The Explanatory Power of the Structured Atom Model (SAM)

J.E. Kaal[1], A. Otte[2], J.G. Emming[3], J.A. Sorensen[4]

[1]Stichting Structured Atom Model, Netherlands

[2]Stichting Structured Atom Model, Germany

[3]Stichting Structured Atom Model, USA

[4]Stichting Structured Atom Model, USA

Email: edwinkaal00@gmail.com

The Structured Atom Model is founded on the intuitive notion, supported by observations, that the atomic nucleus should have structural properties. It is a visual tool that permits understanding of physics at a detailed level without having to master difficult mathematics or resorting to quantum mechanics. Starting from a few simple assumptions, for example the neutron not being fundamental, but a proton-electron combination, we discovered many properties of the nucleus as well as several organizational principles that nature appears to use for constructing the elements. SAM is connected to the real world because during its development at every step we checked whether the new element that would result was congruent with observed data such as isotope stability and abundance, oxidation state, etc. In this process we saw a new periodic table of the elements (PTE) come into existence that raises new issues as to the completeness and limits of the current PTE.

Summarizing, we found that SAM provides insight in a great variety of physics phenomena through visual identification. For example, we can see, observe, or explain:

- how the isotopes of an element differ from each other,
- where the cycle-of-eight comes from and why it breaks down,
- the attributes of elements such as oxidation state by studying nuclear structure,
- why the elements become unstable after lead,
- why alpha decay happens with some but not with other elements,
- how and why normal beta decay occurs,
- how nature uses decay paths including those through isomeric transitions,
- why double beta decay happens,
- how and why uranium-235 splits asymmetrically,
- the origins of the “neutron” drip line, and the “neutron”/proton ratio in heavier elements.

We have created a new numbering system for the elements which in turn opens space in the periodic table for new elements that nature has skipped over or that we have not found yet. However, those new elements that nature skipped could possibly be created artificially.

This is the first time that we disclose the full scope of the Structured Atom Model and we think that it is important that the LENR community becomes fully aware of the power of SAM as a research tool. Therefore, the final part of the presentation focuses on various LENR experiments, concluding with our vision for a LENR breakthrough based on SAM.