Calibration issues with data from the ISO-SWS. I

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The Short Wavelength Spectrometer (SWS) on the Infrared Space Observatory (ISO) observed a wide range of astronomical objects, from star-forming regions to main-sequence stars to planetary nebulae and supernova remnants. These objects have fundamentally different spectral shapes in the mid-infrared. Because of this, different problems in the calibration process will affect different object types in varying degrees. The brightness of a source and the speed at which it was observed also influence which calibration issues dominate and which are relatively unimportant. For example, bright stellar sources are affected by memory effects in Band 2, but weak stellar sources are generally well-behaved. Intrinsically red sources, on the other hand, such as planetary nebulae or star forming regions, can be influenced by memory effects in Band 4 as well as Band 2. Corrections for the "glitches" present in all sources can corrupt important information in those with fine-structure lines present. Extended sources are more susceptible to pointing issues than point sources. We will discuss these and other issues related to the type of object observed.