
Subject: Re: Flame velocity in explosion
Posted by [wbiagiot](#) on Wed, 02 Feb 2000 08:00:00 GMT
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Lol, Ok Murray.

Well, I'm not sure what your thought process on this is, but here are some of my 1st thoughts and not necessarily related to IDL. Your problem as stated is a calculation of velocity (distance over time, I believe). You've stated that you have the time data and therefore need the distance data to complete the equation. Simplistically, one might assume that the flame starts from a single point in 3d space (XYZ)(spark from an electrode, ie.). Then, you could apply the old $D^2 = \Delta X^2 + \Delta Y^2 + \Delta Z^2$ distance formula on each data pt to calculate a matrix of velocity data. If you want to present some kind of snazzy visual display, draw all of the velocity vectors on a 2D or 3d plot with the color set to a value corresponding to speed. Something like:

```
color_code = ((velocity_n - min_velocity) / (max_velocity - min_velocity)) * 255
```

..giving a color code of 0 to 255.

Oh yeah, and set the color table to one of the 40 or so that IDL supplies. Something like the 3d trackball widget might give some viewing options, but I have never used it. See the IDL demo to see how it works.

Well, I sketched that all out on my bagel plate so I'm sure it's at least 50% incorrect. (The seeds get in the way) Feel free to let me know that I'm all wet.

-Bill B.

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"They don't think it be like it is, but it do."

Oscar Gamble, NY Yankees

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