Subject: circles on the sky
Posted by Christopher Thom on Fri, 27 Mar 2009 17:53:20 GMT
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Hi all,

I'm drawing some points on a sky map. The map is <0.5deg across, so I thought a flat approximation would be ok...this may not be true. Around my central point, I draw a circle using a flat geometry relation [x = x0+r*cos(theta); y = y0 + r*sin(theta)], but i see a point outside the circle that I expect to be inside.

I expect this point to be inside the circle, because the radius of the circle (in arcsec) is *greater* than the great-circle angular distance from the centre of the circle to the point.

So...I'm thinking that my flat-geometry assumption is false. My question: can anyone point me towards forumlae/code that will calculate this circle on the sky (i.e. all points which have a fixed great-circle distance from the centre)? I'm using the astro library gcirc.pro to calculte my great-circle angular distances...I kind of want the "inverse" of that routine, I guess.

Or...is there a better way to do it? [Or maybe my bug is elsewhere?]

cheers
chris