

# Welcome NITARP/SHIPs

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# Welcome to California

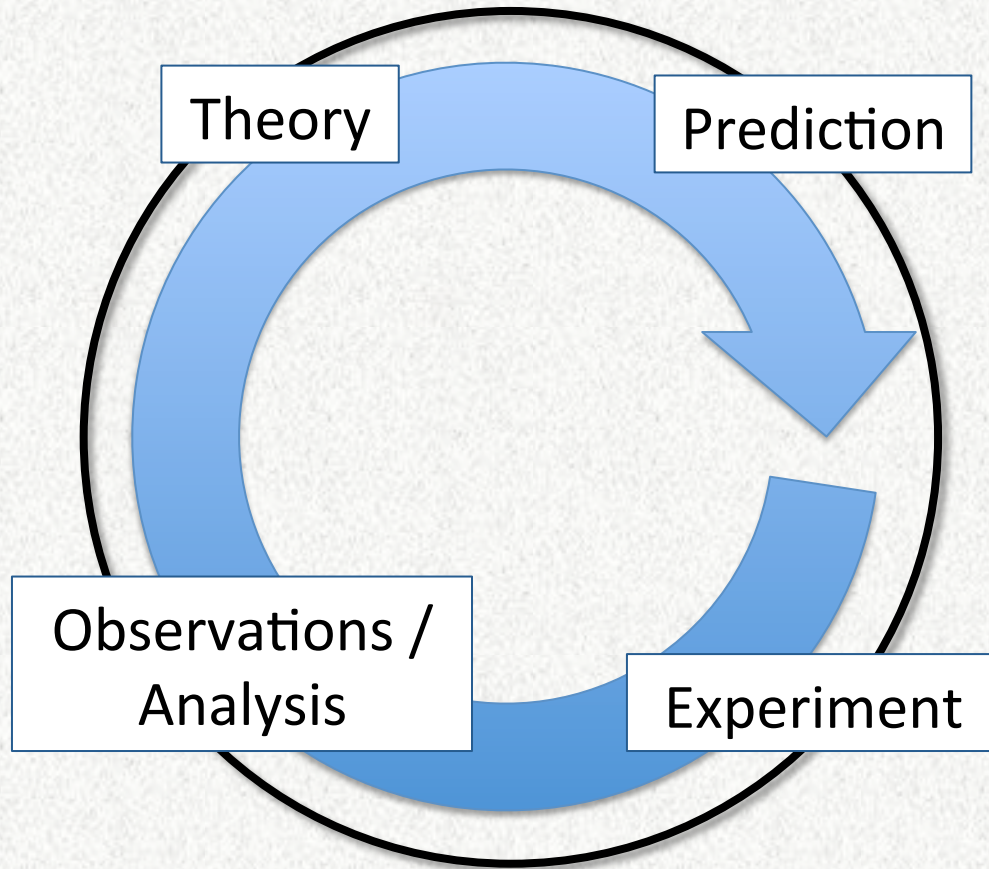
<http://www.youtube.com/watch?v=fcEgD1LZA5w>

# Topics

- Introduction, Goals & Agenda
- Photometry kickoff
- Photometry discussion & open questions

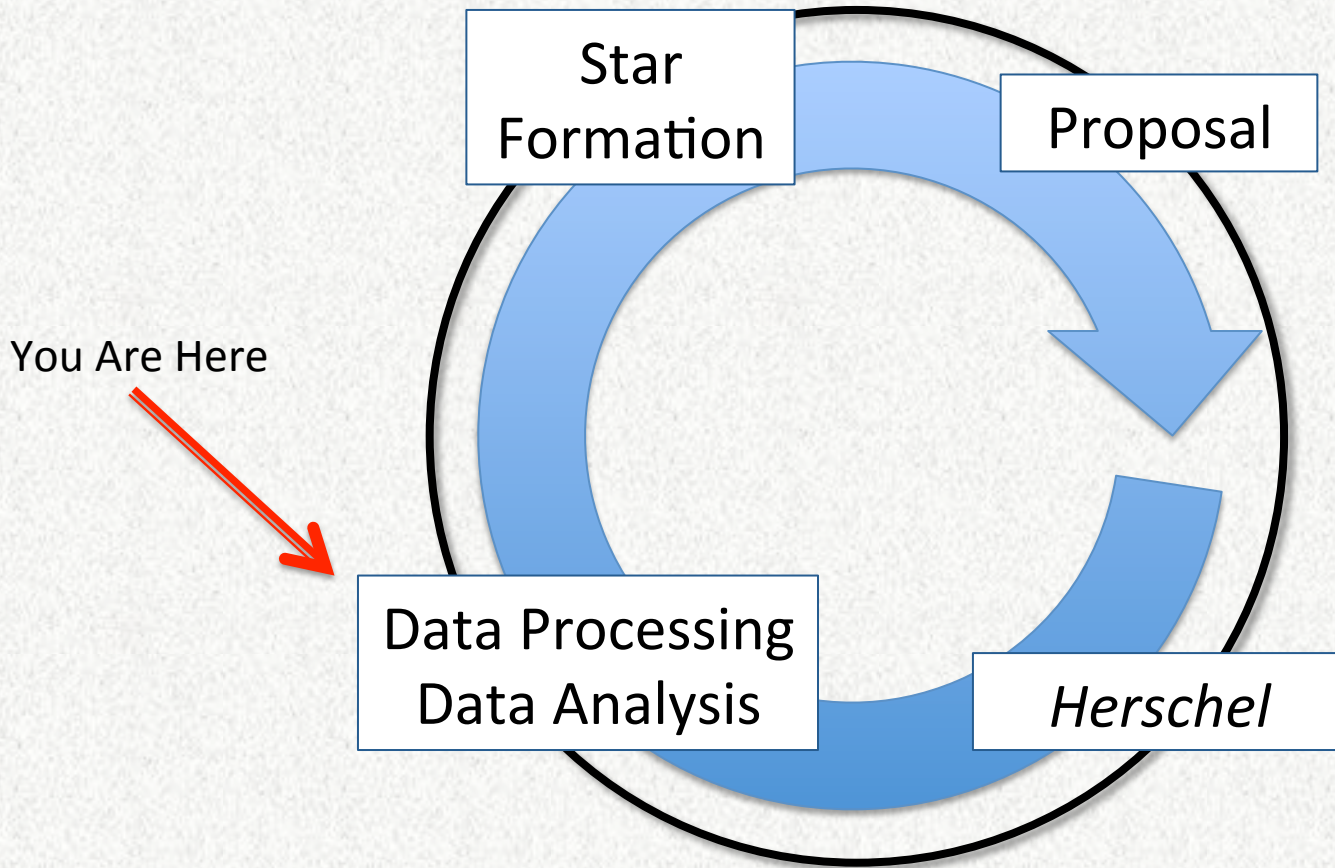
# GOALS & AGENDA

# Where are we at this point?



The Scientific Method

# Where are we at this point?





# NITARP timeline

2013	Activity	
January	Background	← Theory
February	Proposal	} Prediction
March	Proposal	
April	Data Processing	} Processing, Analysis & Comparison with theory
May	Data Processing	
June	Data Processing	
July	Data Analysis	
August	Data Analysis	
September	Data Analysis	
October	Reporting	
November	Reporting	
December	Reporting	

# Primary Goals

- Finish photometry & Data Gathering:
  - Measure brightness of all targets in all bands of Herschel.
  - Discuss and answer all unresolved issues.
  - Identify and fill (where possible) gaps in data.
- Start on data Analysis:
  - Learn how to band merge photometry.
  - Learn about color-color and SED analysis.
  - Start constructing SEDs and color-color plots.



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# Secondary Goals

- Python.

# Work schedule

- Expect to spend most of your time doing hands-on processing and analysis:
  - on APT, ds9, and python (or something for analysis).
- Work at your own pace.
  - Focus on 4 top priority goals.
- Go as far as you can in the analysis and/or programming.
- Work together.

# You Should Know

- Its probably all new to you.
- Ask questions.
- I don't have all the answers.
- I don't remember half the information I am supposed to know.
- But, I probably know where to find the answer.

# Above All



# PHOTOMETRY KICKOFF



# Adopt a star

# Using naming conventions

Lastname\_wavelength\_um\_2013-MM-DDc.tbl

Where the 'c' after DD can be optionally used to specify multiple versions from the same day with letters, a, b, c, d, ....

- Example:

Ivers\_70\_um\_2013-06-24a.tbl

# Keeping Track

- What information to keep?
  - E.g. photometry values
- How is the information organized?
- Using masks and flags.
- Comment on individual sources.

**Details to be discussed later today**

# What, Why, How of flagging data

- Flagging data is an important part of reporting scientific results.
  - Their use is not mandatory, but highly recommended. In some cases mandatory (e.g. WISE all sky release).
- Usually 1 or more columns in tables denoted as 'flag' or similar name appropriate for the intended use.
- Flags are used to communicate more information about a measured quantity (e.g. photometry).

# Example uses of flags

- Source is not detected.
- Source is not in the surveyed region.
- Reported photometry value is from PSF photometry.
- Reported photometry value is actually an upper limit on detection.
- Source has a close (define) companion.
- etc. etc. etc.

# Using flags for NGC 281 photometry

- We decided whether to use flags
- (the answer is yes)
- We decide how many flags are needed.
- We decide how to organize information in the flags.



# PHOTOMETRY DISCUSSION

# Aperture Corrections

- Understood?
- Open items?

# Estimating Background

- Which stars may need more help?
- If the background is complex which way does it nudge the photometry?

# What is a source?

- How do we tell?
- Ideas?

# Keeping and Organizing data files

- Table columns
- Order of columns

# Other photometry topics

- Anyone?