Subject: Re: about the blackbody radiation curve
Posted by mankoff on Fri, 03 Sep 2010 05:40:39 GMT
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On Sep 2, 8:37 pm, panshu Zhao <rochesterz...@gmail.com> wrote:
> if x=0 then begin
no.

Subject: Re: about the blackbody radiation curve
Posted by Wout De Nolf on Fri, 03 Sep 2010 12:36:10 GMT
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On Thu, 2 Sep 2010 20:37:29 -0700 (PDT), panshu Zhao
<rochesterzhao@gmail.com> wrote:

> PRO radiation
>
>
> h=6.626068e-27;
> k=1.38066e-16;
> c=2.997925e+10;
> t=6000;
> x=findgen(100)*0.0000001;
> a=2*h*(c^2)*(x^(-5));
>
> if x=0 then begin
> y=0
> endif else begin
> y=(a)/ (exp((h*c)/(k*x*t))-1)
> endelse
> plot,x,y
>
> END

Do something like

y=a/(exp((h*c)/(k*x*t))-1)
ind=where(x eq 0,ct)
if ct ne 0 then y[ind]=0

Subject: Re: about the blackbody radiation curve
Posted by Paul Van Delst[1] on Fri, 03 Sep 2010 13:52:47 GMT
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Wox wrote:

>
> Do something like
>
> y=a/(exp((h*c)/(k*x*t))-1)
> ind=where(x eq 0,ct)
> if ct ne 0 then y[ind]=0

I would recommend checking stuff before the calculation is done:

```
  ; Check values
  loc = WHERE(x LT Tolerance OR FINITE(x) EQ 0, count)
  IF ( count GT 0 ) THEN $
    MESSAGE, 'Input X-values < or = 0.0, NaN, or Inf found.'
```

where "Tolerance" is the eps output from MACHAR. One should avoid floating point equality tests.

cheers,

paulv
