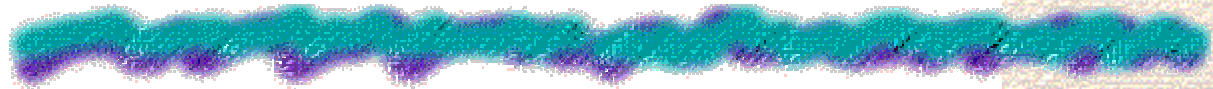# NRO-SUBARU Collaboration I : GMCs and Star Formation in M33

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NRO-45m Legacy Project:
Molecular Gas and Star Formation in M33

PI: N. Kuno

<u>Purpose</u>
To study the properties of
Giant molecular clouds
And star formation
within a whole galaxy

34
~8.1 kpc

5-years project
Jan. 2008~

30
~7.3 kpc

<u>Resolution</u>
19".3   80 pc

1kpc

Spiral Galaxy M33 (Messier 33)

Suprime-Cam (B, V, Hα)
January 22, 2009

(Arimoto et al.)

Variety of Star Formation among GMCs

CO(1-0)map

H
Contour:CO

Physical conditions
Evolutionary process

30s   1h34m0s   30s   33m0s
Right ascension
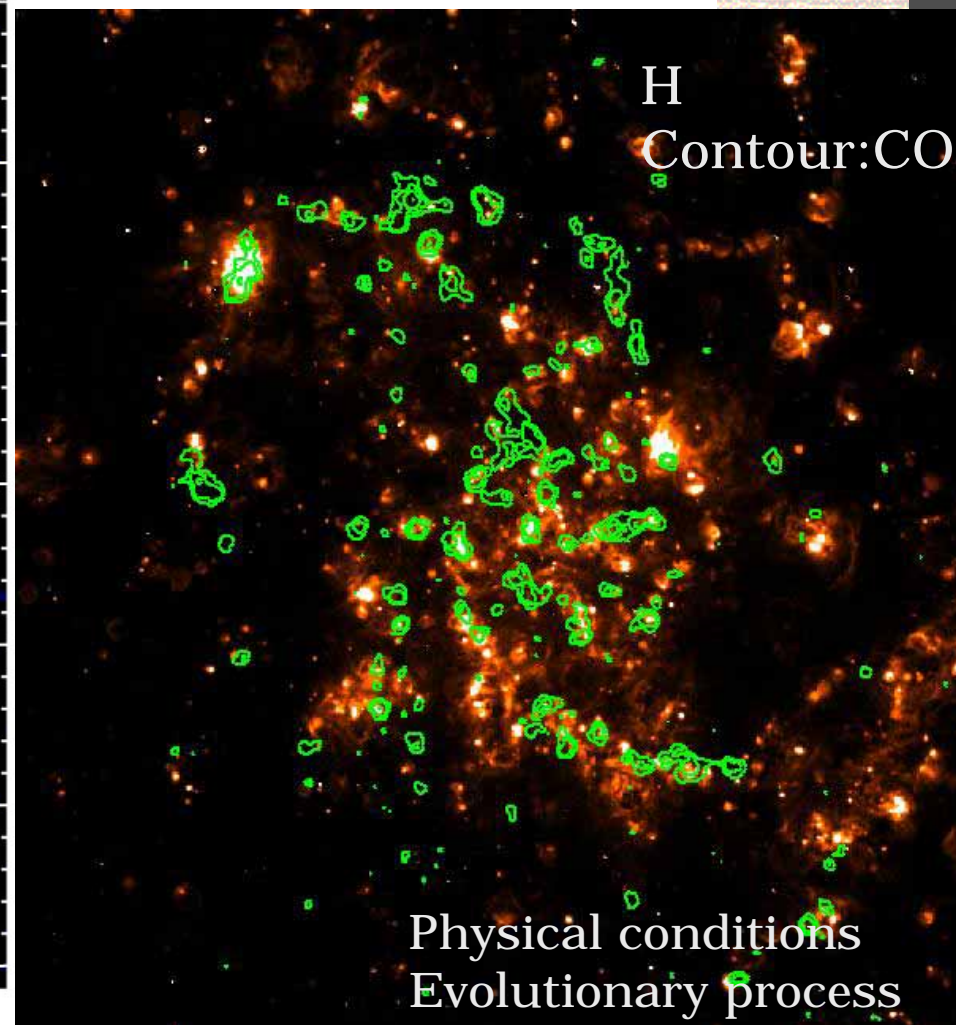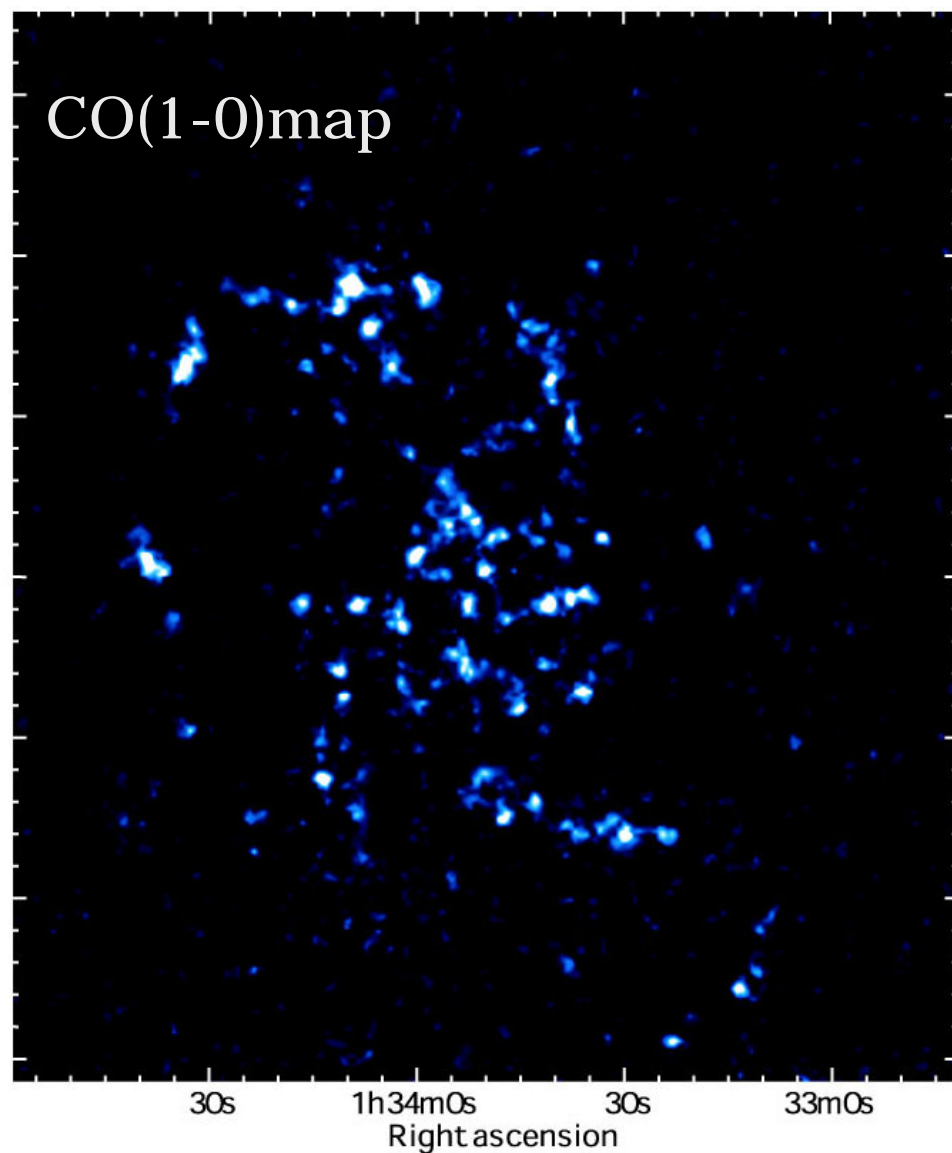
What to do with the SUBARU Data

Essential as indicators of evolutionary stages of GMCs…

- H ongoing star formation
- B-band young clusters
- BVRI galactic potential made by older stars

(near) future work

Identification of young clusters & star-forming regions

publication of a GMC catalog with information about evolutionary stages of each GMC