

# Assignment Compact Binaries, 18/3/2009

## 1 Observing proposals

To find a new phenomenon or to better understand known sources one needs observations obtained with telescopes. For all professional telescopes in the world the available observing time is divided using a quality-based system of observing proposals: the prospective observer writes a proposal in which he/she explains the scientific reason why these observations need to be taken and why with this telescope. Time at the telescope is divided in half year rounds. After a strict deadline (e.g. April 1), a committee convenes, reads the proposals and ranks them in scientific order. From the top of the list downwards time is divided and if the available time is handed out a line is drawn (the 'cut-off line') and all proposals below the line will not receive any time. Better luck next time.

The assignment for this week is for you to write a observing proposal using the template you can download through the departmental website (go to 'onderwijs' -> 'Studiemateriaal'). This template was used for the WHT and INT telescopes, but you can propose for any telescope. Fill out the form completely! Start with the empty form `ing_nl_template.tex`. You can process the LaTeX form with `latex <name>` and make a postscript file with `dvips <name>` where `<name>` is the name of the file without any extension.

A few pointers:

- You need to write a proposal for your favorite compact binary/binaries. You can decide yourself on which telescope you would like to propose for, e.g. WHT, INT, VLT, MMT, Keck, Grantecan, Magellan, SALT, LO-FAR, WSRT, VLA but also space missions such as HST, XMM-Newton or Chandra.
- Be imaginative! Time allocation committees (TAC: in this case Gijs, Matt, Silvia & Paul) like new, innovative ideas that haven't been tried before.
- Be specific and to the point. The clearer your science case and justification, the better it is for your proposal.
- Be realistic. Use the exposure time calculators provided by almost all telescope websites to calculate how much time you need. Also keep in mind that most telescopes are heavily oversubscribed. Asking for a month of VLT time is not realistic. On a 8-10 meter class telescope you can expect 1-5 nights. On a 4-meter class telescope 3-10 nights and on a 2.5-meter class telescope 7-14 nights.
- Be on time! The deadline is a *strict* deadline. **The deadline for submission (by email to [p.groot@astro.ru.nl](mailto:p.groot@astro.ru.nl)) is April 15, 12:00 CET (noon)**. Any submission after this deadline will be discarded and you will have failed this exercise. **No second chances, no excuses!**

Some specific pointers on the form:

- Only edit the file `ing_nl_template.tex`. Rename this file so we can identify who has sent in which file. Do **not** edit the file `ing_nl.tex`. This is the stylefile. • **Box 1**: Specify your preferred telescope or telescopes (you can combine different telescopes in one proposal)
- **Box 2**: Do not edit this box. Semester 09B runs from August 1 - February 1. Make sure your sources are visible in this semester!
- **Box 3**: Fill in your own details here. You are the Principal Applicant (also called the Principal Investigator (PI)) for this proposal.
- **Box 4**: Fill in the names and details of your collaborators. It helps to be collaborating with good people in your particular field! Do not put anyone in the TAC as a collaborator since they will not be allowed to speak on your behalf during the meeting!
- **Box 5**: The title of your proposal
- **Box 6**: A short summary. Be to the point and clear.
- **Box 7**: Fill in which instrument you would like to use, at which focal station it is attached (Cassegrain, Nasmyth, Prime, Coude or other), and what detector you would like use.
- **Box 8**: Fill in the number of nights, weeks, hours or orbits you will need. Specify your units. The minimum allocation is what is still scientifically useful, eventhough not ideal.

- **Box 9:** If you need more time in future rounds, make this clear here.
- **Box 10:** Specify times that are preferred or are impossible.
- **Box 11:** If you want your observations done for you (without you going to the telescopes to do it yourself), indicate this here. From the technical justification it should be clear why you want this.
- **Box 12:** Do you want help on your first night to familiarize you with the telescope?
- **Box 13:** Your list of targets.
- **Box 14:** If you have applications for the same program on other telescopes, indicate this here.
- **Box 15:** The most important box: Justify why you need these observations. Make sure to include: the bigger picture (how do these observations help us understand the Universe), why you, why now, why these objects, and why with this telescope setup. Remember that the TAC members are not experts in your field! Make sure to include literature references and list these. Keep your science case to **one A4** and use a font **larger or equal to 11pt**. Legibility is crucial! If the TAC members cannot read your proposal it will end up at the bottom of the pile.
- **Box 16:** Give the technical information. Convince the TAC members that you can get the science you want with your chosen set-up.
- **Box 16b:** Give figures (refer to them in Box 15 or 16!) and the list of references. Good figures really help! Include them in postscript format using e.g. the `psfig` command.
- **Box 17:** What will you do in bad weather? (Only holds for ground based telescopes in visitor mode)
- **Box 18:** Show what you have applied for in the last four semesters. You may leave this empty.
- **Box 19:** You may leave this empty.
- **Box 20:** List your observing experience.
- **Box 21:** Is this for your PhD?

Good luck and remember: April 15, 12:00 noon CET.