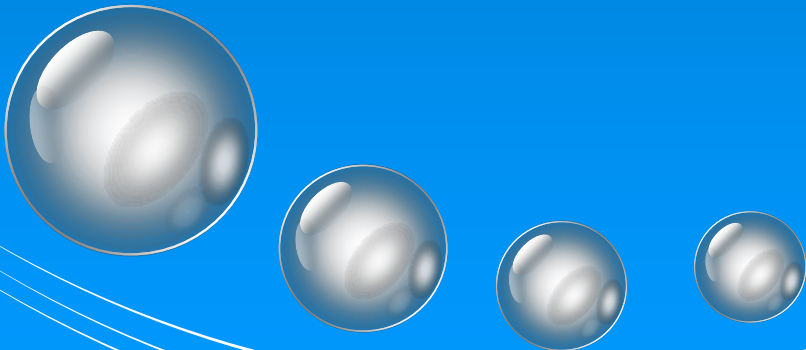


A Photometric study of Berkeley 49 & 84 in the SDSS

2009/2/11 Ryu JinHyuk



Introduction



1776 open clusters(Dias' catalog)



Only 936(52.7%) are known their age, distance, and reddening



Berkeley 49 & 84 have not been studied yet

SDSS contains some of open clusters

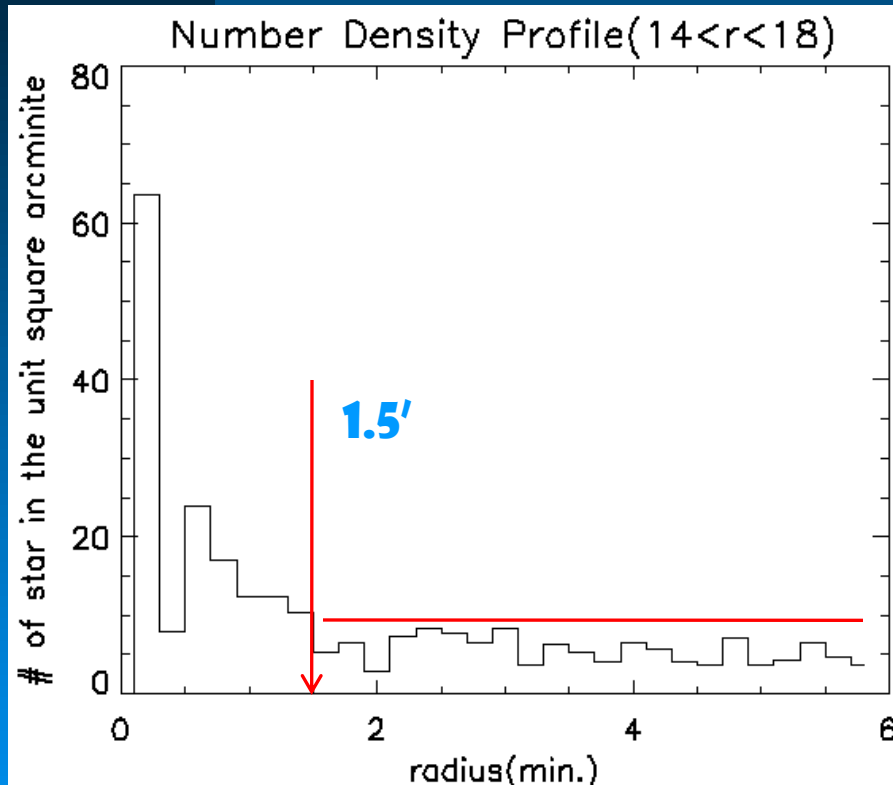


Berkeley 49 & 84 are included in the SDSS, but a catalog of these field is incomplete

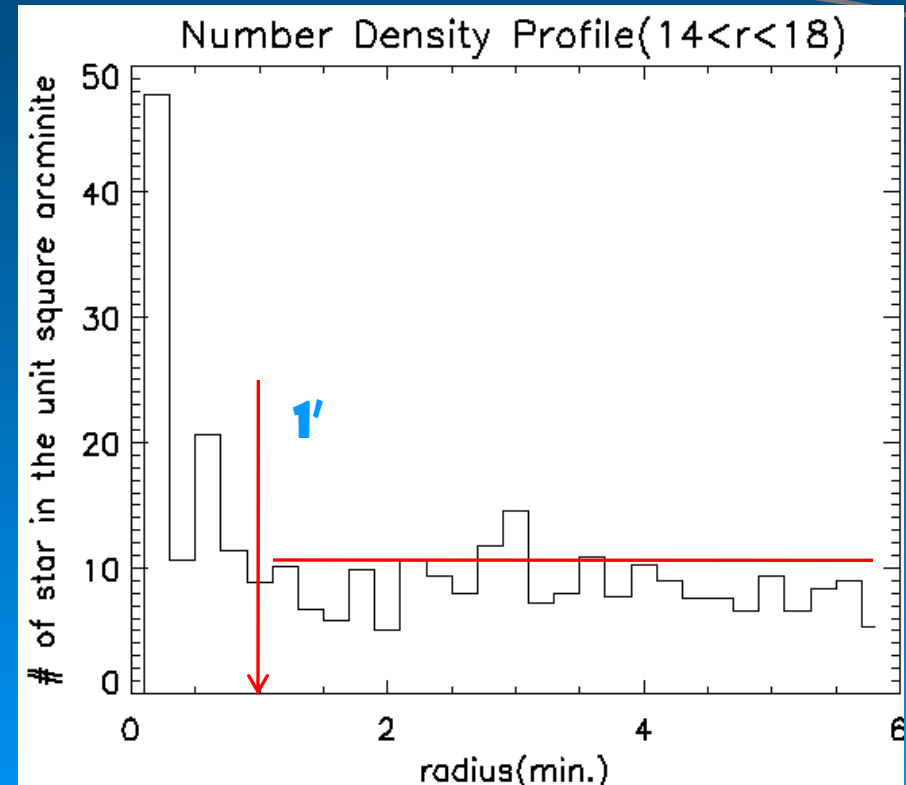


Get FITS files and processed

Number density profile

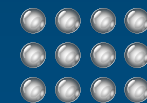


Berkeley 49

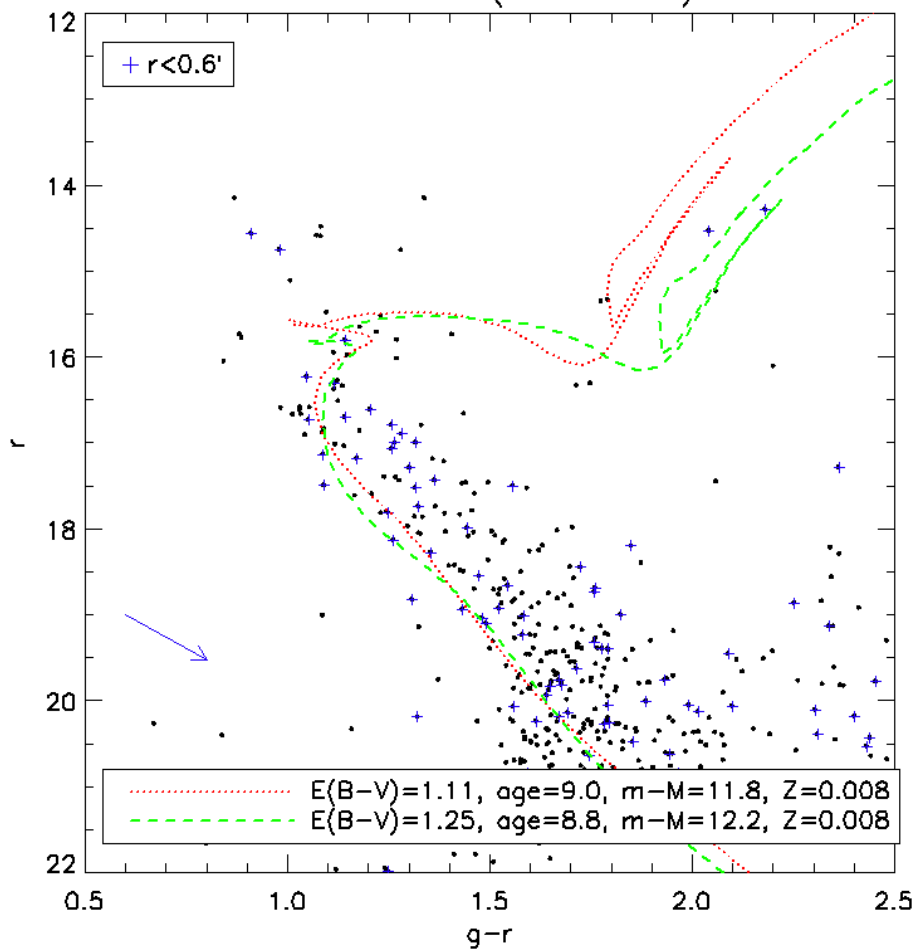


Berkeley 84

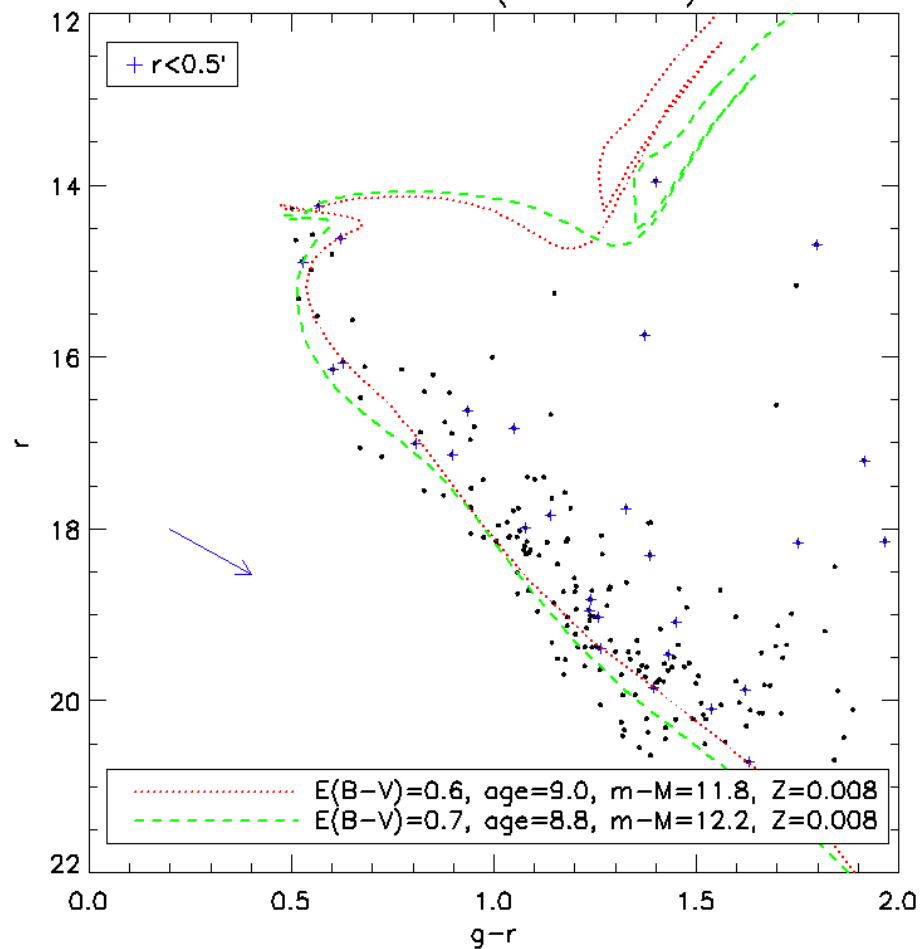
Isochrone fitting



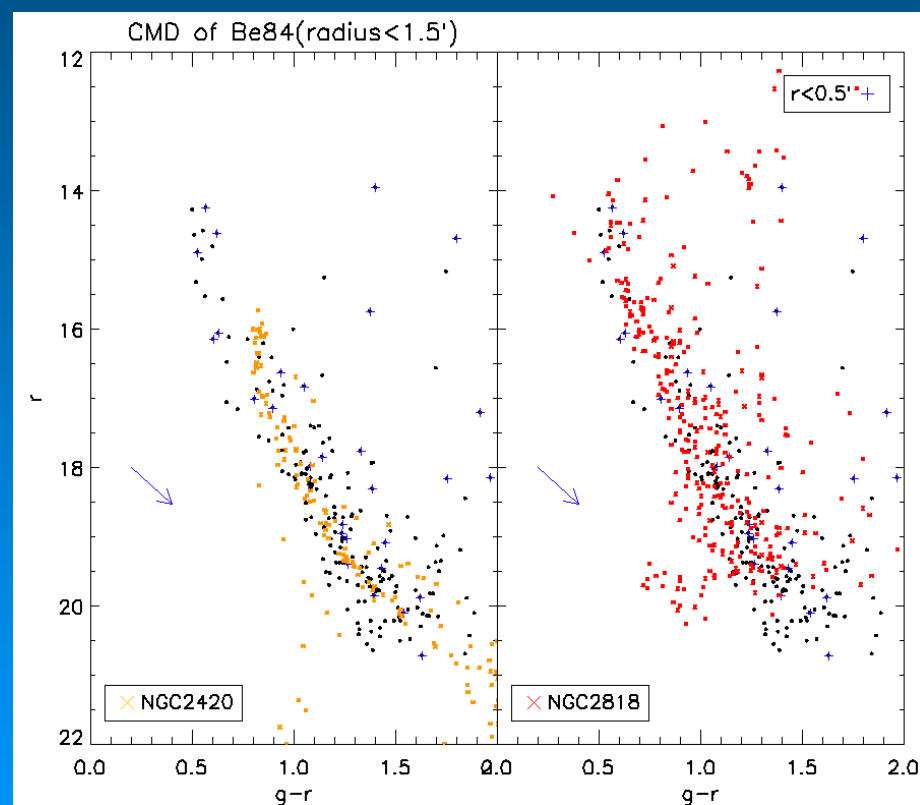
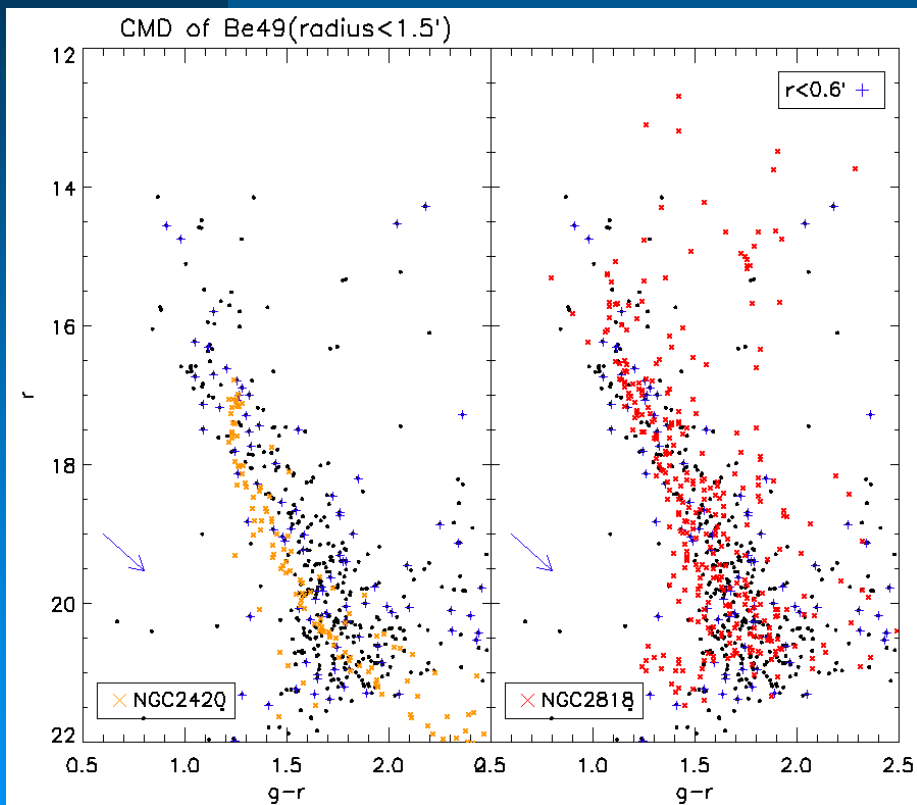
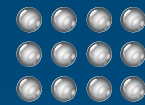
CMD of Be49(radius<1.5')



CMD of Be84(radius<1.5')



Compare with NGC 2420 & NGC 2818



Results



❖ Berkeley 49

- Age $t = 1.0 \pm 0.1$ Gyr
- Reddening $E(B-V) = 1.1 \pm 0.1$ mag
- Distance modulus $m-M = 12.0 \pm 0.2$ mag

❖ Berkeley 84

- Age $t = 790 \pm 100$ Myr
- Reddening $E(B-V) = 0.6 \pm 0.1$ mag
- Distance modulus $m-M = 12.0 \pm 0.2$ mag

**Thank you
Have a nice time!**

