Welcome NITARP/SHIPs

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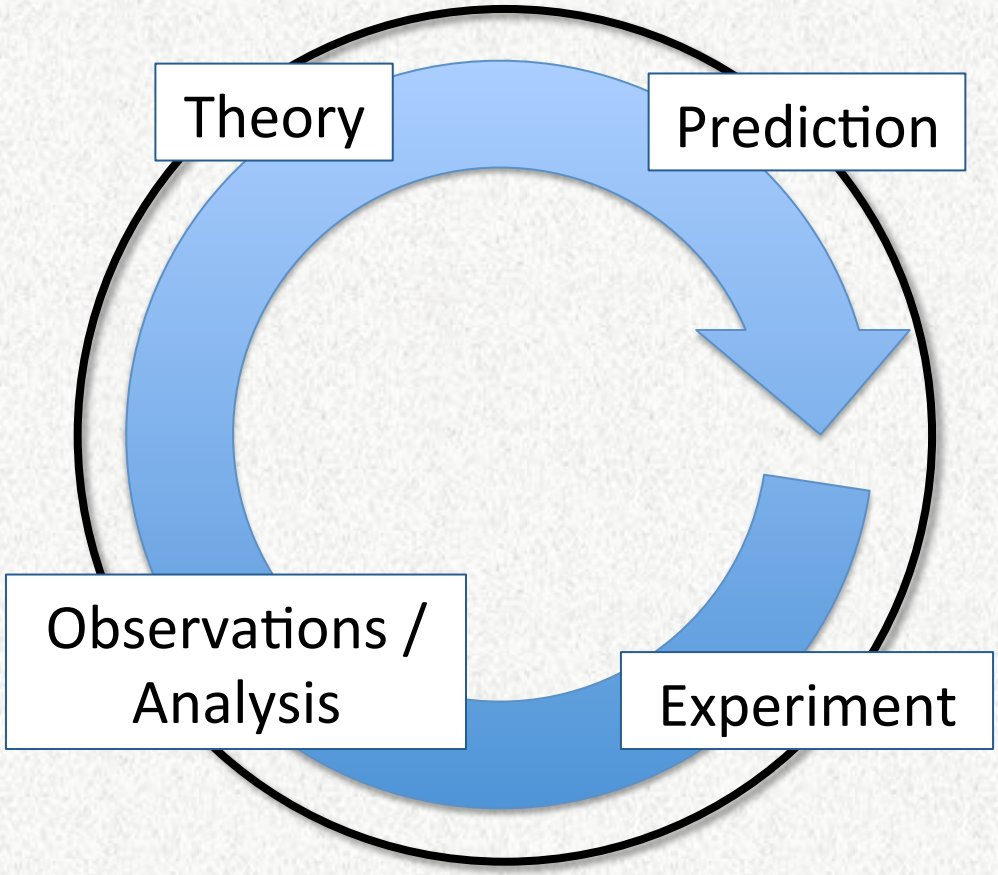
Welcome to California

Topics

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

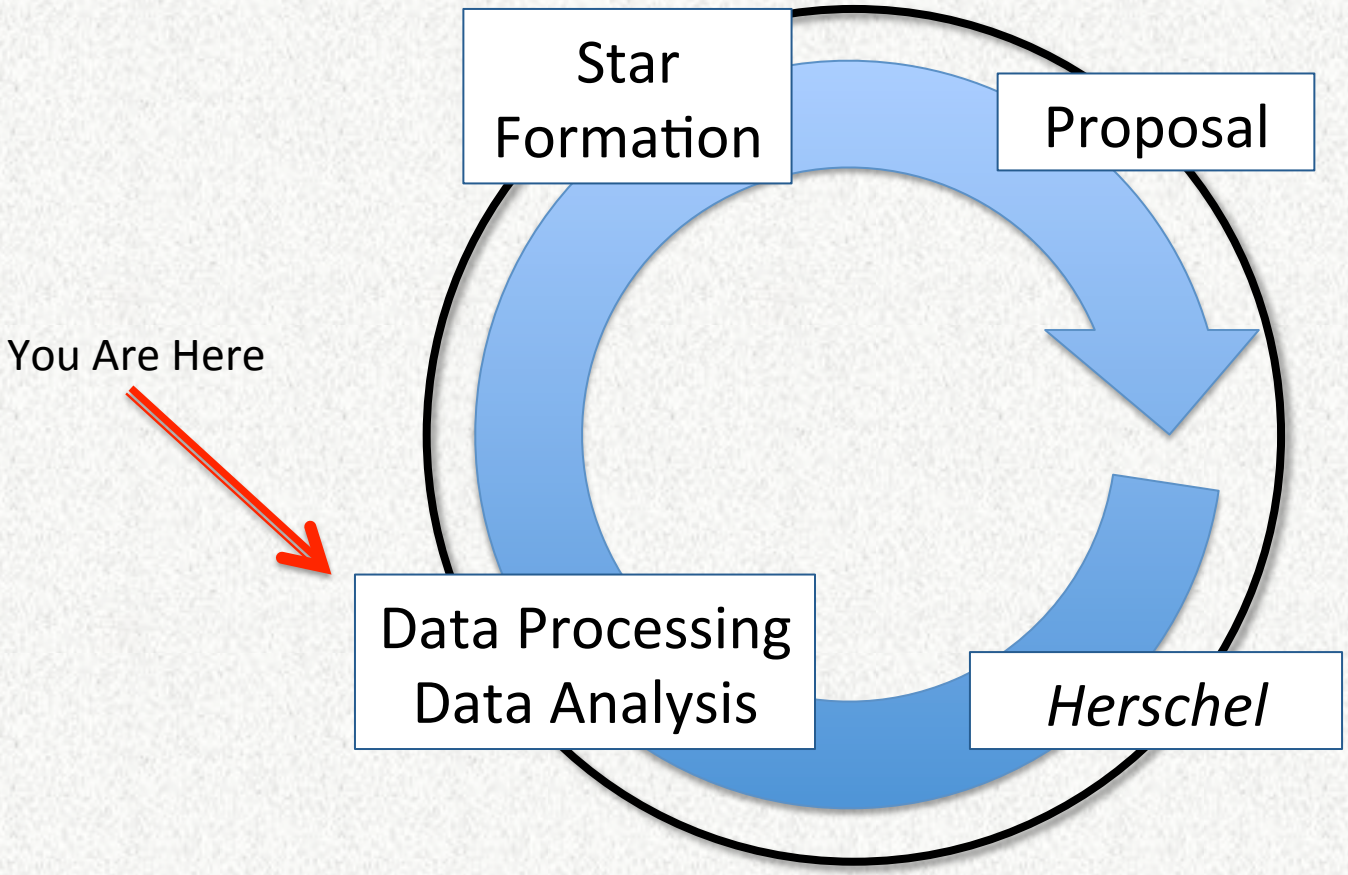
GOALS & AGENDA

Where are we at this point?



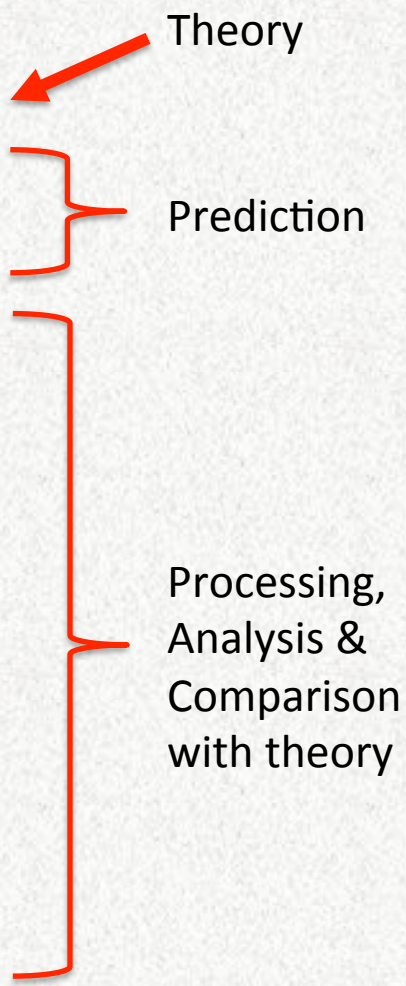
The Scientific Method

Where are we at this point?



NITARP timeline

2013	Activity
January	Background
February	Proposal
March	Proposal
April	Data Processing
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

Checklist

- ❑ APT
- ❑ ds9
- ❑ Anaconda
- ❑ Text editor
- ❑ Email
- ❑ Web-browser
- ❑ Dropbox (>= teachers)

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?