

# Calculating Newton's Constant using the Monster Sporadic Group Elements

*Source:* <http://sci.tech-archive.net/Archive/sci.physics.particle/2004-07/0017.html>

---

*From:* Mark A. Thomas (*marsthoimas\_at\_netzero.net*)

*Date:* 07/05/04

Date: 5 Jul 2004 15:23:24 -0700

This calculation involves using the number of elements (maximum symmetries) of the Monster Finite Group as a limit.

The number of elements of the Monster is a very large precise integer based on its order of prime factorization and is equal to:

80,801,742,479,512,875,886,459,904,961,710,757,005,754,368,000,000,000

It is 53 digits in length. If the 2002 Codata (most recent) values are used the following calculation is very close (accurate but not precise) to the number of Monster elements:

$$(4/a^4) (M_p^2/m_e^2) [(((M_p^2/m_n^2)^{1/65536}) - 1.00)^{-1}]^{1/2048}$$
$$= 8.07831... * 10^{53}$$

To make it easier for readers here is a quick compilation of the 2002 Codata values used:

electron mass ( $m_e$ ) =  $9.1093826 * 10^{-28}$  g (8 significant figures)  
neutron mass ( $m_n$ ) =  $1.67492728 * 10^{-24}$  g (9 significant figures)  
Planck mass ( $M_p$ ) =  $2.176745 * 10^{-5}$  g (6 significant figures)  
fine structure constant ( $a$ ) = 0.007297352568 (10 significant figures)

The Planck mass ( $M_p$ ) is the limiting term since its Codata precision is out to six significant figures.

In addition notice the symmetry of the calculation. We can assume that the values of the electron mass, neutron mass and the fine structure constant are very accurate, precise and certain as opposed to the historical ever changing uncertain value of the planck mass which is based on a classically determined uncertain value of Newton's constant  $G$ . ( $G$  and  $M_p$  Codata is based on the 1999 eotvos value).

Since the Monster elements are significant out to 53 figures we can

## sci.physics.particle: Calculating Newton's Constant using the Monster Sporadic Group Elements

set the calculation to converge on a more precise number of Monster elements. In that we are performing a dimensionless act with a symmetrical calculation the planck mass and hence G (Newton's constant) can be refined to 7 or 8 significant figures well within Codata error.

This places the Monster elements =  $8.0801742... \times 10^{53}$  (8 significant figures)

This predicts accurate and precise Monster Limit values:

$$G = 6.6726603 \times 10^{-8} \text{ cm}^3/\text{gs}^2$$
$$M_p = 2.1767016 \times 10^{-5} \text{ g}$$

However, it must be noted that the calculation cannot recover the precise and full Monster integer due to limited precision of values.

As to the nature of the inverse powers of 65536 and 2048 the only thing i can say at this point is that  $65536 = 2^{16}$  and  $2048 = 2^{11}$ .

As to whether this is a valid approach to calculating G non-classically who knows. But, with the advent and final construction of all the Sporadic finite groups culminating with the Monster in the late 20th century maybe this is a new approach to calculating G within/out ? of the standard model.

As crazy as this may seem i consider this a front door approach since the Monster is historically very young and probably under-utilised in physics.