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Dispersion γZ -box correction to parity violating electron scattering MIKHAIL GORSHTEYN, Indiana University, CHARLES HOROWITZ, MICHAEL RAMSEY-MUSOLF — We review the status of the dispersion γZ correction to parity violating elastic electron scattering. This correction is of particular importance for the measurement of the weak charge of the proton within the Q_{WEAK} experiment. Recently, it was shown that the dispersion γZ correction is substantially larger than it was assumed in earlier analyzes. We review the sources of the uncertainty when calculating this correction, and carefully examine possible model dependence of theoretical calculations. Our conclusion is that currently, the theoretical uncertainty associated with this correction exceeds the projected full theory uncertainty of the Q_{WEAK} experiment and needs further study.

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