1.01 — Classification

← 1.00 — Setting The Stage

If you look online, particularly at the Exoplanet Catalog[1], you'll quickly see that there is a (frankly) bewildering variety of bodies described there, divided into five broad categories:

1. Terrestrial — Earth-mass and less
2. Super Earth — Earth-mass up to Neptune mass (< 17⊕)
3. Neptune-like — Upper mass value not clearly identified
4. Gas Giant — Upper mass not specified, but other sources put the limit at ≈ 0.08☉ ≈ 132♃ ≈ 4131⊕
5. Unknown (we know *something* is there, but that's about it for now)

I highly recommend exploring it and marveling at the sheer variety the universe offers us; but, the thesiast is left still bereft of any kind of organized, catagorical, systematic way of thinking about planemos that can guide their construction for fictional and experimental purposes. So, I propose the following system.

> Please note that this is not in *any* way meant to serve as a real-world planemo classification system, and real-world bodies likely exist that do not fit into this system. I invoke *sed ego dico fictiae*: it's not meant to be "real", it's meant to be *useful*.

The Family of -mo

While the -mo part of Dr. Basri's coinage, *plane**mo***, means "mass-object", and I believe that mass is the most appropriate parameter to use as the base of our system —

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> **Keppy**: Because we've already established **radius** as an *emergent property* arising from the interaction of **mass** and **density**?

Yes. However, I think a level of categorization is need *above* mass that forms a general grouping of the *kinds* of objects -mos are —

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> **Hippy**: Based on **density**.

Precisely.

If we look at the exoplanet catalog list at the beginning of this conversation, more-or-less is already based on material components; rocky, icy, gaseous. I propose that our system follow suite by defining four basic planemo classes:

1. ***Telluric*** (from Latin *Tellus*, one of the Roman Earth goddesses) – Fully solid planets (rocky, carbon-rich, metallic remnants).
2. ***Astatic*** (from Greek *a* "not, none" + *status* "state condition") – Mixed-phase planets (icy, oceanic, or chemically altered worlds that have no fixed state).
3. ***Aeric*** (from Latin *aer* "air") – Gaseous planets (gas dwarfs, ice giants, and gas giants).
4. ***Ulsic*** (from Latin *uls* "beyond") – Exotic or theoretical matter planets (placeholder for degenerate matter worlds if needed).

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1. https://science.nasa.gov/exoplanets/exoplanet-catalog/ ↩