Subject: Re: Fitting an ellipsoid with MPFITEXPR
Posted by johan[1] on Mon, 10 Jan 2011 12:54:51 GMT
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On Jan 9, 1:27 am, "Phillip M. Bitzer" <phillipbit...@gmail.com>
wrote:
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Thanks for both replies. I used the routines from Ronn Kling for some time but I do have a problem with it. The values for both the size of the axis and the angles do not seems to be right but if I use the calculated second moment values, P, together with k=2 as follow:

theta: 0deg -> 360deg
psi: -90deg -> 90deg
u = [sin(theta)*cos(psi), cos(theta)*cos(psi), sin(psi)]
r = k/sqrt((u # invert(P) # u))

I was able to get the right size and shape of the ellispsoid but still needed the angles.

The routine mpfitellipse.pro is unfortunately only for 2-D. I did try to extend it to 3D. Again, the size of the axes are incorrect in my implementation but in this case the angles are correct!

When I created a "combined" routine by calculating the second moments and using the angles from the 3D implementation of mpfitellipse.pro I am able to get the desired result.

This will work for me but I feel uncomfortable with the fact that I do not get all the correct parameters from either Ron Kling's krEllipsoidFit or the 3D implementation of mpfitellipse, feeling something must be wrong and my implementation will not stand the test of time!