Galaxy Evolution: Modeling the Role of Non-Thermal Pressure in the Interstellar Medium

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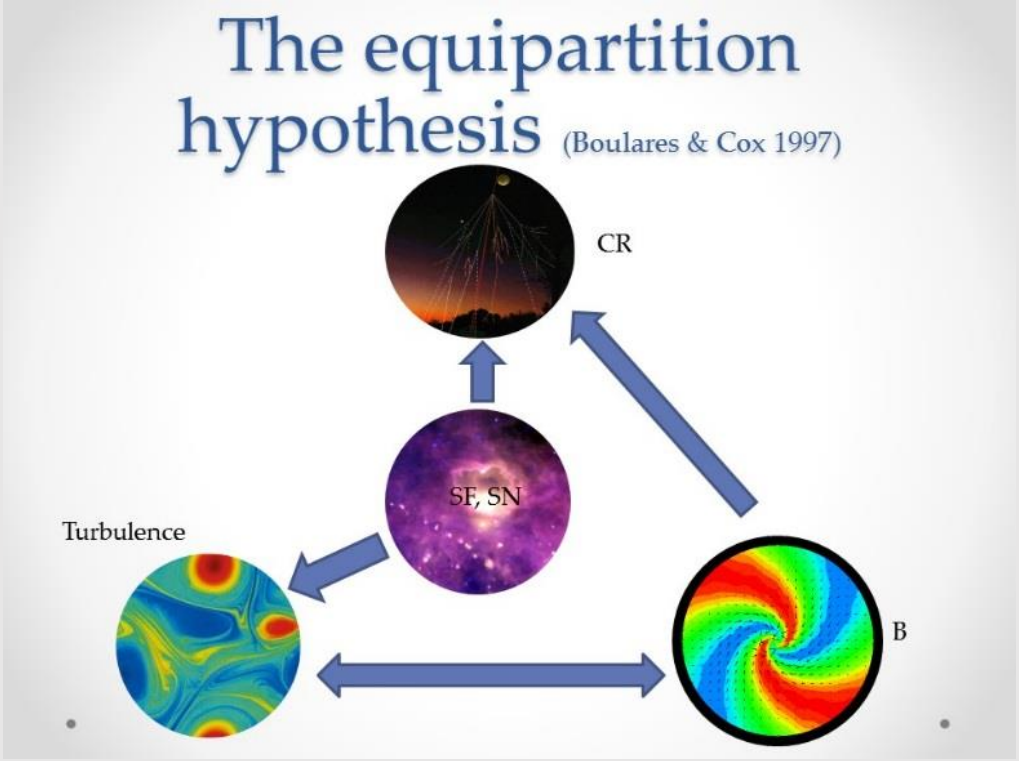
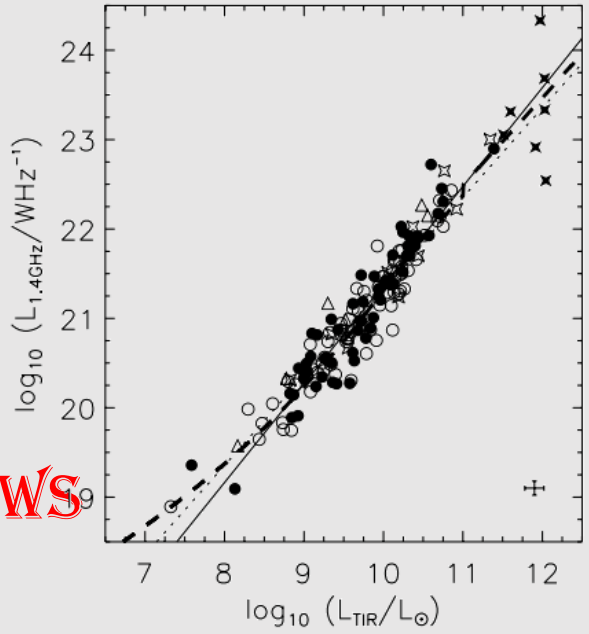
MAIN POINTS:

1. FOR ISM, NON-THERMAL PRESSURE IS "AT LEAST AS IMPORTANT" AS THERMAL
   N.T. ENERGY: MAGNETIC, COSMIC RAYS, TURBULENCE
   EFFECT: KEEP THE ISM DIFFUSE
2. RADIO-IR RELATION IS USED TO CALIBRATE N.T. ENERGY – SFR RELATION
3. COARSE GRAINED N.T. CAN BE MODELED AS SINGLE N.T. PRESSURE.

SUCCESS! WEAKER FEEDBACK,
CORRECT GAS DEPLETION RATES,
SELF REGULATION WITH WEAKER OUTFLOWS





WHATS IN THE PAPER?

QUASI ANALYTIC MODEL

RAMSES 3D WITH DEDICATED SUBGRID MODEL

PRELIMINARY RESULTS