3D + Nearby Galaxies
Discussion

Absorption / continuum
Opt/NIR IFUs

Stars
Opt/NIR IFUs

Early-type
CO – Opt/NIR

Medium/Small scales
CO – Opt/NIR

Emission lines
HI – H\(\alpha\) – CO

Gas
HI – H\(\alpha\) – CO

Late-Type
HI – H\(\alpha\) – CO

Large-scale
HI – H\(\alpha\) – CO
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?
3D + Nearby Galaxies
Discussion

- Cold accretion
  - How important?
  - How do we trace it?

- How do we build the bridge to high-z observations?
  (before SKA)
**3D + Nearby Galaxies**

**Discussion**

- **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**
  - What about FTS, FPs?
    - Hα, TFs, Line ratios
  - And …
3D + (Nearby Galaxies) Discussion

❖ **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