Errors

Us

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1   Monte-Carlo Error Simulation

The table below lists the various errors included in the analysis. Some quanties, such as the quiet sun radio flux density have an 90% error band listed. Others, such as the estimated S-component radio flux, has an error related to its value, due to the increasingly complex mix of contributions as the general activity is higher.

Parameter	Symbol	Value	Error
Quiet Sun radio flux density	F_0	67.5	± 0.5
Estimated S-component Flux	$S_{10.7}$	-	$\epsilon = 0.02 S_{10.7}$
Strong-Field Flux	Φ_S	-	$\epsilon = 0.03 S_{10.7}$
Weak-Field Flux	Φ_W	-	± 3 mfu, random
Slow Activity	$\frac{\partial I}{\partial S^*_{10.7}}$	0.016	± 0.008, random
Irradiance	I	-	± 0.1, random

In all cases the quantities are assumed to have Gaussian distributions with the indicated bands or errors indicating the 90% probability bands. A large number of Monte-Carlo simulations were run. The Figure shows a central plot showing values where no error is assumed, and the lines above and below this plot define the space wherein 90% of the solutions including errors lie.