

WEAVE Galactic Archaeology: Open Clusters survey

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IV Reunión científica de la Red Española de Gaia, 23-25 mayo 2016



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Open clusters survey: science goals

1. Formation of open clusters
2. Disruption of open clusters
3. OCs as tracers of the Galactic disc and its chemical evolution
4. Star formation, planetary system formation and early stellar evolution
5. Stellar evolution

Open clusters survey: targets

1. Formation of open clusters
Sco OB2, Per OB1, Cygnus region
2. Disruption of open clusters
Large FoV, OCs of different ages and R_{GC}
3. OCs as tracers of the Galactic disc and its chemical evolution
Ages > 100 Myr, covering a range of ages and R_{GC}
4. Star formation, planetary system formation and early stellar evolution
Young & intermediate (< 500 Myr), + Hyades, Praesepe
Li abundance, Fe/H accretion rate, chromospheric activity
5. Stellar evolution
Same clusters

Open clusters survey: instrument set up

1. High-resolution mode
2. Essential & optimal data set:
Blue2 & Red gratings: 473-545 & 595-685 nm

Desirable data set:
Bue1 grating: 404-465 nm (*n-capture elements*)
3. S/N = 70

Open clusters survey: considerations

1. Calibration
About 20 Ocs
2. Outer disc survey (anti center)
3. APOGEE, Kepler/K2 fields, Gaia-ESO
4. Special study of compact clusters