Solar resonant P-mode oscillations in the 5min range are excited by the convective motions under its visible surface. Those oscillations are mostly known to be trapped acoustic Eigenmodes and waves propagating near the temperature minimum. They are readily observed in velocity and temperature (intensity) variations at the photospheric level, but not too often in the chromosphere and the corona, where they are documented only under some specific favorable conditions when waves are guided and transformed by the concentrated magnetic field. Their quantitative role in the physics of the solar atmosphere, its heating and plasma acceleration is still unclear. It is due to their mode transformation, reflection and dissipation during the propagation from the source regions which are also not well determined. Estimates of the propagating and standing parts are still not certain. Those estimates are needed for the energy budget evaluations in the solar atmosphere. Observations of 5-min oscillations in the solar corona are scarce and puzzling because of the poor knowledge of many relevant physical parameters. We discuss the suggested interpretations of available “Hinode” data as well as of recent observations onboard the “Coronas –Photon” satellite in 2009 and indicate their insufficiency for obtaining correct one-valued solutions. We point out the impossibility to identify and split the modes in the inhomogeneous and time variable solar atmosphere because of non-linearity in many instances. Finally, we analyze the question of the role of other waves and non-wave structures linking the levels in the solar atmosphere and conclude that this role is generally increasing with the height. This also means that quasi-steady models of the solar wind outflow formation are of very limited usefulness.