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Subject: Re: Group velocity for Cherenkov photon propagation in G3/G4  
Posted by [Oliver Merle](#) on Fri, 28 Jan 2011 18:04:34 GMT

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I checked the group velocity upstream in Geant4 and everything seems to be correct.

Method:

Create photons of different wavelength in a fused silica radiator (manually, not via the Cherenkov process). Export velocity of G4OpticalPhotons and a computed group velocity (using an approximation of  $n_g = n_p - \lambda \cdot dn/d\lambda$ )

Result:

Attached

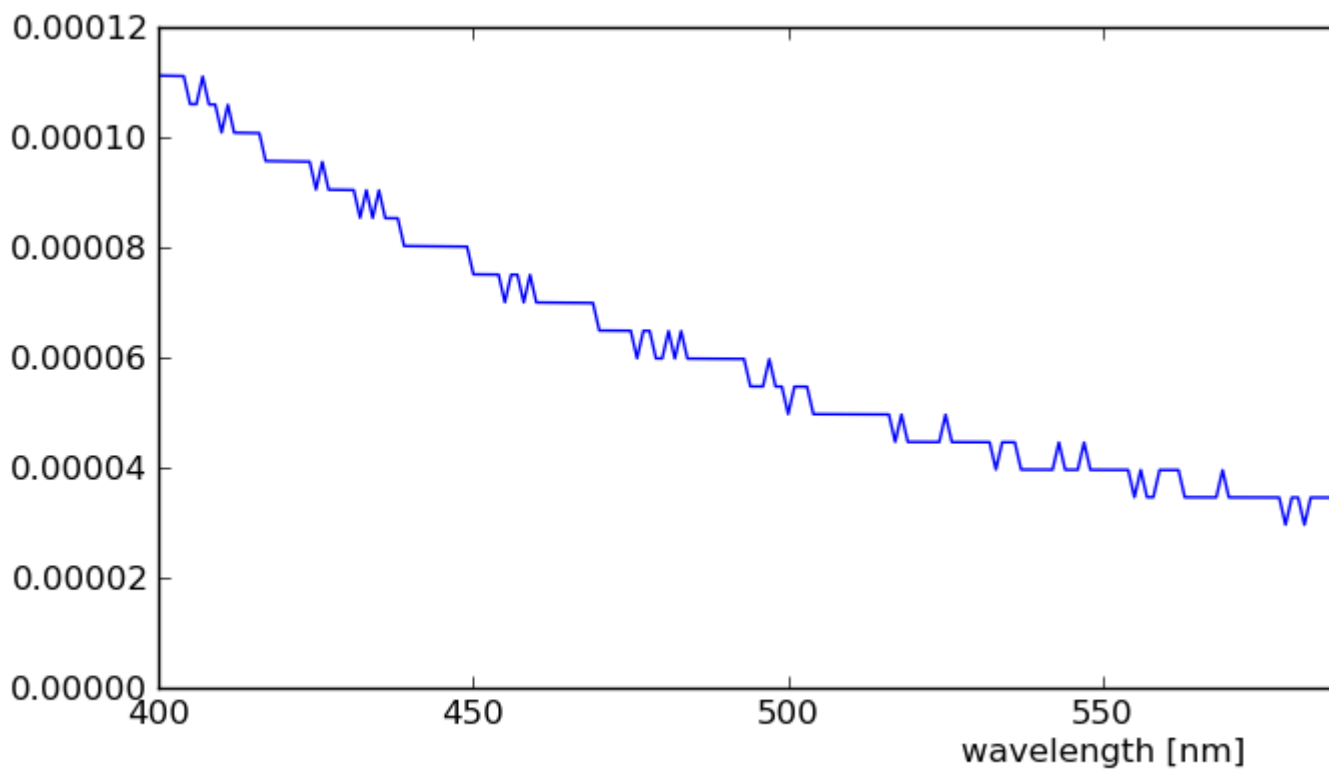
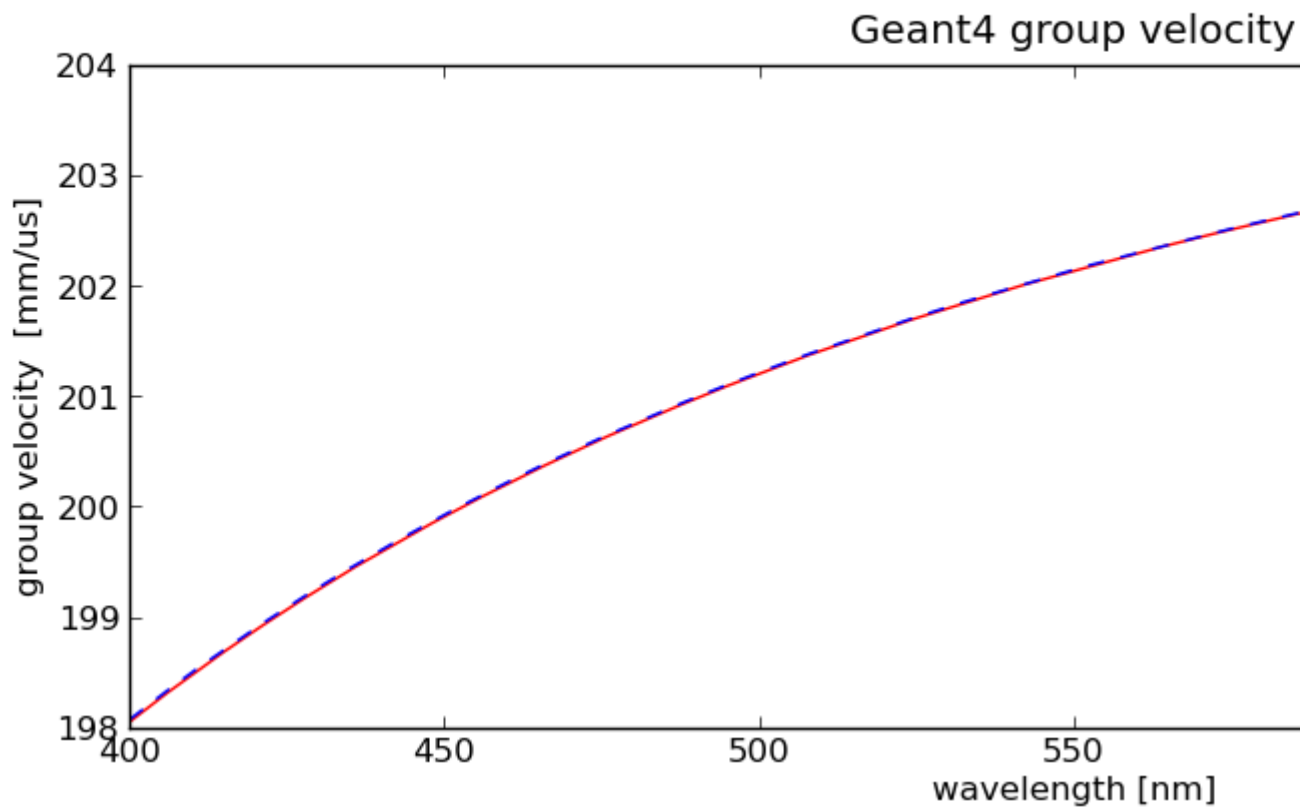
If a bug exists, it is most likely related to wrong material property maps.

Oliver

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### File Attachments

1) [Geant4-GroupVelocity.png](#), downloaded 993 times



2) [wl\\_vs\\_vg.txt](#), downloaded 491 times

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