



Department of Physics

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October 21st, 2010

To

Professor Dieter Wanner,
Associate Provost for Global Strategies and International Affairs
The Ohio State University
300 Oxley Hall, 1712 Neil Ave,
Columbus, OH 43210

RE: International Memorandum of Agreement (MOA) between the Ohio State University, USA and Cairo University, Egypt

Dear Professor Wanner:

The National Research Council has identified the field of High Energy Density Physics as one of the most important fields to develop in this century, because of its wide impact on applications as diverse as Cancer Treatment, Nuclear Security and Clean, Sustainable energy. The elaborate nature of facilities and experiments in this field has, from the beginning, engendered a worldwide collaborative effort from scientists, facilities, and companies all over the world, and the OSU SCARLET (Science Center for Advanced Research in Lasers and Engineered Targets) High Energy Density Physics Laboratory, led by Professor Richard Freeman, is an integral part of it. As a senior scientist in the group leading the Petawatt Laser Project developing one of the most powerful lasers in the world, I initiate and maintain many of these collaborations.

My collaboration with the Z-backlighter facility at the Sandia National laboratory, NM began in late 2004, where I led an experimental team developing an intensity monitoring device for the 100 TW laser facility. The effort resulted in numerous conference presentations, journal articles and training of graduate students. I also lead a collaborative effort to build a laser peak intensity detector at the MTW laser system at the Laboratory for Laser Energetics, Rochester, NY. The funding for these projects are primarily borne by host institutions.

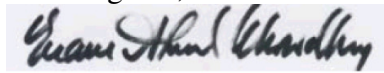
In the last two years, I also have established a strong collaboration on Petawatt class laser development with the Texas Petawatt Group at the University of Texas at Austin, TX. As a result of this collaboration last week, I organized our first mini-workshop on short pulse PW laser between the two laser groups.

Earlier this year, I was invited by Professor Lotfia El-Nadi of Cairo University to deliver a keynote address at the 3rd International Conference on Ultra-fast laser Technology and Applications, at Cairo University, Egypt. During that tour, I had the opportunity to visit the National Institute of Laser Enhanced Sciences (NILES), at CU, meet many scientists and graduate students, and also gave a tutorial on building high intensity lasers. I also had the pleasure of meeting with the President of the Egyptian National Academy of Science, where we discussed a proposal to build an ultra-intense

high power laser facility at CU, which will enable them to perform significant research in High Energy Density Physics. At the request of Prof. El-Nadi, the PI of the proposal, and Dr. Sultana Nahar, a colleague at OSU and an adviser to the project, I am also acting as an adviser on the laser development project there.

Currently Professor Lotfia El-Nadi is visiting our Laboratory and giving an Atomic and Molecular Optical Physics Seminar on the 22nd of October. This presented us with the opportunity to widen our joint research efforts. In light of that, I would like an MOA from your office at the Ohio State University to help our collaboration extend to the next level, where we can exchange graduate students in research and training projects, write joint international proposals, and perform exceptional research in the field of High Energy Density Physics.

Best Regards,

A handwritten signature in black ink, reading "Enam Chowdhury", is placed over a light gray rectangular background.

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