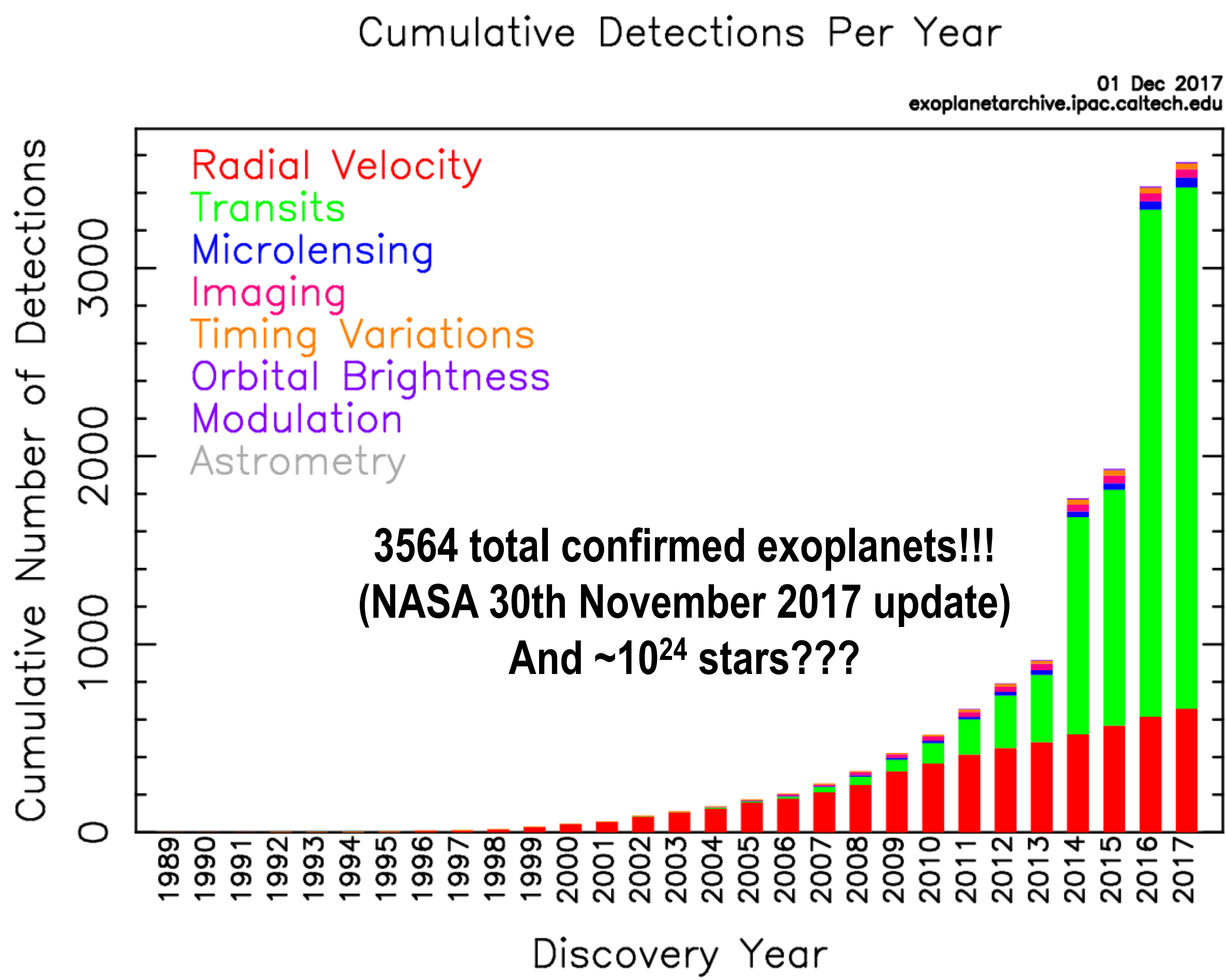


# An overview of the approaches to the study of circumstellar discs

Nuria Fonseca Bonilla<sup>1</sup>

<sup>1</sup>Centro de Astrobiología CSIC-INTA, Ctra. Torrejón a Ajalvir km.4, 28850 Torrejón de Ardoz, Madrid, España  
e-mail: fonscabn@cab.inta-csic.es

## Introduction



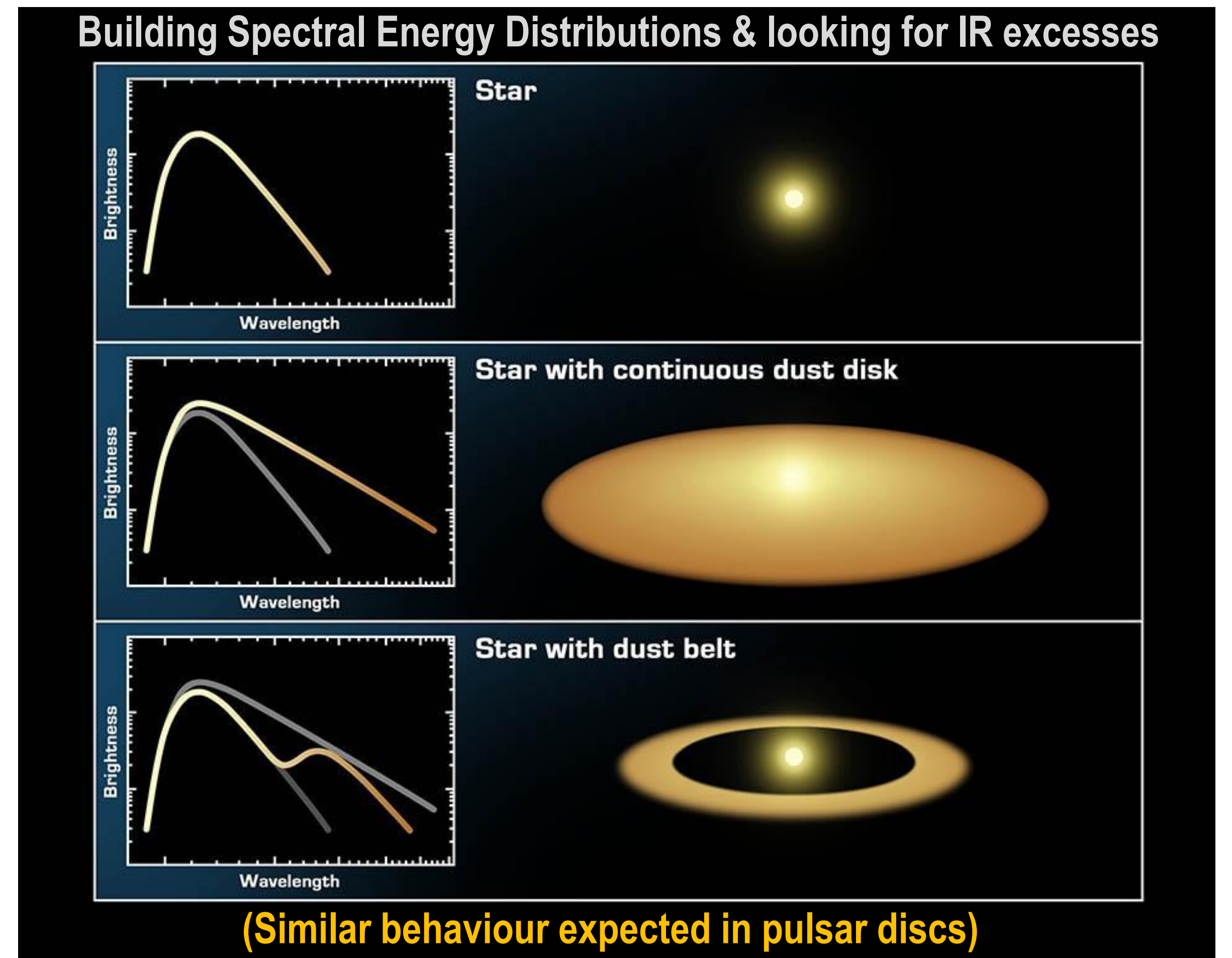
Planets are hard to find

We don't know much about Formation and Evolution of planetary systems

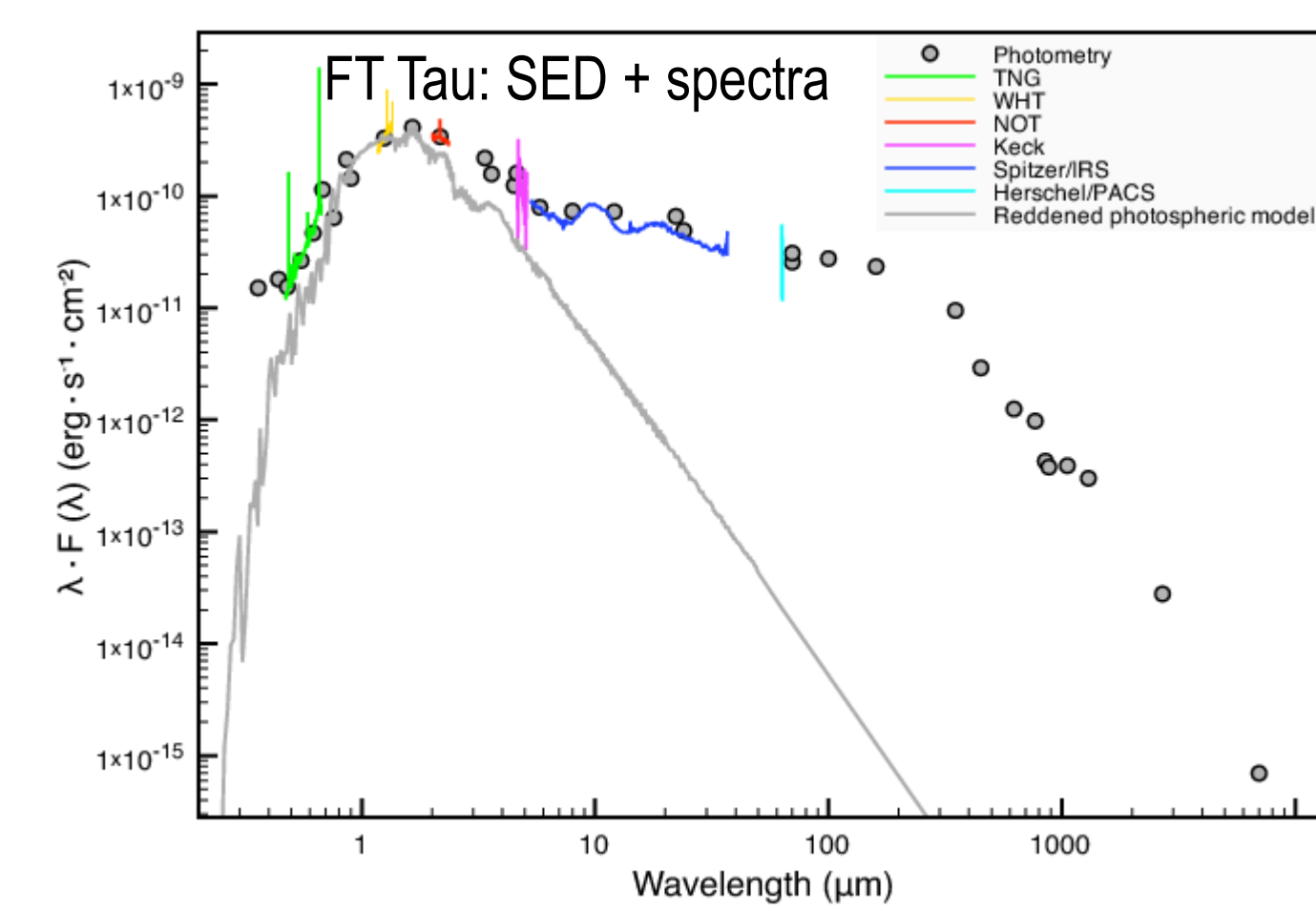
Why not to study discs instead?

## Method

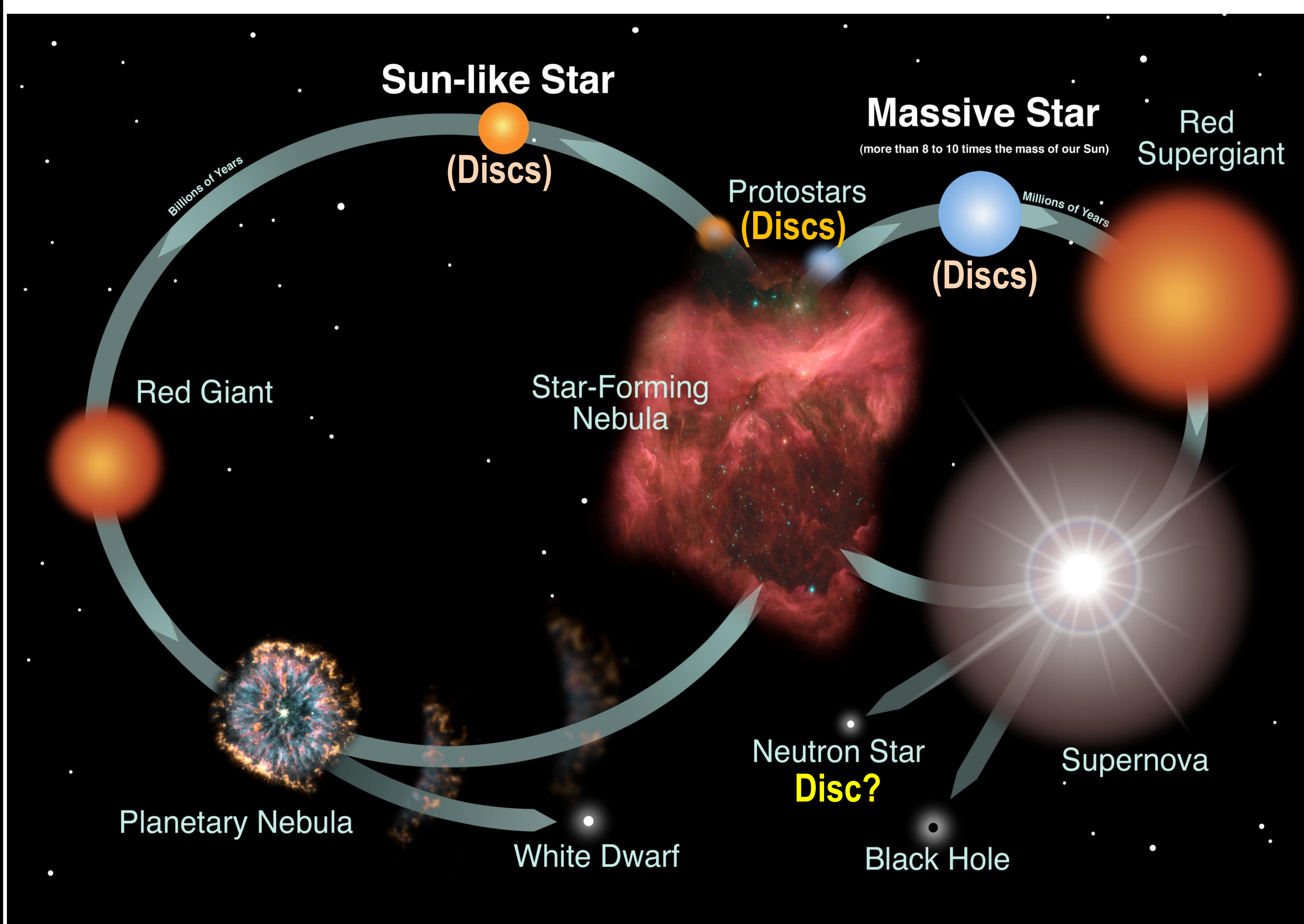
### a) Photometry:



### b) Spectroscopy:



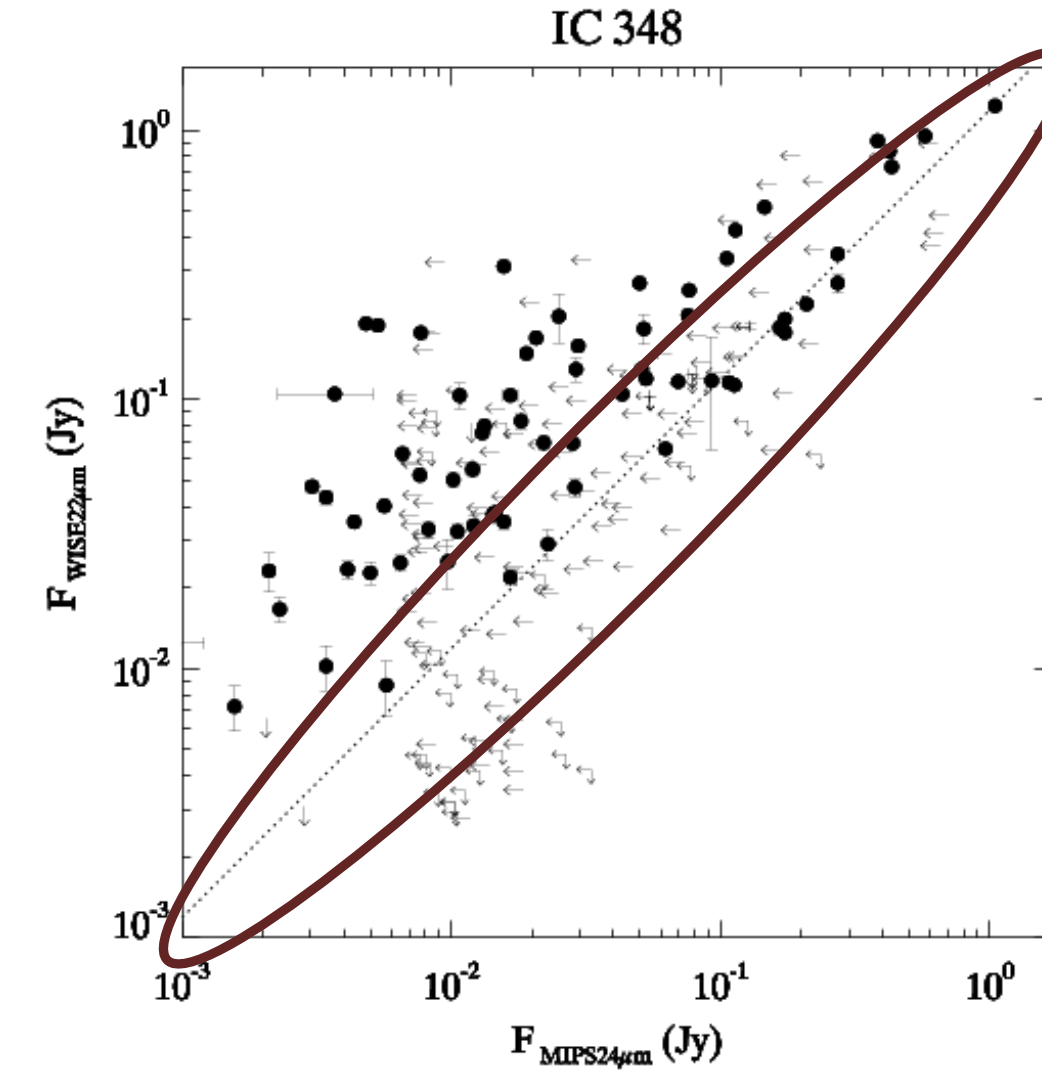
## Background



Discs are related with **Formation & Evolution** of Planetary Systems

## Results

### a1) Open Clusters



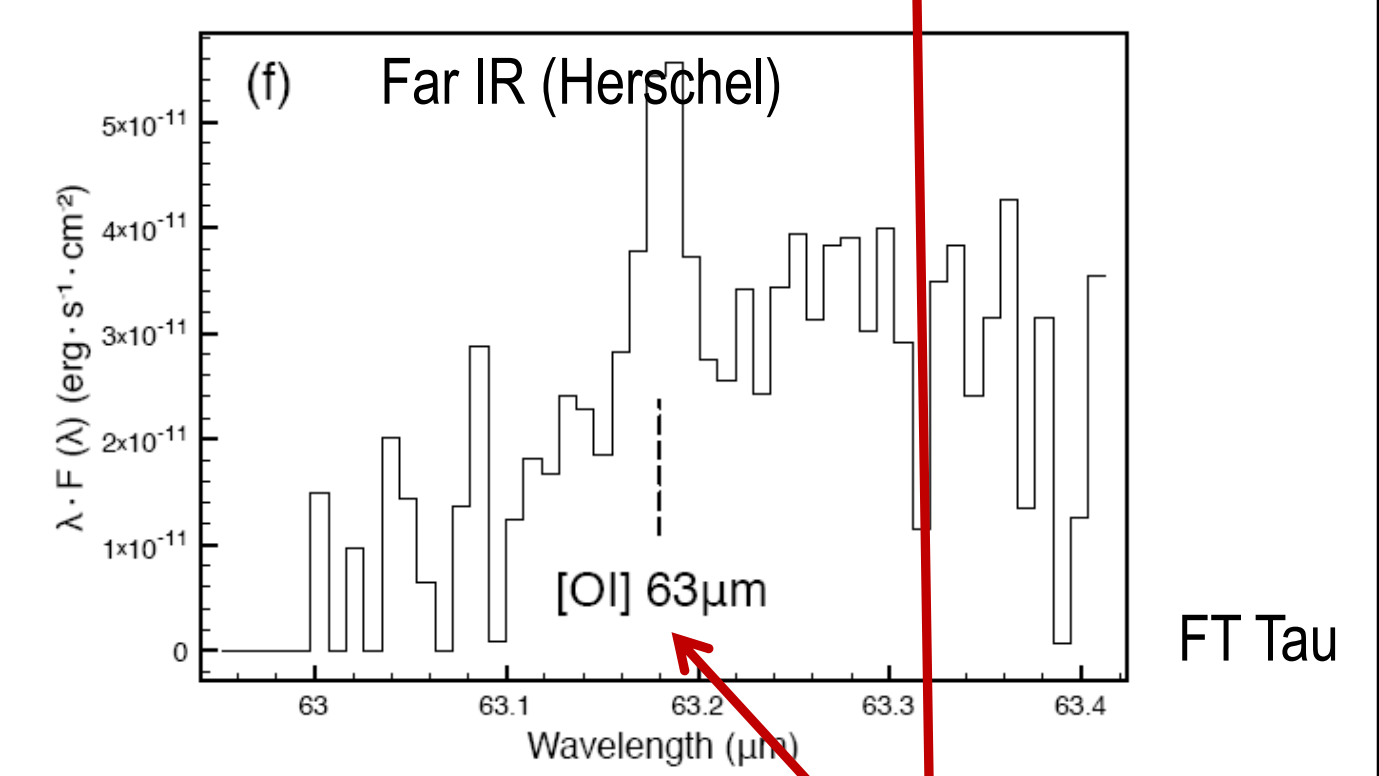
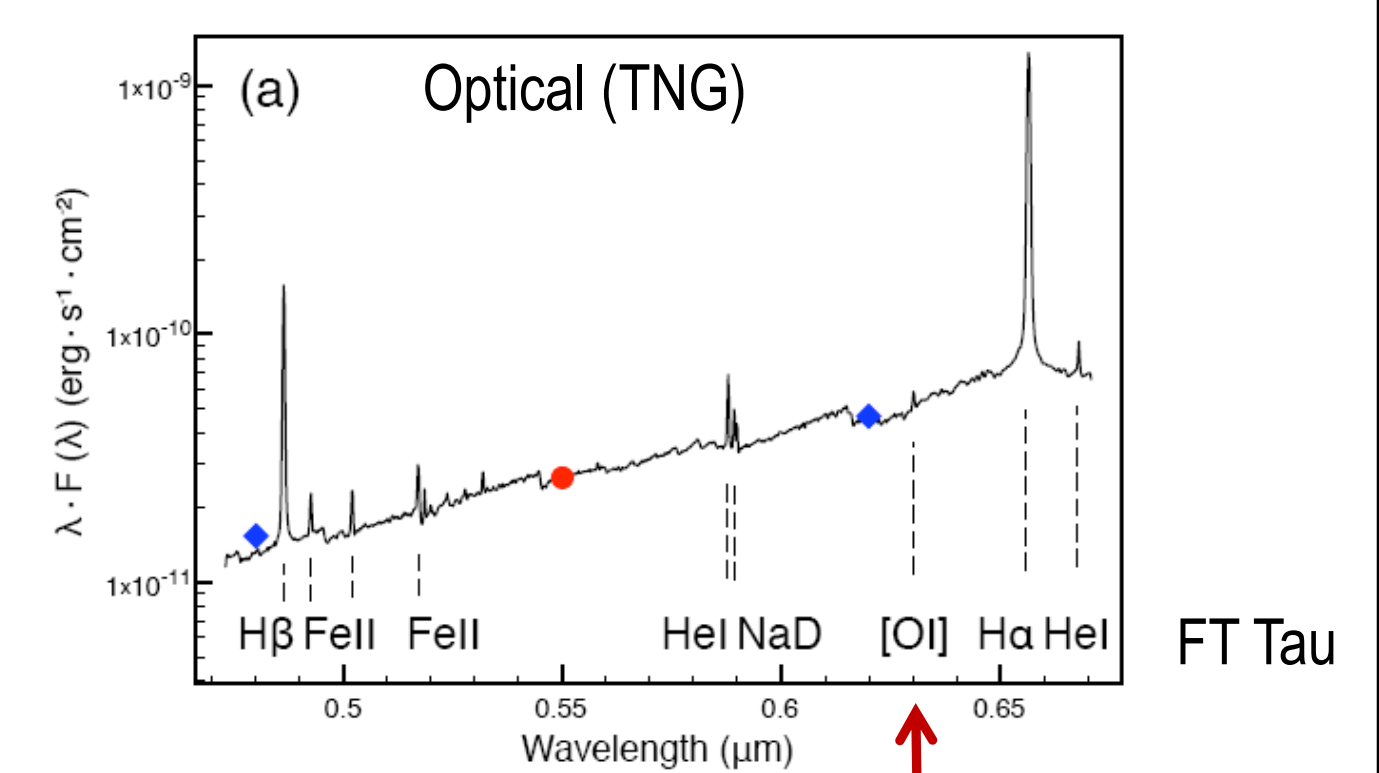
NEED OF HIGH QUALITY ALL SKY DATA

- Satellites differences → recipe:
- Spitzer: less surveys, high quality
  - WISE: all sky survey, low quality

A tool to find discs in the oldest clusters!

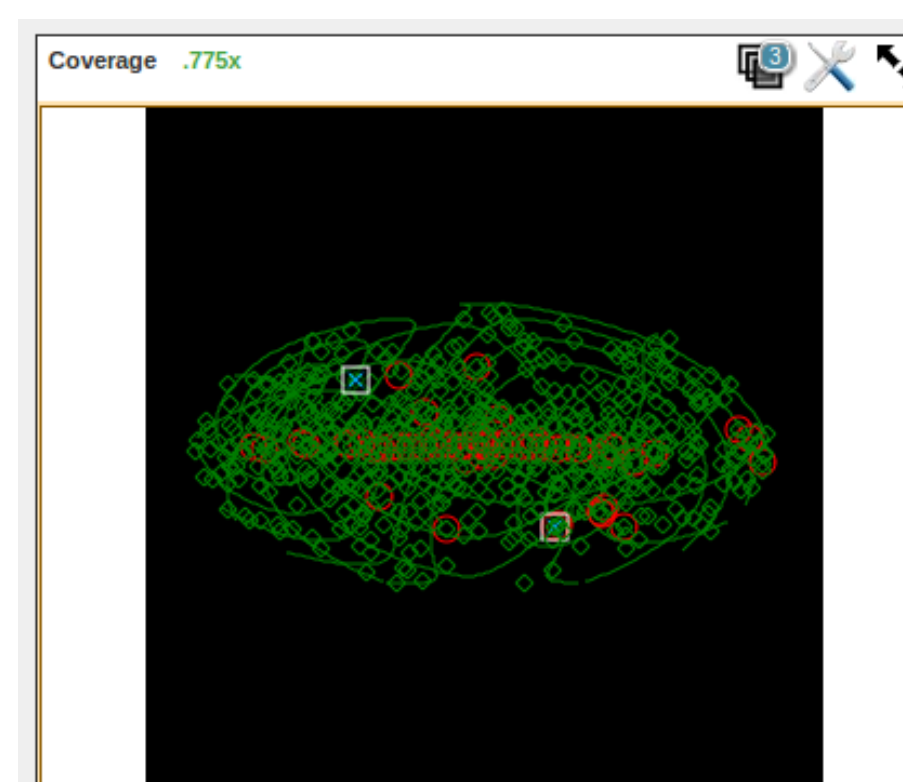
### b) Protostars ("GASPS" project)

Objective: compare optical and IR spectra



- Forbidden lines related with strong winds
- Signs of the disc in the optical?

### a2) Pulsars



2627 pulsars known to date!!

- 3 pulsars in WISE: no new discs
- High quality Spitzer data of 233 pulsars
- **Problem:** Most of them in galactic plane => extinction!!

## Conclusions and Future Work

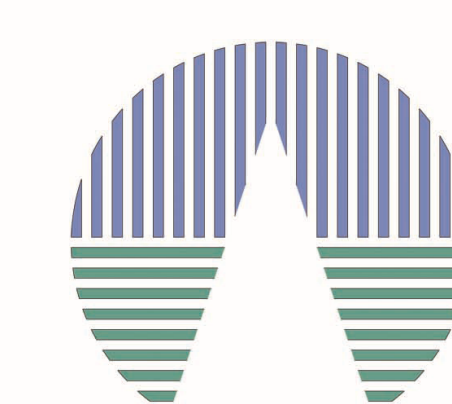
### CONCLUSIONS

Discs are essential to understand Planetary Systems

- Agreement between data quality and quantity
- Special care with galactic plane sources
- Useful correlations between optical and IR lines

### FUTURE WORK

- Polish the recipe to use WISE data:
  - Apply recipe to pulsars and old clusters
  - Special care with galactic plane
- Find correlations between optical and IR lines



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