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	abstract	The Hamiltonian formulations for the perturbed Vlasov-Maxwell equations and the perturbed ideal magnetohydrodynamics (MHD) equations are expressed in terms of the perturbation derivative $\partial{\cal F}/\partial\epsilon \equiv [{\cal F}, {\cal S}]$ of an arbitrary functional ${\cal F}[\vb{\psi}]$ of the Vlasov-Maxwell fields $\vb{\psi} = (f,{\bf E},{\bf B})$ or the ideal MHD fields $\vb{\psi} = (\rho,{\bf u},s,{\bf B})$, which are assumed to depend continuously on the (dimensionless) perturbation parameter ϵ. Here, $[\;,\;]$ denotes the functional Poisson bracket for each set of plasma equations and the perturbation {\it action} functional ${\cal S}$ is said to generate dynamically accessible perturbations of the plasma fields. The new Hamiltonian perturbation formulation introduces the framework for the application of functional Lie-transform perturbation methods in plasma physics and highlights the crucial roles played by polarization and magnetization in Vlasov-Maxwell and ideal MHD perturbation theories.	**abstract**	The Hamiltonian formulations for the perturbed Vlasov-Maxwell equations and the perturbed ideal magnetohydrodynamics (MHD) equations are expressed in terms of the perturbation derivative âˆ‚F/âˆ‚Ïµâ‰¡ [F, S] of an arbitrary functional F[Ïˆ] of the Vlasov-Maxwell fields Ïˆ = (f, E, B) or the ideal MHD fields Ïˆ = (Ï, u,s, B), which are assumed to depend continuously on the (dimensionless) perturbation parameter Ïµ. Here, [,] denotes the functional Poisson bracket for each set of plasma equations and the perturbation action functional S is said to generate dynamically accessible perturbations of the plasma fields. The new Hamiltonian perturbation formulation introduces a framework for functional perturbation methods in plasma physics and highlights the crucial roles played by polarization and magnetization in Vlasov-Maxwell and ideal MHD perturbation theories. One application considered in this paper is a formulation of plasma stability that guarantees dynamical accessibility and leads to a natural generalization to higher-order perturbation theory.		
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