DRAGONFLY WIDE FIELD SURVEY

DIFFUSE LIGHT IN GROUPS

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Most galaxies in the Universe live in groups.
Most galaxy groups in the Universe are large and have low density.
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Bullock and Johnston 2005
OBSERVING DIFFUSE LIGHT IN GALAXY GROUPS

M96 Galaxy Group


IllustrisTNG

Pillepich et al 2017

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OBSERVING DIFFUSE LIGHT IN GALAXY GROUPS

M96 Galaxy Group

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Need more observational statistics!

DRAGONFLY TELEPHOTO ARRAY

Dragonfly
Optimized for low surface brightness imaging.
Large Field of View.

Field of view = 3° x 2°
DRAGONFLY WIDE FIELD SURVEY

Region: SDSS Stripe 82 + Equatorial GAMA fields
Area ~ 300 deg²
Band: $r$ and $g$
Status: Observation ~ 40% completed
Galaxy Groups in Survey Area

~ 15 groups with

$13.0 < \log (M_h / M_\odot) < 14.5$

and

$z < 0.03$ (DL < 130 Mpc)

(Lim et al 2017)
IMAGING DIFFUSE LIGHT
IMAGING DIFFUSE LIGHT
Characterize diffuse light (amount of light + substructure) in galaxy groups with a range of halo mass and density.

Check out poster by Colleen Gilhuly: DRAGONFLY EDGE-ON GALAXY SURVEY