Subvisual travelling auroral structures.

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There is continuous energy and information exchange between different regions of magnetosphere, partially, by some types of MHD-waves. For example, solar wind irregularities generate different waves spreading inside magnetosphere. These waves can activate auroral arcs flashers, be a trigger mechanism for substorm development, etc. In turn, fast auroral arcs activations (and so, strong modulation of FAC's) can generate MHD-waves spreading north and south and stimulating activity in another regions of magnetosphere. Travelling through magnetosphere plasma, waves obviously modulate the fluxes of precipitating particles and so can produce some optical effects as very weak moving auroral structures. Using modern methods of image processing and filtering gives a possibility to detect and study these structures by TV cameras. Some examples of TV investigations of subvisual moving auroral structures together with ground-based data both for Spitsbergen and Lovozero latitudes are presented in our report.