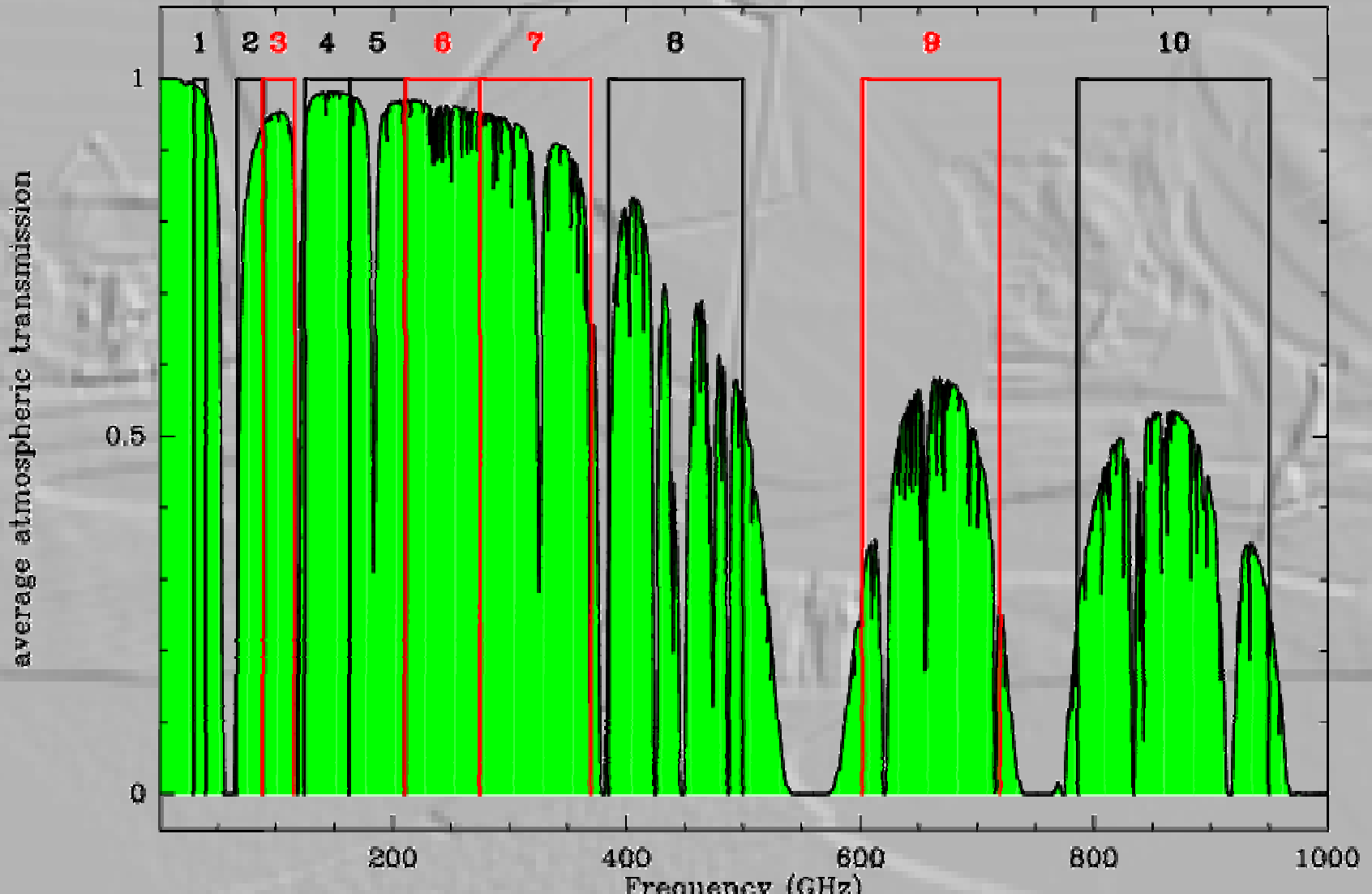
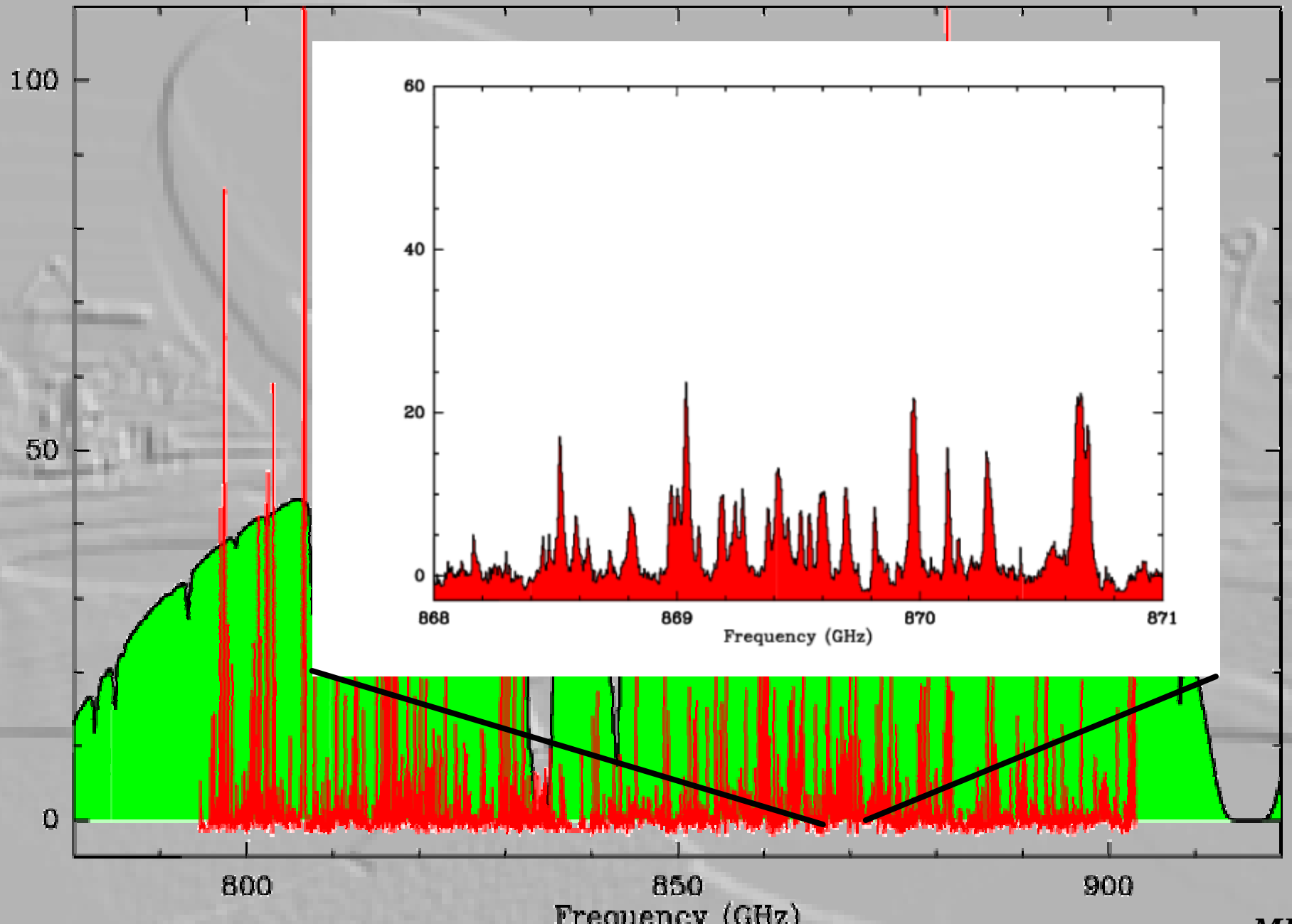
ALMA frequency bands for star formation studies (including astrochemistry)

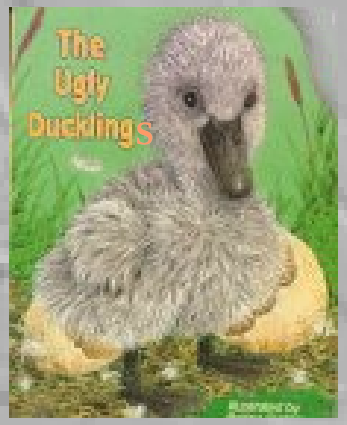


Orion line survey 780-900 Ghz (Comito et al.)



- Band 10:
  - Warm dust
  - high temperature, high density tracers
  - CO(7-6), HCN(9-8, 10-9), HCO^+(9-8,10-9), H_2CO, HDO
  - High mass star forming regions
- Band 4:
  - Cold dust
  - Excellent atmospheric transmission
  - Chemically rich (e.g. H_2CO ground state transitions)
  - Low mass star forming regions
- Band 8:
  - Dust emission bracketed by other bands
  - Atomic carbon ground state line
  - Other important lines, e.g. HDO

- Band 1:
  - Overlap with VLA
  - Low priority from star formation/astrochemical point of view



- Band 2:
  - Ground state lines of DCN, DCO^+, N_2D^+
  - Extremely important for low mass cores (depletion)
- Band 5:
  - Transitions of H_2O, $H_2{}^{18}O$, ground state H_2S
  - Important for water studies