LOUISIANA STATE UNIVERSITY

College of Science
Department of Physics & Astronomy

25 February 2018

Professor Miguel Alcubierre Moya
Director of the Instituto de Ciencias Nucleares
Universidad Nacional Autónoma de México
Ciudad Universitaria, Circuito Exterior S/N
A.P. 70.543
04510 Mexico City
Mexico

Dear Professor Moya,

Re: Letter of Support for appointment of Peter Hess as "Profesor Emérito" at UNAM in México

I have known Peter Hess for nearly 40 years, so it is a pleasure for me to write a letter of support for your consideration of his promotion to "Profesor Emérito" status at the Universidad Nacional Autónoma de México. Over this period we have published 14 joint scientific papers that cover a rather broad range of physics topics, starting with a set focused on group theoretical results that relate to some of his earliest work at UNAM with Professor Marcos Moshinsky as an Alexander van Humboldt Fellow. This collaboration grew to include Ramon Lopez who was one of Peter's early students who came to work with me at LSU as a postdoc on the completion of his Ph.D. at UNAM with Professor Hess. Our most recent collaborative work tracks to that of Professor Cseh of the Czech Republic. Between these interests we also touched on a collage of topics of shorter duration, but nonetheless that resulted in several nice publications that have helped to establish a bridge between a microscopic (shell-model) framework and a macroscopic (phenomenological) picture of atomic nuclei.

Perhaps the most striking aspect of Professor Hess's scientific work is its breadth, spanning from nuclear physics to particle physics with a sound appreciation for the importance of fundamental concepts as well as their interpretation in terms of a physically motivated phenomenology. Add to this the experience he gained working with colleagues who were well trained in the Marcos Moshinsky School of group theoretical methods to physics, has resulted in a number of novel initiatives. As an example of the latter, I reference his recent work with Professor Cseh (above) where they attempt to explain features of strongly deformed nuclear systems in terms of cluster-like structures, with the clusters handled in a shell-model framework with relative motion parts treated through harmonic oscillator functions while being attentive to proper antisymmetrization requirements of the Pauli Principle. This work draws on SU(3) technologies first advanced by J. P. Elliott and M. Moshinsky, while including some novel aspects of the Symplectic Shell Model, work that has been led in the Western World by David Rowe (Toronto) and his colleagues, most notably George Rosensteel (Tulane). And not surprisingly, all of this draws heavily on his early phenomenological work with his mentor, Professor Walter Greiner.

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Over this extended timeframe, we have also had an opportunity to get to know one another on a more personal level, with my many visits to Mexico, especially to Cocoyoc, and his to Louisiana along with time we spent together in Germany while I was a Guest of Professor Amand Faessler at the University of Tubingen and he was on one of his sabbaticals with Professor Werner Scheid at the University of Giessen. In addition, I have very fond memories of times spent together with family and friends at conferences, not infrequently with Peter's mentor, Professor Walter Greiner from the University of Frankfurt in attendance. In summary, it is an extraordinary pleasure to add my strong support for Professor Peter Hess's promotion to "Profesor Emérito" status at UNAM in México. He is an excellent scientist with a rich publication record, and his strong family roots speak well of his character as a good human being. If I can be of further assistance to you, do not hesitate to contact me via my mobile phone (+1-703-626-5087 or by email (draayer@lsu.edu).

Best regards,

Jerry P. Draayer
Professor of Physics and Distinguished Research Master, Louisiana State University &
President and Chief Executive Officer, Southeastern Universities Research Association