

Chapter III

Size and Mass of the Moon



The Moon sphere is $468\frac{1}{2}$ geographic miles in diameter, $1470\frac{1}{2}$ miles in circumference.

Therefore, it is (according to MÄDLER)

in diameter = 3.67	} times smaller than the Earth.
of surface = 13.44	
of volume = 49.25	

The surface of the Moon contains 689240 geogr. Square miles, the physical volume is 53806000 cubic miles.

Therefore, $49\frac{1}{4}$ Moon spheres would be required to form a sphere of the size of the Earth.

The astronomers also know that the Moon also has a lower average density, according to the investigations of LINDENAU, it is assumed that its mass = $\frac{1}{88}$ of the Earth's mass. [9]

This number is to be understood as the weight of 88 Moon spheres corresponding to equalling the weight of the Earth.

It is also known that when the weight of a water ball of the size of the Earth is 1, the weight of the true Earth is 5.44, from which the total weight of the whole Earth mass can easily be calculated to be about 130000 trillion hundredweight.

The $\frac{1}{88}$ th of the Moon gives the Moon the weight of about 1477 trillion hundredweight: numbers, which in themselves are incomprehensible, as are many others in astronomy, are, by the way, of no scientific value.

If the density of the Earth = 1, then that of the Moon = 0.5614, or the former = 5, assuming the value of the Moon = 2.8. [10]

From this, according to other known laws, the drop height on the surface of the Moon is found in the first second = 2,314 Parisian feet: a gravity $6\frac{1}{2}$ times smaller than that which takes place on the Earth. [11]