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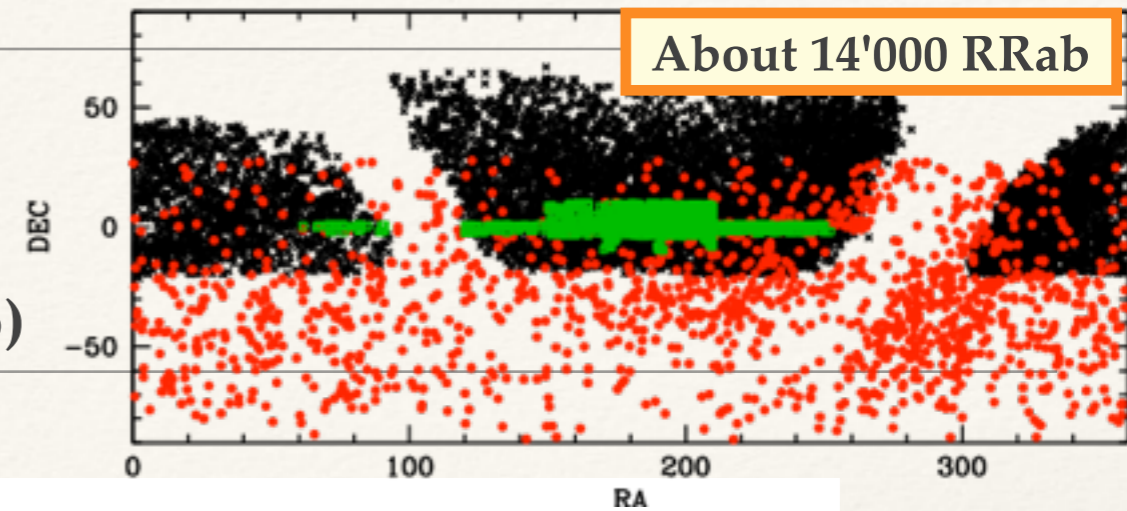
## RR Lyrae stars: building-up the Galactic halo with dwarf spheroidals

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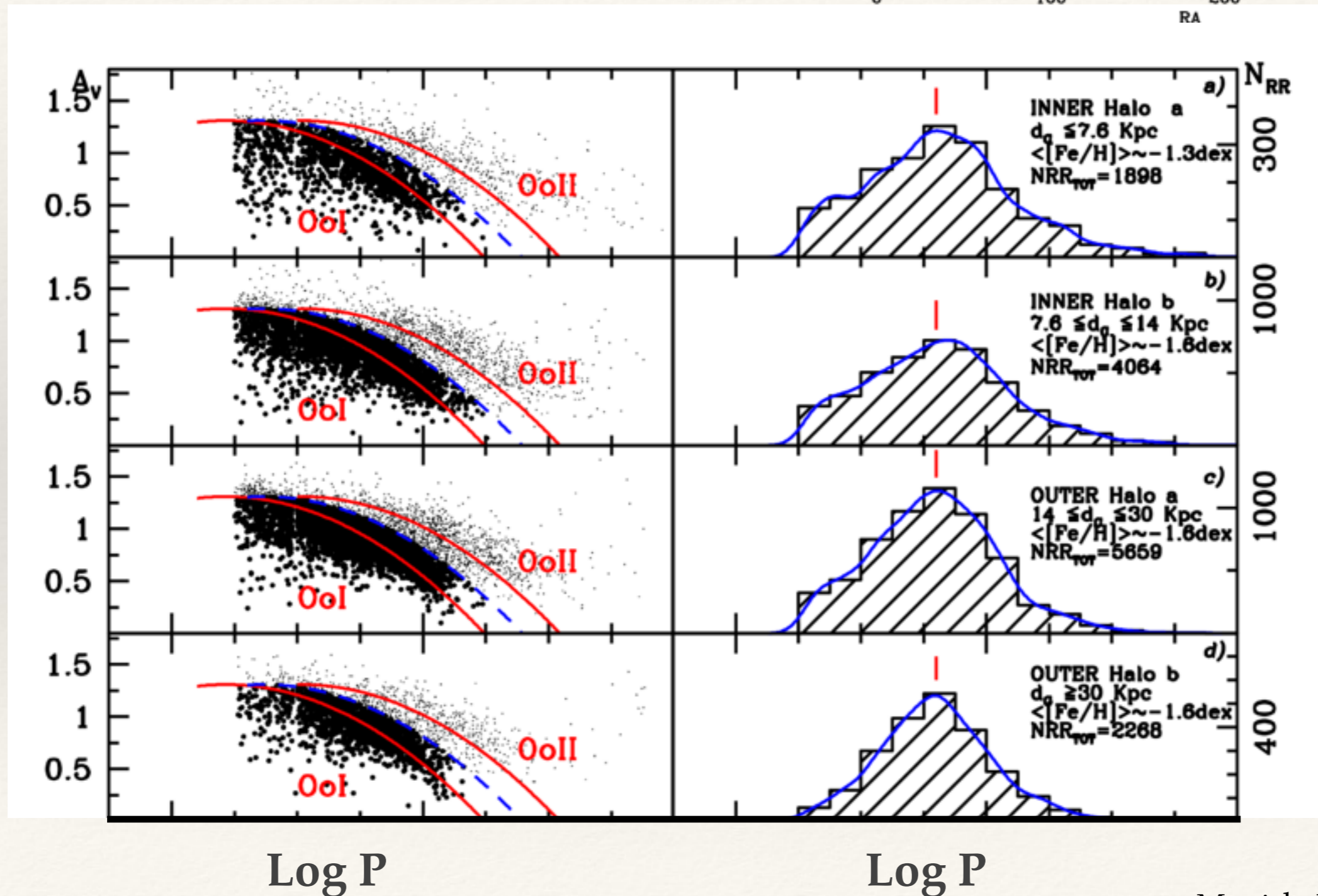


# INNER vs OUTER HALO

selecting only Fundamental mode RR Lyrae (RRab)



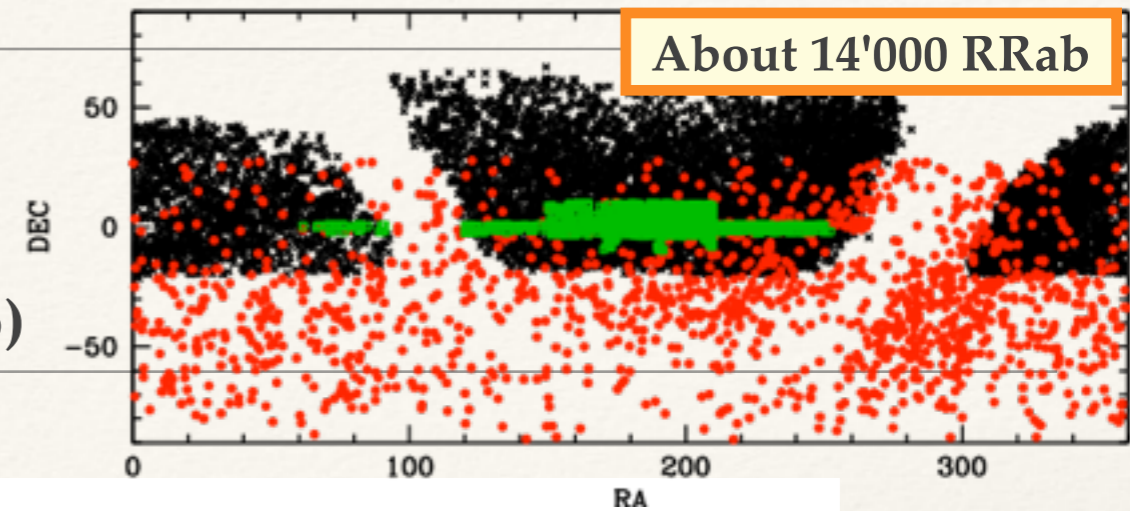
Stetson et al. 2014, PASP, 616, 216



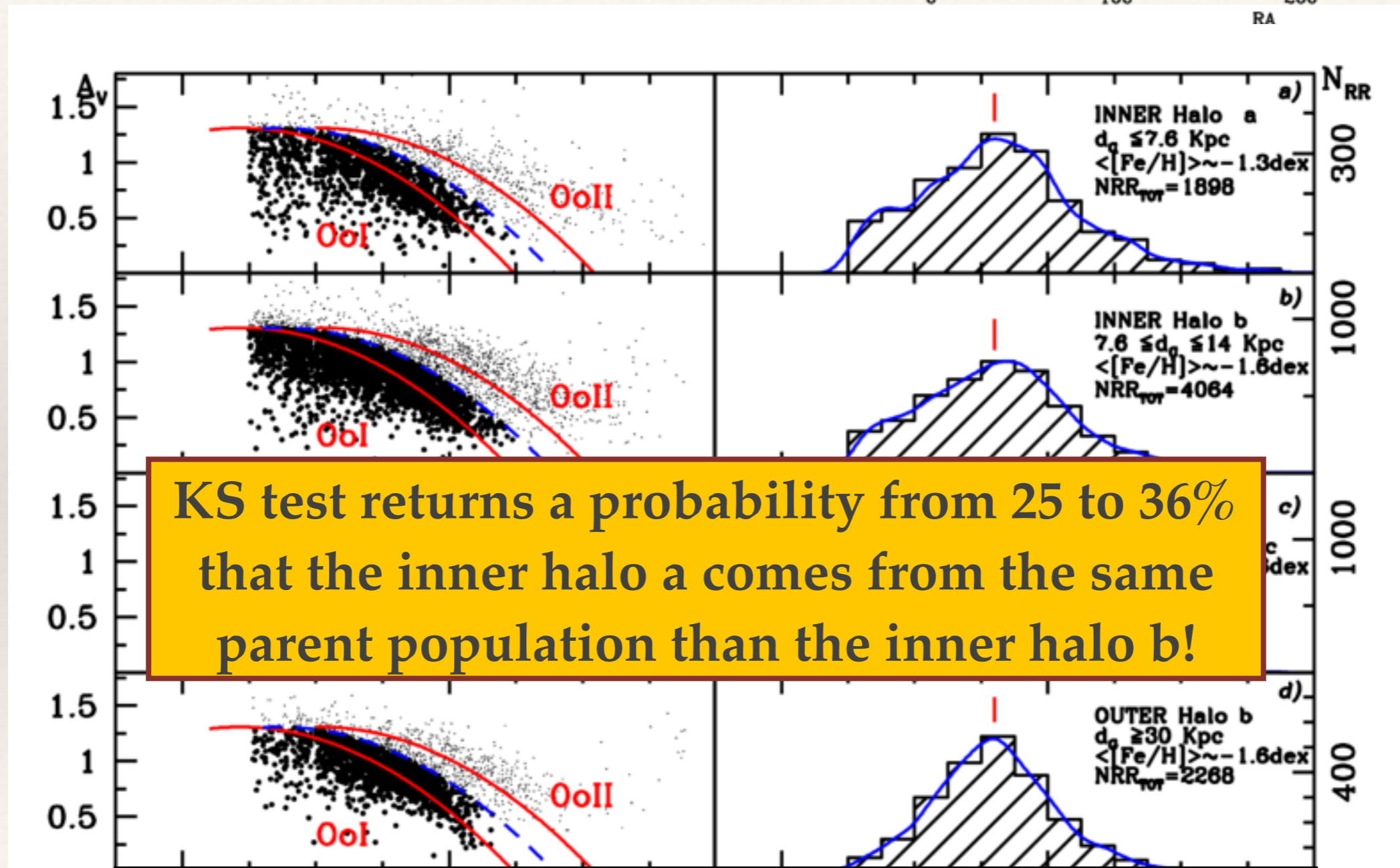


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**KS test returns a probability from 25 to 36% that the inner halo a comes from the same parent population than the inner halo b!**

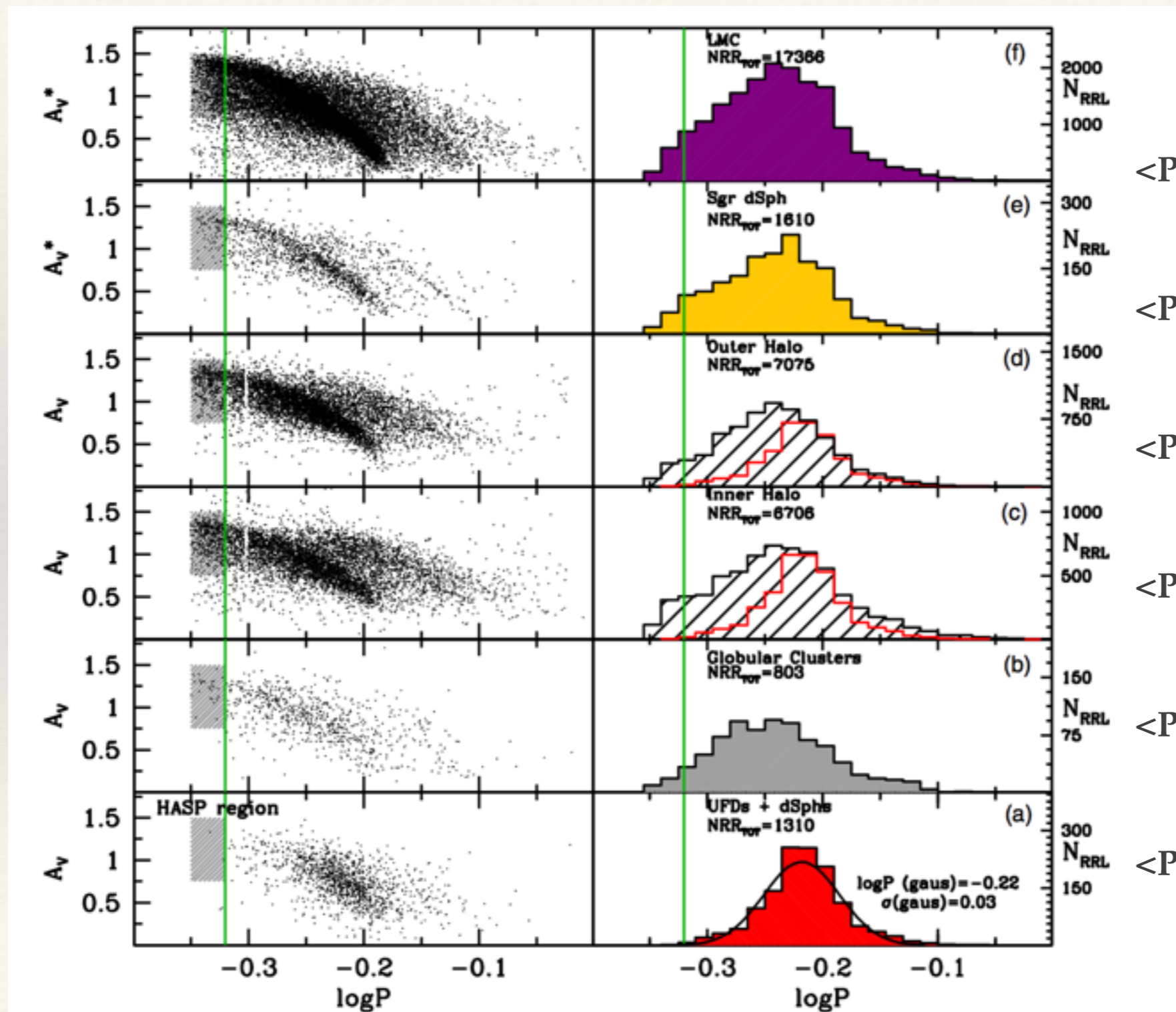
Log P

Log P

# First, **DIRECT** comparison

selecting only Fundamental mode RR Lyrae (RRab)

Fiorentino et al. 2015, ApJL, 798L, 12



LMC  
 $\langle P_{ab} \rangle = 0.575 \pm 0.002$  (0.07)

SGR dSph  
 $\langle P_{ab} \rangle = 0.576 \pm 0.001$  (0.07)

OUTER HALO  
 $\langle P_{ab} \rangle = 0.577 \pm 0.001$  (0.07)

INNER HALO  
 $\langle P_{ab} \rangle = 0.584 \pm 0.001$  (0.08)

GGCs  
 $\langle P_{ab} \rangle = 0.580 \pm 0.002$  (0.07)

dSphs  
 $\langle P_{ab} \rangle = 0.610 \pm 0.001$  (0.05)



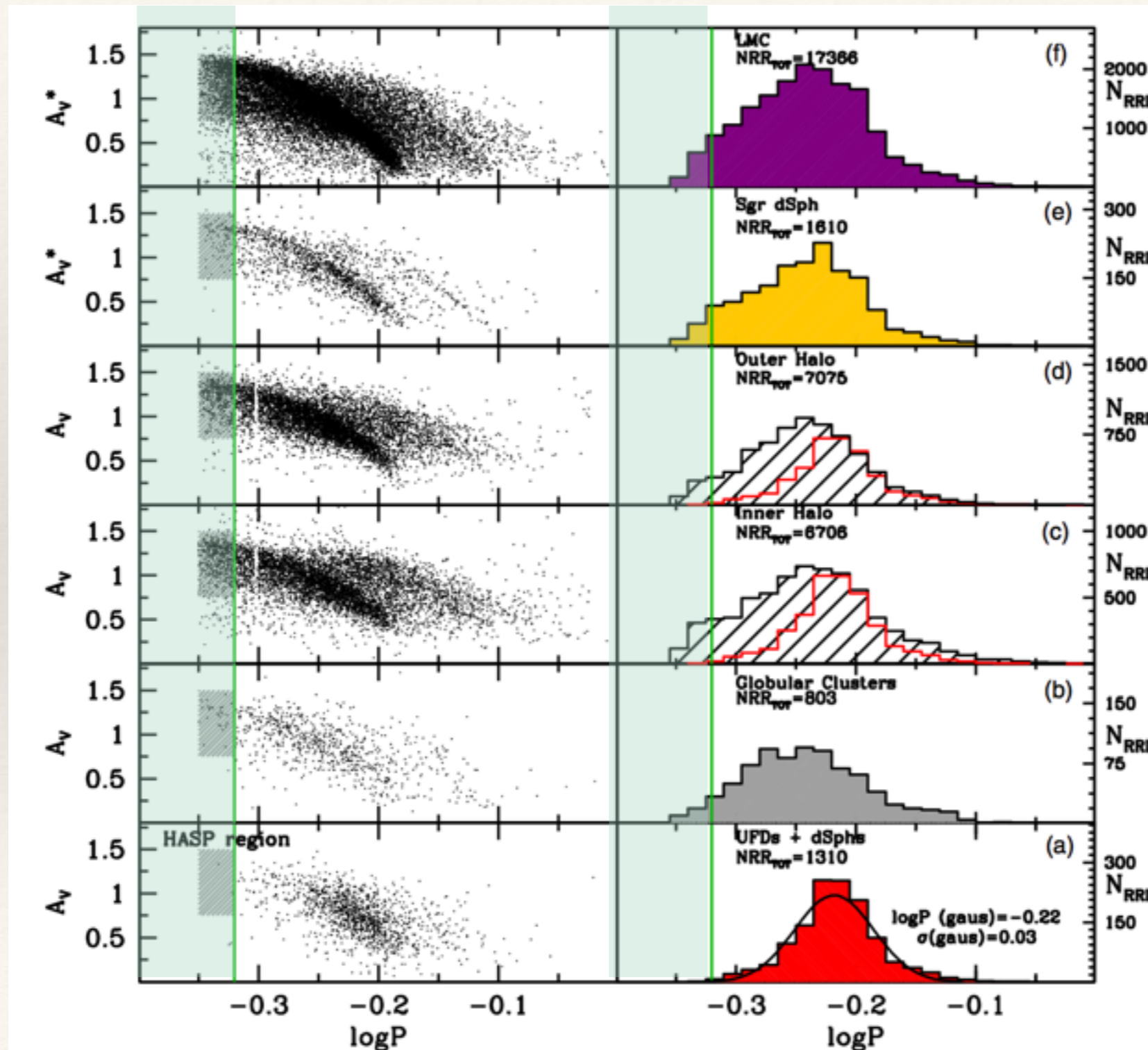
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selecting only Fundamental mode RR Lyrae (RRab)

The High Amplitude Short Period (HASP) RRab are missing!



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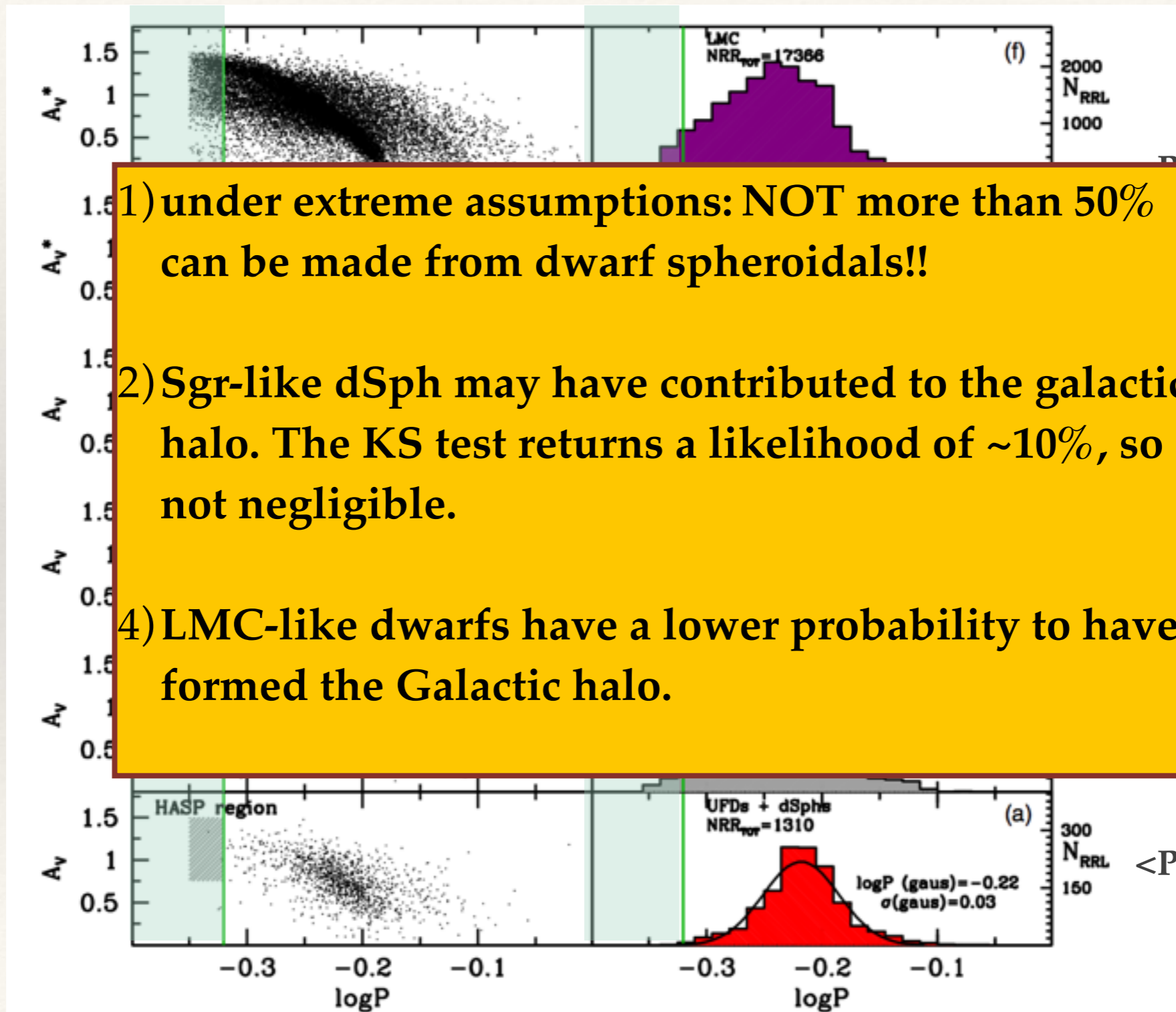
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selecting only Fundamental mode RR Lyrae (RRab)

The High Amplitude Short Period (HASP) RRab are missing!



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- 1) under extreme assumptions: **NOT** more than 50% can be made from dwarf spheroidals!!
- 2) Sgr-like dSph may have contributed to the galactic halo. The KS test returns a likelihood of  $\sim 10\%$ , so not negligible.
- 4) LMC-like dwarfs have a lower probability to have formed the Galactic halo.

LMC	$\langle P_{ab} \rangle = 0.575 \pm 0.002$ (0.07)
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