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Subject: Re: Group velocity for Cherenkov photon propagation in G3/G4  
Posted by [Jochen Schwiening](#) on Fri, 28 Jan 2011 18:14:10 GMT

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Hi Oliver,

thanks for the check.

Are you plotting the average velocity per wavelength bin or the velocity for each photon? In the events that I looked at the velocity is almost correct on average but there is a huge spread. Would it be possible for you to plot the velocity per photon vs. the photon wavelength from your sample, similar to the scatter plots I have?

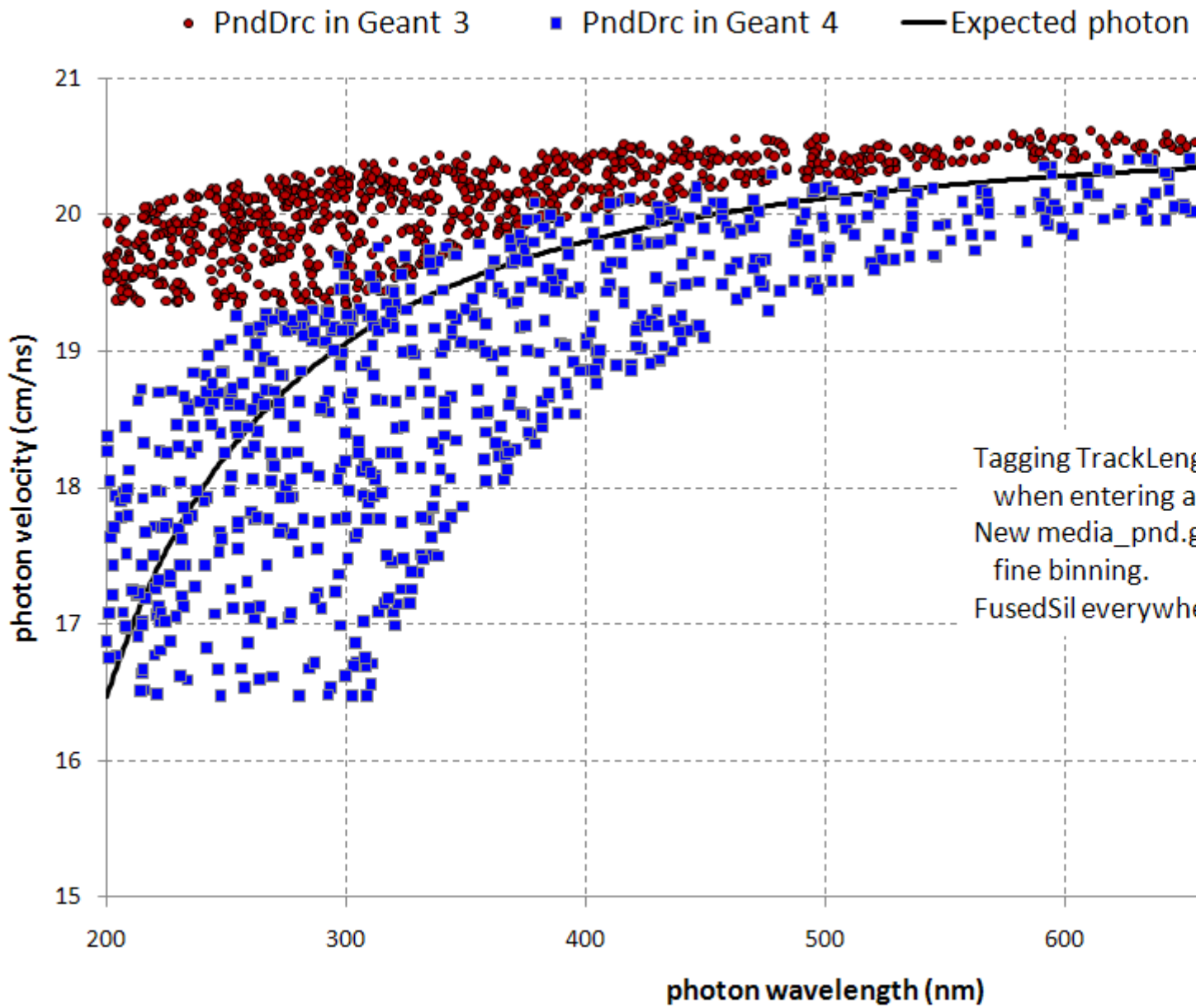
I checked the material properties table for FusedSil in the current official media\_pnd.geo and it looks OK. The binning could be finer and I applied a table with the equivalent of the 1nm binning you recommended. The spread of  $v_{\text{group}}$  for a given wavelength remains the same, as you can see in the attached plot for the finely binned FusedSil.

Cheers,  
Jochen

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## File Attachments

1) [pandaroot\\_geant\\_v\\_vs\\_lambda\\_new\\_files.png](#), downloaded 618 times



Tagging TrackLength  
 when entering a  
 New media\_pnd.g  
 fine binning.  
 FusedSil everywh