

Gaia Data Release 3: RVS spectra and their application to the disk and Galactic center

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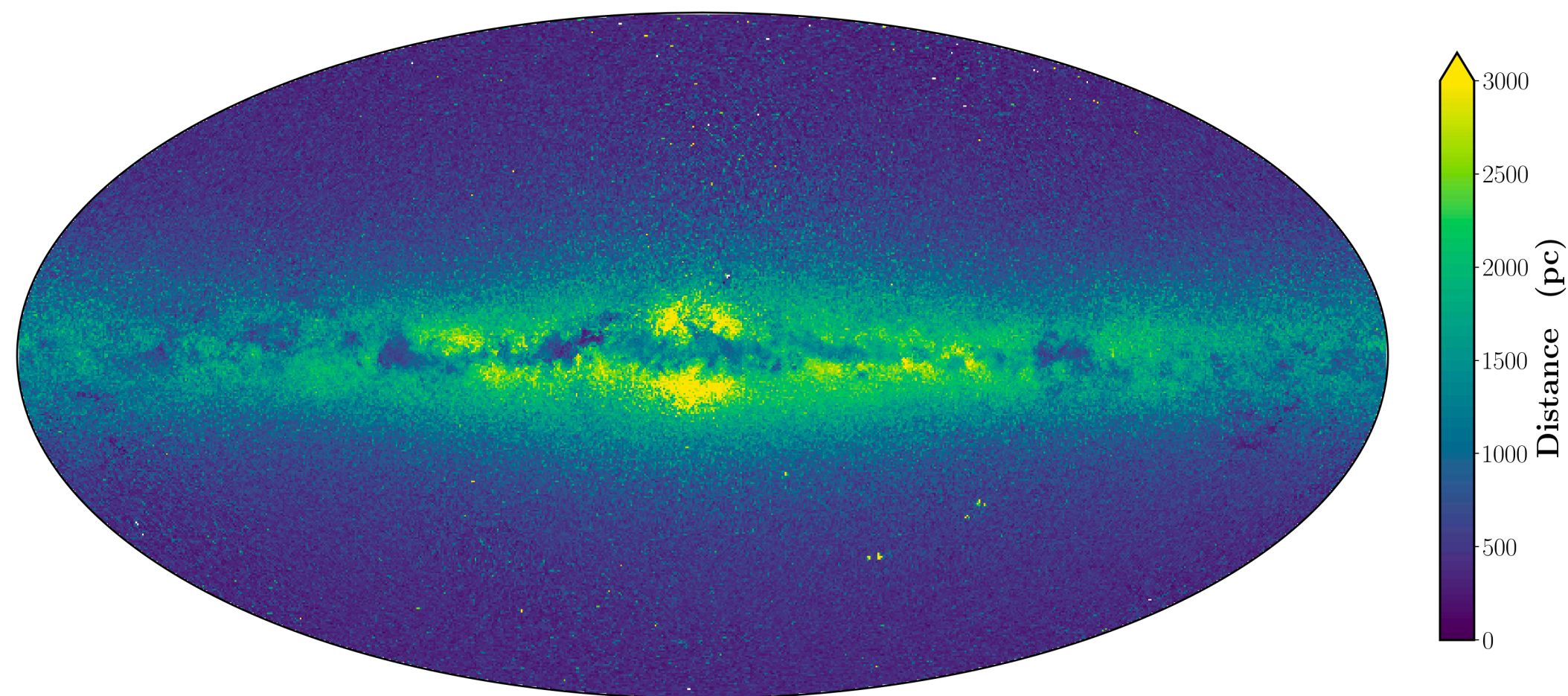
1. The RVS samples

The RVS-GSP Spec sample

Gaia Collaboration, Recio-Blanco et al. (2022)

5,594,205 stars observed by the Radial Velocity Spectrometer (RVS: 845 – 872 nm, $R = \lambda/\Delta\lambda \sim 11500$; Cropper et al. 2018; Katz et al. 2022) and parametrized by the General Stellar Parametrizer - spectroscopy (GSP-Spec; Recio-Blanco et al. 2022)

Atmospheric parameters and individual estimates of **13 chemical elements**

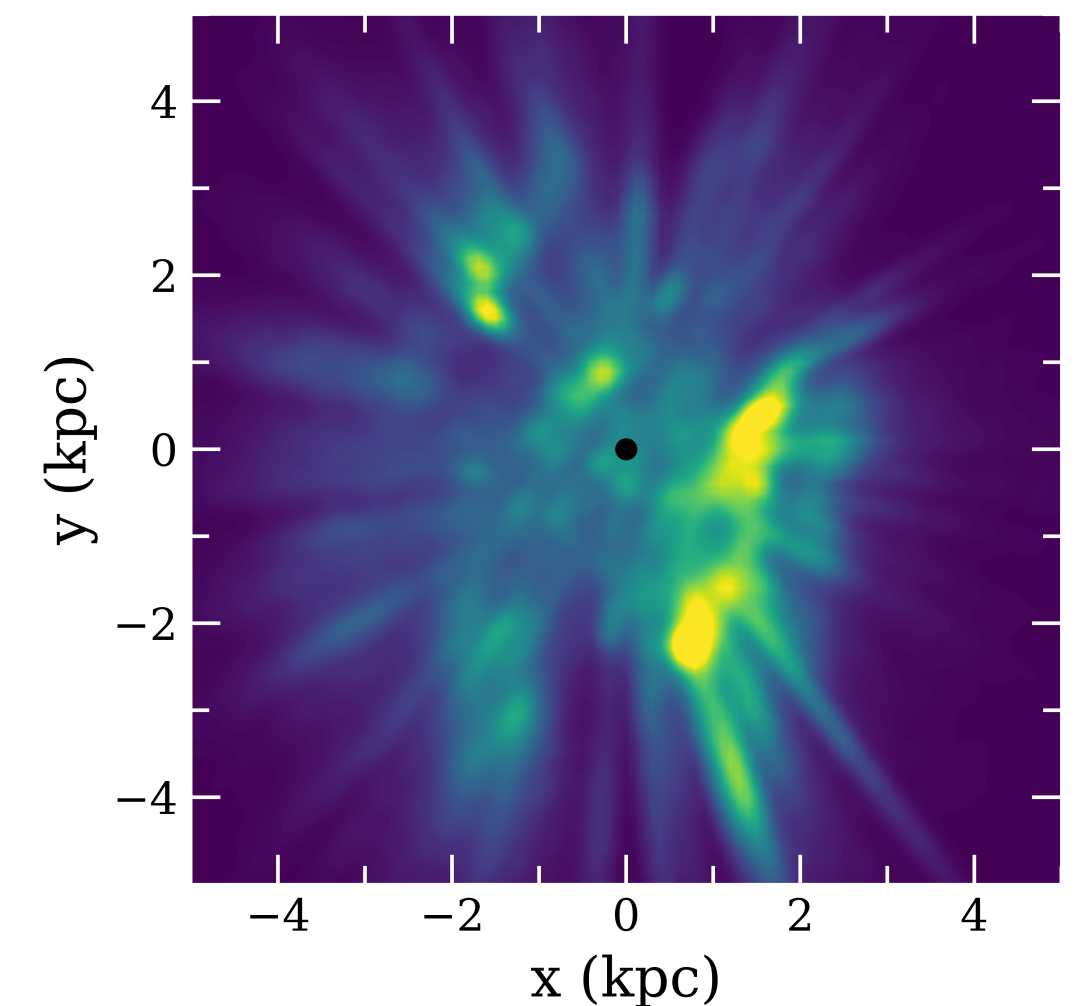
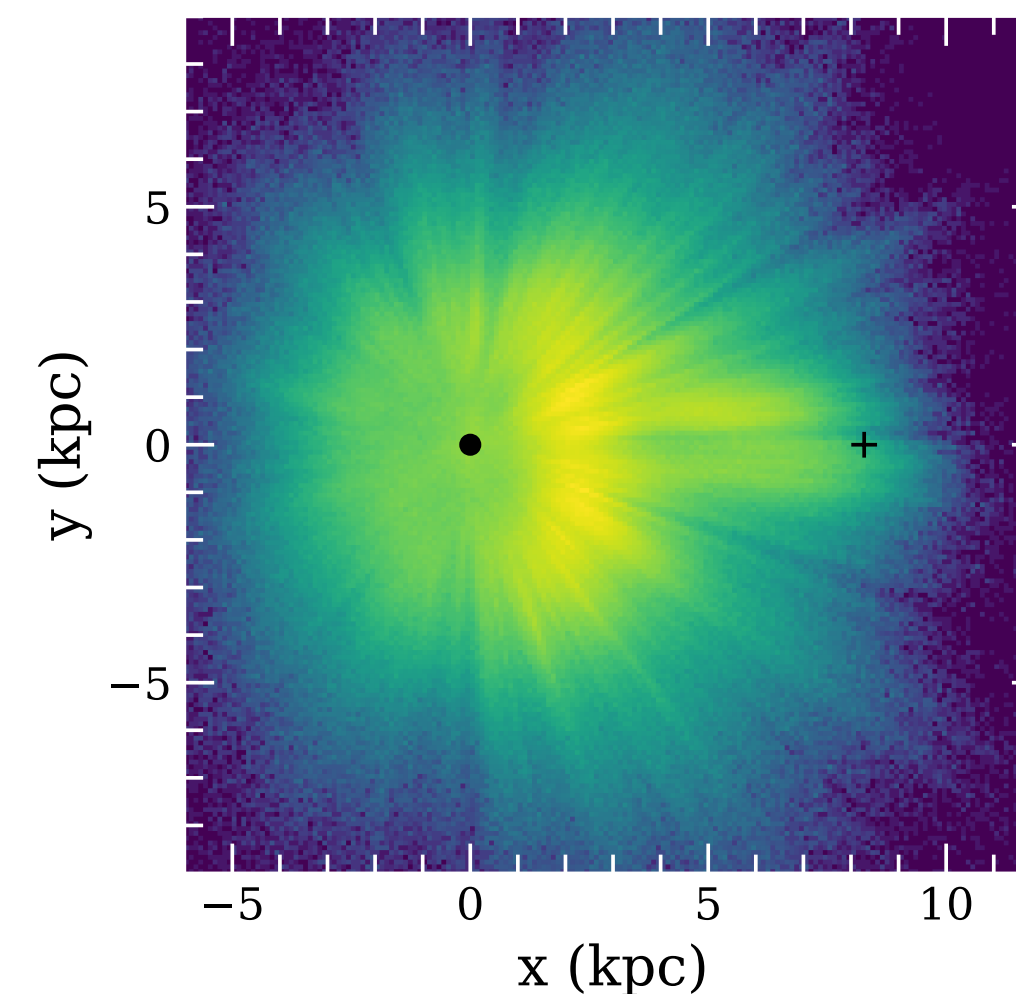


The RVS RGB and OB samples

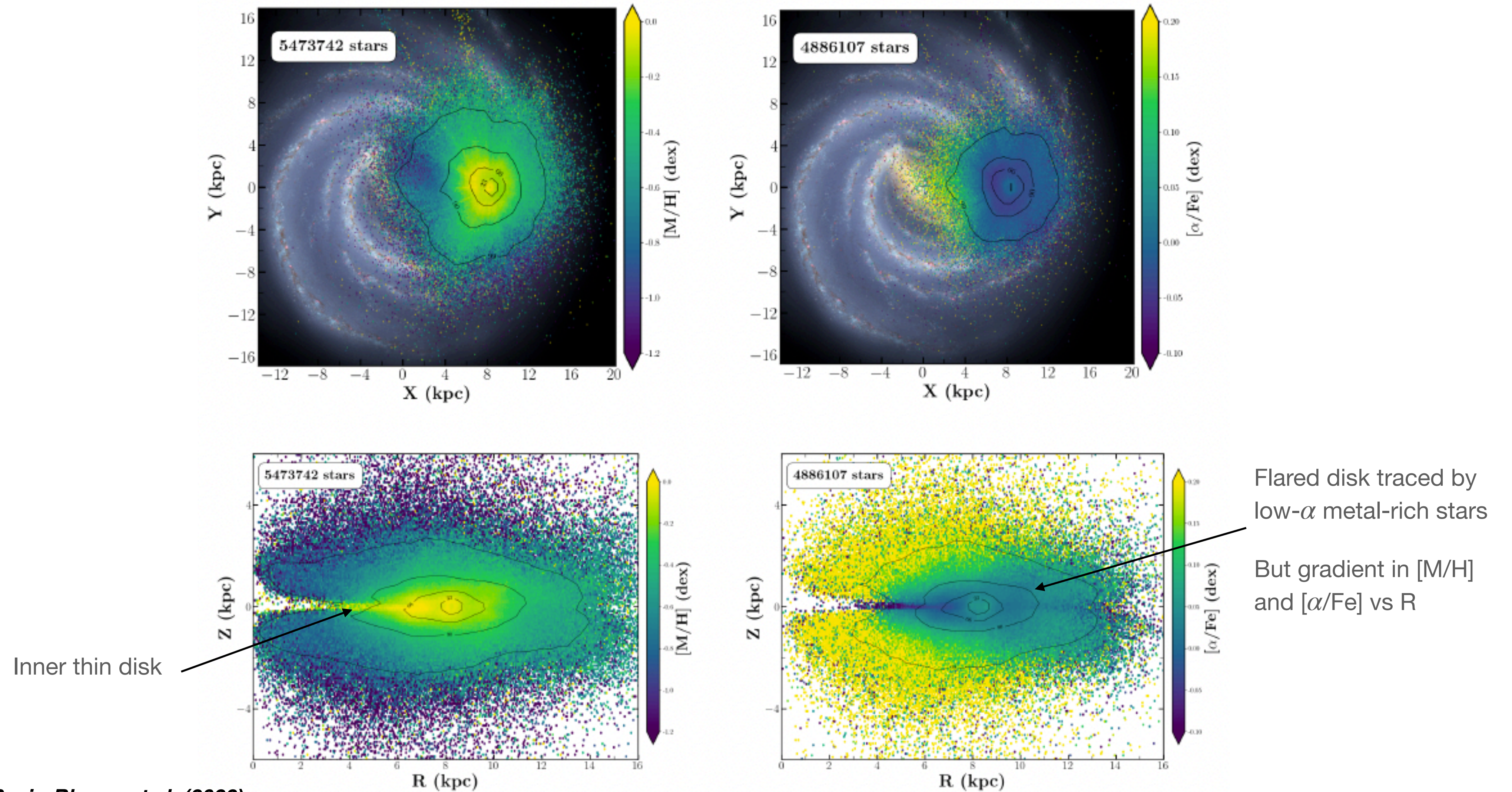
Gaia Collaboration, Drimmel et al. (2022)

5,730,578 RGB stars and **77659** OB stars observed by the Radial Velocity Spectrometer (RVS: 845 – 872 nm, $R = \lambda/\Delta\lambda \sim 11500$; Cropper et al. 2018; Katz et al. 2022) and with astrometry and radial velocities

- RGB selection $3000 < T_{\text{eff}} < 5500$ and $\log g < 3$ (from GSPPhot). Spatial coverage **up to 8 kpc** from the Sun, though 99% of stars are brighter than $G = 15$.
- OB selection based on T_{eff} from GSPPhot and T_{eff} from ESP-HS module. Spatial coverage **up to 3-4 kpc** from the Sun.



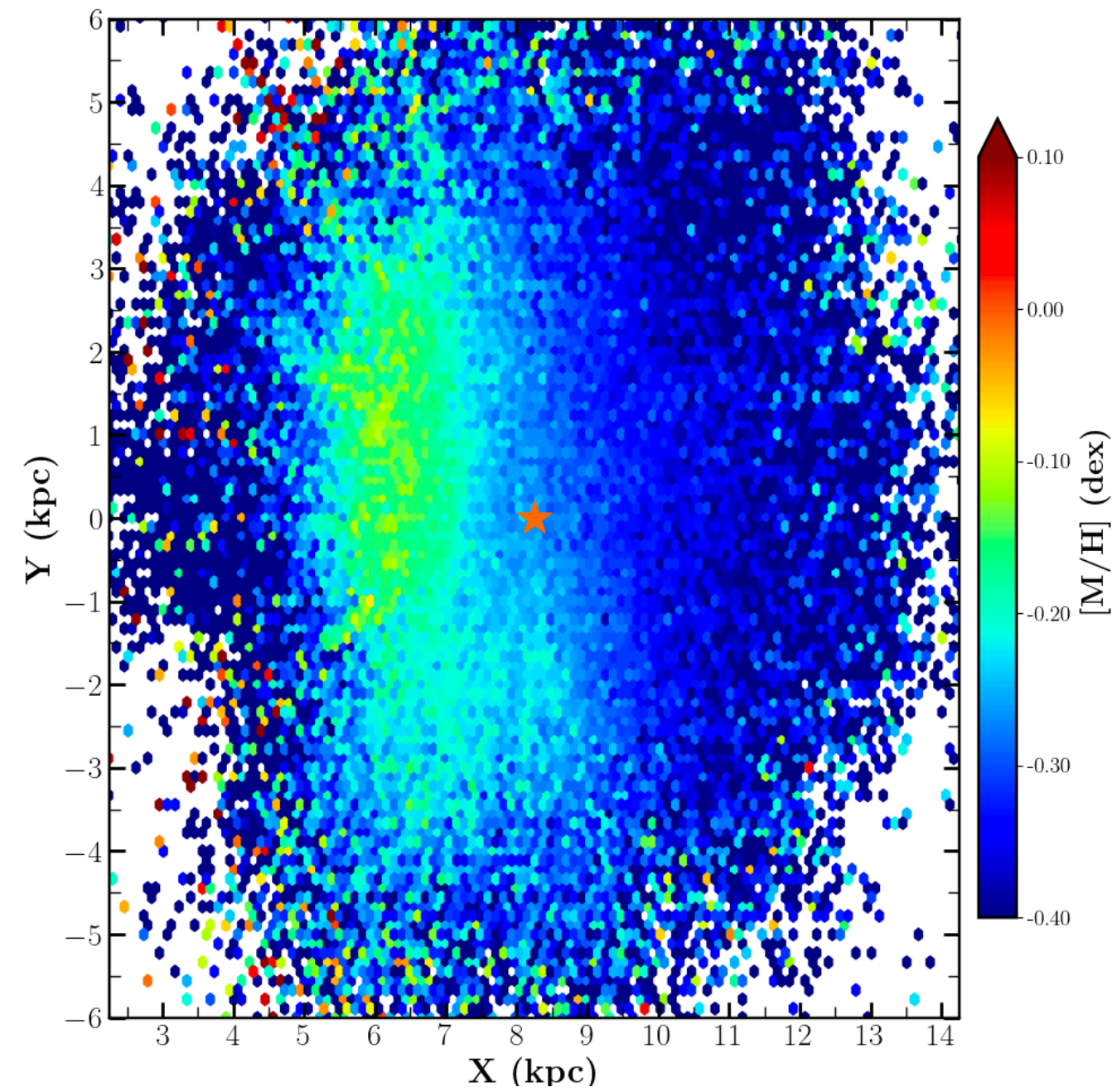
2. Spatial-chemical trends



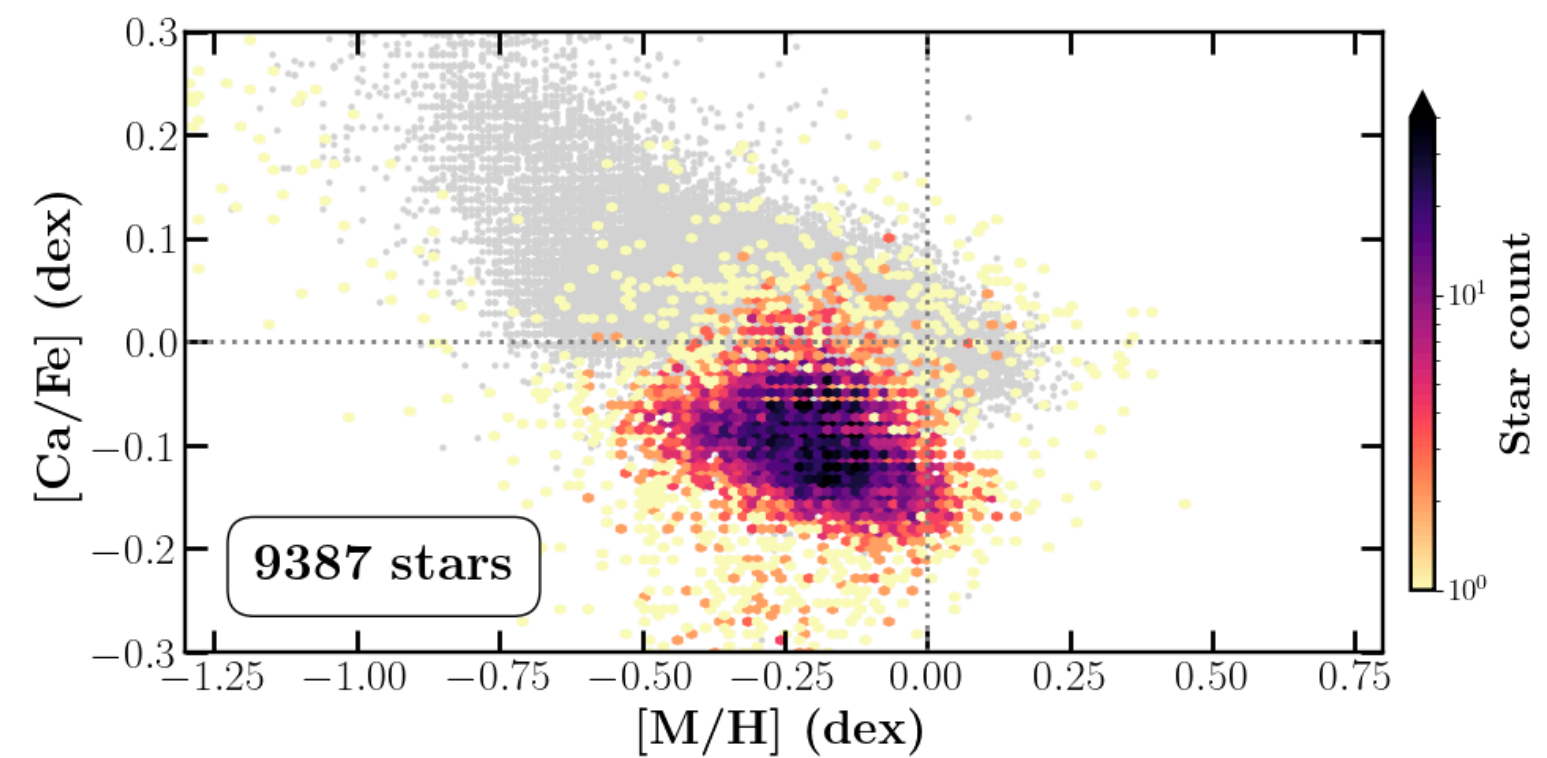
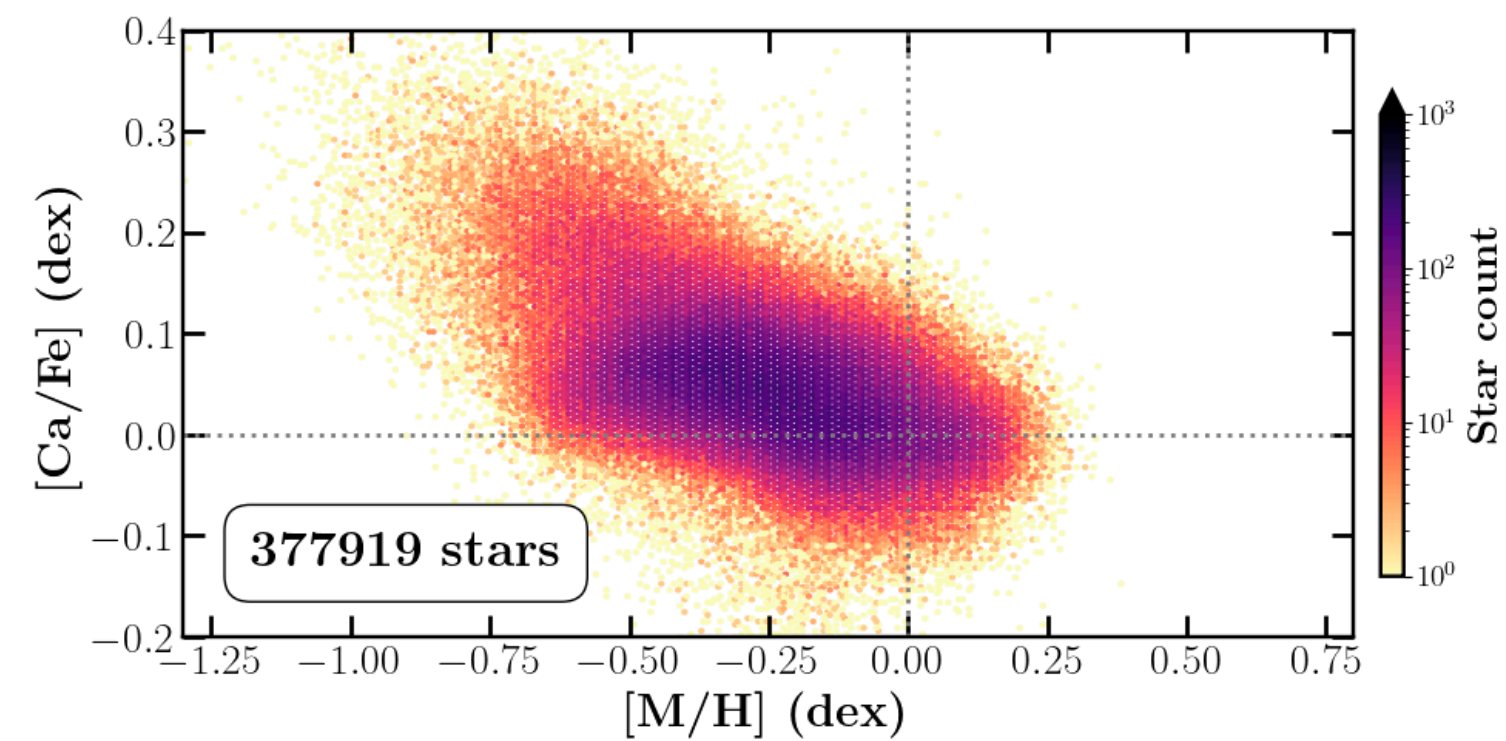
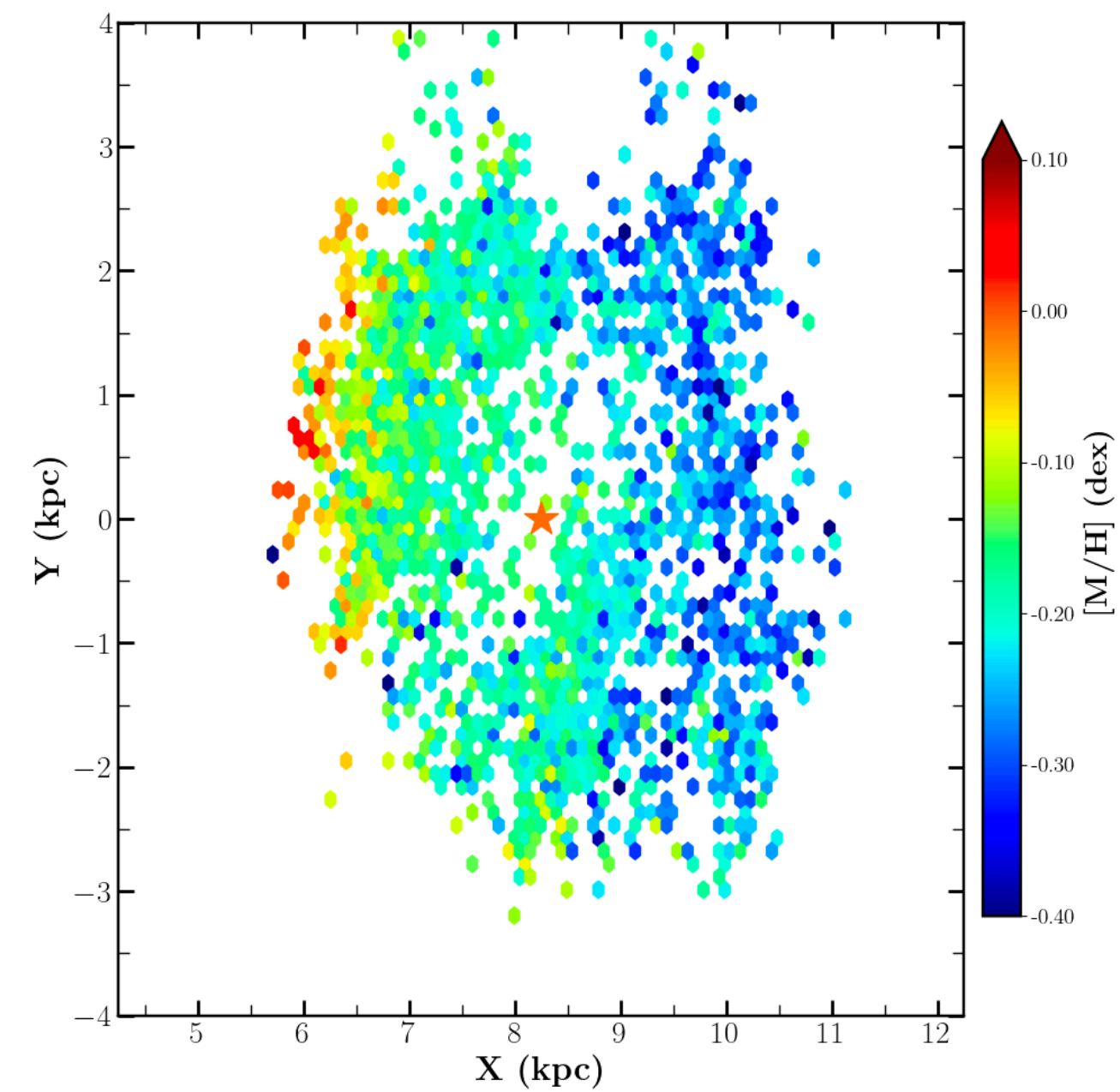
Gaia Collaboration, Recio-Blanco et al. (2022)

2. Spatial-chemical trends

RGB sub-sample in plane

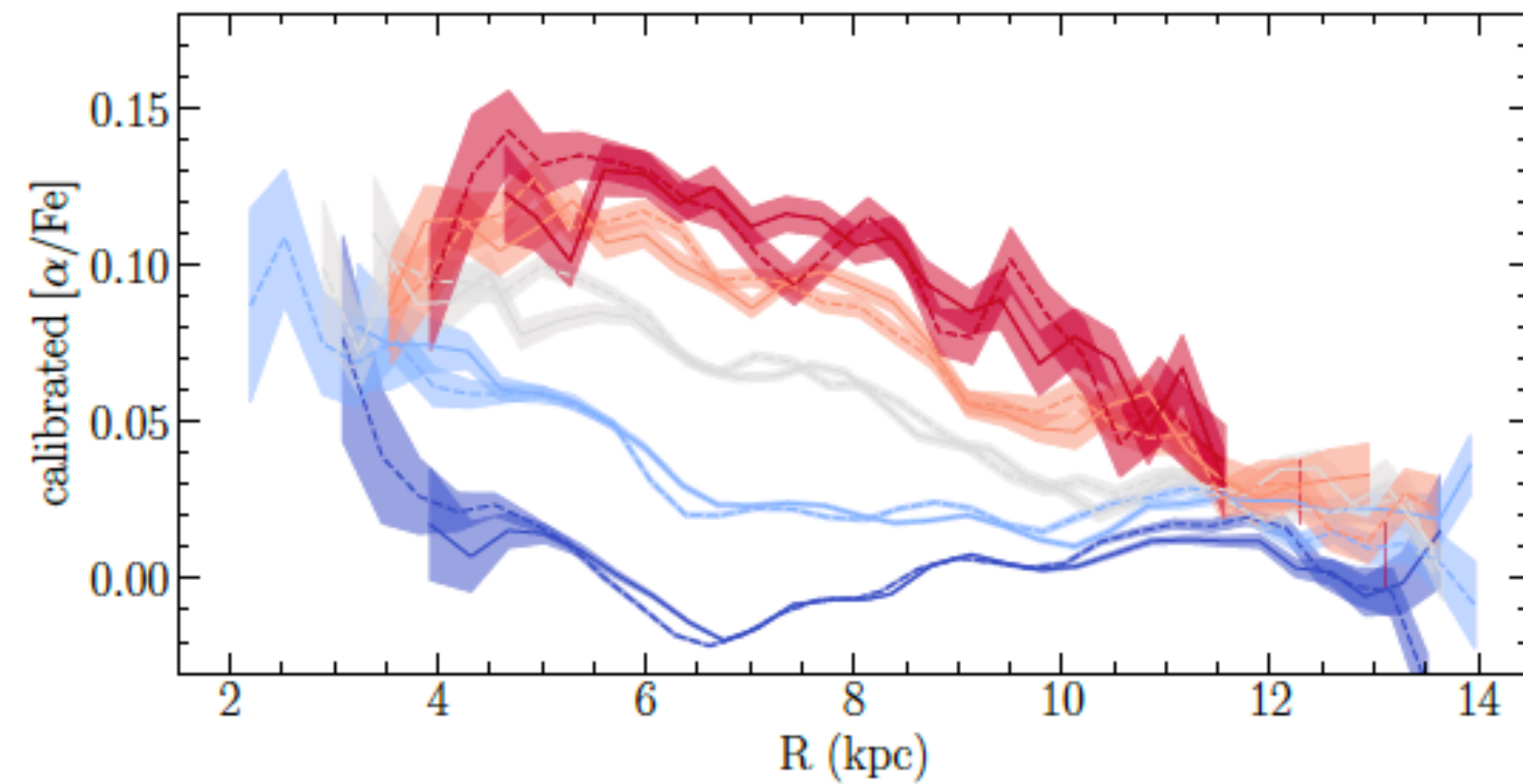
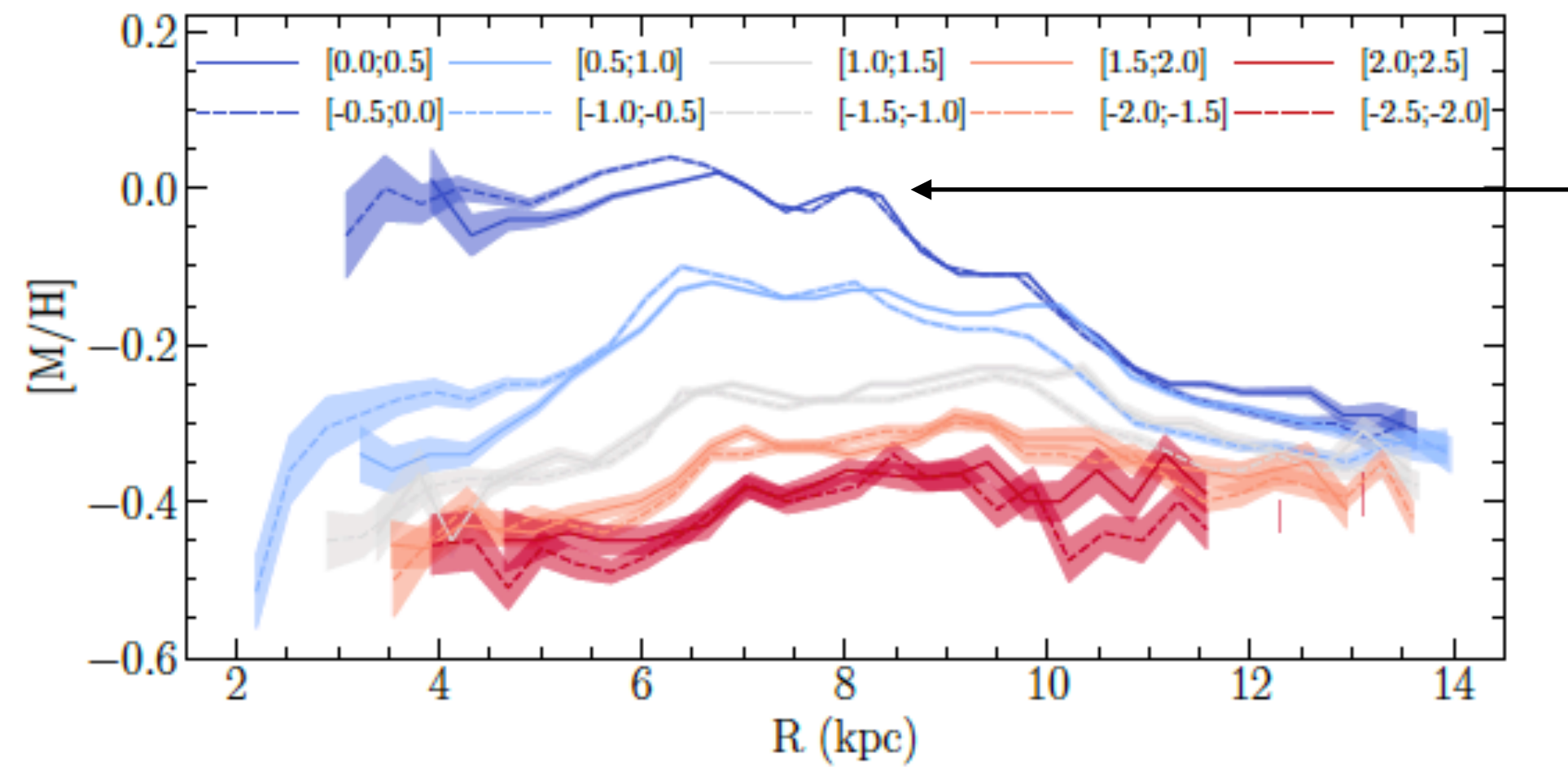


Massive stars

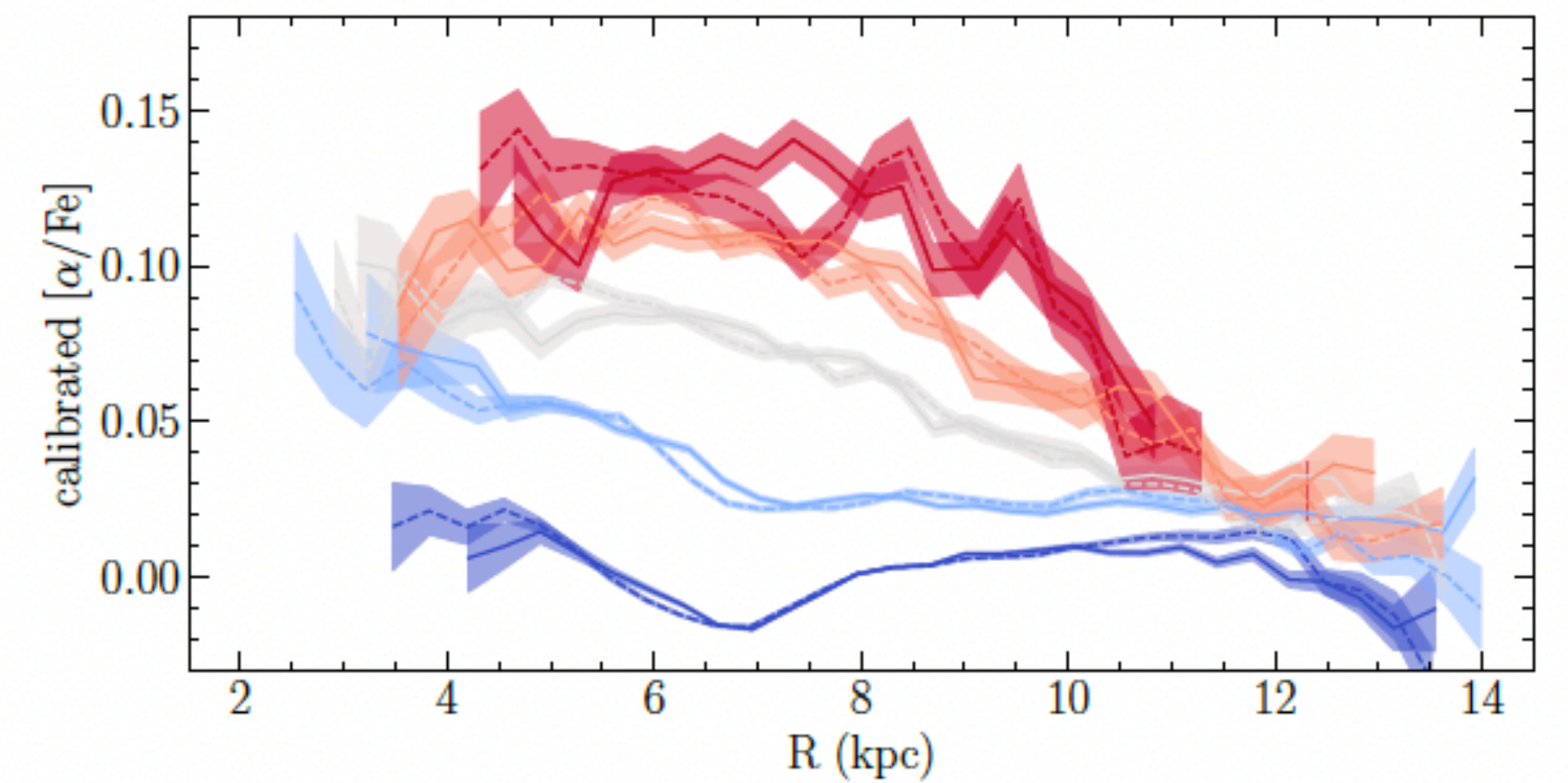
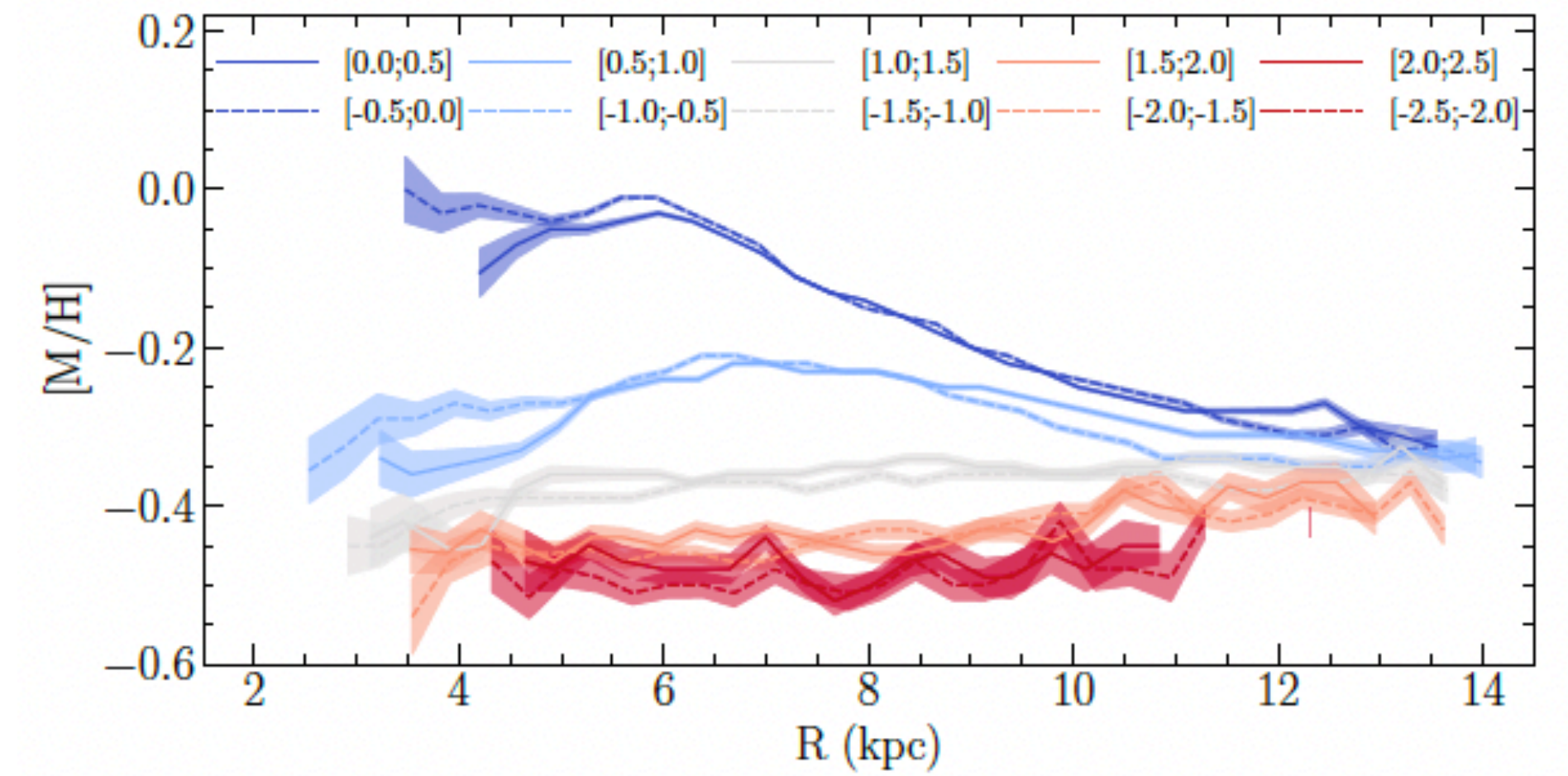


3. Radial and vertical trends

Full sample

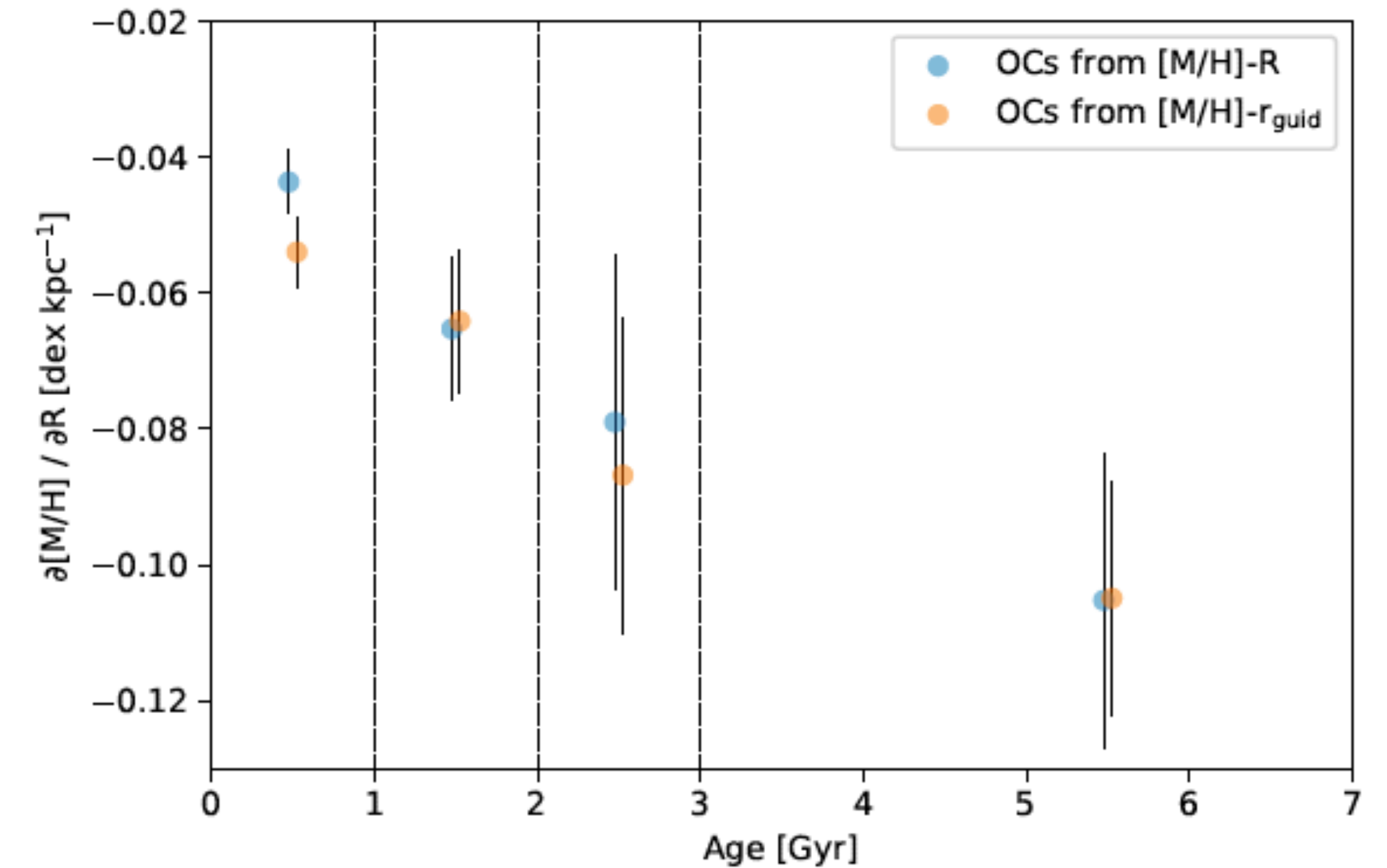
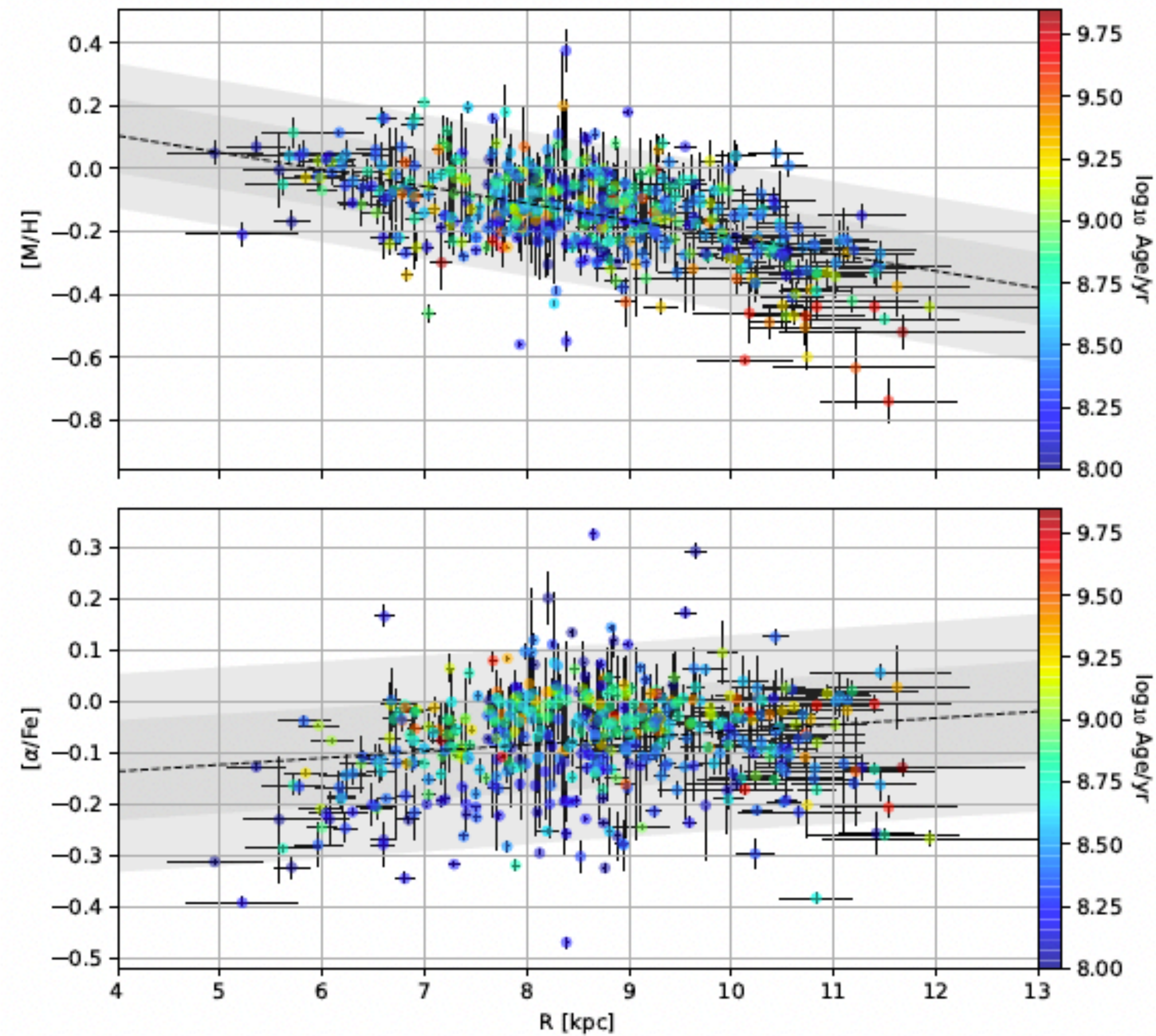


RGB sub-sample in plane

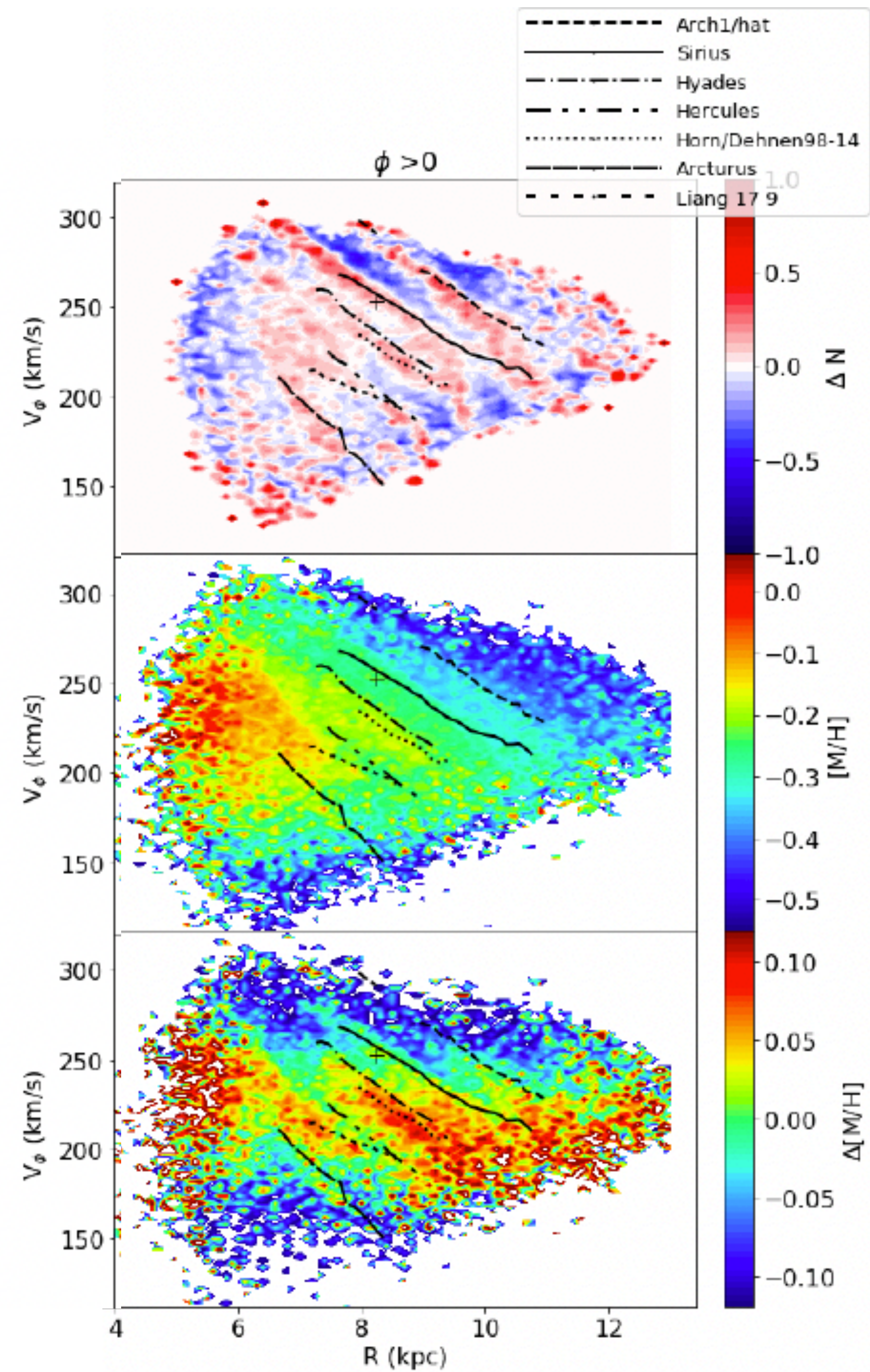
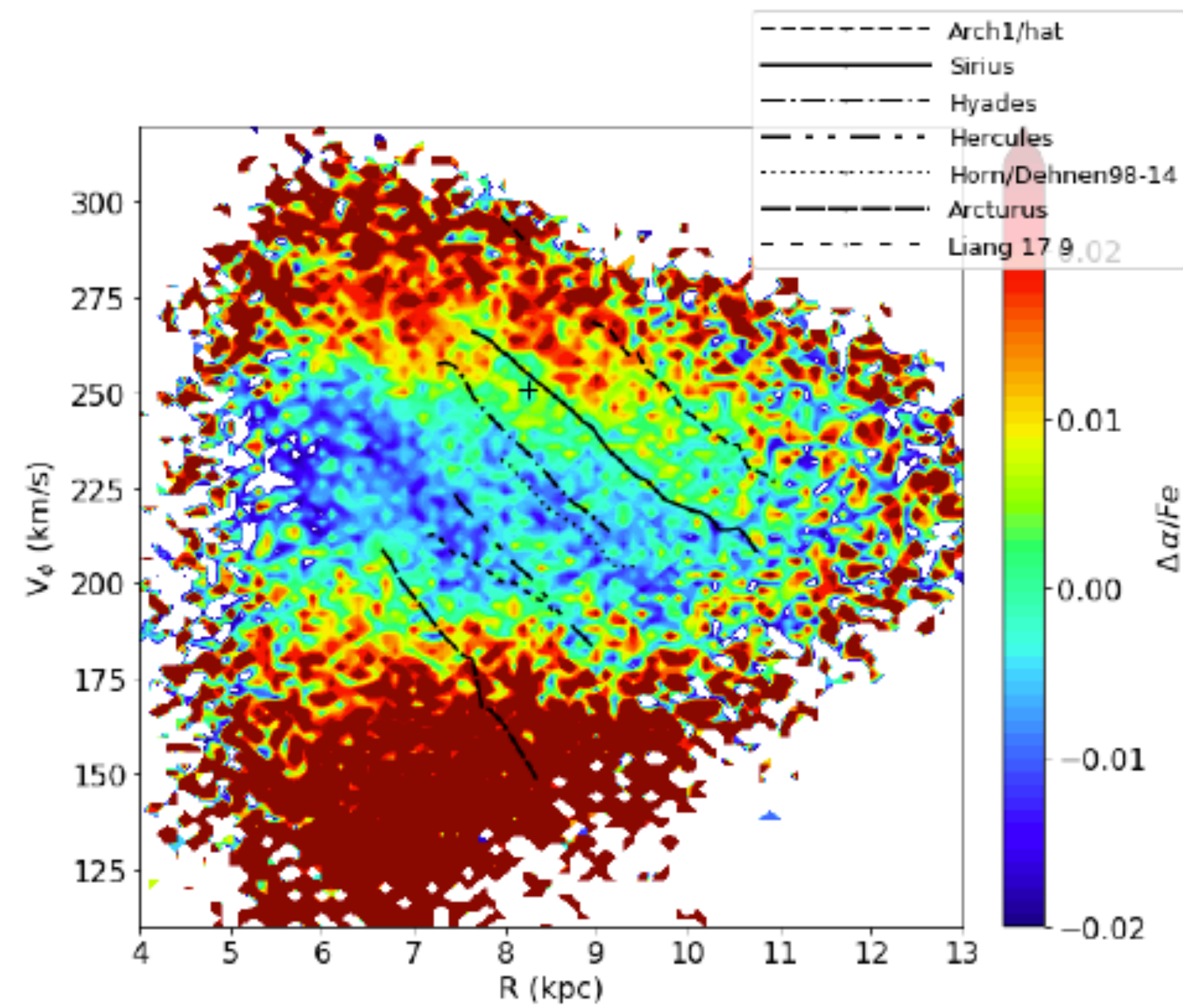


4. Chemo-kinematics of open clusters

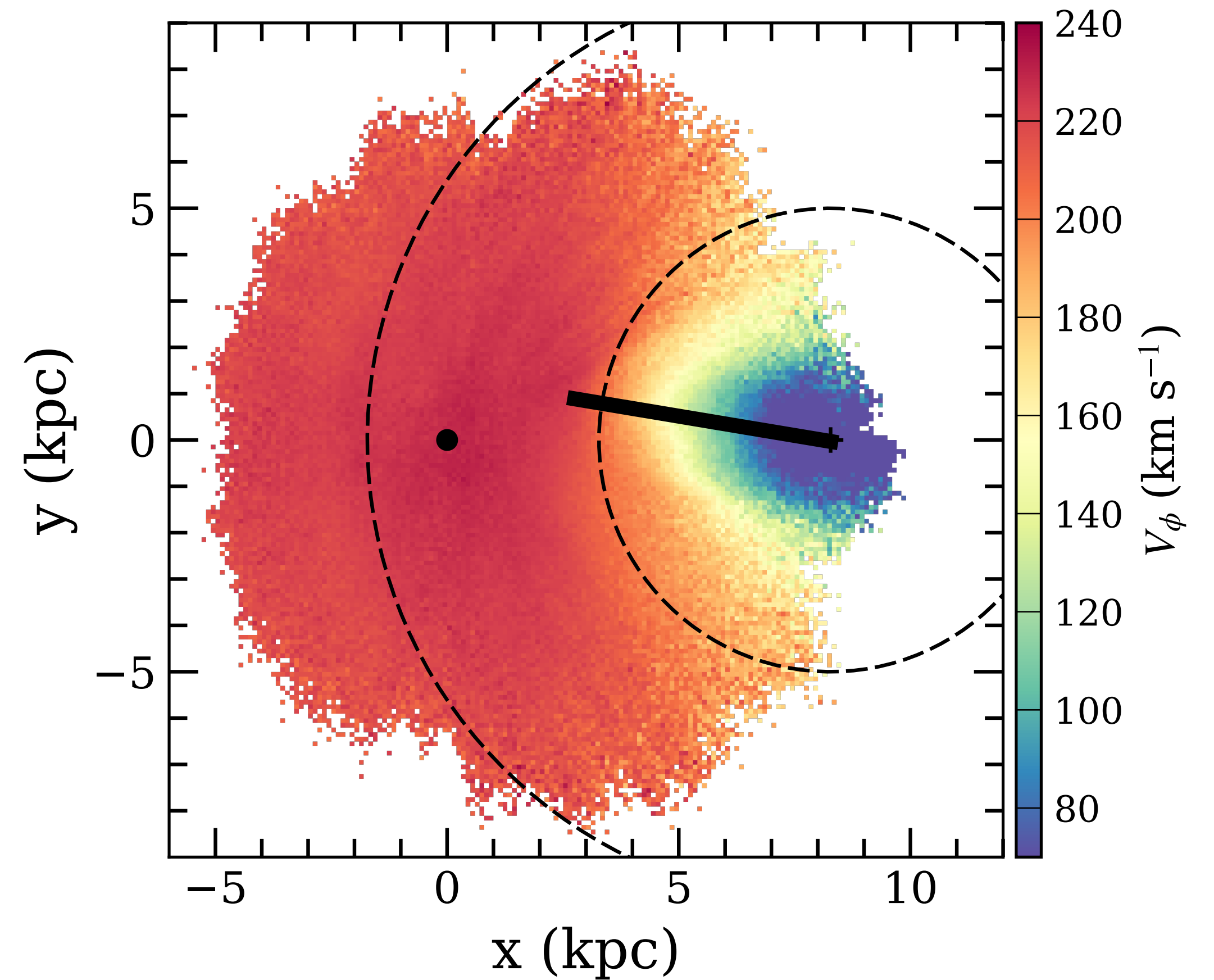
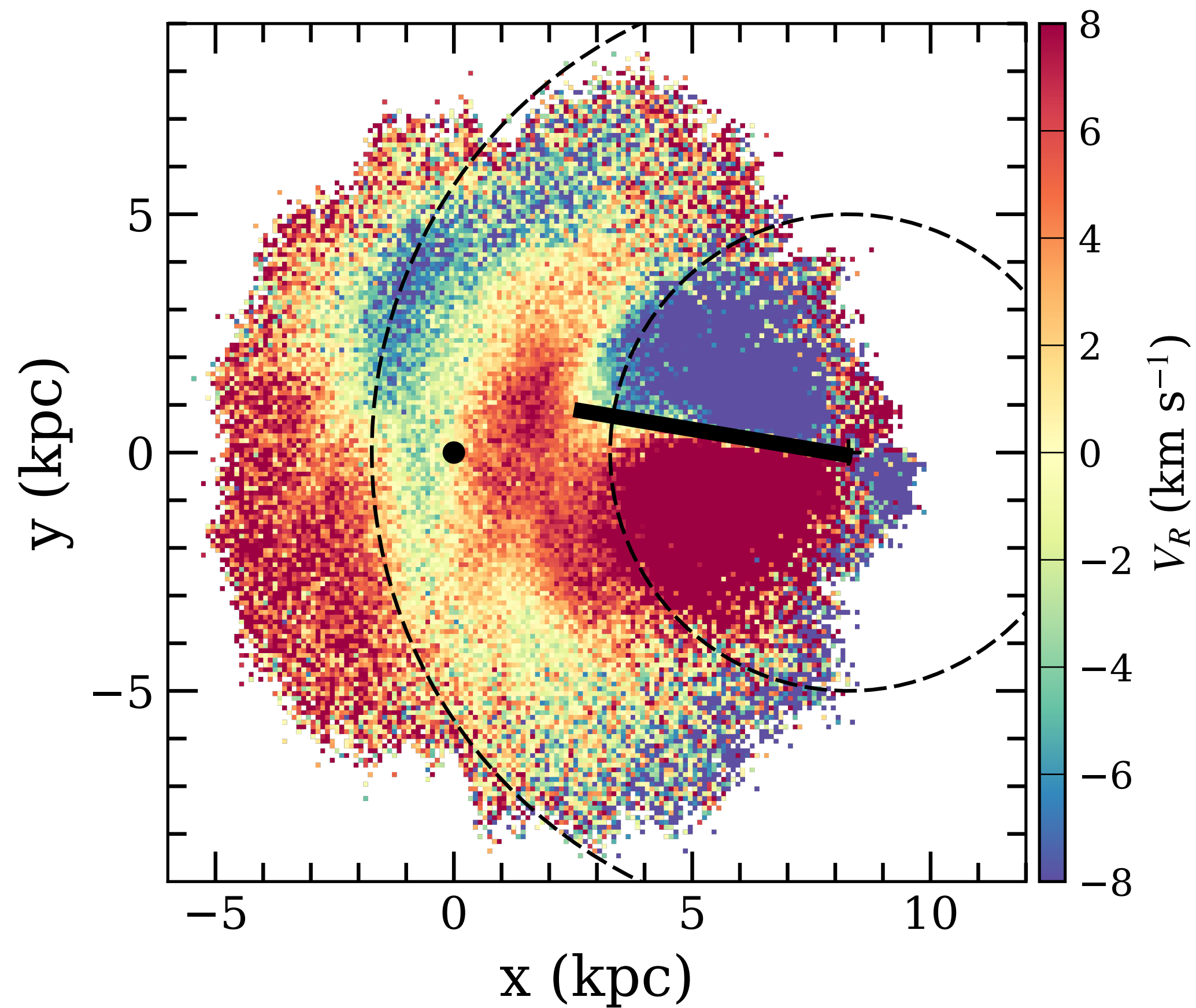
503 open clusters older than 100 Myr and $R < 12$ kpc



5. Chemo-kinematics

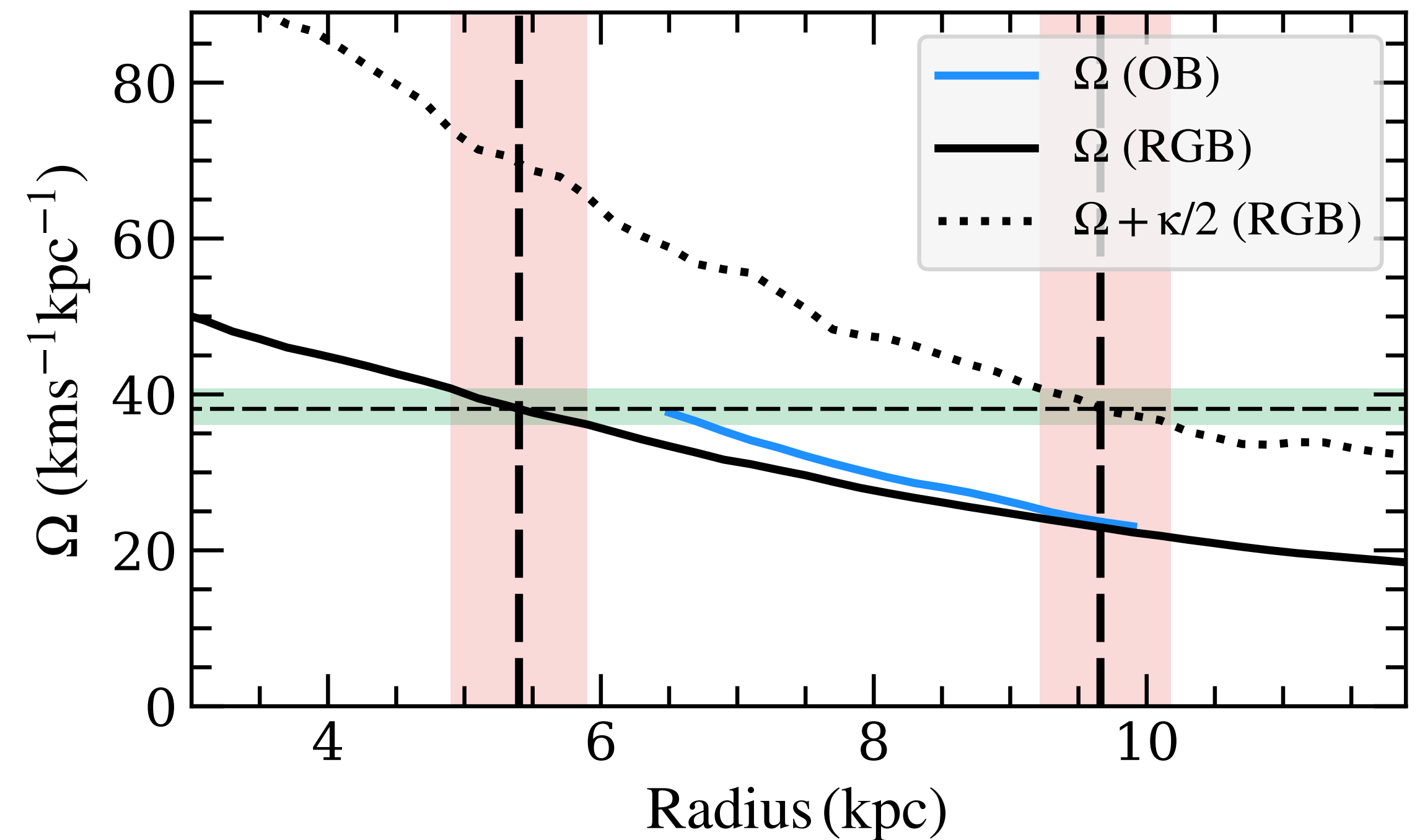
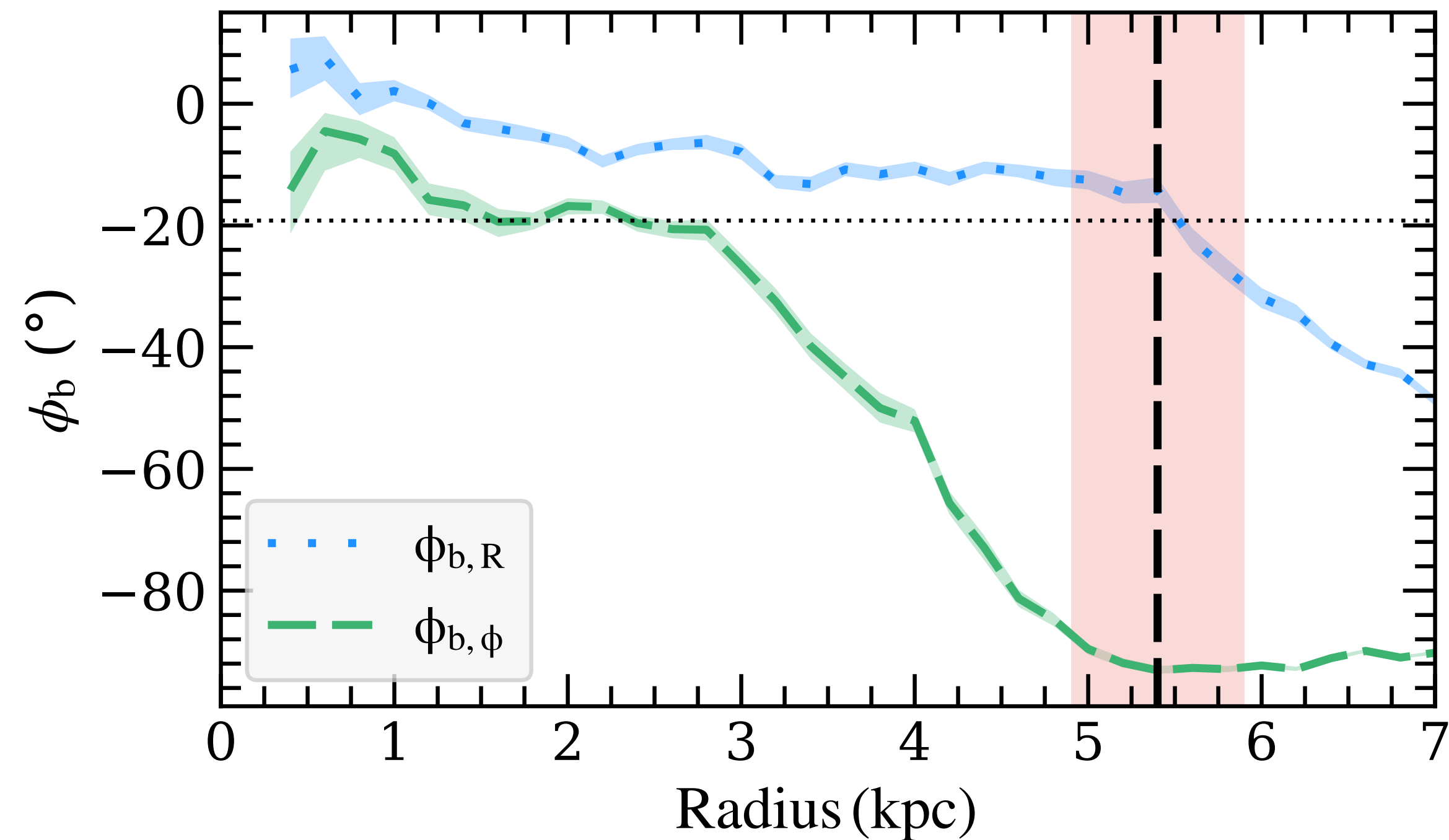


6. Kinematics of the RVS-RGB sample

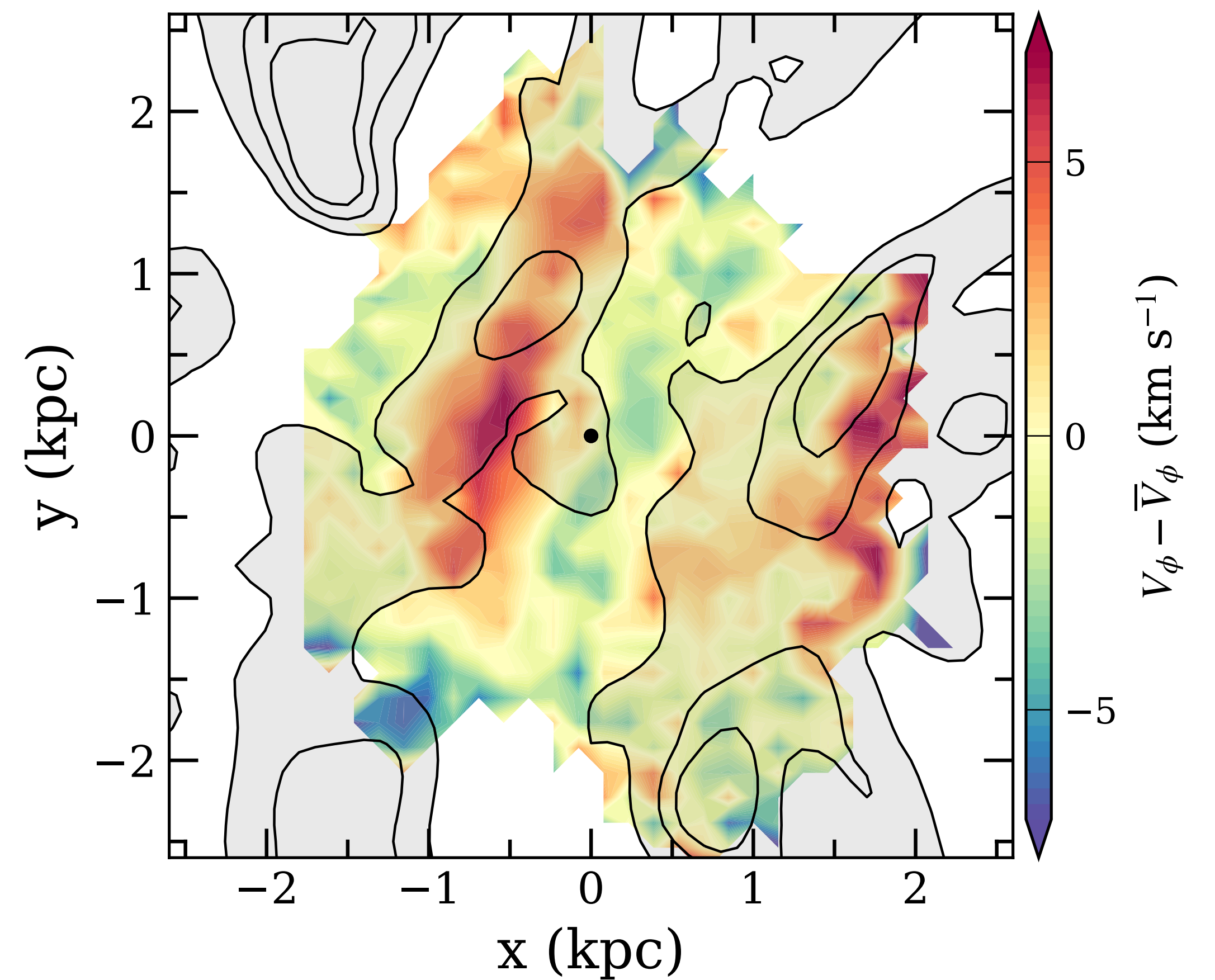
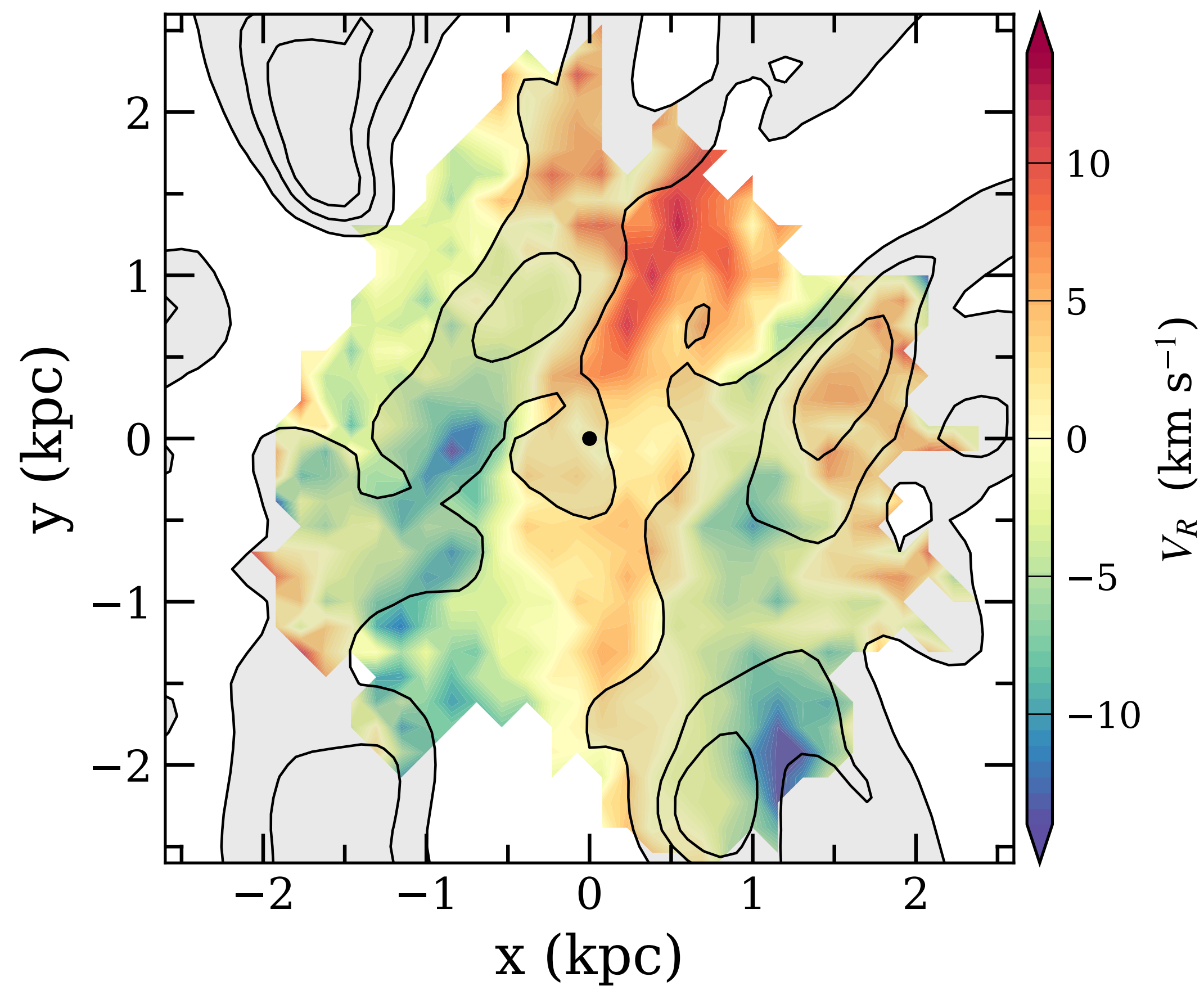


6. Kinematics of the RVS-RGB sample

The Galactic bar position angle and rough estimation of the pattern speed



6. Kinematics of the RVS-OB sample



DR3 stories

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