

**From:** "Carl H. Gibson" <[ir118@sdcc3.ucsd.edu](mailto:ir118@sdcc3.ucsd.edu)>  
**Subject:** **Re: 3D CMB spectrum from the Planck mission data**  
**Date:** September 25, 2015 at 9:39:10 AM PDT  
**To:** Alexander Bershadskii <[bershads@gmail.com](mailto:bershads@gmail.com)>

Looks great!

Sent from my iPhone  
[cgibson@UCSD.edu](mailto:cgibson@UCSD.edu)

On Sep 25, 2015, at 6:37 AM, Alexander Bershadskii <[bershads@gmail.com](mailto:bershads@gmail.com)> wrote:

Dear Prof. Gibson,

I hope things are going fine with you.

Attached please find a file with a 3D CMB spectrum

I have calculated from the recent Planck mission data.

Astrophysicist used to calculate a spherical spectrum.

In the paper 'Physics Letters A 372 (2008) 2741–2745' it is shown how to calculate a straight 3D spectrum from these data (do not mind a physical hypothesis suggested in this paper). That I have done using the file COM\_PowerSpect\_CMB-TT-hiL-binned\_R2.01.txt in the archive <http://pla.esac.esa.int/pla/#results>. The tail after presumably power spectrum  $-5/3$  is exponential. What do you think?

Best  
Sasha

<3D-CMB-spectrum.pdf>