

Astronomy Journal Club 2017-2018

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September 11, 2017

<http://www.physics.mcmaster.ca/apjclub>

Welcome to Astronomy Journal Club 2017/2018! The basic premise is to have weekly talks and discussions pertaining to recent astrophysical research with all members of the astronomy group at McMaster. JC should ideally serve as a means for keeping up to date on research currently being done both in the department and in the field. JC offers an outlet for graduate students, post-docs and faculty to share new and exciting research with the department and provides a friendly setting for lively discussions of recent, and sometimes controversial, papers. In addition, JC is great way to gain experience presenting in front of an expert audience.

Every graduate student is responsible for giving two talks per academic year, so it will be your responsibility to not only choose a date, but to also assist with any scheduling conflicts you may encounter as the date of your presentation nears. We kindly ask that you honour this request in an effort to help keep not only JC, but also the lives of your coordinators, running smoothly. We are hoping that the two talks given by graduate students each year consist of presenting one paper and giving one research talk (see “presentation guidelines” section below). Additionally, post-docs and faculty should aim to give one talk per year on a paper or research topic of their choosing.

In order to register to give a talk, an online service is available on the Astro JC website that should be self-explanatory and easy-to-use (<https://www.physics.mcmaster.ca/apjclub/index.cgi?page=signup>). If for some reason you cannot sign-up on-line, please do not hesitate to send one of your organizers an e-mail indicating your chosen date. If you’re signing up for a talk in advance and do not yet know your talk title and abstract (which is likely the case), please fill in those sections as TBD.

Roughly once a month, we will have an “astro-ph” session instead of our usual journal club. Astro-ph sessions will consist of informal discussions on very recent papers. When we are planning for an astro-ph journal club, the organizers will send around a google doc a week or so in advance asking for people to sign up papers to lead a brief and informal discussion on (for more details, see “astro-ph sessions” section). We ask that all grad students, post-docs, and faculty contribute one paper each year for an astro-ph session.

To summarize, every graduate student is responsible for: (1) Giving two 30 minute talks per year, ideally consisting of one paper presentation and one research talk; (2) Contributing one paper and leading a brief discussion during an astro-ph session each year; (3) Attending JC each week and participating in discussion.

I am hoping that this document will answer any questions you may have about JC, and will be useful for both new and returning members of the department. If you find that you still have questions after reading this document, please feel free to ask the organizers (Matt Alessi, alessimj@mcmaster.ca and Sam Benincasa, benincsm@mcmaster.ca) by email or come talk to us in person! We will always make sure the first few weeks consist of talks given by returning students/post-docs so that new students can attend these sessions and learn what to expect when it's their turn to present.

Schedule

Journal Club will take place on Thursdays at 12:30-1:30. For the time being we will meet in ABB-304/A, although due to the construction that will eventually prevent us from using this room, we are in the process of finding another room to use this year. Presentations should typically run for 20 minutes, allowing 10 minutes for questions and discussion. There will therefore be a maximum of 2 talks per JC slot with sessions running for either 30 or 60 minutes, depending on whether there are one or two talks scheduled.

In all likelihood, some slots will not be filled and we will have some days without any scheduled talks. As such, please try to have a look at the overall schedule when choosing your talk date and make an effort to fill empty slots before doubling up on already filled ones. If you have something you are excited to present and would like to give a longer talk, it should not be a problem to accommodate you. If you are the only speaker during a session, you are welcome to use as much of the hour as you would like; please feel free to exceed 30 minutes in this case. Whatever talk length you are preparing, please keep in mind to plan for a 2:1 ratio between your talk time and time for discussion and questions.

Journal Club slots are ideal for guest speakers and they will take precedence over regularly scheduled presenters. If your talk date happens to overlap with that of a guest speaker, you will be bumped to the next available time slot that you are able to present. If our schedule is becoming full, we will schedule a second JC session earlier in the week (Monday or Tuesday around noon) to accommodate both the guest speaker and the previously scheduled speakers. In all cases, the organizers will email you before moving your talk to make sure the new time works for you.

Updates

We plan to continue with the JC website this year as a means of providing an easily accessible schedule, as well as a reference for weekly abstracts and talk titles. In order to stay apprised of the upcoming weeks' talks, please become accustomed to referring to the website. Each week, I will send an email on Monday and Thursday mornings letting everyone know who that week's presenters are, as well as their talk/paper titles and abstracts. As such, we ask that you e-mail Matt (alessimj@mcmaster.ca) and Samantha (benincsm@mcmaster.ca) with your talk title and abstract at least 7 days before you are scheduled to present. This will give us time to update the website, and give us the information we need to notify everyone of your talk. Finally, if you plan to attend any JC presentations and suspect that you might not be on the JC mailing list, ask Tina Stewart in the main office to be added to the "d-physastro" mailing list.

Presentation Guidelines & Format

Journal club speakers are expected to prepare a formal presentation with slides. On the day of your presentation, plan on arriving to the room 5-10 minutes early to set up (one of the organizers will arrive at this time to open the room). If you do not plan on using your own laptop for your presentation, you need to let one of the organizers know in advance by emailing them and attaching your presentation. In that case one of the organizers will bring their laptop for you to use. The projector connects via a VGA input, so you may need an adaptor to connect. The organizers have a Mac dongle that we can provide for this.

When preparing a talk, plan for a 2:1 ratio between talk time and discussion and questions (so for a 30 minute talk prepare a 20 minute presentation). We like to encourage open discussion at JC, so it is common for the audience to ask questions both *during* and after your talk. As a speaker, we ask that you take questions during your presentation and to expect interruptions for clarification and discussion. There are exceptions here, such as for conference practice talks where there will only be questions at the end of the presentation. On this note, as an audience member, be respectful when asking questions during a presentation. Wait for a pause between slides to raise a question as opposed to cutting off the speaker.

Regardless of whether you're giving a paper talk or research talk, please aim your talks to be accessible for a general astronomy audience. Also keep in mind that new students may have limited astronomy background (ie. have not yet taken intro astro modules). As such, your talk needs to have sufficient background and introductory material so that every audience member learns something from your talk.

Research Talks

This is an opportunity for you to discuss some of your research with the department's astronomy group. Giving research talks in this setting is especially useful as your audience has a range of areas of expertise and backgrounds as well as a nice mix of observers, theorists and simulators. Needless to say, you can expect a lot of great feedback. Since the talk time is 20 minutes, we would like the discussion to focus on a well-defined problem in your thesis. Tell us how it contributes to your thesis, the approach you're taking, the problems you're having, etc. The audience may be able to give you feedback on solving a problem you're facing!

If you're attending a conference where you will be giving a talk, you are encouraged to do a trial-run at journal club. This is a great opportunity to time your talk and get feedback on your slides and presentation.

New members are welcome to give a research talk on a previous project (ie. an undergrad project, masters or PhD thesis). This is a great way to introduce yourself to the group and tell us what you were working on before you came to McMaster.

Lastly, if you attended a conference and would like to give a conference summary talk, that is also welcomed to JC! Please run this by the organizers first. Often these are most effective if the conference had some overarching themes or questions, or if you want to discuss several key points, results and figures you found interesting.

Paper Presentations

The first step for doing a paper presentation is selecting a recent paper to present. We encourage speakers to select recent papers that have been submitted to (off of astro-ph) or fully published in a peer-reviewed journal (usually ApJ, MNRAS, A&A, Nature, Science, etc.). Of course, your paper needs to be astronomy-themed. The purpose of presenting papers in JC is to highlight new and exciting research being done in the field, so we encourage selecting papers that have been published/submitted within the last year or so. **In all cases, you need to have your paper approved by your supervisor.** There are many different reasons for picking a paper for JC. It could impact your research in some way, have an exciting result, or a new and interesting model. Whatever the reason is, tell us why you chose the paper during your presentation!

Again, I will emphasize the importance of giving sufficient background and introductory material for your talks. The introduction section of the paper you're presenting is a good place to start, but often you will have to expand on what's there. You may have to cull from additional sources to accomplish this. During your talk, you'll want to go through the paper, probably following the structure the authors used (ie: intro/motivation, methods, results, conclusion), showing figures directly from the paper. Additionally, I think it's a good idea to give your own interpretation of the methods/results presented in the paper, be them positive or negative.

Astro-ph Sessions

Roughly once a month, we will have an informal astro-ph session in lieu of our typical journal clubs. The purpose of these meetings is to notify others of the most recent news and results to promote group discussions. Here, we are looking for very recent papers that come up on astro-ph within, say, the last month. Astro-ph sessions are comparable to paper discussions at research group meetings, the difference being that they involve the entire astronomy group.

When signing up a paper for an astro-ph session, you are expected to lead a brief 10-15 minute discussion which can be thought of as a very informal and watered-down version of a formal paper presentation. Instead of making a presentation, we will put up the paper itself on the projector and you can scroll through it as you tell us about the main ideas, results and figures in the paper.

If you feel that this document is missing any pertinent information, you can feel free to let one of the organizers know at any point during the year and we will update it as necessary.

We look forward to another invigorating year of Journal Club talks and discussions. See you all there!

– The Organizers