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MAIN QUESTIONS

- Is the IMF still rising in the BD regime ?
- Is the IMF universal ?
- Do BD have the same spatial distribution as stars in clusters ?
- Formation of BD connected to solar type stars ?

Alpha Persei cluster

- $\alpha = 3^h 22^m$ and $\delta = 48°37'$
- Extinction negligible $A_V = 0.30$
- Parallax measured by Hipparcos $\Rightarrow d = 185 \pm 10\,pc$
- Age $\approx 90 \pm 10\,Myr$ by lithium method (*Stauffer et al.)*
- Low-mass star candidates based on (I,R-I) diagram
- Observations at Calar Alto : 5 optical fields covered in K' band
- Colour-magnitude diagram (K',I-K')

Future observations and outlook

- Optical data for Alpha Persei

  $\Rightarrow$ *J. Bouvier in Grenoble*

- IR imaging with Omega2000 in Calar Alto
- Follow-up spectroscopy of α-Persei BD candidates

  $\Rightarrow$ *TNG in La Palma*

- Evolutionary tracks of low-mass stars and brown dwarfs

  $\Rightarrow$ *F.Palla in Arcetri*

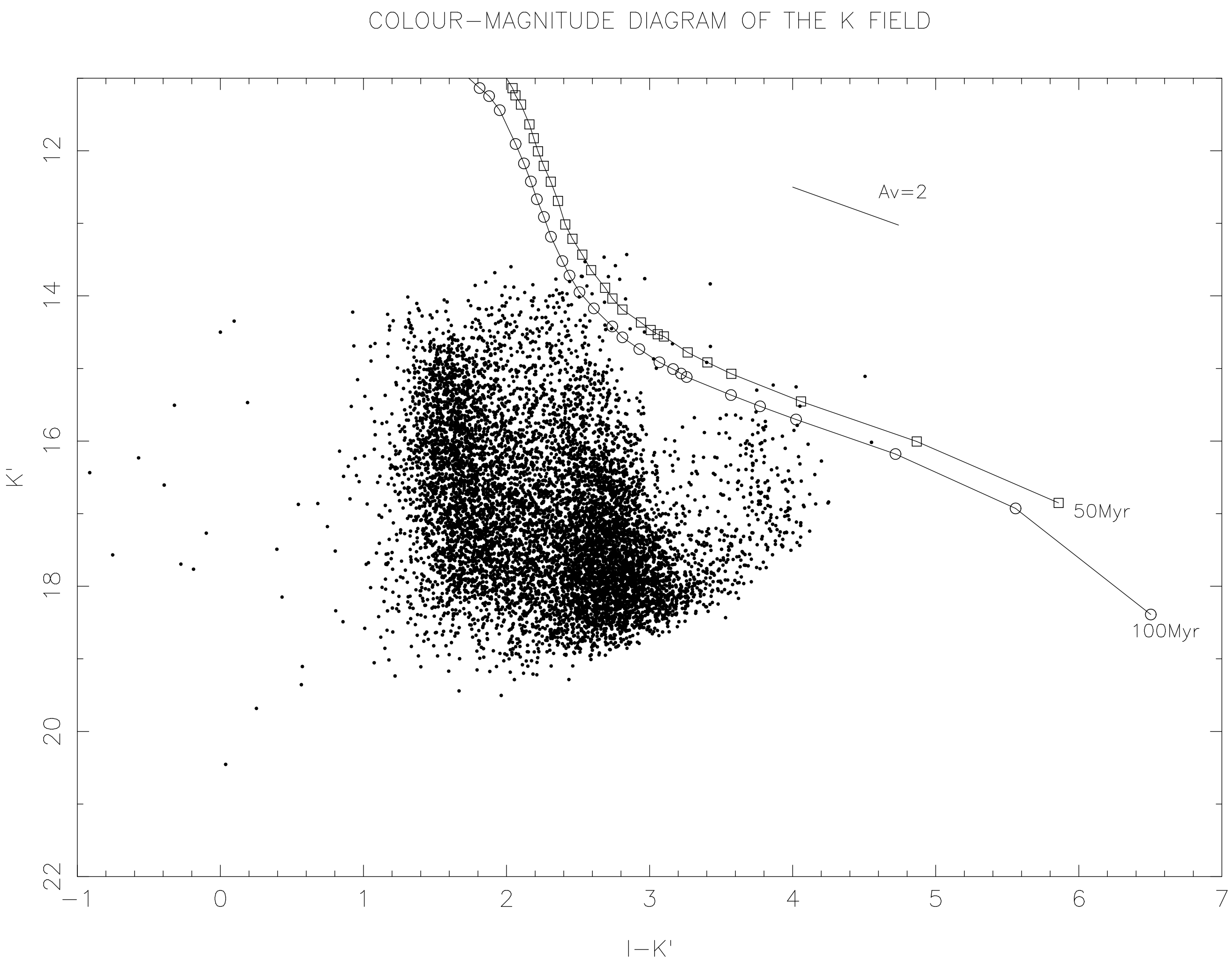

FIG. 1 – Colour-magnitude diagram (K',I-K') for two infrared Fields of View in α -Per. Evolutionary tracks from Baraffe et al. (1997) for 50 and 100 Myr and masses between 2.5 and 0.02 $M_{\odot}$ are also shown.