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NIR imaging analysis of cluster candidates in the Vela Supercluster

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The aim in this survey is to map the distribution of galaxies in the potential clusters that lie within the newly discovered Vela Supercluster (VSCL) found by Kraan-Korteweg et al. (2017). This supercluster at a redshift of about 18000 km/s appears as extended and massive as the Shapley Supercluster. The VSCL is partly hidden in the Zone of Avoidance (ZoA) and so the Near Infrared (NIR) is the most suitable waveband to probe it, since it is less affected by the dust in the Milky Way. We use NIR images from the IRSF telescope which are $\sim$ 2 magnitude deeper compared to 2MASX. Along with the spatial distribution, we also estimate the number density distribution and derive the luminosity functions of these prospective clusters, which allow us to ascertain their masses and quantify their contribution to the observed bulk flow.

Apply to be
 considered for a student
   award (Yes / No)?

Yes

Level for award
 (Hons, MSc,
   PhD, N/A)?

PhD

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