

Understanding Long-term Changes of the VIRGO Radiometer and Sunphotometer in Space
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During the evaluation of the VIRGO data a model for the changes of the sensitivity of radiometers and sunphotometers in space has been developed. It is based on changes of quartz due to siliconizing by e.g. UV radiation which seems to be adequate for most of the changes of transmission, reflectance and absorptivity of optical surfaces and material. Another important aspect is the temperature dependence of these changes. It is not through a Boltzman factor influencing the rate of degradation, but as temperature correction of the amplitude of the exponential function. Moreover, it seems to be stronger during high activity and practically negligible during low activity. This model may help also to improve also the corrections for other space experiments.