Galactic Clusters Survey: Update

N Hambly, N Lodieu, N Deacon, S Casewell, S Boudreault, ...
(on behalf of the GCS WG)
### Survey coverage (%)

<table>
<thead>
<tr>
<th>Target</th>
<th>Area deg²</th>
<th>Z</th>
<th>Y</th>
<th>J</th>
<th>H</th>
<th>K×2</th>
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<tr>
<td>Pleiades</td>
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<td>AlphaPer</td>
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<tr>
<td>Praesepe</td>
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<td>18</td>
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<td>*53</td>
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<tr>
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<tr>
<td>Coma Ber</td>
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<td>Hyades</td>
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</table>

**NB:**
- includes processed data to end Jan 2012, but QC only to end Jan 2011 (for DR9)
- No K2 in Orion and Hyades suspended
- 77% complete (compared to original plan) as at April 2012.
• Good DR9 coverage (as at end Semester 10B)
• Some gaps being filled (up to 12A)
• More extensive coverage than legacy optical photographic surveys
• Much larger samples than deep pencil-beam surveys
Cluster VLMS/BD sequences

Ages:  
≥1 Myr  
~10 Myr  
~100 Myr
New in DR9: proper motion selection

- Cluster members exhibit distinct proper motion
- Dispersion in proper motions as low as 4 mas/yr
- e.g. Praesepe

add in a predicate of the form

\[ \text{AND } \text{ABS}(\mu_{\text{Ra}} - \mu_{\text{Ra0}}) < 3 \times \text{sigMuRa} \text{ AND } \text{ABS}(\mu_{\text{Dec}} - \mu_{\text{Dec0}}) < 3 \times \text{sigMuDec} \]
Evidence for MF variations...?
Conclusions

- 5 colour, multi-epoch GCS imaging provides unrivalled datasets for VLMS/BD studies
- Survey completeness is good
- Preliminary evidence for MF variations, but need more sophisticated analysis

To find out more, type “Lodieu, N.” into ADS.