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COBE and the Absolute Assignment of the CMB to the Earth. PIERRE-MARIE ROBITAILLE, The Ohio State University, DMITRI RABOUNSKI, Gallup, New Mexico — The FIRAS instrument on COBE initially reported a CMB temperature of 2.730+/-0.001 K (1σ). At the same time, using the 1st derivative, FIRAS reported a CMB temperature of 2.717+/-0.003 K (1σ). These two values are significantly different at the 99% confidence interval. In order to remove this significance, NASA lowered the absolute value of the CMB by changing the calibration on the external calibrator long after launch. It also raised the error bars on the second value. However, the observed difference in the CMB temperature measured by these two methods may well constitute evidence that the CMB monopole arises from the Earth. It should be assumed that a second, much weaker, microwave field exists both at L2 (the WMAP position) and at the COBE position. Motion through this much weaker field is responsible for the dipole observed. The value of the CMB temperature obtained by the 1st derivative is sensitive to motion. It is also sensitive to the complicating effect of the weak field also present at L2 when sampling the CMB temperature using FIRAS. The presence of a second weak field at L2 and the Earth is required in order for COBE to be able to resolve this situation. The PLANCK satellite should soon reveal that that CMB monopole does not exist at L2.

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