

History of the Milky Way

3. [1.5 points.] Answer the following questions.

- (a) Explain why there are more absorption spectrum lines for a metal-rich star and few absorption spectrum lines for a metal-poor star. (Do *not* explain why/how a metal-rich star has more metals than a metal-poor star.)

- (b) Clearly circle your answers below in describing the monolithic collapse model of the Milky Way. (No explanation necessary, but no partial credit given.)

Halo
 Disk

stars were the "first generation" stars of the Milky Way, producing metals from fusion, then exploding as type II supernovae, and providing these metals (and unused hydrogen) to the "next generation" halo
 disk

stars that formed as the shape of the Milky Way gradually became flatter
 expanded outwards

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