

FUNDAMENTAL

FORCES OF PHYSICS / ELEMENTAL

STRENGTH / SPHERE SIZE ANALOGY *

FORCES OF MAGIC (K) SEB

TYPE

RANGE

RELATIVE STRENGTH

STRENGTH / SPHERE SIZE ANALOGY *

SIMPLIFIED PHYSICAL EXPRESSION

PROPOSED ELEMENTAL ATTRIBUTION

STRONG

SHORT

1

radius of observable universe (about 10 billion light years)

NUCLEAR COHESION

△ FIRE

ELECTRO-MAGNETIC

INFINITY

10^{-3}

radius of 10 million light years (the closest spiral galaxy is about 2 million light years distant)

WAVES

▽ WATER

WEAK

EXTREMELY SHORT

10^{-14}

centered on the sun, the sphere extends beyond the orbit of Jupiter.

DECAY PROCESSES (DISPERSION)

△ AIR

GRAVITATIONAL

INFINITY

10^{-40}

radius of the nucleus of an atom

MASS

▽ EARTH

* These are rough analogies intended merely to aid in visualization of the relative strengths of the physical forces, SEB