

Interaction of the Cometary Plasma with Solar Wind Found in the Image Data Observed from the Ground

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An interaction of solar wind with cometary plasma has been studied by using the IHW archive data being focused on the variation of the side ray structures and the ion motions along the magnetic field lines of side rays. The direction of rays tend to gradually directed toward the main tail direction reflecting the distribution of the solar wind velocity near the Halley's comet and in the tail region. We measured the ion flow speed along a side ray by comparing the location of ion blobs identified in images. The ion flow speed along the ray structure is in a range from 20km/sec to 120km/sec depending on the distance from the tail axis. It is interpreted that the cometary ions are accelerated along the magnetic field line due to a possible wave-particle interactions with the solar wind plasma.