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A Statistical Analysis of Shock Wave Extension in the Inner Heliosphere as observed by the two Helios probes

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The two Helios probes traveled at variable longitudinal and radial separations through the inner heliosphere. They collected most valuable high resolution plasma data for an entire solar cycle. The mission is still so successful that no other missions will collect the same kind of data in the next 20 years. One of the subjects studied after the success of the Helios mission was the identification of more than 390 shock waves driven by Interplanetary Coronal Mass Ejections (ICMEs). Combining the data from both probes, we make a statistical study for the extension of the shock waves in the interplanetary medium. For longitudinal separations of 90° we found a cutoff value at this angular separation. A shock has 50

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