

Review of: "A simple direct empirical observation of systematic bias of the redshift as a distance indicator"

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Potential competing interests: No potential competing interests to declare.

This is an intriguing observation and I agree with at least one other referee that the evidence is well presented. It is compelling that the difference in redshift increases as we focus on directions more closely aligned with the northern galactic pole. Conversely, Fig. 3 shows that the effect becomes diluted as one focuses on larger patches of the sky. Moreover, seeing the opposite effect in the direction of the southern galactic pole provides a sanity check. The author has done a good job taking the reader through different approaches to annotation and the strengths and weaknesses of these approaches.

I have a number of comments.

1. The captions for the figures and tables can be improved to make them more self-contained. For example, in Fig. 1 what are the axes in the second and third figures. What are we expected to take away from these plots?
2. It would be nice if Fig. 2 further decomposed the sample in galaxies rotating with the Milky Way and galaxies counter-rotating. This may give us a better feel for the effective redshift of the sample. As remarked by another referee, it is important to get to the bottom of whether this anomaly is distance dependent or not.
3. It would be good if the author explained how the errors on the redshifts are calculated for Z_{cw} and Z_{ccw} . As an aside, are CC and CCW defined in the text? I may have missed them in my (single) reading. Are the redshifts simply the mean or are they weighted by the errors?
4. The anisotropies typically commented on in the literature are usually in the CMB dipole direction or the direction of the hemispherical power asymmetry. If one sees the same direction in a number of probes, this makes it more compelling. Is the author aware of any other directional anomaly aligned with the Northern Galactic Pole?
5. In terms of statistics, it may be possible to confirm significances from the student t-tests by running simulations in future. One could draw redshifts randomly from the redshift bins in Fig. 2, once one has figured out how many rotating and counter-rotating galaxies are in each bin. This would help the reader get another perspective on how significant are the shifts in redshift seen in observed data.