

Re: Comet thought experiment.

Source: <http://sci.tech-archive.net/Archive/sci.astro.amateur/2005-01/2174.html>

From: Hilton Evans (*hiltonevans_at_dont_spam_me.net*)

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"GD" <alfa@melb.something.au> wrote in message
news:Xns95DCC0D3736A9alfamelbsomethingau@203.87.95.150...
> *Upfront I'll say that I dont have any of the bits of equipment required*
> *to try this idea, all my astrophoto stuff is film based. Not a CCD or*
> *laptop in sight.*
>
> *On the topic of comet hunting:*
> *It seems that there is such a thing as a "typical comet spectrum". Doing*
> *a google search on the topic seems to bear this idea out anyway.*
>
> *What I had in mind was taking a few CCD images of the same patch of sky,*
> *each image taken through a different filter (UHC, Swan Band etc...).*
> *Then a bit of software would look though the images and display a view*
> *based on how similar the intensities of each pixel in those images*
> *represented the intensities expected by a comet.*
>
> *You'd calibrate and set it up using filtered images of known comets of*
> *course.*
>
> *If this idea worked for *most* comets, and imaging only took a minute*
> *or so, and the computer analysis was quick, then I imagine a heap of sky*
> *could be scanned quite quickly for new comets since you arent looking for*
> *movement, just the right spectrum.*
>
> *Thoughts?*

It's a lot easier and much more efficient to
image the same part of the sky and look for
day to day movements of fuzzy objects.

To acquire a spectrum, you must spread the light
over an extended area. This reduces the
sensitivity greatly. For an extended object,
like a comet you would need a slit which
reduces the sensitivity even more.

Finally your software would have to sift

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through the haystack of stellar spectra
to find that needle of a comet spectrum.

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Lon -71° 04' 35.3"

Lat +42° 11' 06.7"

Webcam Astroimaging

<http://home.earthlink.net/~hiltonevans/astroimaging/astroimaging.htm>

ChemPen Chemical Structure Software

<http://www.chempensoftware.com>