

Lisbon, 21st December of 2012

Dear colleague,

I am writing to recommend that Dr. Venus Keus be granted a position at your institution. Dr. Keus is a very capable researcher in the field of multi-Higgs models, and has developed an impressive body of work on the topic of N-Higgs doublet models, particularly their symmetries.

I first met Dr. Keus in the Scalars2010 Meeting in Warsaw, where she delivered an amazing seminar on abelian symmetries in three-Higgs doublet models (3HDM). This was a subject in which I myself had worked years earlier, and the work of Dr. Keus and her PhD supervisor cast results I already knew in a completely different light. She had been able to systematize a subject which is incredibly complex in such a way that investigating those symmetries became much simpler. Her communication skills are quite remarkable, she gives excellent seminars. But all of that would be for naught if she did not possess the knowledge, and the understanding of the subjects, to back them up.

My research group invited her to Lisbon for discussions on the subject of the Octahedral Potential, one of those she had published work on. This model has many interesting features which continue to fascinate me – and I first became aware of those features in the extremely fruitful discussions I had with Dr. Keus during the week she spent here. I can attest, therefore, to her being an excellent team member, giving valuable and precious contributions in discussions of great complexity.

I had the privilege, and the pleasure, of being invited to her PhD exam. During her return to Lisbon - to participate in the Workshop on Multi-Higgs organised by my group, and where she, once again, delivered a remarkable talk – I proceeded, during every available period, to “grill” her on her thesis, asking for explanations or clarifications on numerous points. She endured my thorough questioning of her work, explaining away all of my questions and demonstrating, without room for any doubt whatsoever, she had complete dominion of her thesis’ work. It was therefore no surprise that, weeks afterwards, she passed her PhD examination with flying colours.

I can also testify to her burning desire to learn more and apply herself to whatever subject she is faced with. In addition to the very theoretical work she did on multi-Higgs doublet models and their symmetries, she also considered what phenomenological consequences those models might have, in particular as providing possible Dark Matter candidates. On her recent arrival in Southampton, she plunged herself into studies of Supersymmetric Models. I have began collaborating with her over the last months, via email, on the vacuum structure of the Octahedral 3HDM potential, and am impressed with her insights, calculations and physical intuition. I have no doubts that, given the opportunity, she will produce scientific work of excellence.

On a side note, Dr. Keus did her PhD with my colleague and friend Igor Ivanov, who is an exceedingly intelligent physicist, and produced some of the most startling and general results in multi-Higgs doublet models in the last few years. That Igor is brilliant I have absolutely no doubts – but even I, who have some experience in Higgs models, have difficulty understanding many of his papers and results. Dr. Keus did a PhD with Igor, produced a body of work with him and dominates many techniques he taught her – that alone should tell you something about the degree of preparation and resourcefulness she has.

On a more personal note, Venus is a very nice and charming person, filled with enthusiasm for science and eagerness to learn more. She will be a fine addition to your research team. I know that, had I the financial means, I would not hesitate in bringing her to Lisbon, as I am certain she would be a valuable asset for our research in multi-Higgs models.

It is, therefore, without reservations, that I urge you to give her a job! With my best wishes,

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