Subject: Re: Physical constants in IDL with !CONST
Posted by Heinz Stege on Thu, 20 Dec 2012 17:36:21 GMT
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On Thu, 20 Dec 2012 06:24:31 -0800 (PST), wlandsman wrote:

> I wonder if the constants should be !DtoR and !RtoD (or RADEG and DEGRA) to correct the earlier inconsistency in the ancient history of IDL. I'm not sure about this, though. --Wayne
>
A lot of discussions for a little thing, that everyone can do her or himself within a startup file.

However, I think Wayne is absolutly right.

A similar point is, that I wouldn't name the elementary charge "eV". I know, there is a name conflict with the Euler's number. However the Euler's number can simply be calculated by number=exp(1d). Therfore I suggest to simply remove it from the table.

Please realize, that most of the "constants" are from physics and chemistry and the Euler's number is a mathematical number which never will change. (You may argue, that pi also is a mathematical constant, however it is needed [even though by definition] for the calculation of the magnetic constant mu0=4d*!dpi*1d-7)

The name "ev" for the elementary charge is confusing, because the definition of the elementary charge constant has nothing to do with the energy unit "electron volt". The reason for 1 eV being 1.602... 10^-19 J only reflects, that changing the potential of a charge e about 1 V means an energy change of 1.602... 10^-19 J.

Thats what I wanted to say.

Cheers, Heinz