Subject: units conversion
Posted by Jason Li on Wed, 28 Feb 2001 03:30:01 GMT
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Hi,

MODTRAN package outputs atmospheric profile in tape 6. The physical unit
used for the gas concentration is in ATM CM/KM. I want to convert it to any
one of the following units:

g/Kg
ppmv,
g/m3

Help please and thanks in advance

jli@wam.umd.edu

Subject: Re: units conversion
Posted by jeyadev on Thu, 01 Mar 2001 00:03:59 GMT
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In article <B6C1DAE9.46C8%jylimd@yahoo.com>,
Jason Li <jylimd@yahoo.com> wrote:
> Hi,
>
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> used for the gas concentration is in ATM CM/KM. I want to convert it to any
> one of the following units:
>
> g/Kg
> ppmv,
> g/m3

What are CM and KM? Centimetres and kilo-mole?

--

Surendar Jeyadev jeyadev@wrc.xerox.com

Subject: Re: units conversion
Posted by Craig Markwardt on Thu, 01 Mar 2001 01:33:24 GMT
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Jason Li <jylimd@yahoo.com> writes:
> Hi,
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> used for the gas concentration is in ATM CM/KM. I want to convert it to any
> one of the following units:
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> g/Kg
> ppmv,
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I'm still wondering: what's the big deal? If you need three conversions, then you can probably figure the scale factors once for all three and just put them in your code. [It must be harder than this.] In fact, given that that this was cross-posted to meteorology, is it even related to IDL at all?

Craig

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Craig B. Markwardt, Ph.D. EMAIL: craigmnet@cow.physics.wisc.edu
Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response
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Subject: Re: units conversion
Posted by Paul van Delst on Thu, 01 Mar 2001 14:39:19 GMT
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Craig Markwardt wrote:
>
> Jason Li <jylimd@yahoo.com> writes:
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> I'm still wondering: what's the big deal? If you need three
> conversions, then you can probably figure the scale factors once for

> all three and just put them in your code. [It must be harder than
> this.]

It is a big deal and it is harder than that. Units conversion, particularly for the numerous and arcane ones used in various meteorological and atmospheric spectroscopic fields, is a lot more trickier than people think. Particularly when integrated quantities are involved and interpolations must be performed etc.

> In fact, given that that this was cross-posted to
> meteorology, is it even related to IDL at all?

Maybe he reads the MODTRAN output in IDL for plotting the results.

paulv

--
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Fax:(301)763-8545
pvandelst@ncep.noaa.gov

A little learning is a dangerous thing;
Drink deep, or taste not the Pierian spring;
There shallow draughts intoxicate the brain,
And drinking largely sobers us again.
Alexander Pope.