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Click here to Return to Topic 3 main article link. (Optional, click to Fig.3)

Two very small spheres shown, each barely fitting through 'donut hole' at center of a big 3-sphere pattern of 3 big touching nucleons. If each of the big 3 nucleons has a relative mass of '1.004977366 u'; then the total mass of the two very small spheres (each barely fitting through the pattern's hole) = '0.00744152 u'.\*\*

Three nucleons of light isotope 'Helium-3', with each nucleon having an average mass or vol. =  $3.0160293 \text{ u} - (2) \times 0.000548580 \text{ u}$  (3) nucleons

equals an ave. mass or vol. (for each big nucleon) of 1.004977366 u.

In the above expression, the relative total mass or vol. of (2) electrons, Ref. '(2) x 0.000548580 u', was subtracted from the mass or vol. of Helium-3, Ref. '3.0160293 u', because (2) of the electrons of Helium-3 are orbiting its nucleus, instead of adding to the nucleus' mass or vol.

Compare that est. above (Ref. <u>0.0744152 u</u> \*\*) to our e,p based Binding Energy result, determined as follows:

Relative mass of the starting ingredients, before fusion, are (3) Hydrogen-1 atoms each of mass 1.007825032 u and net neutral charge: So (3) x 1.007825032 u = 3.0234751 u; and mass of final fused neutral Helium-3 atom made = 3.0160293 u; Difference (i.e., before – after) is relative mass or vol. = 0.0074458 u; \*\*\*

Note: Our theorized mass loss (est.), Ref.  $\underline{0.00744152}$  u \*\*, is very close to the e,p based 'Binding Energy', Ref.  $\underline{0.00744580}$  u; \*\*\*, an error of only about -0.00000428 u, or 0.06% error.

