Universe Filled With Card Decks

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30,000 Universe Radii

Planck length (1899, Max Planck):

$$\ell_P = \sqrt{\frac{\hbar G}{c^3}} = 1.616255(18) \times 10^{(-35)} \text{ cm} \qquad (1)$$

Radius of the Universe

$$R = 4.4 \times 10^{(28)} \text{ cm} = (2.7 \times 10^{63})\ell_P \qquad (2)$$

If each deck is ℓ_P thick need more than 29,873 Universes.

$$52! = (8.0658 \times 10^{67}) = 29873.3982 \times (2.7 \times 10^{63}) \qquad (3)$$

1175 Milky Way Galaxies

Volume of a deck of cards:
$$1.9 \text{ cm} \times 6.4 \text{ cm} \times 8.9 \text{ cm} = 108.2 \text{ cm}^3 \qquad (4)$$

Volume of cards:

$$V = (8.0658 \times 10^{67}) \left(108.2 \text{ cm}^3\right) = 8.7272145535 \times 10^{69} \text{ cm}^3 \qquad (5)$$

Volume of Milky Way Galaxy: $r = 52{,}850 \text{ ly} = 5 \times 10^{22}$ cm, $h = 1{,}000$ ly
$= 9.461 \times 10^{20}$ cm, $V = (\pi \, r^2) \, h$

$$V = 7.4306520239 \times 10^{66} \text{ cm}^3 \qquad (6)$$

Or?: Mini-Decks Filling 1.175 Milky Way Galaxies

Volume of a deck of cards:
$$0.19 \text{ cm} \times 0.64 \text{ cm} \times 0.89 \text{ cm} = 0.1082 \text{ cm}^3 \tag{7}$$

Volume of cards:

$$V = (8.0658 \times 10^{67}) \left(0.1082 \text{ cm}^3\right) = 8.7272145535 \times 10^{66} \text{ cm}^3 \tag{8}$$

Volume of Milky Way Galaxy: $r = 52{,}850 \text{ ly} = 5 \times 10^{22}$ cm, $h = 1{,}000$ ly $= 9.461 \times 10^{20}$ cm, $V = (\pi r^2) h$

$$V = 7.4306520239 \times 10^{66} \text{ cm}^3 \tag{9}$$