

DARK MATTER

ASTR 333/433

FALL 2013

M T 4:00-5:15PM

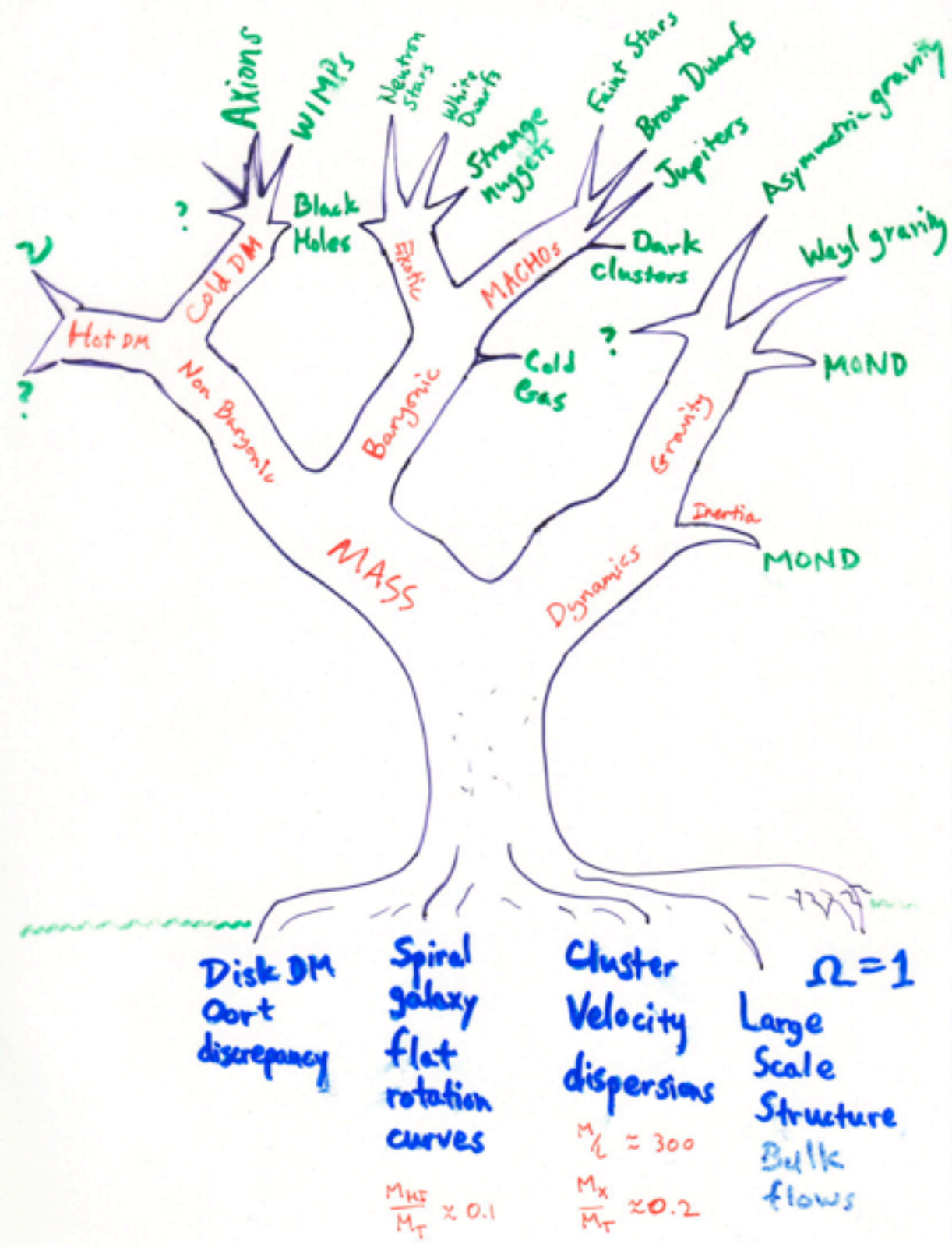
SEARS 552

PROF. STACY MCGAUGH

SEARS 573

368-1808

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CASE WESTERN RESERVE
UNIVERSITY EST. 1826

ISM

The stuff between the stars

Atomic gas

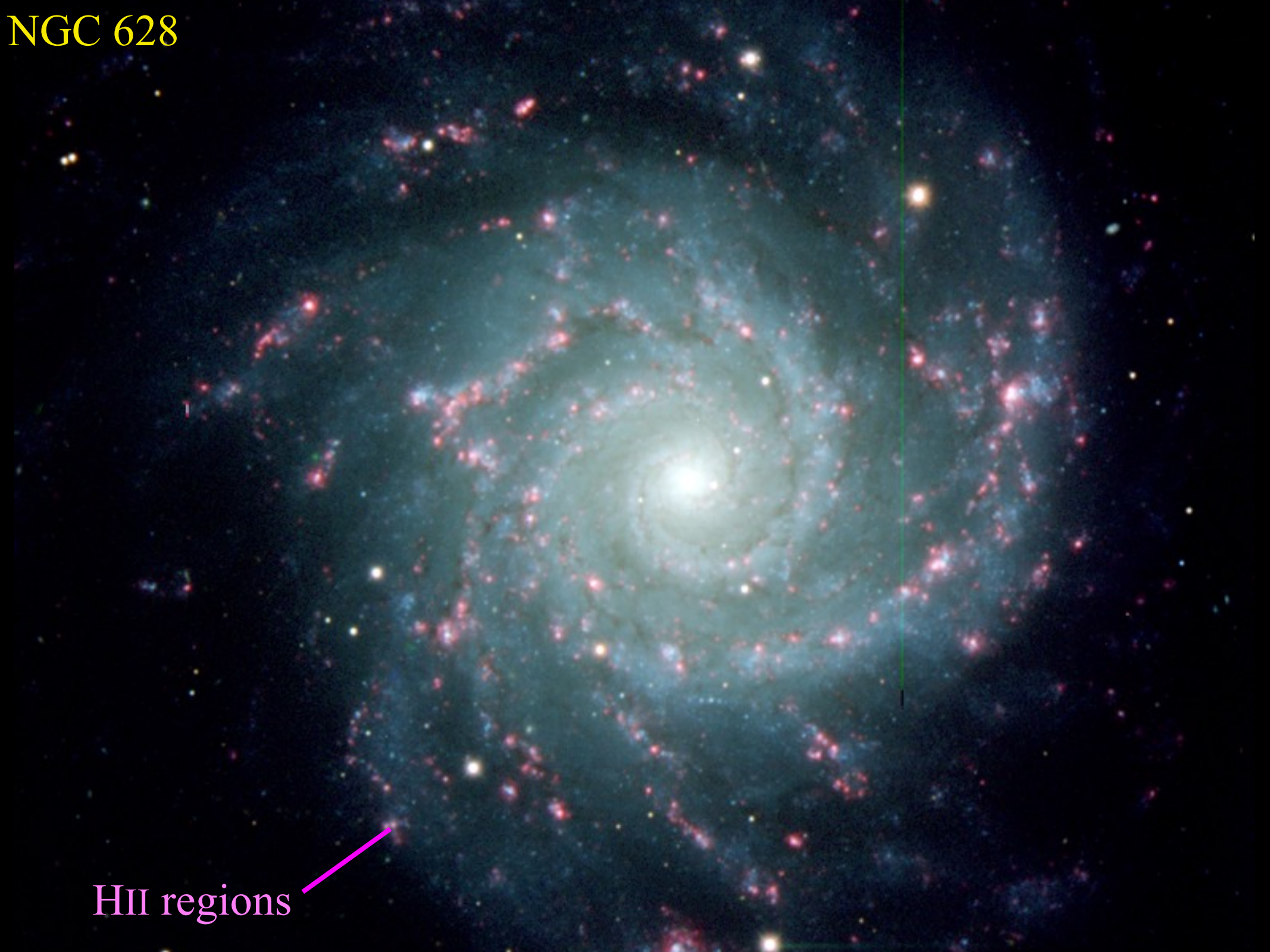
Molecular gas

Ionized gas

Dust

POTENTIAL-DENSITY PAIRS

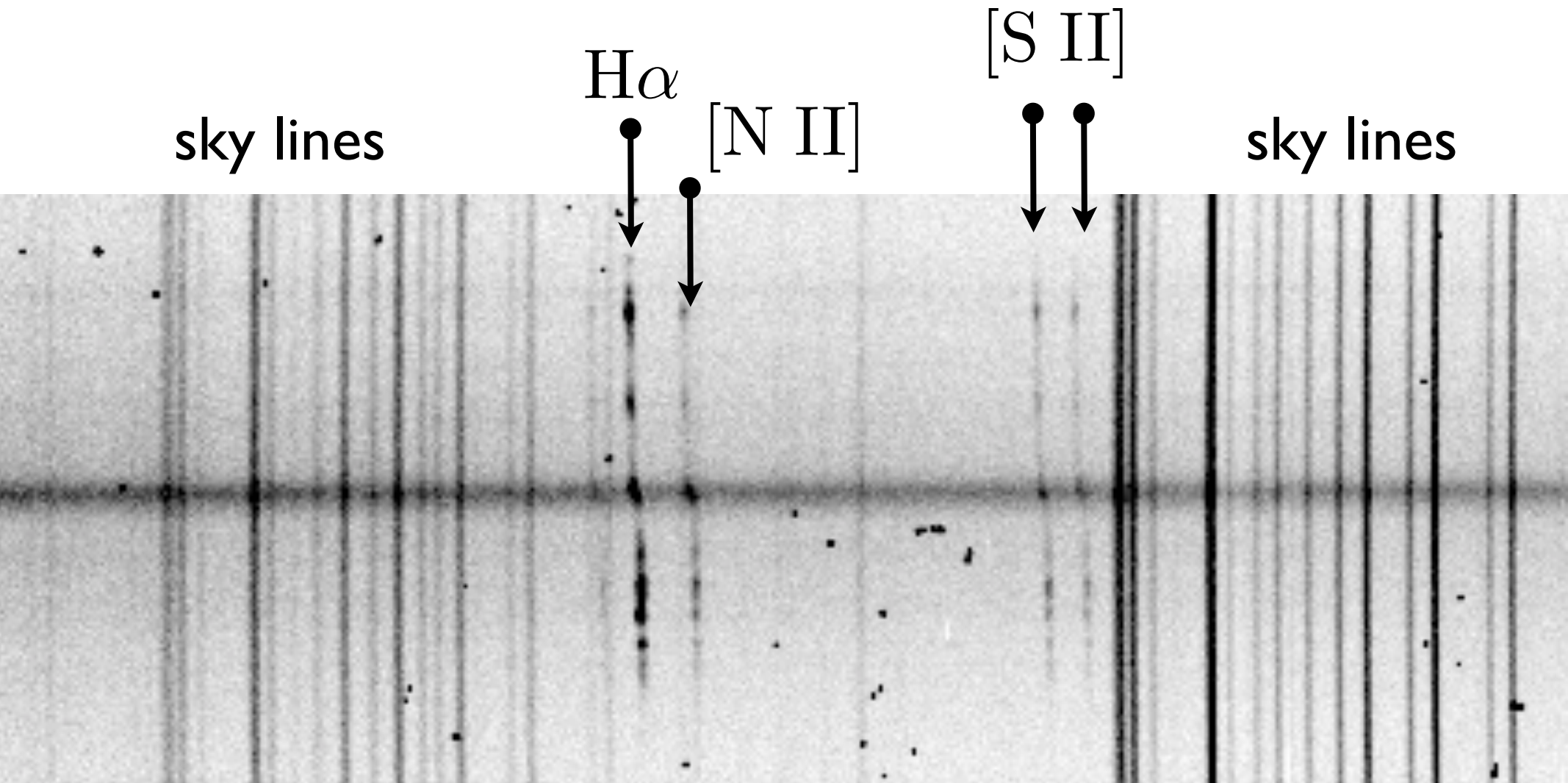
NGC 628



HII regions

Optical long slit spectrum along major axis of galaxy

Brightest emission is in HII regions,
but there is also diffuse emission.



Dust

Not much mass
Lots of obscuration
in UV/optical

magnitudes of
extinction A_λ

$$R_V = \frac{A_V}{E(B - V)}$$

$$E(B - V) = (B - V)_{obs} - (B - V)_{true}$$

