Transient Mapping

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DATA COLLECTION

$l^{II} = 202°...\ b^{II} = \pm 5$

	$b=(0)$ min	$b=(0)$ max	$b=(1)$ min	$b=(1)$ max
RA (no offset)	93°	+108°	+102°	+117°
Dec (no offset)	-20°	+8°	-15°	+12°
RA (offset)	+93°	+108°	+102°	+117°
Dec (offset)	-20°	+8°	-15°	+12°

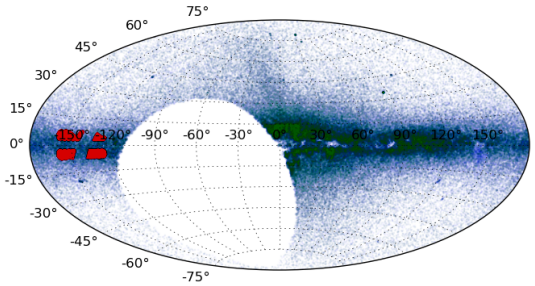


FIG. 1: *Aitoff projection of observed and PS RR Lyrae candidates. Blue are candidates from PS that ¿= 0.05, green are PS candidates that ¿= 0.2., observed data in red.*

DATA REDUCTION

- Sorted data by going through 1deg x 1deg FOV
- Identify stars as most variable
- Run LS
- Discuss how we established uncertainty in period - how this propagates to distance calculations
- How are we going to determine distance - discuss PL-relation

ANALYSIS

Pan-STARRS Comparison

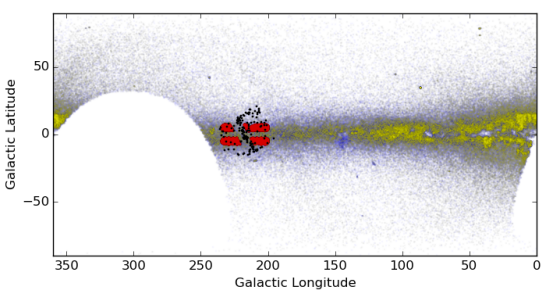
- download Pan-STARRS data (finished)
- compare generated variable star list to PS RA and Dec
- validate observed variable stars
- Determine if PS parameters are worth anything (are candidates actually RR Lyraes)

Simbad Completeness

- Pull established RR list from Simbad
- Pull other variable data from simbad, too
- Compare list of observed RR to catalogs
- Is anyone actually reading this outline, this bullet point serves no purpose
- Wow, its sad how little Jeff did since class began (especially after JT gave him the code to do it a month ago) - 6 obs x 4 nights = January-April work period haha
- Establish completeness with Simbad

3D map galaxy - var. stars

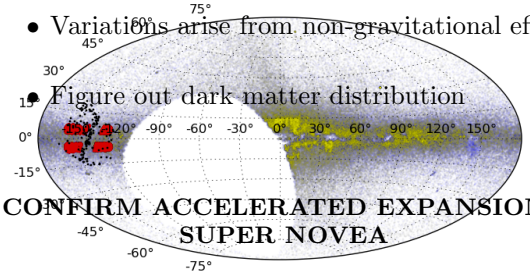
- Use gri data to identify variable stars
- Use Period-Luminosity relationship to get distance
- Map 3D spatial distribution



(a) *Aitoff map.*

FIG. 2: *Aitoff projection of observed and PS RR Lyrae candidates. Blue are candidates from PS that ¿= 0.05, yellow are PS candidates that ¿= 0.2., observed data in red, simbad in black.*

- Determine deviation of variable stars from model
- Variations arise from non-gravitational effects
- Figure out dark matter distribution



CONFIRM ACCELERATED EXPANSION - SUPER NOVEA

- use PanStarrs data to identify supernova locations

(b) *Aitoff projection*

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