perturbation itself. For an electron density perturbation, the steady-state terms in the brackets are not zero, implying that their product with the partial derivatives in eq. 8 are *not* ignorable. The transport coefficients $D_e^p = -\partial\Gamma_e/\partial\nabla n_e$ and $V_e^p = \partial\Gamma_e/\partial n_e$ of the perturbation of the electrons are then to be viewed as the diffusivity and convection of the perturbation. They are related to, but may not be equivalent to, steady-state values. This has powerful implications: knowledge of the steady-state transport obtained from particle balance and the perturbation transport coefficients obtained from gas puffing can provide constraints on the density and gradient dependence of the underlying transport mechanisms.[38] The different interpretations of D_e^{eff} and D_e^p has been underscored in this work and may relate to the similarities and differences between the two quantities, as is discussed in Section II.C.3.

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