Protostellar wind observations from ALMA

A study of systems B228 and B335

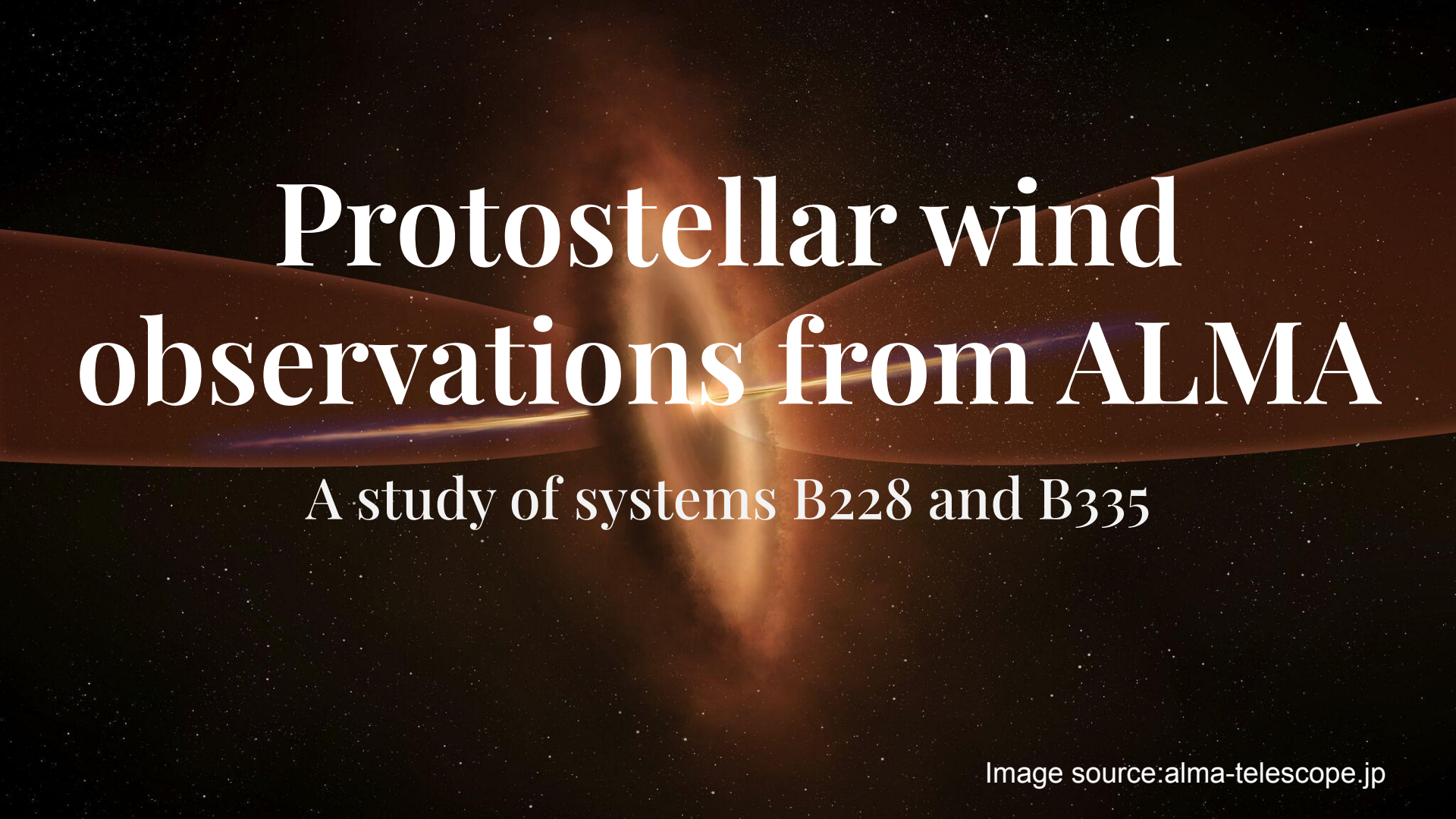

Image source:alma-telescope.jp

Context

During star formation mass is lost from the accretion disk through molecular outflows and or atomic jets. Protostellar winds do take a role in this, too.

Is suspected that during these processes the system’s mass budget might be affected.

Research objectives

1. Find evidence of mass loss due to winds, atomic jets and molecular outflows in two protostellar systems.

2. Establish a premise of how frequent the phenomenon is amongst similar protostellar systems.

3. Visually represent the data from ALMA-telescope as a proof of a significant material ejection in young forming stars.

Experimental Data and Methodology

Datasets are available from ALMA's recent observations coming from high-frequency bands.

Data is to be analyzed in search of similar behavior to that of a previous case study awaiting for publication.

Imaging techniques using CARTA and numerical processing of the data will allow to draw conclusions.

Next steps

1. Continue to explore the literature about observational studies of B228, B335 and HH212, winds and other mass ejection mechanisms in forming stars.
2. Review of academic documentation on protostellar processes as of current understanding.
3. Learn the efficient use of CARTA, CASA and programming languages oriented to data analysis in order to process the datasets from ALMA.