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Hello, Friend:

Well, here we go again: another new year and a fresh slate. We have learned to get by without Rick Thompson, though he is missed... especially when there are department chair duties to be done. Dr. Bykov and I are in the midst of a search for a new Physics faculty member. We will once again be three-strong and ready to take on some research projects. The search is going well, although I shouldn't say anything about it just yet. We should have news by spring. I'm looking forward to introducing our newest member to you in May. We advertised the position for an experimentalist or an Astronomer and have applications from a healthy set of each. I know, you're on the edge of your seat; but, you'll just have to wait until May, like the rest of us.

We have another large freshmen enrollment. We probably won't have as large a sophomore class next year as we have this year, but it will still be larger than the recent previous years. All twelve of the sophomores are moving on to the Spring term. We will also have several students graduating in May. Now that our enrollment is growing, I would like to reiterate the usefulness of the alumni lecture series. These kids have varied interests and it helps to hear what the possibilities are for them.

This coming spring, I have not scheduled any alumni lectures. Instead, we are going to have the job candidates give presentations. In the Fall however, we could still use some volunteers. I always like to have new faces, but I understand the difficulty of travel. If any of you are in the neighborhood (like Dallas or Waco or Austin), then consider popping up for a day to visit campus. We did continue the series this past fall. Our first speaker this past term was Roger Ward ('67). He spoke about his career in the semiconductor industry. He spoke of quality and reliability and gave us all some good advice: Learn to do the operations, get your hands dirty, understand how what your company builds works. Treat people well; be honest and give people more than they expect. Do the job and do it well. Last but not least: Don't take your work home with you. Our second speaker this fall was Weldon Bailey ('01), who came to us while visiting family in Clyde. His advice was that we learn Fourier transforms. (I have certainly benefitted from knowing them.) Weldon gave a quick overview of these. If you are having trouble imagining a *short* overview of Fourier Transforms, ask Weldon. He did a great job. It has so far worked well having two people come per semester. As I said, we need volunteers for Fall of '06. Homecoming is usually in October if any of you happen to be here that weekend.

As I recall, I mentioned updating the freshmen physics labs this past summer. Well, it didn't quite work out. However, Dr. Bykov and I are applying for a grant this May to test out a different "learning style". Hopefully this will also pay for some new equipment. We'll keep you posted.

Regarding the student projects that I have mentioned in previous letters... We received a list of **nine** suggestions from alumnus Jerry Lee ('61). I would love to get more ideas from others. Please email ideas to us. I am hoping to create a web page with ideas as well as actual projects. Until that web page goes up (it may be summer before I get to it), let me describe the context. Last year, the school decided that students would benefit from activities that are very similar to what they will do after they graduate. For many of us, that means original research projects. At that time all honors students were required (and still are) to do a senior thesis project. Dennis Conner ('02), for example, looked for chaos in a divan pendulum. Bonnie Schneider ('06) is continuing some work she did this summer in a Research

Experience for Undergraduates (the National Science Foundation's REU program) on the search for gravity waves. We have decided to extend this to all students.

We have found that trying to prepare and perform an experiment all in one semester is too cumbersome. So we created a 1-hour course called "research proposal" and a 2-hour course called "research project". Two students took the proposal course this Fall. One is considering sonoluminescence, creating light from sound waves as they crush small bubbles in a fluid. The other is considering the thermodynamics of a jet engine air conditioning unit. Both of these are investigative studies. If any of you would be interested in reviewing and critiquing their reports, they have agreed to it and would be interested in alumni feedback. The first project is set to be performed this Spring. The second will wait until next Fall. We also have another student signed up for the proposal course this Spring. I would love to set up a regular set of alumni reviewers if anybody is interested. I think the students could really benefit from your experience. The students will also be giving presentations at the end of the term – both proposers and projecters – so if you are in the area, stop on by. We'll schedule the talks to accommodate you.

You might check the alumni webpage occasionally to see who else has checked in and sent us an update. I have posted some photos of a project the students worked on in Advanced Lab (<http://www.mcm.edu/academic/depts/physics/c-pend-photos.html>) and of the tour of Moncrief Cancer Center (<http://cs1.mcm.edu/smab/Trips/moncrief/index.htm>) to the webpage. (The Moncrief trip was posted by David Hammond to the SMAB webpage.)

As always, if you're in the area, even if you don't want to give a presentation, we'd love to visit if you can spare the time. I expect our students would also be grateful if you could forward information about internship possibilities.

Enjoy your spring!

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