

PhD project

Timeline

Project report: Documents requested by advisor

S3 seminar talk slides
TAC meeting talk slides (if different from above or amended)
Publications and/or publication drafts
Thesis outline (table of contents) and/or thesis draft
Written report overleaf (one-third to one page per TAC meeting)
Separate detailed written report (length specified by advisor)

[illegible]

Status and project reports by doctoral candidate for all meetings so far	pages 1–3
Minutes of all meetings with comments of the TAC members	pages 4–5
Instructions for TAC meeting preparation and documentation	page 6
TAC meeting procedure: list of talking points	page 7
Guidelines for mentoring at MPS in the appendix	pages 8–11
Guidelines for doctoral education in the Max Planck Society in the appendix	pages 11–14



Review of progress on various formalities (GAUSS/Prophys centered; skips points if not applicable)

IMPRS TAC Agreement exists and has been submitted to the IMPRS coordinator. ☐ Yes ☐ To do
 University mentoring agreement (Betreuungsvereinbarung) submitted to university. ☐ Yes ☐ To do
 Doctoral candidate has received documents confirming formal university enrolment. ☐ Yes ☐ To do
 TAC folder in Stud.IP provides all documents above, and all previous TAC reports. ☐ Yes ☐ To do
 Proposed committee members have requested examination authorisation if necessary. ☐ Yes ☐ To do
 Request for authorisation to submit a cumulative thesis has been submitted if applicable. ☐ Yes ☐ To do

Review of progress on curricular activities

TAC folder in Stud.IP provides a recent scan of Course Assessment Form ☐ Yes ☐ To do
 GAUSS/Prophys teaching requirements fulfilled and all signatures collected ☐ Yes ☐ To do
 GAUSS/Prophys course requirements fulfilled and all signatures collected ☐ Yes ☐ To do
 IMPRS course requirements fulfilled (without TAC, S3 seminars, retreats, publications) ☐ Yes ☐ To do

Doctoral candidate's view on frequency of meetings with the day-to-day supervisor

The doctoral candidate and advisor meet often enough ☐ Discuss at TAC meeting ☐ Yes ☐ No

Project abstract and work plan (May be updated for each TAC meeting.)

Written report for TAC meeting 1 (May NOT be modified when preparing for TAC meeting 2 etc.)

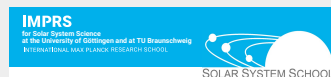
Dummy text which disappears as soon as you edit the tac_meeting_form.tex file instead of trying to edit this pdf. Edit and compile the zip file's L^AT_EX contents from <https://www.mps.mpg.de/phd/tac-report-zip!> It is possible to directly upload the zip file into CoCalc at <https://cocalc.gwdg.de> (or sharelatex/overleaf).

PhD project

The report in this box may be one-third to one full page long. It cannot not exceed one page. Normally, there should be no need for an additional detailed written report if talk slides, publications or an advanced thesis draft are available.

If the following has not been listed on any talk slides that otherwise contain the science, this space can then be used to briefly summarize the time line and action items, previous and planned publications (one per line), previous and planned conferences (one per line), as well as previous and planned curricular activities, if not sufficiently well documented in the Course Assessment Form. Otherwise this space can be entirely omitted by removing the \projectreport command corresponding to a meeting.

It is also possible, although probably not advisable, to include graphics.



Publications

Conferences

Curriculum



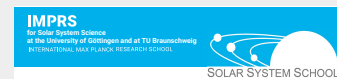
Written report for TAC meeting 2

Dummy text which disappears as soon as you edit the `tac_meeting_form.tex` file instead of trying to edit this pdf. Edit and compile the zip file's \LaTeX contents from <https://www.mps.mpg.de/phd/tac-report-zip!> It is possible to directly upload the zip file into CoCalc at <https://cocalc.gwdg.de> (or `sharelatex/overleaf`).

PhD project

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Publications

Conferences

Curriculum

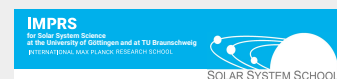
Written report for TAC meeting 3

Dummy text which disappears as soon as you edit the `tac_meeting_form.tex` file instead of trying to edit this pdf. Edit and compile the zip file's \LaTeX contents from <https://www.mps.mpg.de/phd/tac-report-zip!> It is possible to directly upload the zip file into CoCalc at <https://cocalc.gwdg.de> (or `sharelatex/overleaf`).

PhD project

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Publications

Conferences

Curriculum



Thesis Advisory Committee Meeting TAC COMMENTS

Comments by TAC members for TAC meeting 1

Dummy text
Refer to suggested talking points provided on page 7; overarching topics are

Science

Curriculum

Graduation

Funding

Mentoring

Comments by TAC members for TAC meeting 2

Dummy text
Refer to suggested talking points provided on page 7; overarching topics are

Science

Curriculum

Graduation

Funding

Mentoring

Comments by TAC members for TAC meeting 3

Dummy text
Refer to suggested talking points provided on page 7; overarching topics are

Science

Curriculum

Graduation

Funding

Mentoring

Overall assessment of project progress

TAC 1

TAC 2

TAC 3

TAC 4



Time without main advisor / without doctoral candidate

	TAC 1	TAC 2	TAC 3	TAC 4
Yes, roughly five minutes spent discussing without main advisor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yes, roughly five minutes spent discussing without doctoral candidate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Signatures



TAC meeting preparation and documentation

1. The regulations as signed by all parties in the IMPRS TAC Agreement form apply.
The guidelines for mentoring at MPS apply (see appendix).
The guidelines for doctoral education in the Max Planck Society apply (see appendix).
2. TAC meetings should preferentially be scheduled immediately following a doctoral candidate's S3 seminar talk. If this is not possible, the doctoral candidate and advisors should agree on an alternative way of reporting (see front page). This may in particular be necessary for the first TAC meeting.
3. **The doctoral candidate fills out pages 1–3 of the form at hand, and submits the report to all TAC members cc the coordinator at least one week prior to the TAC meeting** The doctoral candidate is encouraged to discuss the contents of the report with the day-to-day supervisor before submission. The submission includes a detailed report on the progress of the thesis project in a suitable format.
4. The doctoral candidate takes care to bring their TAC folder in Stud.IP up-to-date in time for the TAC meeting, using sufficiently self-explanatory file names for documents and providing if applicable
 - IMPRS TAC agreement
 - university mentoring agreement (Betreuungsvereinbarung) or equivalent document(s) from other university
 - documents confirming formal enrolment at the university (Zulassung)
 - additional documents such as cooperation agreements with other universities or third-party funding agencies
 - numbered TAC meeting reports as pdfs (including submitted version for the next meeting)
 - any additional reports or materials that the TAC members may have asked for in connection with a particular meeting (see Project reports: Documents requested by advisor, page 1)
 - talk slides: numbered S3 seminar slides, slides for TAC meeting if different or amended
 - recent scan of the Course Assessment Form (should be used by all IMPRS doctoral candidates, including those not enrolled in Göttingen, and list all activities, not just mandatory ones, including all publications and conferences)
 - publications and/or publication drafts currently under preparation
 - thesis outline (table of contents) and/or thesis draft
 - thesis plagiarism report
 - extension requests
5. **The TAC members take note of the report** submitted by the doctoral candidate and attend the doctoral candidate's S3 seminar talk. They may additionally consult the initial project outline and previous TAC meeting reports.
6. During the meeting: The following page lists various issues that the participants should consider during TAC meetings. TAC members should initially put emphasis on talking points that they currently deem most relevant for the doctoral candidate's education and progress. The doctoral candidate should subsequently be encouraged to seek advice on additional concerns that may not yet have been covered.
7. The TAC members provide written comments about the issues discussed during the meeting. A TAC member or the doctoral candidate adds these to the report. The final version, agreed upon by all TAC members, will be uploaded to the doctoral candidate's TAC folder. The doctoral candidate adds any additional project report material.
8. If it is the doctoral candidate who uploads the final version, the original signed by all TAC members must be submitted to the coordinator.
9. All TAC members are alerted to the upload via e-mail, and are asked to double-check that they agree with the contents of the final version within two weeks.



TAC meeting talking points

- **Science comments**

Review of latest report delivered,
review of work plan, time line
and action items from last meeting:
Which goals have been achieved,
which goals have been missed?
Suggestions for further work,
additional literature to read,
new tools and methods to explore,
suggestions to solve any problems?
Action items for next 6 to 12 months,
including planned publications
and journals recommended to publish them in?

- **Curriculum comments**

Review of completed activities in Course Assessment Form
(Leistungsnachweisheft)
and identification of those requirements yet to be fulfilled.
Completion of signatures where applicable.
Suggestions for the upcoming two semesters for teaching opportunities,
for attendance of elective lectures,
and qualification courses?

- **Graduation comments**

Submission and defense dates?
Monograph thesis or cumulative thesis?
Cumulative thesis: # of papers published?
Support of university advisor?
Request authorisation 3 months prior to submission.
Thesis reviewers
(third reviewer for summa cum laude grade)?
Committee members for defense?
Request examination authorisation for committee members
who are not professors or habilitated 6 months prior to submission.
Plagiarism check performed and distributed?
Thesis approved for submission by TAC?

- **Funding comments**

Project funded for full three years?
Extension needed? / Request funding **and** continued admission in GAUSS 3 months before end date!
Visa, health insurance and guest access to institute issues clarified
in case of an interruption in funding?
Wrap-up phase funding or Postdoc position secured?

- **Mentoring comments**

If talk given: Feedback on content and on presentation skills.
Review of attendance at research group meetings, seminars, journal club.
Suggestions for useful workshops, summer/winter schools, conferences,
external collaboration possibilities and networking opportunities?
Encouragement to pursue proposals for observing time, computing time, or grants?
Suggestions for career planning: well ahead of thesis submission date, strongly encourage candidate
to apply for next job after PhD time at MPS (academic or non-academic)?
Identify prizes or grants the doctoral candidate may be eligible to apply for /
may be nominated for by TAC or others?

Guidelines for mentoring at MPS

Preamble

These guidelines for mentoring at MPS are based on discussions at the institute's retreat in 2012. They describe common practices already in effect, add new recommendations and provide a more formalized structure. This document also contains heritage from the recent application for the International Max Planck Research School (IMPRS) hosted at MPS, at least as far as mentoring of PhD students is concerned. This document is distributed among all scientists at MPS, including PhD students, PostDocs and mentors. New arrivals will be provided with a copy.

January 2013

This outline for mentoring concerns PhD students and young scientists with typically five years or less of post-doctoral experience. In the following the term "S/P" will be used when referring to PhD students and PostDocs alike.

Not yet experienced in research, PhD students will receive close guidance through a precise plan laid out by their supervisor in their 1st year. In their 2nd year the student is expected to develop own ideas and realize these ideas in close collaboration with their supervisor. This is expected to result in a research plan for the 3rd year. In this final phase the PhD students are expected to work mostly independently, with some guidance, now including career planning. The mentor of the student is the supervisor or the day-to-day supervisor. The PhD student will obtain guidance also from the thesis advisory committee (TAC) that has three members, including the supervisor, as outlined in the IMPRS rules.

PostDocs usually still need some guidance concerning their scientific work, which is ensured through their full integration in a research group at MPS. The mentor of the Postdoc is a senior scientist of that research group. For the mentoring of PostDocs there will be a strong emphasis on the planning of their further careers.

The S/P is encouraged to seek mentoring advice also from other senior members of the institute that she or he thinks are appropriate to approach. In case of severe problems, the S/P can seek confidential advice from the ombuds person. The yearly institute's retreat provides a feedback mechanism for the mentoring in general.

The mentors consider the supervision of a S/P as teaching experience, with the goal being to teach the S/P to perform independent work and to be creative in defining new research projects. There are regular meetings of the mentors of MPS to identify problematic or particularly good examples of S/P projects. Such meetings are instrumental in resolving problems in supervision and to find synergies between the projects of different S/P.

Scientific practice

There are yearly discussions between mentor and S/P on overarching plans for the upcoming year. Starting with the second year these are based on a self-evaluation for the preceding year provided by the S/P. For PhD students these discussions can be combined with the TAC meetings, that also include a performance review.

For day-to-day scientific work, there are regular meetings between mentor and S/P, typically on a weekly basis. These meetings ensure that problems are recognized as soon as possible and that motivating feedback can be given to the S/P.

The S/P is fully integrated into one or more research groups within MPS. This includes the participation in the research group meetings, journal clubs and other meetings these groups might hold. Because of the wide diversity of groups within MPS there is a range of activities the S/P is involved with in their respective group. In particular, the mentor is expected to give a good example and attend such seminars whenever possible.

The S/P is introduced to the tools and methods that are used in the hosting research group and that the S/P needs for the research work. In addition, the S/P is familiarized with tools and methods that might be of potential interest for the broader context of her or his work.

The S/P is advised on where to publish which parts of her or his results. Here an emphasis is put on reaching the proper audience and on publishing the results effectively in a timely manner. Because writing and publishing is an integral and key part of science work, the mentor encourages the PhD students to publish results already during the thesis work. By suggesting papers to read, the mentor motivates the S/P to keep up with the literature, which is prerequisite to writing good papers.

The mentor discusses the rules of good scientific practice with the S/P ensuring that she or he understands the full implications of these rules. During their PhD the students have to participate once in the regularly provided block course on “good scientific practice and research ethics”, and PostDocs are encouraged to attend. Furthermore, the mentor introduces the S/P to science-related work such as refereeing of manuscripts and proposals, and responsible work in committees.

Scientific mentoring

The S/P give regular reports on their work within MPS; the PhD students in the IMPRS seminar (S³) and the PostDocs in the various group seminars. The mentor gives feedback to the S/P not only on the scientific content of the talks, but also on the organization and presentation of the talk and on the right level for the audience.

The S/P is also provided with some guidance for improving teaching and mentoring skills. In part, the PhD students participate in the teaching program of the University of Göttingen tutoring exercises for lectures. The PostDocs have the possibility to participate in the supervision of PhD students in their research group.

The S/P is introduced to (senior) researchers within MPS and from other institutions in order to encourage collaborations with people from similar and other scientific backgrounds. This encourages the S/P to deepen the understanding of their field of research and to familiarize themselves also with other areas.

Each S/P has a travel budget that is to be used at the disposal of the S/P. With some guidance from the mentor the S/P can use this to participate in conferences or visit other institutions to gain contacts that will give new inspirations for her or his work and that could be instrumental for their future career.

Career planning

The mentor provides counseling regarding which summer schools, workshops and conferences the S/P should visit to enhance the visibility of her or his research, and to make contacts with colleagues from other institutions that might be potential collaborators.

MPS provides internal teaching on paper writing and grant writing strategies. This is done through block courses in the framework of the IMPRS. These courses are also open to PostDocs. PostDocs are encouraged to write their own proposals for which the mentor provides some direct advice for the science plan and practical matters. Furthermore, mentoring courses at the University of Göttingen are open to each S/P. Contacts with MPS alumni can be used to prepare applications to jobs after the stay at MPS.

The mentor discusses with the S/P possibilities for career opportunities after the post at MPS ends. This includes counsel for the application process, such as advice for the preparation of applications and eventual job interviews. The mentor also reviews with the S/P well-suited career paths considering strengths and weaknesses of the S/P. In particular, these discussions include the preferences and abilities of the S/P for a balance of research, teaching, and service activities. The mentor is available to give guidance to the S/P regarding her or his application for a position or a grant, including the CV etc.



GUIDELINES

ON THE TRAINING OF
DOCTORAL STUDENTS AT THE
MAX PLANCK SOCIETY



PREAMBLE

The aim of the Max Planck Society is to carry out basic research at the highest possible level. As the research carried out by doctoral students is also subject to this aim, the Max Planck Society has a particular responsibility when it comes to junior scientists and must therefore select the best candidates and ensure optimum supervision and qualification. Doctoral students must meet high expectations and be capable of working independently and autonomously in order to contribute to the scientific achievements of the research facilities through their work. Similarly high requirements apply in terms of supervising doctoral students at the research facilities of the Max Planck Society, as responsible supervision with transparent framework conditions and rules is a decisive factor when it comes to successful completion of a doctorate.

The different subject cultures require different qualification and supervision structures that need flexible room to manoeuvre. In many cases, the qualification and supervision provided in doctoral student programmes has proven to be advantageous and attractive in terms of attracting excellent doctoral students, particularly from abroad. The IMPRS model leads the way here, particularly in terms of cooperation with universities. Max Planck Society research facilities should check the extent to which the establishment of an IMPRS would make sense and apply for additional central funds for an IMPRS if necessary. It may also make sense to undertake doctorates outside doctoral programmes.

The following statements should be considered binding guidelines for both doctorate models, in order to offer junior scientists reliable and transparent training and career structures. They are based on the *"Guidelines for Doctoral Training at Max Planck Institutes"* issued by the Scientific Council in 2012 and the *"Recommendations for the Supervision and Qualification of Doctoral Students in MPG Research Facilities"* issued by the "Support of Junior Scientists" Presidential Committee in 2014.¹

1. The Max Planck Society is under an obligation to ensure scientific excellence. When it comes to research within the framework of dissertations, high expectations apply not only to the doctoral students themselves, whose work must contribute to a joint research programme, but also to those supporting them, who must do all they can to ensure that the doctoral students unlock their full potential. All research facilities should convey the framework conditions, requirements, processes and rules for the conferral of a doctorate in a generally accessible and transparent manner.
2. Max Planck Institutes that accept doctoral students cooperate with a suitable university in terms of the doctoral students being accepted onto the relevant doctoral programme at this university if any such programme exists, as well as in terms of their supervisor being approved as the first reviewer of the dissertation.²
3. The *Guidelines for Doctoral Training at Max Planck Institutes* are intended to supplement the provisions for doctoral studies at universities and apply to the extent that they are compatible with such provisions. Where not already agreed, MPG research facilities shall agree on rules with the respective partner universities that correspond to the principles of the Max Planck Society and allow appropriate participation by the Research Group Leaders and Directors in the doctoral procedure.

¹ The Cross-Sectional Committee of the Scientific Council acknowledged and approved the *"Recommendations for the Supervision and Qualification of Doctoral Students in Research Facilities"* in September 2014. The recommendations also refer to the so-called Salzburg Principles, (Bologna Seminar 2005: Doctoral Programmes for the European Knowledge Society, 3-5, February 2005).

² cf. also the *Memorandum of Understanding* between the German Rectors' Conference and the Max Planck Society dated 14 March 2008.

4. The doctoral training offered at Max Planck Institutes is primarily intended to serve the purposes of the doctoral students and support them in the pursuit of a successful scientific career.
5. Dissertations completed at Max Planck Institutes are independent pieces of work that are prepared within the limits of the respective subject-specific and professional practice. The Max Planck Institutes and the doctoral student supervisors ensure that the personal research efforts by the doctoral students for the scientific community are recognized as such.
6. The total number of doctoral students selected per supervisor should be such that a suitable level of supervision is ensured. A supervisor should usually not be the main supervisor for more than eight doctoral students at the same time. Higher numbers are feasible in certain research fields or if more experienced scientists are incorporated into daily supervision of the doctoral students. Supervisors should be given sufficient opportunity for further training relating to supervision.
7. During all phases of their work, the doctoral students must be aware of the date by which they are expected to complete their dissertation. Doctoral theses should be completed within a timeframe that complies with the normal practices of the relevant subject. Except under exceptional circumstances, doctoral theses should take no longer than four years.
8. A written agreement should be made between the doctoral students and their supervisors at the start of the doctoral procedure, specifying the rights and obligations on both sides and defining the relationship between the doctoral student and supervisor on a clear basis that is transparent to both sides ("support agreement"). The main supervisor of the doctoral thesis and the doctoral student shall regularly discuss the schedule for dissertation completion. Model agreements may be prepared for individual subject groups and used as a basis by research facilities.
9. The doctoral students should be granted funding for the entire period of doctoral study specified in the support agreement, as long as the doctoral student achieves the expected level of scientific performance.
10. A second independent scientist should be available to each doctoral student in an advisory capacity, alongside the respective main supervisor. Supervisors hold regular advisory meetings with their doctoral students about the progress of the doctoral theses.
11. One tried and tested form of advice is the establishment of a Thesis Advisory Committee (TAC) to accompany the doctoral studies phase, whose members are independent of one another; documented meetings of this Committee should be held at least once a year, with doctoral students being given the opportunity to talk to other TAC members without the involvement of their main supervisor.
12. Doctoral students with a doctoral funding contract should primarily be given tasks that directly serve the purposes of their own doctoral project. However, they may also be asked to carry out other scientific services as long as these serve the purposes of their own scientific qualification and the overall primary focus of the employment relationship remains doctoral qualification. Where these contribute to the successful qualification of the doctoral student and do not have a negative impact on the timely completion of an excellent dissertation, doctoral students may/should therefore publish research results, attend courses and conferences, prepare contributions to scientific conferences, participate in teaching activities and contribute to other useful subject-specific activities pursuant to their field of study and in consultation with their main supervisor. This includes measures to develop specialist, methodology and personal skills within a scientific environment. Tools such as peer coaching, peer mentoring, self-organized retreats or meetings should also be supported financially by the Institute.

- 13.** Author agreements between doctoral students and their supervisors must comply with the recognized international rules of good scientific practice for the respective research field. The supervisors should have already encouraged the doctoral students to publish research results during doctoral thesis work where such publications promote the scientific career of the doctoral students and do not have a negative impact on the completion of the doctoral thesis.
- 14.** During their doctoral training, doctoral students must be given the opportunity to discuss any affairs relating to their supervision with an independent officer, particularly in the event of differences of opinion with their supervisor. An officer responsible for doctoral affairs should therefore be available to the doctoral students at MPG research facilities. All doctoral students should be made aware of the identity of this person when they start their doctoral studies. If necessary, this officer could also be employed by the relevant university. The independent officer must ensure that any conflicts are resolved to the satisfaction of all parties, with all due consideration of the justified interests of the doctoral students and the Max Planck Institute responsible for supervision, as well as taking all necessary steps to maintain or restore mutual trust and cooperation.
- 15.** A so-called wrap-up may be carried out in connection with the completion of doctoral studies. Classic doctoral studies at the MPG end with the defence of the dissertation or viva. While the doctoral student concentrates on preparing and submitting his/her dissertation text and completing his/her doctoral studies, the wrap-up is used to finalize research work and refocus in professional and scientific terms. This includes the completion of started manuscripts for publication, as well as theoretical/experimental preparations for the person's next scientific career step. The postdoc phase is often particularly decisive to the student's career. Choosing the right subject focus, the right research environment and the right mentor are important steps when it comes to the qualification of a junior scientist. Any necessary final work on started experimental set-ups or initial pilot considerations for further theory or experiment development guided by an experienced mentor is in the interests of the junior scientist at this stage. The wrap-up phase runs for a limited period. A maximum of 12 months is usually sufficient and appropriate for transition from doctoral studies to the postdoc phase.
- 16.** All rules and regulations should be applied in a flexible manner and in good faith. Doctoral training also ensures that the doctoral students are familiar with the principles of good scientific practice.
- 17.** In their regular evaluations of the research facilities, the Scientific Advisory Boards should explicitly give their opinions on the quality of doctoral student training, with all due consideration of the guidelines for doctoral training and the IMPRS.