

3D + Nearby Galaxies Discussion

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Absorption / continuum

Opt/NIR IFUs

Stars

Opt/NIR IFUs

Early-type

CO – Opt/NIR

Medium/Small scales

CO – Opt/NIR

Emission lines

HI – H α – CO

Gas

HI – H α – CO

Late-Type

HI – H α – CO

Large-scale

HI – H α – CO

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- ❖ **Gas phases: neutral, molecular, ionised**
(and soon, multi-species & low/high density)

- Ⓞ **Conversion processes**

- Ⓞ What do we need ?

- Ⓞ **Link with star formation**

- Ⓞ **Link with stellar populations**

- Ⓞ GALEX, Spitzer, Opt/NIR, SED
- Ⓞ Line indices + SED (methods, tools) ?

- Ⓞ **What about numerical simulations ?**

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❖ **Cold accretion**

@ How important ?

@ How do we **trace** it ?

❖ **How do we build the bridge to high-z observations?** (before SKA)

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❖ Surveys:

- ⊙ Number of combined surveys
 - ⊙ HI-CO-(Optical/NIR)-GALEX-Spitzer...
 - ⊙ Spirals, Hubble sequence, early-types, Local Group
- ⊙ What is the next step?

❖ HI/CO and SAURON/ATLAS^{3D}

- ⊙ What about FTS, FPs?
 - H α , TFs, Line ratios
- ⊙ And ...

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❖ Data:

- Ⓢ Diffusion : How do we do this ?

❖ Softwares:

- Ⓢ Analysis of « velocity fields » / kinematics:
 - Ⓢ Fitting → Moments, Gauss/Gauss-Hermite
 - Ⓢ Global/local → Tilted rings, harmonics, kinemetry
 - Ⓢ Single emission lines versus stellar LOSVDs
- Ⓢ General Tools: adaptive binning, data mining, ...
- Ⓢ Visualisation:
 - Ⓢ Data (direct or processed), AND Simulations

❖ Networking, Communities

- Ⓢ Euro3D, RadioNet, ...
- Ⓢ IRAM, NEON Schools