Guidelines for Running Coffee

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The following short set of notes are meant as a set of guidelines for running Morning Coffee, and should not be thought of as rules. Coffee changes every day, and even careful Coffee planning can be (and should be!) routinely upended by a great spontaneously occurring conversation.

A general note:

When in doubt, email coffee@astronomy.ohio-state.edu. This email list currently consists of Scott Gaudi, Barbara Ryden, Annika Peter, Todd Thompson, John Beacom, David Weinberg, Ji Wang, Adam Leroy, and Laura Lopez.

The night before:

At 8pm Eastern (or a bit after) the night before running Coffee, check the new abstracts at

http://arxiv.org/list/astro-ph/new

Ignore all conference proceedings unless local, or especially interesting/insightful.

Note all local papers, including those by postdocs, including CCAPP postdocs, students, faculty, and staff. If you are unsure about who the postdocs are in CCAPP, check

http://www.physics.ohio-state.edu/ astro/ccapp/

Email people with local papers to confirm that they will present at Coffee the following day. Please cc coffee@astronomy.

Email graduate students, postdocs, and faculty who are working on topics especially closely connected to the papers you think are important. If you are unsure about what people are working on, find out. Ask if they would be willing to present the paper, and whether or not they would be willing to do it tomorrow. Graduate students and postdocs willing to present non-local papers have priority. Highest priority is given to students with first-author papers.

Also, take a look at Nature and Science to see if there is anything of general interest:

http://www.nature.com/nature/index.html

http://www.sciencemag.org/

Selecting abstracts:

To make abstract selections from arxiv.org. Go to:

http://www.astronomy.ohio-state.edu/cgi-bin/Coffee/grind.pl

Select abstracts by putting a check mark in the box next to papers you would like to include.

Read all titles and abstracts. Ignore all conference proceedings unless local, or unless especially interesting/insightful.

Select all local papers.

Select papers you deem interesting and that seem to have new conclusions or methods. All topics are open for discussion.

Once you have selected abstracts, click Submit Choices at the bottom of the page. If there are additional papers to be included from previous days, include them in the box labeled "Other Papers". The format is just the complete arxiv number. Just enter something like 1507.04362 in the box at the bottom of the webpage.

Preparing for Coffee:

You should read and be able to comment on $1-2$ papers on the day you are running Coffee.

You should hope to have approximately $2-4$ items scheduled for Coffee in the sense that, for example, you have prepared 1 paper, we have 1 visitor who will contribute Value Added, and someone (student, postdoc, faculty member) has agreed to discuss 1 additional paper (3 items).

Note that all plans for Coffee are subject to immediate and complete rescheduling. If you run Coffee enough, you will find that virtually every day someone comes in with something that you did not have scheduled. So, don't be too committed to your plan for Coffee because you will just find it frustrating. Be ready for days when you carefully read 2 papers, but neither are discussed.

Joining Coffee via Zoom:

Coffee can be joined via zoom by clicking the red box at

https://astronomy.osu.edu/talks/astro-coffee

or via

https://osu.zoom.us/j/277692118

Note that a passcode is required to join. Please email coffee@astronomy.

Preparing to discuss a paper:

Read the title and abstract carefully. Read/skim the Introduction of the paper until you have a clear sense of the historical context of the problem being addressed and the methods employed. Look for a paragraph in the Introduction that states clearly the logic of the paper.

Understand the argument of the paper. That is, the claims in the abstract must be logically substantiated by the findings of the paper (e.g., "We show that..."). Understand that logical line. This does not, of course, mean that the steps in the argument are not subject to interpretation, or that the conclusion of the paper must be correct. But, you must first judge the paper on its own terms, within its working hypotheses. What is the argument the authors are trying to make? Do their data/methods/calculations substantiate that finding? If so, what are the figures that most clearly and succinctly demonstrate the steps in the logical argument? What is their conclusion?

In many cases, in order to understand the logic of a paper, you must understand the physics, or something new about an instrument, or about the data handling and modeling techniques. The goal is to understand the underpinnings of the paper, as cleanly and quickly as possible.

A key to reading papers quickly for Coffee is to boil the paper down rapidly to the logical line,

with associated figures. Extra time is needed in the Introduction and Conclusions if you are new to the field. Extra time is also needed if you are new to the physics/methods involved. This is the practice part. The more you do it, the better you'll get. Remember that even a 50 page ApJ paper is trying to make just a few crucial points, and that each of those has a logical argument behind it that you need to distill quickly. Also, don't be too hard on yourself. If after a few tries you simply can't understand a paper, it might simply be because the paper is poorly written or something is in fact missing.

Think critically about the paper. Once you have understood the logical line, and you have identified the key figures that demonstrate each component of the argument, think critically about where the holes are and which assumptions are most likely to be incorrect. Is their physics right? Have they neglected some selection effect that might be important? Do their plots in fact show what they purport to show? You should be able to say something of the form "In Figure 2, you see that the solid line is above the dashed line. This is the author's argument for their claim in the abstract that X is true."

Discussing a paper:

State the title.

Give a few sentences of background: What is the central problem? What is the reach of the problem (list one or two consequences)? What are proposed methods of solution (list one or two)? Use the abstract as a guide. You should be paraphrasing the Introduction to the paper, by stating the effective topic sentences of each paragraph. These few sentences should be understood by most people in the room. As much as possible, define the key problem and motivations.

What does this paper do to address the central problem? Present the logical line, with figures. Fill in physics, information on techniques, and methods as you go. RUTHLESSLY AVOID discussing figures and points made by the authors that are not crucial to the main point that they are trying to make. The additional figures you skip may be useful during the critique of the paper, but you should go in thinking that you will deliver the most streamlined, but complete, narrative of the paper's main result possible.

How does this paper succeed/fail? What part(s) of the logical line is(are) broken? What things are left to explore?

Look at the clock. Shoot for less than 10 minutes. Allow yourself 15 if you think the topic is extra important, or if you had a lot of questions during the Introduction. Continuously assess the interest level of the entire audience. If interest has flagged, stop.

As always, the art in presenting anything is being able to effectively communicate with a diversity of people. Interests, expertise, background knowledge, and attention spans vary. Ask yourself how you can get as many people as possible engaged in a given paper. When in doubt, ask yourself why the audience should care about this paper.

Running Coffee:

Start promptly at 10:30am.

It is usually best to begin by discussing a paper, rather than starting with a guest. The reason is that people generally trickle in late. After the first paper is discussed, then move on to a guest and their added value. This guarantees maximum attendance, but also enough time for

the visitor to talk. The same goes for a local paper with a student as lead author.

Try to keep each agenda item at Coffee (a paper, visitor, etc.) to about 10 minutes. Beyond 10 minutes, in most cases, a substantial fraction of the room has lost interest in the topic of discussion.

Even if you find the topic very interesting, it is crucial that you assess whether or not the rest of the room is with you. The vast majority of the time people go on for more than $10-12$minutes most of the room has tuned out, this despite your very deep interest in the topic. Ditto for papers you have spent a lot of time preparing: just because you took the time to understand it does not mean people want to hear it.

There is no formal end to Coffee. Many people in the Department think that the formal end time for Coffee is 11:00am or 11:05am, but this is not correct. We do in fact observe a very hard boundary of 11:15am that is only exceeded perhaps a few times per year. For the most part, people start to get ready to go around 11:05 - 11:10am, and this is a good working nominal stop point, but it is up to the Coffee leader to decide when Coffee is over.

When someone else is presenting a paper, ask questions if you feel that their discussion is leaving out key bits that the general audience needs in order to understand the main point.

Keep the discussion of papers balanced. Even papers that are worthy of substantial criticism often have interesting ideas, or can be used as a pedagogical tool.

Hosting a visitor, managing Value Added:

When hosting a visitor, make sure to tell them about Value Added. It is best if all members of the Department use similar language in describing Value Added to visitors. Describe the setting and audience. Stress that they need to give a brief introduction to the topic accessible to graduate students. Tell the visitor that we can bring up papers and figures if needed. Tell them that they should shoot for about 10 minutes. Apologize in advance for the fact that you or the Coffee moderator might have to cut him/her off in the middle of discussion in order to keep Coffee moving; it is key to Coffee's success that we move things along. Here is some sample text that you might want to include in an email to your visitor ahead of time, or that you might want to state or paraphrase in discussing Value Added:

"Astronomy Morning Coffee (10:30am-11:15am in 4054 McPherson Lab) is a daily discussion of arxiv abstracts and papers. About 30-40 students, faculty, postdocs, and staff attend. It is a tradition to have our visitors contribute "value added," and so we'd like you to spend 5-10 minutes or so discussing some aspect of your research that you will not be able to get to in your talk. We can bring up a paper, figures, or a few slides if necessary, but it's also fine to just lead a quick discussion from your seat or the blackboard. Usually one of the faculty, students, or postdocs is in charge of running Coffee and he or she (as well as others!) may interrupt you with questions and comments along the way. If necessary, the Coffee facilitator may need to cut you off a bit since we often have more than one visitor or there is a must-discuss paper that we need to get to, but you should shoot for the whole thing to take about 10 minutes.

What Coffee should succeed in doing:

We hope that Coffee is simultaneously a pedagogical tool and a research tool, and a way to develop and maintain cohesion within the Department. As a Coffee moderator, it is your job

to run the discussion, provide or elicit background information when necessary, and let some discussions run their course. Periodically paper-worthy ideas and discussions develop during Coffee and it is important to allow those to occur organically.

How to "drive" (run the computer during Coffee discussion)

(The notes below are originally due to Brett Andrews and are specific to running the computer during an in-person Coffee. Some are relevant to online Zoom-Coffee.)

Brett's Notes: (with updates from Todd for new ADS):

Pay attention to the conversation.

Zooming in with pdfs:

- Close Bookmarks pdf sidebar with little arrow in the top right or left on the pane.
- Expand refereed journal articles by dragging the divider all the way to the right side of the screen.
- If the Adobe Reader Toolbar doesn't show up and there is a intermittent black pop-up bar at the bottom, click on the Adobe symbol (curly triangle) to show the toolbar.
- Use full page zoom to quickly scroll through the document (use the mouse wheel).
- Use marquee zoom (magnifying glass with dashed rectangle) to highlight plots and abstract/title/authors.

Title/Authors/Abstract:

- If possible, show all three.
- If not, show Title/Author for a minute, then switch to the Abstract.

Plots:

- Show the axes. If the plot is multi-panel and only one representative panel is needed, show one with both x and y axes.
- Generally, don't show the caption.
- Remember: given the dimensions of McPherson 4054, virtually everyone else in the room is sitting farther away than you.

- Don't show the caption (the presenter should explain the line/point styles), unless asked to.
- Types of plots to know: light curve, SED, CMD.

Searching for a word:

- html ("/" or Ctrl-F)
- pdf (binoculars or magnifying glass with no dashed rectangle) Ctrl-S sometimes.

Finding a Paper:

ADS search:

- Author:"^NAME" = first author
- use "and" button if entering more than one author
- date search helps narrow down choices: "year:2020-2021"
- use "property:refereed" to narrow down options.

arXiv search:

- use "_" between last name and first initial
- use html search keyboard shortcuts to find a new or recent paper

Know how to find Nature and Science papers.

Switch Displays and Hardware:

- Use the buttons labelled on the tower to switch between the PC, laptop, and Airplay.
- Eject USBs.
- Use the "blank" button on the projector remote to turn it off temporarily
- Turn off projector after Coffee.