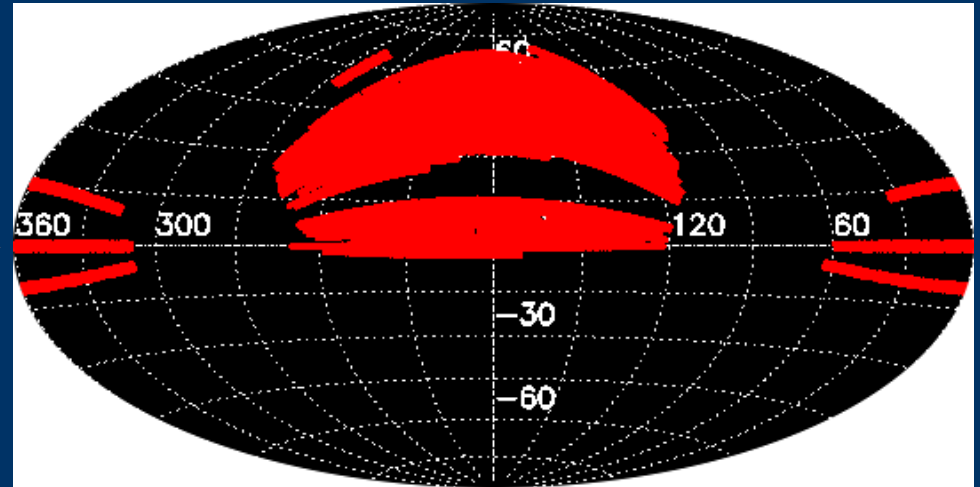
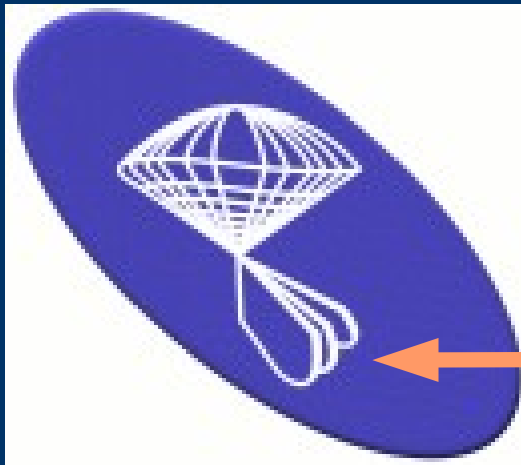


SDSS-II SN Imaging Data

- Summary of 2005 run
- Calibrations
- Coadds
- Data Access



Stripe 82 (the “southern equatorial stripe”)

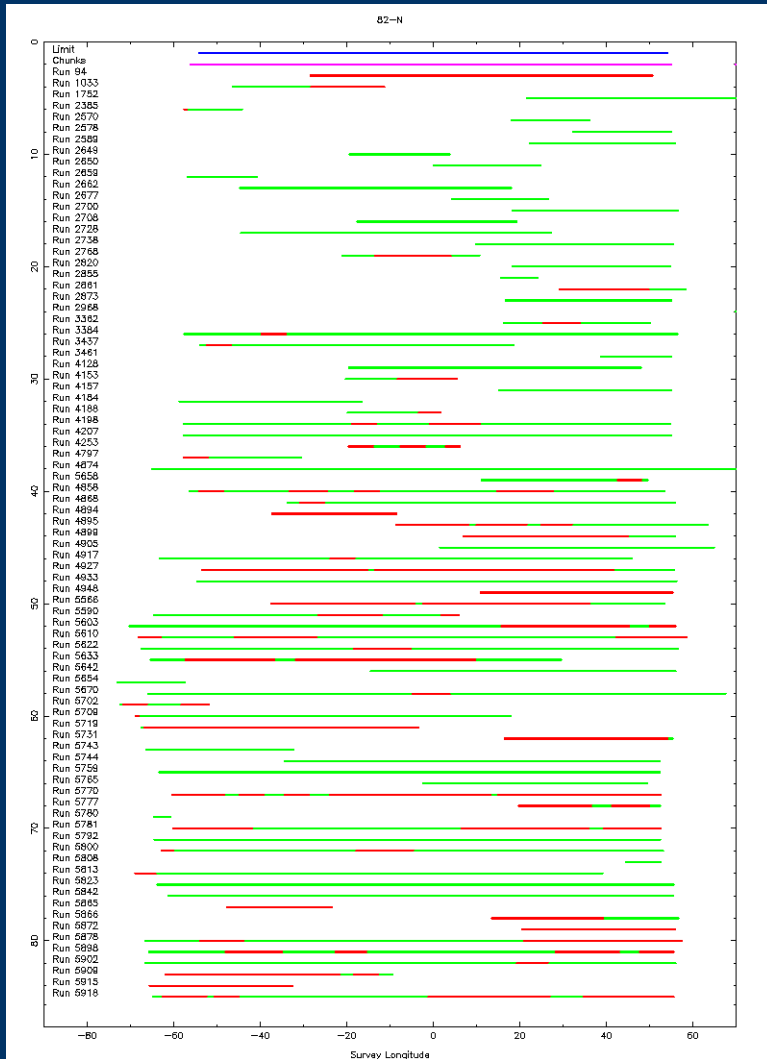


$-60 < RA < 60$
 $-1.25 < dec < 1.25$
300 sq. deg.

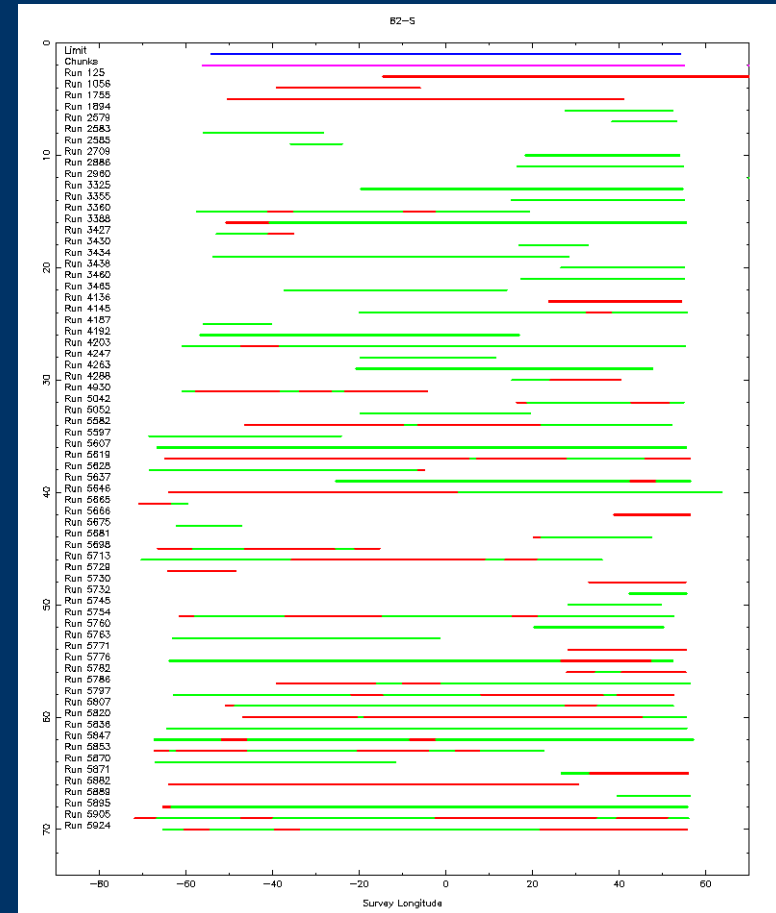


Imaging data on Stripe 82

82-N

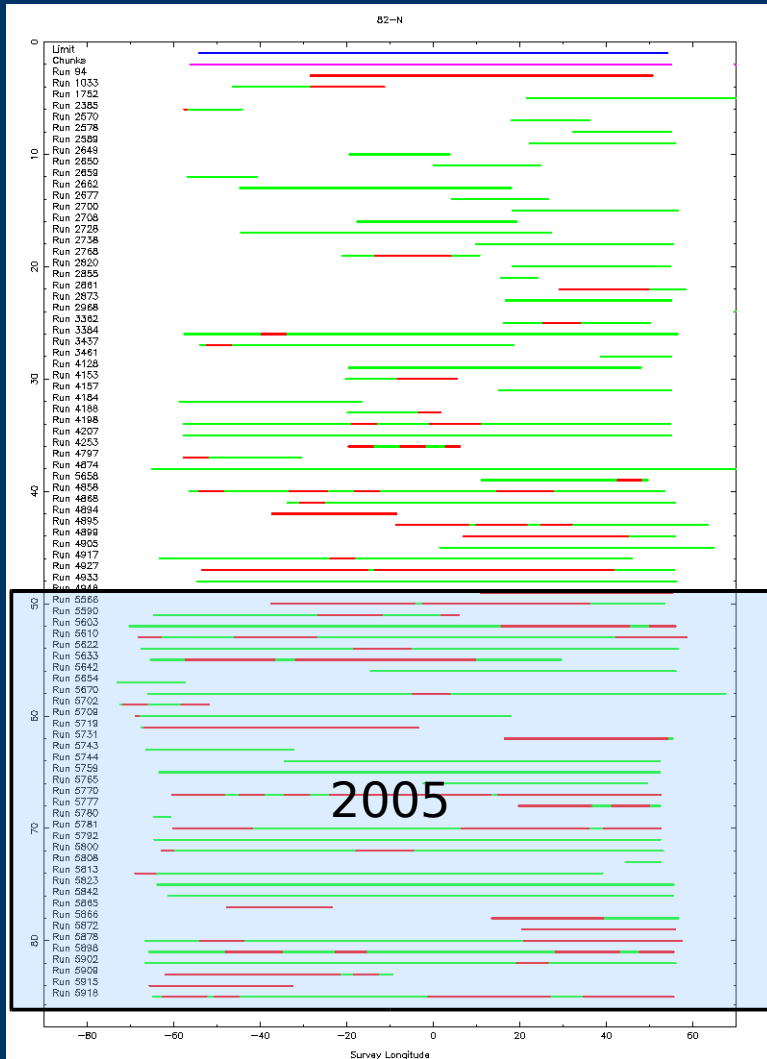


82-S

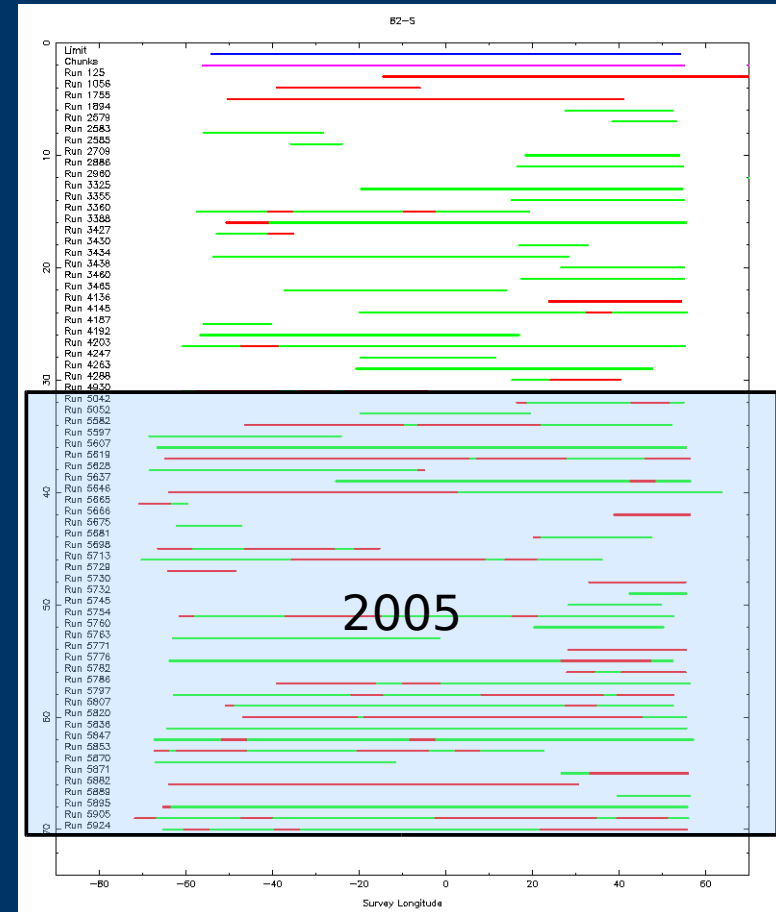


Imaging data on Stripe 82

82-N



82-S



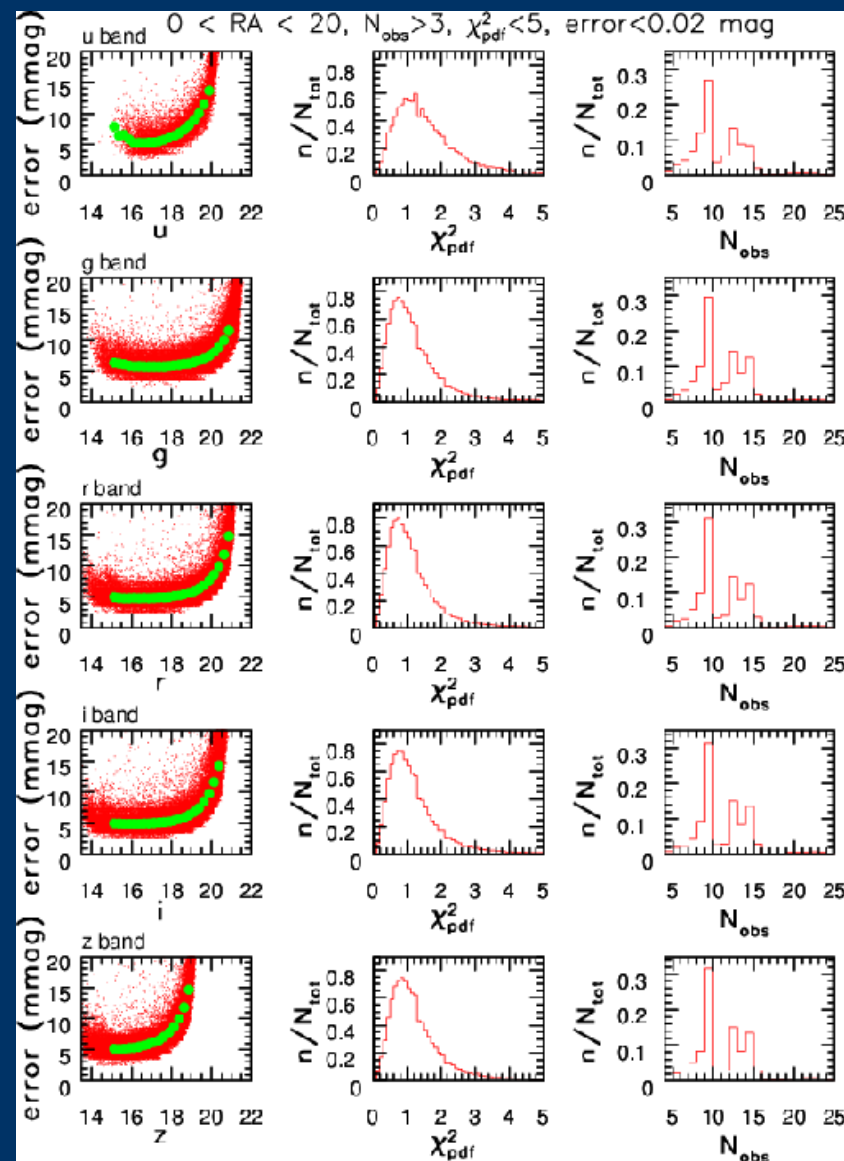
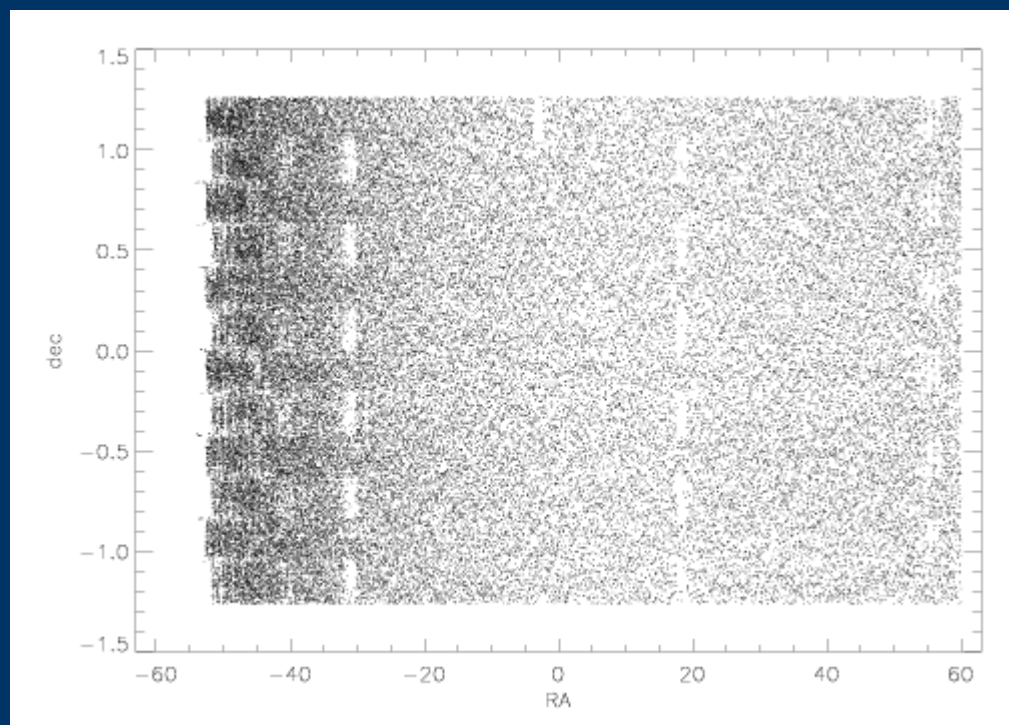
Calibration

- Multiple photometric runs can be combined to beat down statistical error, as well as some systematics
- “Catalog coadd” - huge catalog of standard stars with zeropoints to $\sim 1\%$
- Use this catalog to recalibrate individual runs, esp. non-photometric data

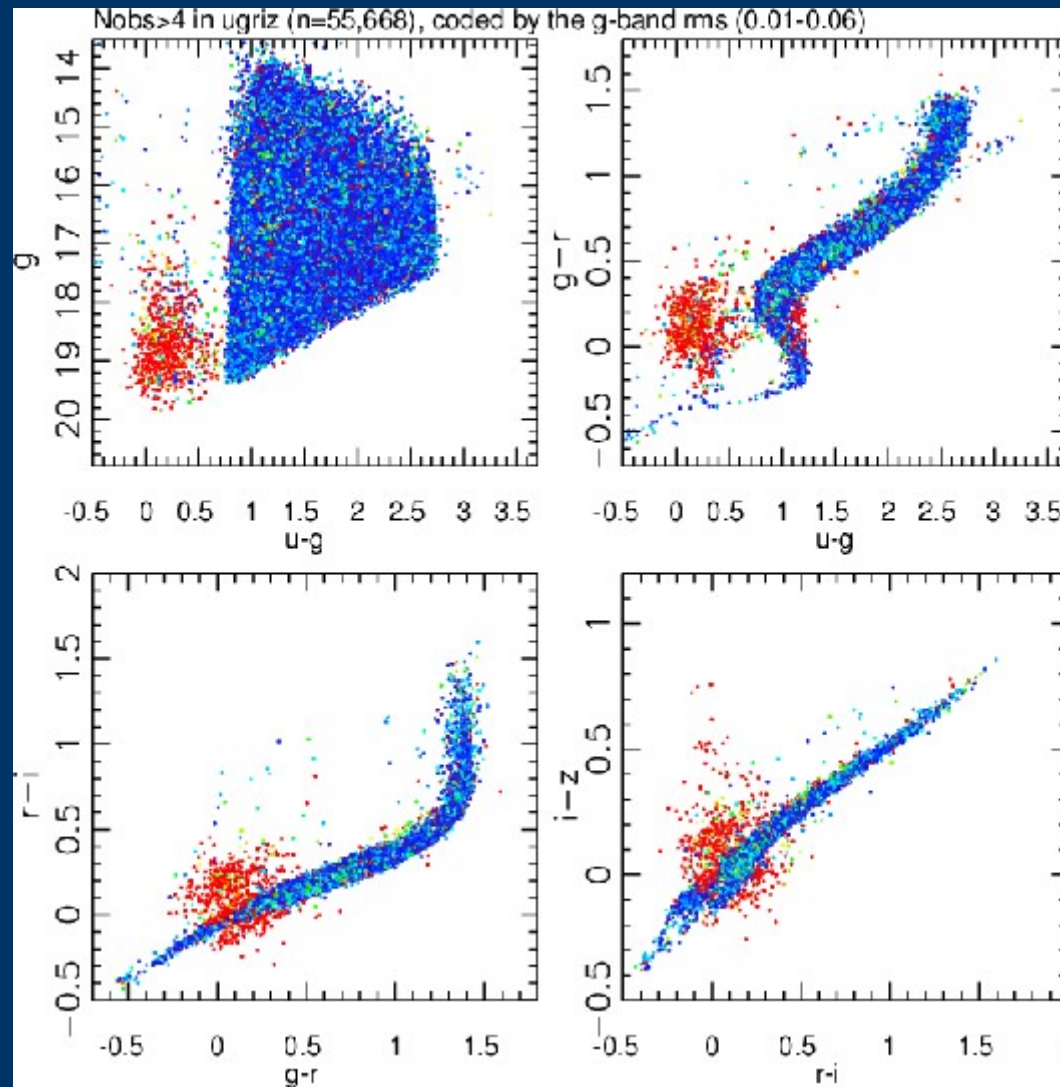
work by Zeljko Ivezic, Huan Lin, Gajus Miknaitis, J. Allyn Smith, Douglas Tucker

Stripe 82 standard catalog

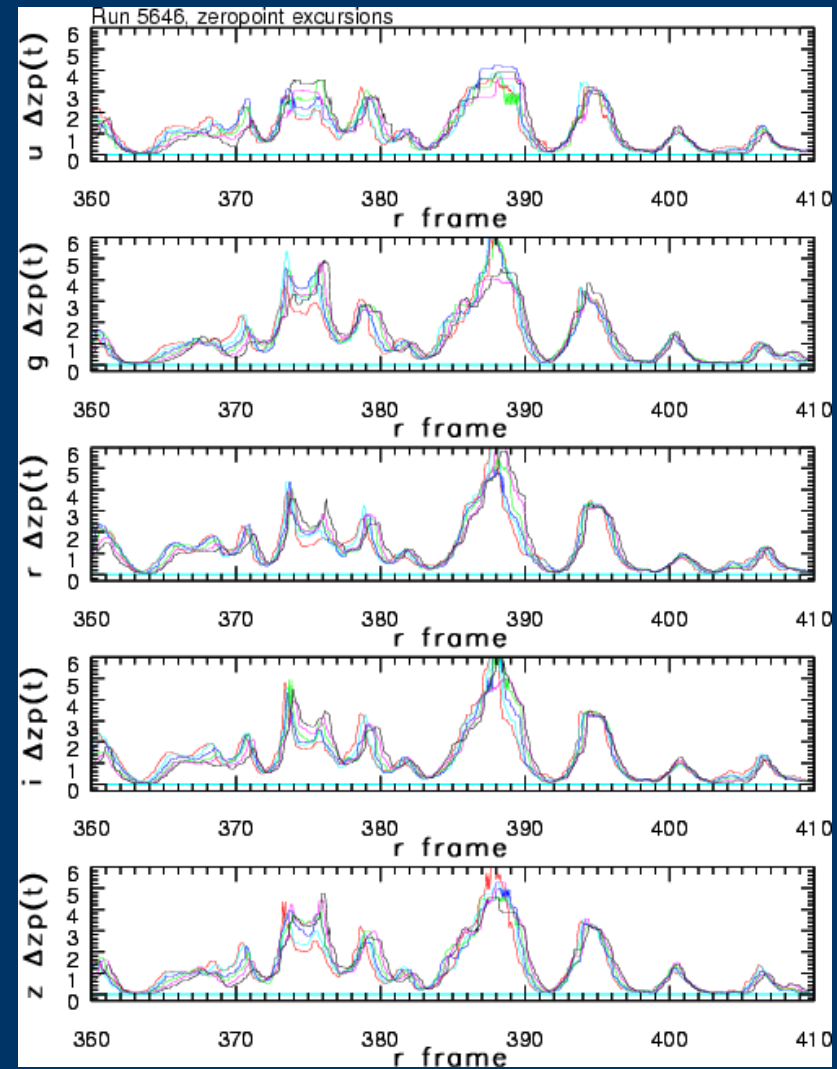
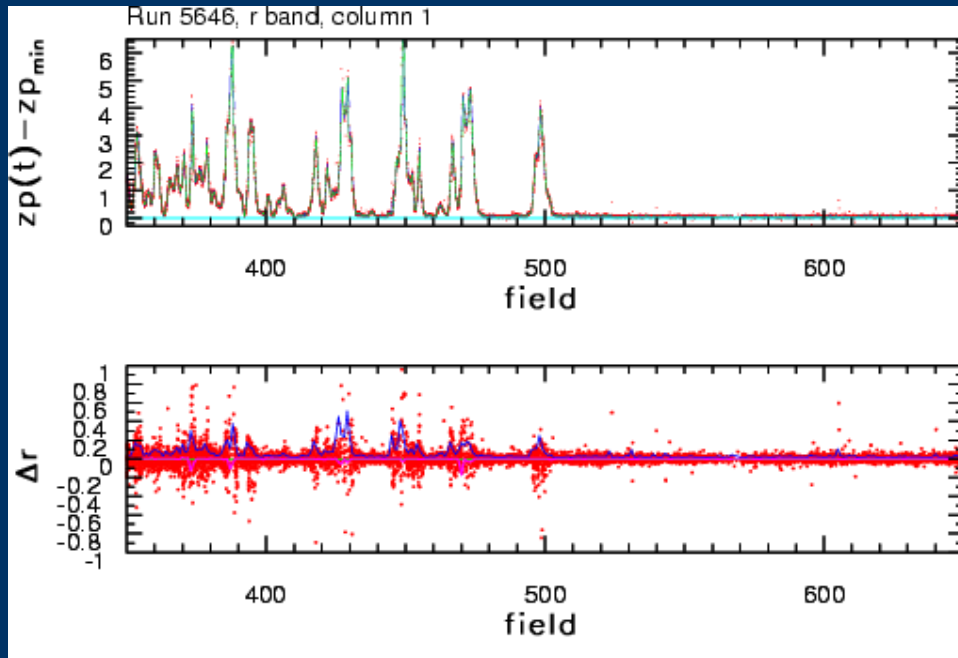
4 or more observations, $\chi^2 < 3$ in *gri*
→ **675,000 stars**



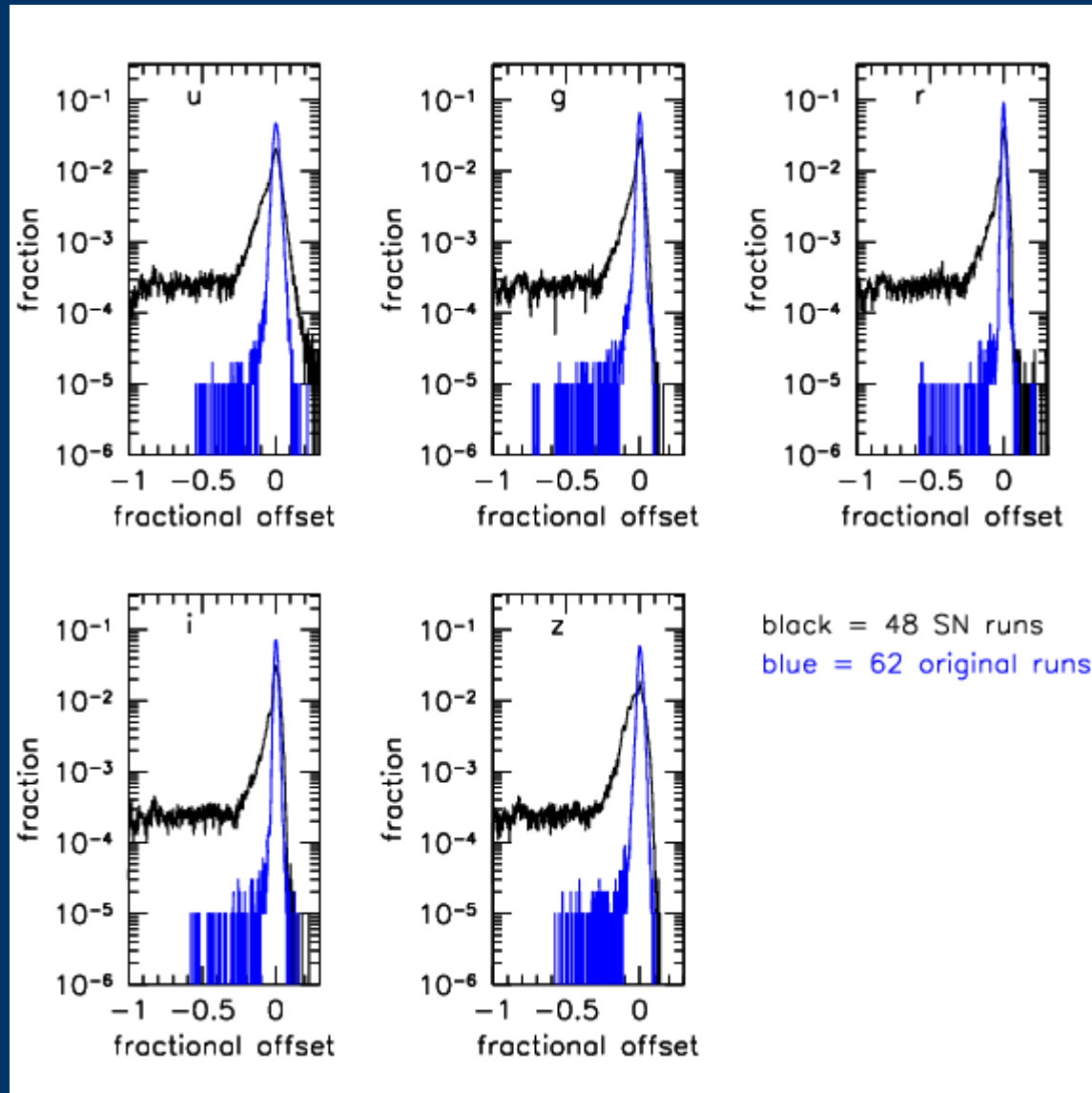
Stellar locus



Calibrating non-photometric data



Calibrating non-photometric data



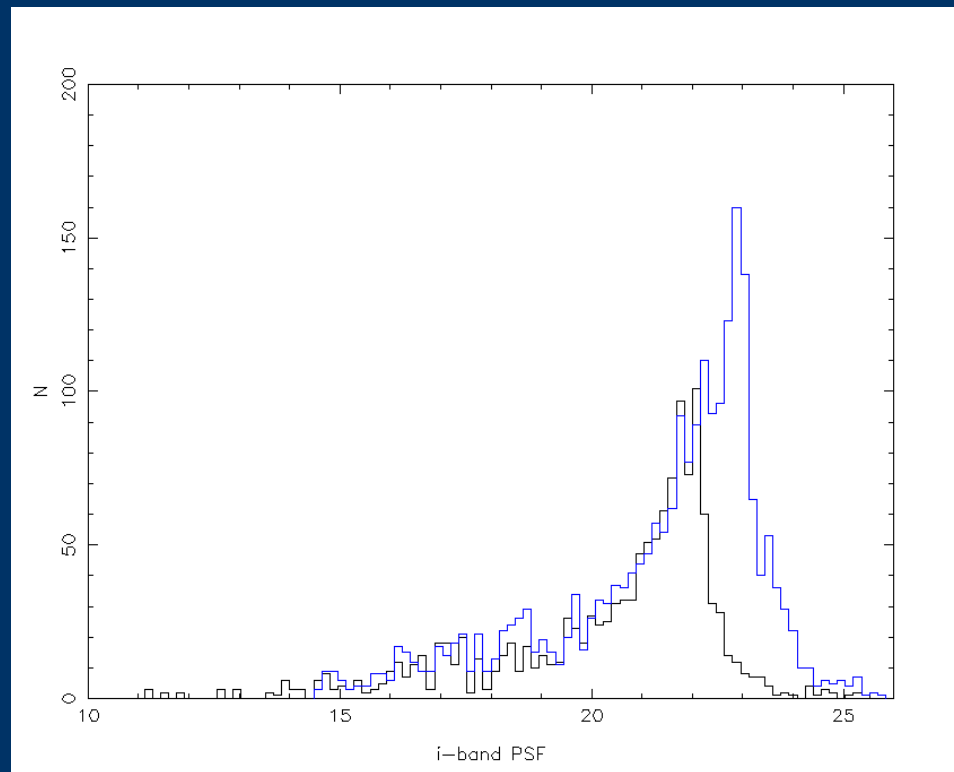
Calibration issues

- length/time scale over which zeropoints can be tracked
- seeing transients and stability of PSF mags
 - some evidence that model/petrosian mags are more stable



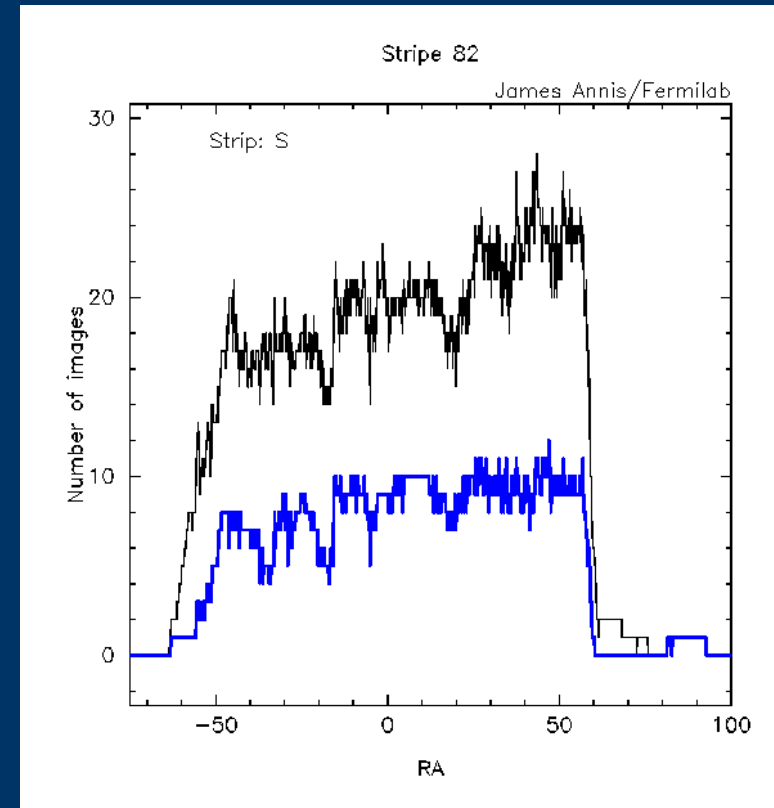
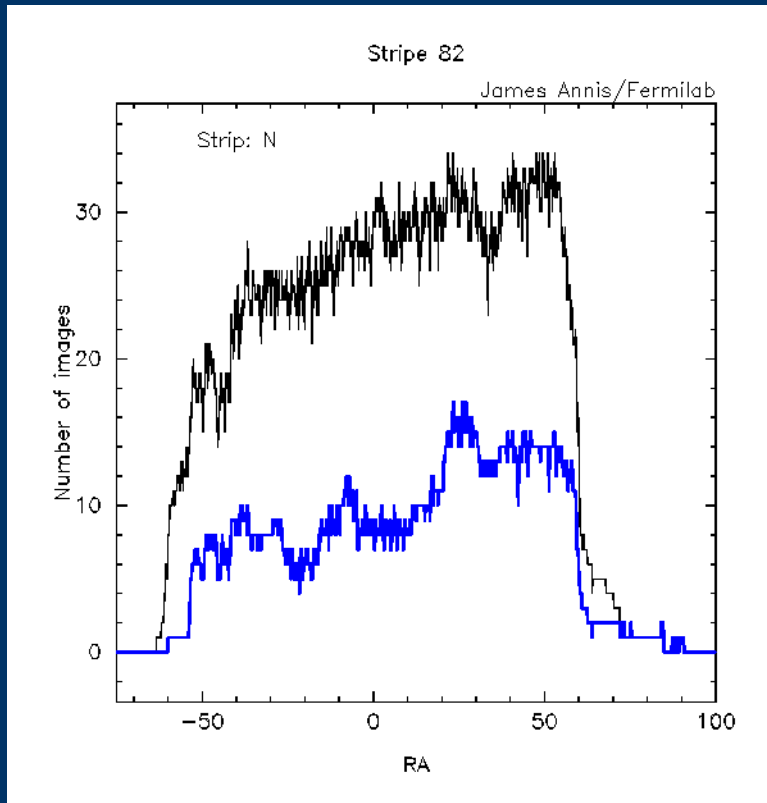
Imaging Coadds

- Coadd 1 (currently available):
 - depth-optimized: ~10 obs
 - psf-optimized: 5 obs w/ best seeing



Imaging Coadds

- Coadd 2 (in ~2 months):
 - include 2005 SN data, ~1 mag deeper



Data Access

- SN runs are publicly available
 - corrected frames
 - uncalibrated catalogs (fpObjc)
 - served via simple DAS interface

http://www.sdss.org/drsn1/DRSN1_data_release.html

SDSS Data Archive Server: DRSN1

Step 1: Select data products.

Data Product	File Description	run	rerun	camCol	filter	field
<input type="checkbox"/> fpC	Corrected imaging frame	X	X	X	X	X
<input type="checkbox"/> fpObjc	Catalog of imaging objects	X	X	X		X

Note: the current best data processing rerun is 40.

Step 2: Specify the parameters required, as indicated in the table above. You can do this by either:

A. Uploading a file, specifying the parameters required.

The filename extension must be one of the following: .csv, .par, .tbl, .fit or .xml . Please refer to the [file specification section of the DAS users guide](#) for details on the file formats.

Select file to upload:

or:

B. Entering the information below, separated by commas.

```
run, rerun, camcol, filter, field  
5566, 40, 5, gri, 75
```

Run List for Data Release SN1

Run	MJD	Date	Stripe ¹	field start ²	field end	RA start	RA end	seeing ³	clouds ⁴	UT start	UT end
5566	53616	2005-9-3	N	11	622	327.42838	58.90609	seeing	clouds	05:11:04.63	11:15:53.52
5582	53622	2005-9-9	S	11	759	305.42030	57.40507	seeing	clouds	04:02:20.56	11:28:57.44
5590	53623	2005-9-10	N	11	480	300.34426	10.55656	seeing	clouds	03:08:57.31	07:48:59.12
5597	53625	2005-9-12	S	11	313	296.35807	341.56773	seeing	clouds	03:20:23.11	06:20:42.17
5603	53626	2005-9-13	N	25	850	296.65854	60.17008	seeing	clouds	02:34:24.04	10:46:59.43
5607	53627	2005-9-14	S	700	831	40.28287	59.89637	seeing	clouds	09:18:53.82	10:37:06.86
5610	53628	2005-9-15	N	11	877	294.30712	63.95735	seeing	clouds	02:03:13.73	10:40:17.91
5619	53634	2005-9-21	S	96	840	309.31960	60.70513	seeing	clouds	03:05:07.81	10:29:21.43
5622	53635	2005-9-22	N	11	848	296.55347	61.85961	seeing	clouds	02:24:15.27	10:44:00.54
5628	53636	2005-9-23	S	11	449	296.42416	1.99361	seeing	clouds	02:21:40.69	06:43:10.95
5633	53637	2005-9-24	N	11	659	299.44348	36.45267	seeing	clouds	02:26:02.06	08:52:56.53
5637	53638	2005-9-25	S	11	562	339.42878	61.92072	seeing	clouds	06:04:44.38	11:33:43.81

Data access

- Individual imaging runs:
http://www.sdss.org/drsn1/DRSN1_data_release.html
or
`/sdss/data/<run>/40`
 - Coadds:
depth-coadd, 82N: `/sdss/data/100001/2`
depth-coadd, 82S: `/sdss/data/200001/2`

psf-coadd, 82N: `/sdss/data/100002/2`
psf-coadd, 82S: `/sdss/data/200002/2`
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