
Subject: Re: Colliding galaxies in 3-D object?

Posted by [Dick Jackson](#) on Wed, 18 Feb 2004 06:59:01 GMT

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"Richard G. French" <rfrench@wellesley.edu> wrote in message
news:BC581B0F.1C17%rfrench@wellesley.edu...

> Hi, Folks -

> For an astrophysics class I'm teaching, I'm having the students write
a

> simple simulation of colliding galaxies (in IDL). They've got the
basic code

> working in standard graphics mode, with color coding for the stars in
the

> two galaxies and front and side views of the collision as it unfolds
over

> hundreds of time steps. What I'd like to do next is to view the
collision in

> 3-D with mouse control over the viewing angle and (ideally) the zoom
as

> well. The input information is a set of arrays of 3-D coordinates for
N red

> stars and N green stars, for M time steps. Can someone point me to the
3-D

> object routine in IDL that should be able to handle this, and (better
yet)

> alert me to any gotchas I should worry about as I try to implement
this?

>

> Thanks for any suggestions!

> Dick French

> rfrench@wellesley.edu

Hi Dick,

Rick Towler and I gave similar replies to a similar question last week
(thread: "An Interactively rotating 3D animation ?"... my only
half-usable post can be found by Googling for the word `AnimateXObjView`).
This might be a starting point for you, and the objects to put in the
`XObjView` could be:

`n = 100 ; Number of stars in each galaxy`

`t = 2 ; If you want more than single-pixel stars`

`xyzRed = RandomN(seed, 3, n) - 1 ; (3, n) coords`

`xyzGreen = RandomN(seed, 3, n) + 1 ; (3, n) coords`

`oRed = Obj_New('IDLgrPolygon', xyzRed, Color=[255,0,0], $
Style=0, Thick=t)`

`oGreen = Obj_New('IDLgrPolygon', xyzGreen, Color=[0,255,0], $
Style=0, Thick=t)`

(to simply see what these looks like, just paste the above into the command line and do:

```
XObjView, [oRed, oGreen]  
)
```

Then, at each time point (my section labeled "Modify objects viewed in XObjView window"), update the objects by:

```
oRed -> SetProperty, Data=newXYZRed  
oGreen -> SetProperty, Data=newXYZGreen
```

Hope this helps!

Cheers,

--

-Dick

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