Shawn Wilder Physics Department Ph.D. Candidate Plan of Study, Spr. 2012

My immediate goals are to put a significant dent in my dissertation. My long-term goals are still to finish out my doctoral degree and attain a promising post-doctoral position. I have not yet decided if I will go into the private sector or academia. My academic career is just now getting to the point where I can legitimately start to develop the foundations needed to attain these goals. Last spring, I finished my fellowship in the GK12 ChemBOND program, which I feel was fruitful but also rather time consuming. Last fall, I was doing half of my assignment with the math department, which required a more substantial amount of time than usual because I was unfamiliar with their system. Now that I am again working solely for the physics department, I should be able to focus my efforts on research.

Last year I started a new research project which appears promising in the sense that it should hone my skills better than the last research project, which was too complicated for me given my previous skill level. I have presented at four FAUst meetings (one of which was in front of a person with quite the reputable name; this presentation went very well I feel in part because I was presenting my research project instead of someone else's). I led a group that presented a special interest session and a poster session at the national GK12 conference in Washington D.C., and I presented a research poster for both the college of science and graduate college research days. The special interest session that my group presented at the national GK12 conference concerned the benefits a specific teaching pedagogical method. Our method proposed teaching science curricula from a multidisciplinary perspective. For example, methods and benefits of a physics professional participating in teaching a chemistry class Our presentation was well received. alongside a typical teacher. Also at this conference I co-presented a poster that had information about both the GK12 project here at FAU and my current research project. Despite the experience I have gained creating posters during the last two years attending the GK12 conference. I do not feel like this has developed my skills for creating posters. Therefore, I appreciate attending the research days for the college of science and graduate college. I feel that developing a poster solely about my research and presenting it at these venues has helped me develop the rudimentary skills for such endeavors. However, whether or not I need these skills remains an open question.

My current research project aims to determine if a previously proposed definition for generalizing angular momentum is perturbatively stable. That is to say that the project seeks to determine if this proposed definition is physically viable; i.e., if the definition minimally responds to small changes in the system.

Even though I have satisfied all of the necessary course requirements to attain my Ph.D., I am attending a course on Quantum Gravitation. I am doing this because I feel that, even though my research project will prepare me for its specific area or study, I feel that I need a more well versed understanding of the field in order to be successful in the future. In the coming academic year I hope to significantly advance my research project, submit a paper or two for publication and attend and present at a few research

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