Note: Skip reading the below until after reading the pages with sketches, preferably. **Also first read pg.20** of this booklet, before reading the below -- which continues some of the discussion on page 20.

. At least 3 Nobel Laurettes, all experts on quarks, etc., bemoaned not understanding why the various particles in physics have the various masses they do. So, I hope this booklet helps to largely resolve that otherwise on-going mystery.

. This pg.14 also contains descriptions, even without sketches, to describe how to build and estimate the particle masses of many more particles. That allows this booklet to be shorter than otherwise, since sketches occupy large spaces. Still, this booklet avoids descriptions of some less prominent particles and other misc. discourse – to avoid undue length. And we continue to often estimate particle masses well, by simply averaging together the masses of two other known particle masses.

. The early-discovered, longest half-life particle in the Omega Hyperon (baryon) family, (Ω^-), is already addressed on pg. 20C; but below we discuss two other Omega baryons in the Omega family as well:

. The mass of the Charm Omega baryon', ($\mathbf{\Omega^0_c}$), 5278.86 electrons, roughly**;** can be estimated as the ave. of the mass of the Tauon, (τ), 3477.19 electrons, and the mass of the fairly recently discovered 'Xi Double Charm Baryon', ($\Xi cc{+}{+}$), 7086.1 electrons. That ave. = 5281.9 electrons, our est. for ($\mathbf{\Omega^0_c}$).

. The mass of the Bottom Omega baryon', ($\mathbf{\Omega^-_b}$), 11,848.14 electrons, roughly**;** can be estimated as the ave. of the mass of the Tauon, (τ), 3477.19 electrons, and the mass (vol.) existing when one big outer sphere surrounds four protons, outer sphere = 20.218.5 electrons. That ave. = 11,847.8 electrons, our est. for ($\mathbf{\Omega^-_b}$).

. Regarding the empirical mass of the 'light' Xi baryon, $\mathbf{\Xi^0}$, 2573.1 electrons; it is already very well estimated by the sketches on pg. 10, est. = 2573.5 electrons. ((It could have also been very roughly estimated (instead of very well estimated) by **averaging** the following**:** The mass of the 'heavy' Sigma baryon, $\mathbf{\Sigma^-}$, 2343.35 electrons and a *large outer sphere* mass (vol.) surrounding 6 platonically positioned spheres, with each of those 6 containing 6 platonically positioned spheres surrounding 1 core electrons, I.e., the *large outer sphere* = 2786.1 electron. That **averaging**. = 2564,73 electrons.)) That is a relatively very **poor** est., landing about 8.37 electrons less than the empirical Xi, $\mathbf{\Xi^0}$, mass, And thus, that poor method likely has only a very slight influence on the final $\mathbf{\Xi^0}$ mass outcome, but still, perhaps, a very slight effect. And that sort of very slight perturbation is typical of the sort that sometimes causes a very slight deviation of mass outcome from the mass otherwise estimated. And 'circular feedback' and 'second tier' mass averaging, similarly, a very slight deviation.))

. On Pg. 17, note 2, we construct and est. the mass of the light Sigma baryon mass, Σ^+, a 2nd way, and get 2330.1 electrons. That Est. is not quite as accurate as the 1st Σ^+ est., made nearer the top of pg. 17, but perhaps that 2nd est. still increases the Σ^+ empirical mass outcome a pinch above the mass of our 1st Est.

. In the upper large sketch on pg.12 of the booklet, we estimated a particle mass by averaging our calculated value for an ultra-prominent Resonance (equivalent mass) and our mass est. for a Lambda baryon particle, Λ^0. When averaging such Resonance and particle mass values together, we think using the empirical mass of a particle is a better practice than using 'our estimated particle mass'. Even though the effect, in that pg.12 case, would have been a slightly less accurate est. But when we use the equivalent mass of an ultra-prominent 'Resonance', I think the use of our calculated (estimated) 'Resonance' is more appropriate.

. Regarding 'circular feedback', suppose the following is averaged**:** The pattern,1 sphere around 6 close-packed around 8 electrons, see pg.17, 1175. electrons, and the empirical light Xi baryon, $\mathbf{\Xi^0}$, 2573.1 electrons. That ave. = 1874.05 electrons, a great est. for the Eta Prime meson, η', 1874.1 electrons. **But** on pg. 10 we obtained that ($\mathbf{\Xi^0}$), 2573.1 electrons value by averaging the Eta Prime, (η'), mass and the mass of the Omega Hyperon (baryon), (Ω^-). So, we seem to be using (η'), and (Ξ^0) in a ('chicken lays egg, egg hatches chicken' -- which came first?) -- 'circular' manner. Thus, it is especially nice to have built and estimated the Eta Prime (η'), mass **independently** of the above, see pg. 16! But still, importantly, 'circular feedback' results in a more stable particle than otherwise, and often, I think, provides a very slight influence in a particle's empirical mass outcome.