

Promatranje gustog molekularnog plina u asimetričnoj galaksiji NGC 2276

Noa Vidović

- SFR (star formation rate)
 - Stopa formiranja zvijezda
- SFE (star formation efficiency)
 - Efikasnost formiranja zvijezda

$$\text{SFE} = \text{SFR} / M_{\text{plin}}$$



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$$\text{SFE} = \text{SFR} / M_{\text{plin}}$$

- Molekularni plin
 - Rijetki: CO
 - Gusti: HCN, HCO⁺, HNC

$$\text{SFE}_{\text{mol}} = \text{SFR} / M_{\text{mol}}$$

$$\text{SFE}_{\text{dense}} = \text{SFR} / M_{\text{dense}}$$

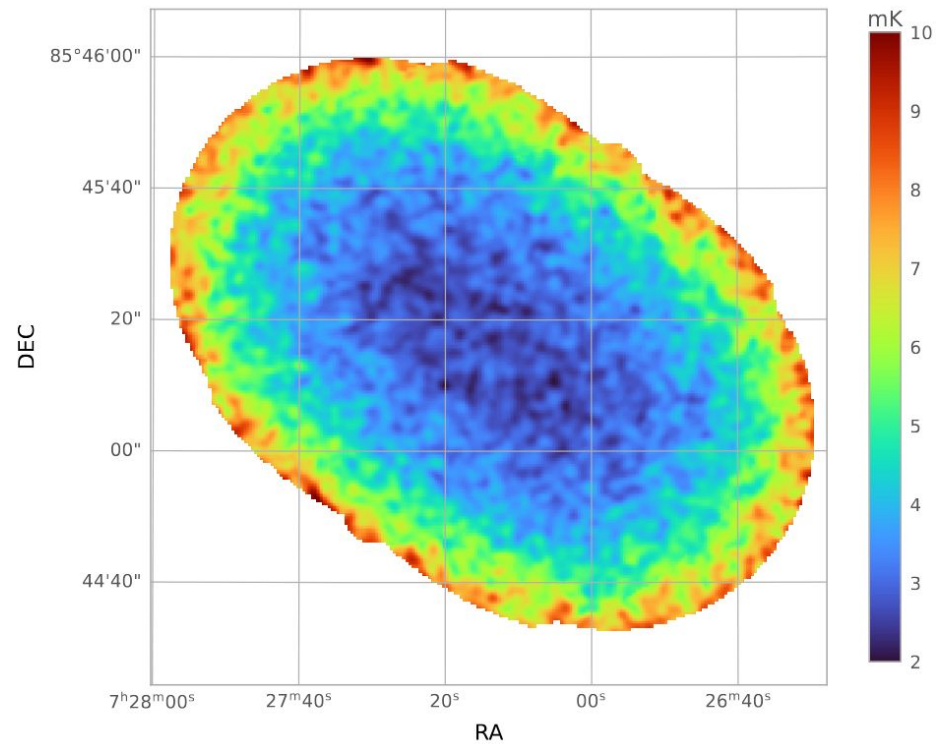
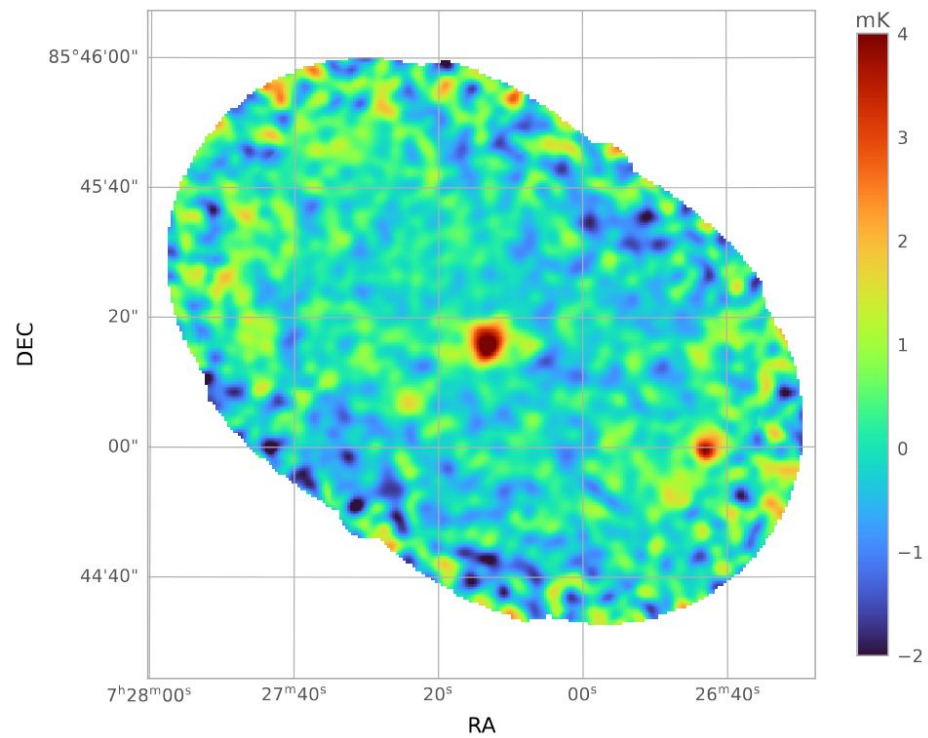
$$f_{\text{dense}} = M_{\text{dense}} / M_{\text{mol}}$$

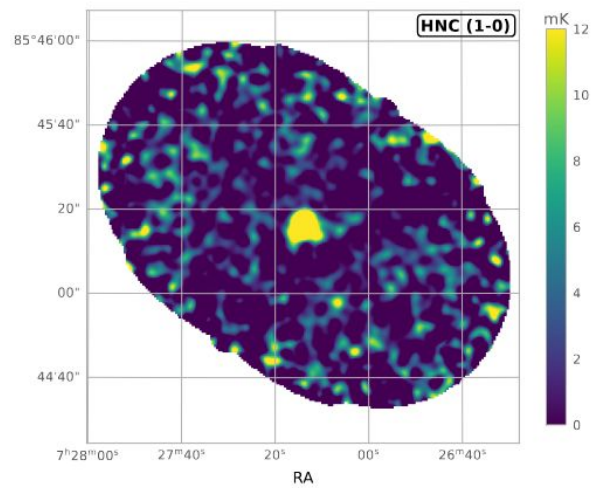
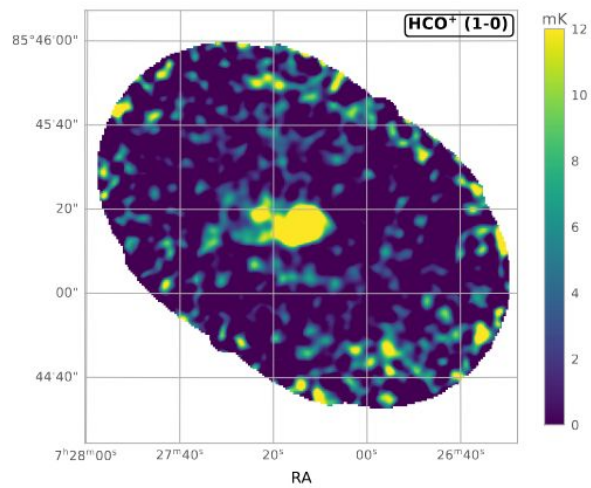
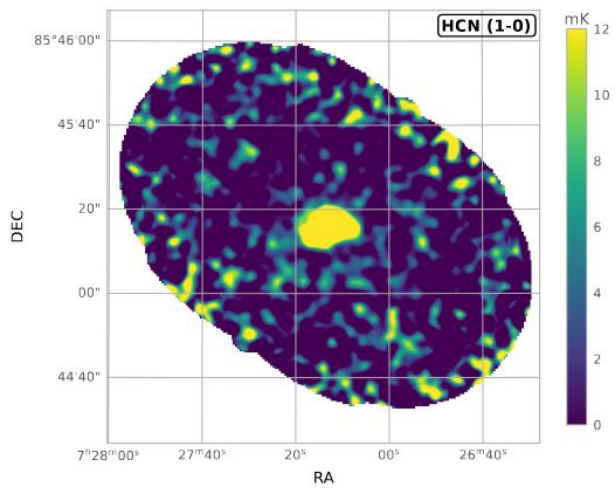


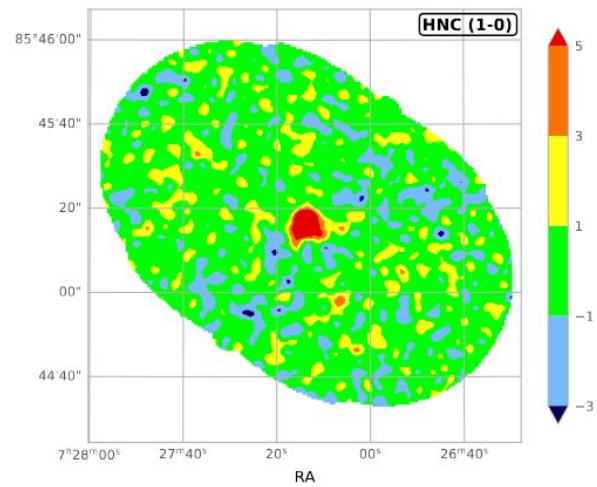
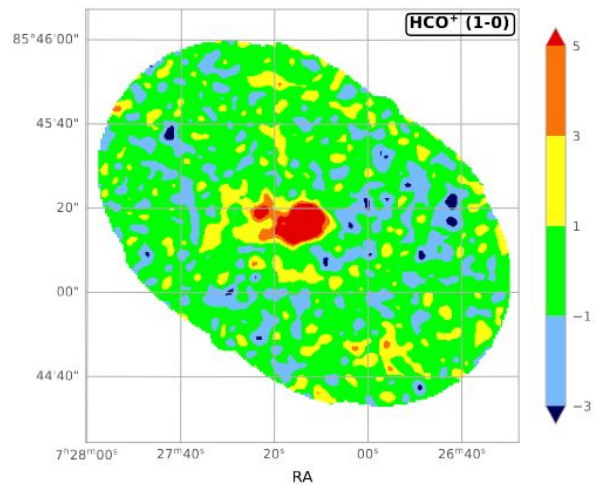
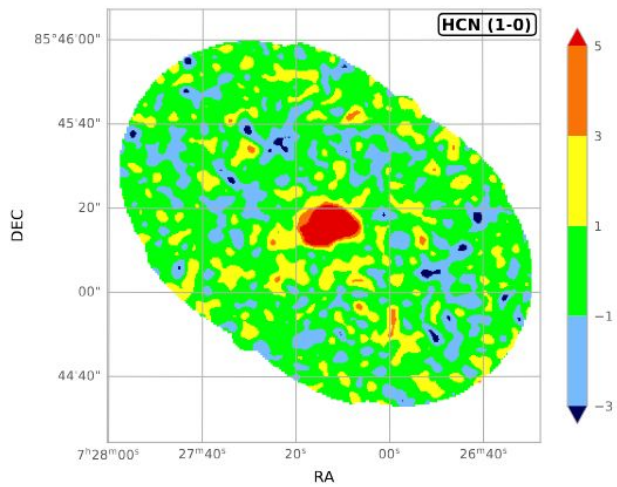
- NOEMA
 - IRAM interferometar
 - IRAM 30m
-
- Promatrani raspon frekvencija
 - 87.12 GHz do 95.11 GHz
 - HCN (1-0), HCO⁺ (1-0), HNC (1-0)
 - Spektralna rezolucija 68 km/s

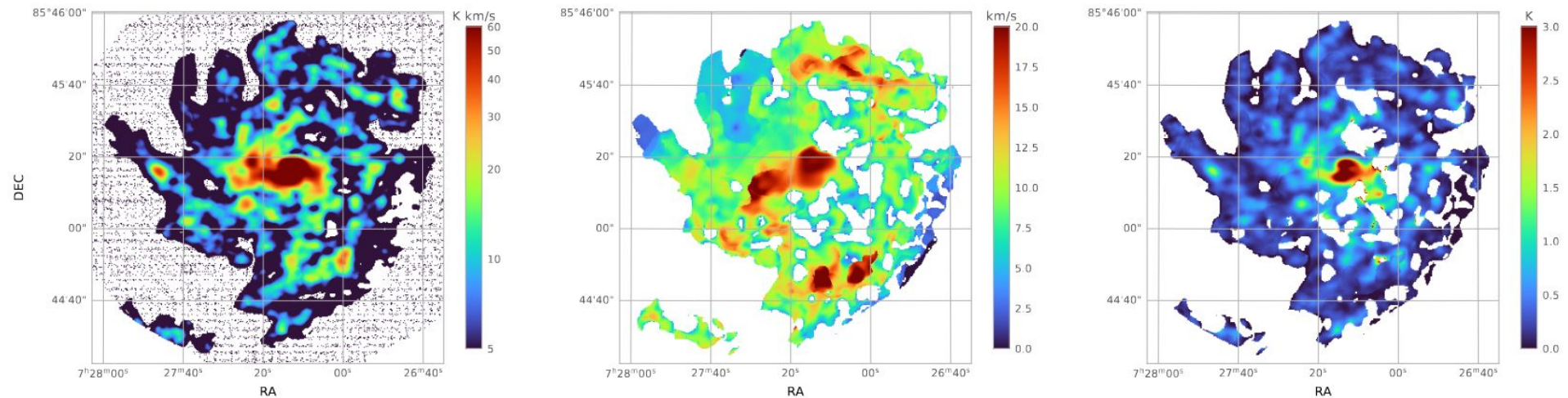


Matijević et al. in prep.

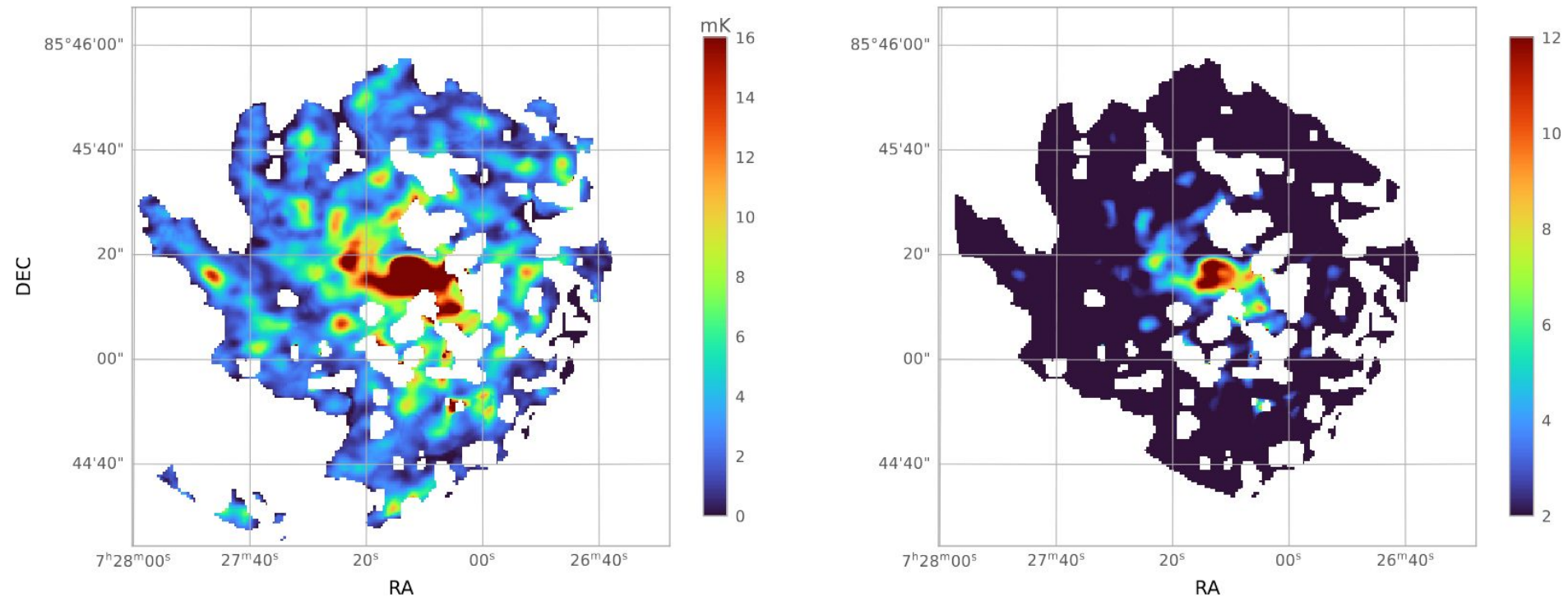








Slika 6. Mape različitih podataka za mjerenja signala CO (1-0) emisijske linije. Slijeva nadesno: (a) ukupni fluks emisijske linije u K km/s, (b) širina emisijske linije u km/s, (c) amplituda emisijske linije u K.



Slika 7. Lijevo: očekivana amplituda signala HCN (1-0) linije na bazi amplitude CO (1-0) linije. Desno: Omjer očekivanog signala i izmjerene razine šuma. Sva područja ispod 2 su prikazana istom tamnoplavom bojom.