A kinetic approach to the propagation of disturbances in liquids
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— Intermolecular forces play a key role in the propagation of disturbances in liq-
uids. The details of interaction are best accounted for in the framework of the
Kinetic Theory. In this work, the propagation of disturbances is investigated from
the point of view of Kinetic Theory: starting from the Vlasov equation, the self-
consistent field is calculated for intermolecular forces and a form of wave equation
is obtained, where the dispersion relation depends on the type of intermolecular in-
teraction considered. A criterium is found to establish whether or not a disturbance
can propagate, criterium which again depends on the details of the interaction.

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