



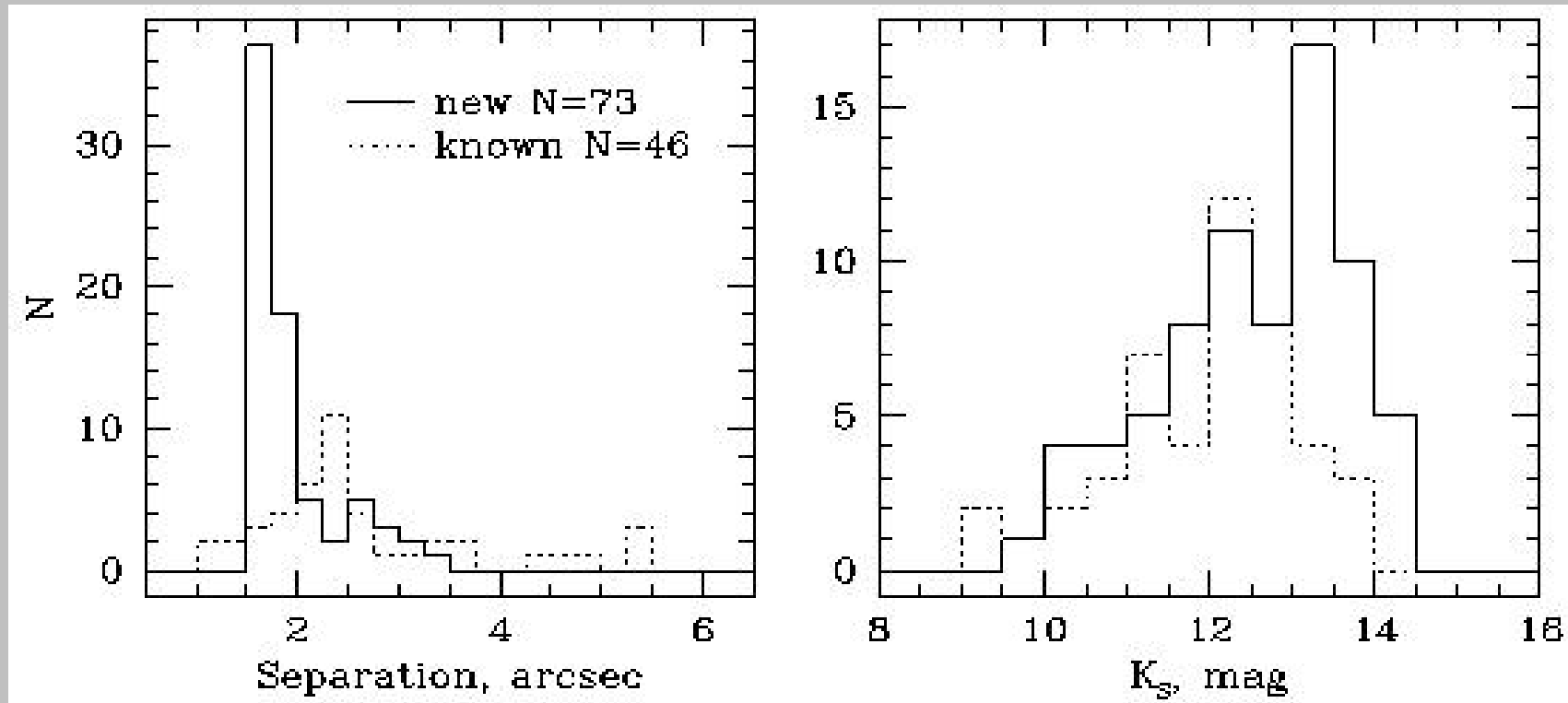
Search for Companions to High Proper Motion Stars with the VMC Survey. Discovery of Eleven New Neighbours

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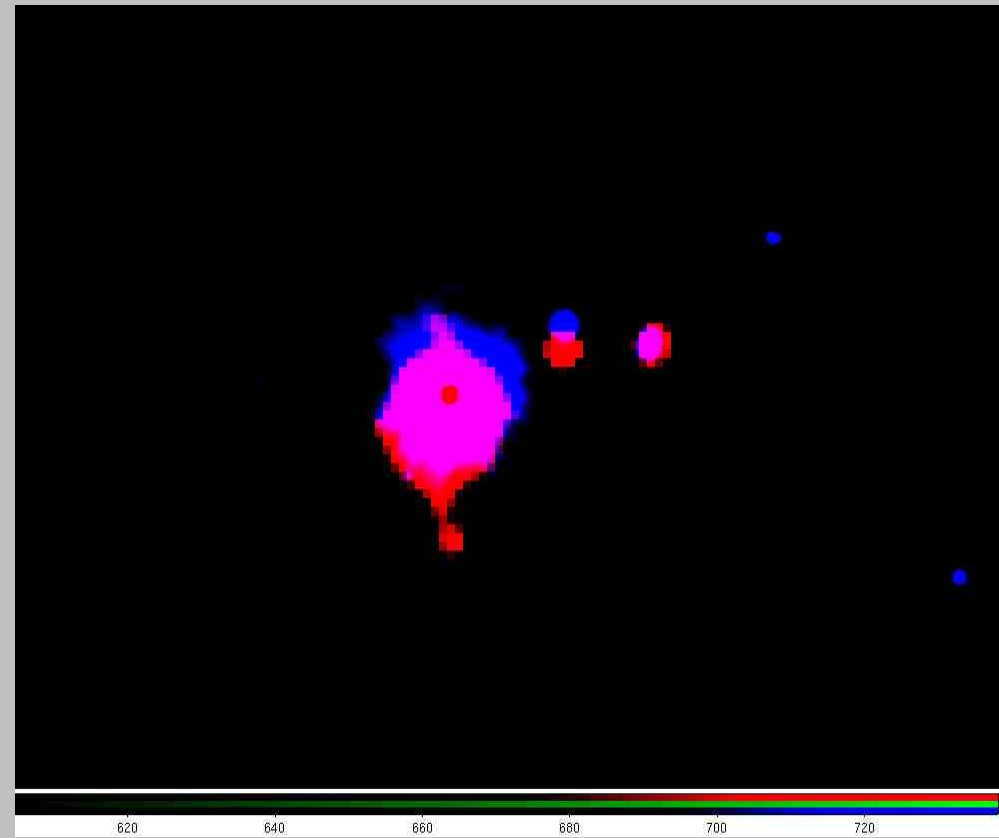
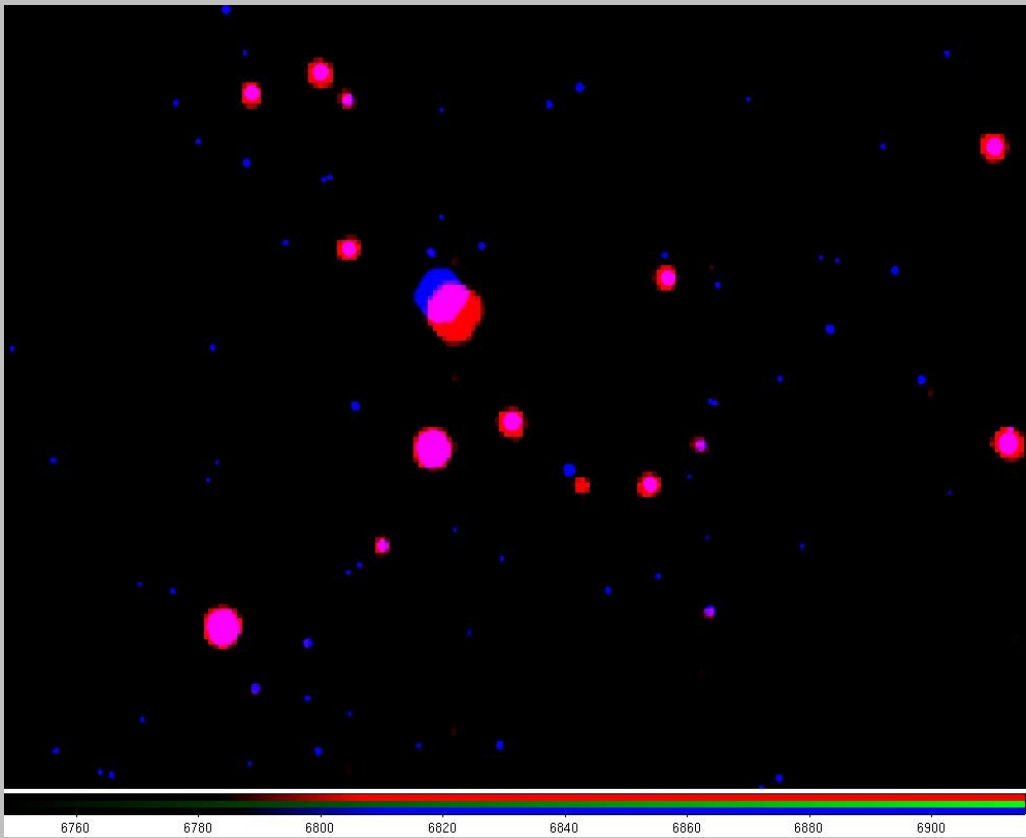
Search for new high-PM stars

- 2MASS provides the first epoch, VMC – the second; we look for stars with reliable (2MASS quality flag = AAA), identical J and Ks magnitudes (within 0.1 mag) but with a coordinate offset >1 arcsec
- Results: 73 new high-PM stars found, 46 known ones recovered from 31 tiles observed so far, at least once in J and Ks



Search for companions to high-PM nearby stars

- quick visual search for faint co-moving companions that didn't make it into the 2MASS PCS or were merged with other stars on older images: create colour images from VMC, 2MASS (and occasionally an old optical survey)
- Results: 11 co-moving companion candidates around 119 high-PM stars (73 new and 46 known)



Search for companions to high-PM nearby stars

Summary:

- this project searches for new high-PM stars and for co-moving companions to them using 2MASS as first epoch and VMC and second
 - 73 new high-PM stars with a movement >1 arcsec over ~ 10 yrs were found, and 46 known ones were recovered from 31 tiles observed so far at least once in J and Ks
 - 11 new co-moving companion candidates around these high-PM were identified
 - spectroscopic follow up is in progress
 - a deeper, more complete high-PM star search will come from VMC alone closer to the completion of the survey when the VMC will supply at least 5 yr long time baseline.