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# Self-consistent Alfvénic wave heating and its effect on the structure of the global inner heliosphere

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The interaction of outward-travelling Alfvén waves with the interplanetary medium has been identified as a major heating agent for the solar wind. Past attempts to model this non-linear fluid-wave interaction, which consists of both an accelerating wave pressure gradient and a direct heating by ion-cyclotron dissipation at larger heliospheric distances, have either employed purely radial models, or have condensed the waves' spectral information into one or two single scalar fields. We briefly review the existing work and present first results of our recent attempts to self-consistently model this interaction. We follow the waves' detailed spectral shape in more than one spatial dimension as the system settles into a configuration reminiscent of Solar minimum conditions. Consequences for the modeling of heliospheric transients such as coronal mass ejections will also be discussed.