

Faculty Guidelines to Ph.D. Qualifying Exam

Overview

To be allowed to continue in the Ph.D. program, by the end of their 2nd year all Ph.D. students are required to take and pass *a comprehensive defense of their Ph.D. thesis proposal*. The two hour twenty minute long oral exam is administered by the student's Ph.D. qualifying exam committee. During the first twenty minutes, the student presents their proposed Ph.D. dissertation research plan. In the remaining two hours the student defends the scientific merit of the proposal and their ability to carry out the

- At least *three* weeks before the exam, the supervisor ensures that their student distributes a written thesis proposal to the committee members. Note, the thesis

Kracker asked: absorption line definition (P); broadening mechanisms (P); abundances (P); how produce C and O (F).

Kringle asked: Hubble's constant definition (P); Freeman topology (P); Microwave blackbody radiation cause (F).

- Following the final round of questions the chair asks the student to leave and wait for the results in the student's office.

Evaluation and Outcome

- The chair invites each member in turn to discuss *their* evaluation of the student's performance.
- The following questions should be considered:
 - Does the student understand the project?
 - Does the student have a reasonable grasp of the background material, enough to begin the project?
 - Is the project itself well defined and reasonable and if not how should it be improved? Does the project constitute original research and is it likely to lead to a defensible Ph.D. thesis?
 - Is the student qualified to undertake the research?, I.e., does the student have sufficient knowledge and understanding in the field of research, its literature, and related fields to undertake the research competently?
- After the discussion, the chair asks each member to cast a vote of pass—the student is qualified to undertake the research, or fail—the student is not yet qualified to undertake the research.
- The student passes when a majority of the committee passes the student. The student fails when a majority of the committee fails the student.
- The chair should immediately report the outcome of the exam to the graduate coordinator.
- If the student fails the exam then the student is offered one opportunity to retake the exam. If the student declines they will be asked to leave the program immediately.
- The proposal itself can be approved (no further action is required) or approved with minor modifications (supervisor sees that the recommend modifications are made). If

What is a red giant? How do we distinguish observationally a red giant from other