

UNCOVERING (EPISODIC) OUTFLOWS AND THEIR FEEDBACK ROLE IN PROTOSTELLAR CLUSTERS

Adele Plunkett, ESO/ALMA Fellow

EWASS 2016, "S9: The Dynamics of Star and Planet Formation"

Collaborators:

Héctor Arce (Yale)

Stuartt Corder (JAO/ALMA)

Michael Dunham (Harvard-CfA/SAO)

Manuel Fernández-López (Instituto Argentino de
Radioastronomía)

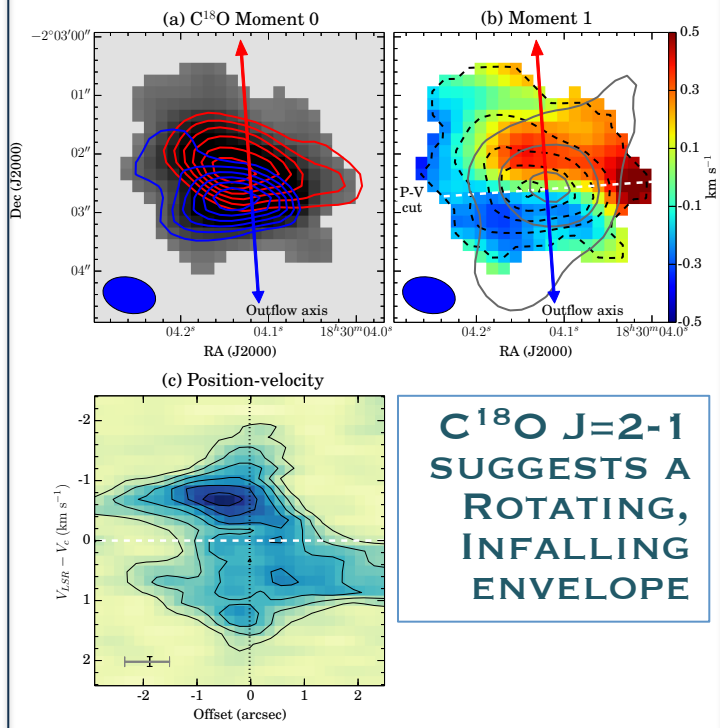
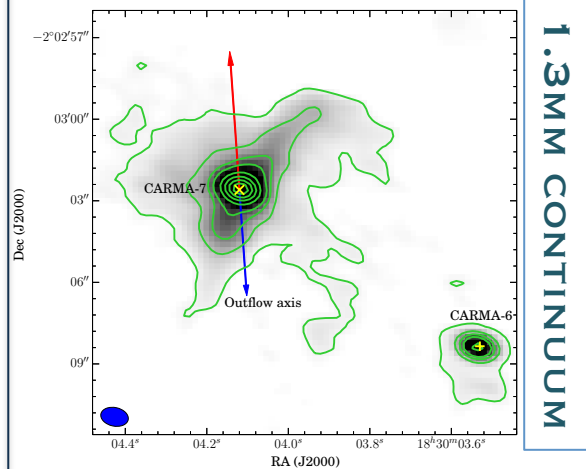
José Gallardo (JAO/ALMA)

Jin Koda (NAOJ/JAO/Stony Brook University)

Diego Mardones (Universidad de Chile)

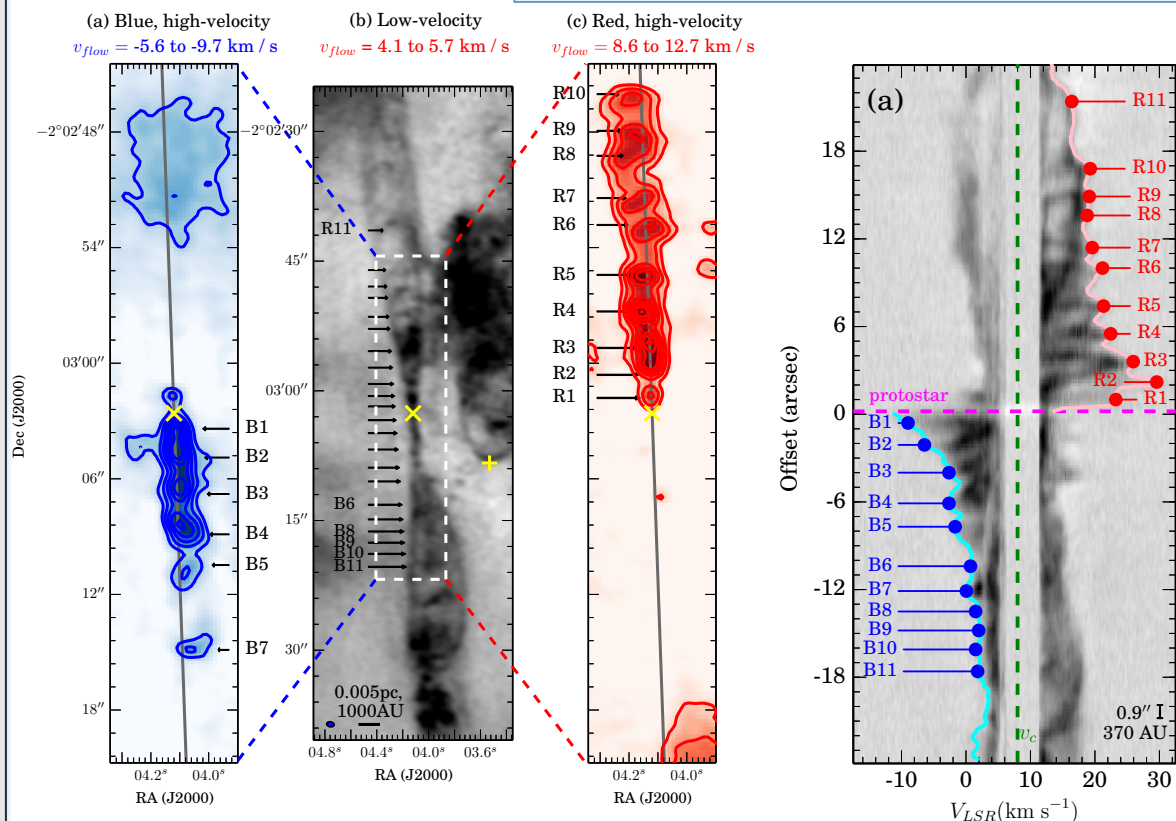


[CARMA-7: A CLASS 0 SOURCE]



“EPISODIC MOLECULAR OUTFLOW IN THE VERY YOUNG PROTOSTELLAR CLUSTER SERPENS SOUTH” Plunkett, et al. 2015, *Nature*, 527, 70

^{12}CO J=2-1 SHOWS EPISODIC, BIPOLAR OUTFLOW



ONGOING: ALMA superb sensitivity reveals 10+ continuum sources in Band 6, and molecular outflow emission spans large area of our $\sim 2' \times 3'$ map. ALMA has a unique capability to recover spatial scales over several orders of magnitude (i.e. core to cloud in this case) – by **COMBINING DATA FROM 12-M ARRAY AND ACA.**

