

Supporting Information for “Global Sensitivity Analysis and Uncertainty Quantification for Background Solar Wind using the Aflvén Wave Solar Atmosphere Model”

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Tables S1 and S2.

In total, 174 AWSoM simulations are retained for CR2152 (solar maximum) and 199 for CR2208 (solar minimum). The tables given below contain all the parameter settings for the runs that were not included in the uncertainty analysis, either because the run failed or did not meet the criteria outlined in Section 4 of the manuscript.

FactorB0	nChromoSi	PoyntingFluxPerBSi	LperpFlimesSqrtBSi	StochasticExponent	rMinWaveReflection	realization	PFFS	UseSurfaceWaveRef
0.6588	3.1232e18	1.032e6	146910.0	0.28168	1.0558	7	FDIPS	true
0.77976	6.50e17	633600.0	30270.0	0.12712	1.0786	6	FDIPS	true
0.8748	8.288e17	1.0288e6	68610.0	0.23032	1.0318	6	HARMONICS	true
0.6372	6.752e17	1.0608e6	140430.0	0.17464	1.091	1	FDIPS	false
0.93528	1.1168e18	776000.0	61590.0	0.14344	1.13859	12	HARMONICS	true
0.8316	4.0736e18	1.0448e6	115590.0	0.28888	1.0706	4	HARMONICS	false
0.66312	3.5744e18	972800.0	270030.0	0.24376	1.117	6	FDIPS	false
0.54648	1.3952e18	814400.0	50250.0	0.13624	1.1654	10	FDIPS	false
1.40184	2.8256e18	630400.0	63750.0	0.178	1.1078	12	HARMONICS	false
0.79272	4.1696e18	926400.0	71850.0	0.18712	1.0538	12	FDIPS	true
0.594	1.3472e18	1.056e6	37290.0	0.23608	1.18859	1	HARMONICS	true
0.92664	4.5728e18	952000.0	45390.0	0.33784	1.0354	8	HARMONICS	false
0.95256	2.2496e18	908800.0	85890.0	0.31528	1.0166	2	HARMONICS	false
0.7452	6.944e17	1.0832e6	279750.0	0.27208	1.18259	3	FDIPS	false
0.94824	2.9792e18	808000.0	101010.0	0.27496	1.0874	7	HARMONICS	true
1.01304	9.728e17	720000.0	72930.0	0.13144	1.0174	5	FDIPS	false
0.88344	3.5168e18	1.0016e6	68070.0	0.11176	1.1938	5	FDIPS	false
0.73224	1.616e18	1.0032e6	104250.0	0.24136	1.0134	11	HARMONICS	false
1.1124	5.792e17	704000.0	238710.0	0.31816	1.0038	3	FDIPS	false
0.56376	1.6544e18	1.0752e6	190650.0	0.28024	1.0326	12	FDIPS	false
0.77112	2.432e17	900800.0	54570.0	0.25816	1.1962	11	HARMONICS	true
1.17288	1.9616e18	753600.0	98310.0	0.19528	1.009	12	HARMONICS	true
1.07352	3.872e17	752000.0	39450.0	0.118	1.0942	4	HARMONICS	false
0.86616	7.232e17	832000.0	172290.0	0.10888	1.155	4	HARMONICS	true
0.8532	3.008e17	992000.0	183630.0	0.21496	1.1242	7	HARMONICS	false
0.82728	3.68e17	640000.0	93990.0	0.26824	1.1262	8	HARMONICS	true

Table S1. Parameter settings for non-converged or non-physical simulations for CR2152 (solar maximum)

FactorB0	nChromoSi	PoyntingFluxPerBSi	LperpTimesSqrtBSi	StochasticExponent	rMinWaveReflection	realization	PFSS	UseSurfaceWaveRef
1.25928	8.0e17	790400.0	268950.0	0.18808	1.1282	3	FDIPS	false

Table S2. Parameter setting for non-converged or non-physical simulations for CR2208 (solar minimum)

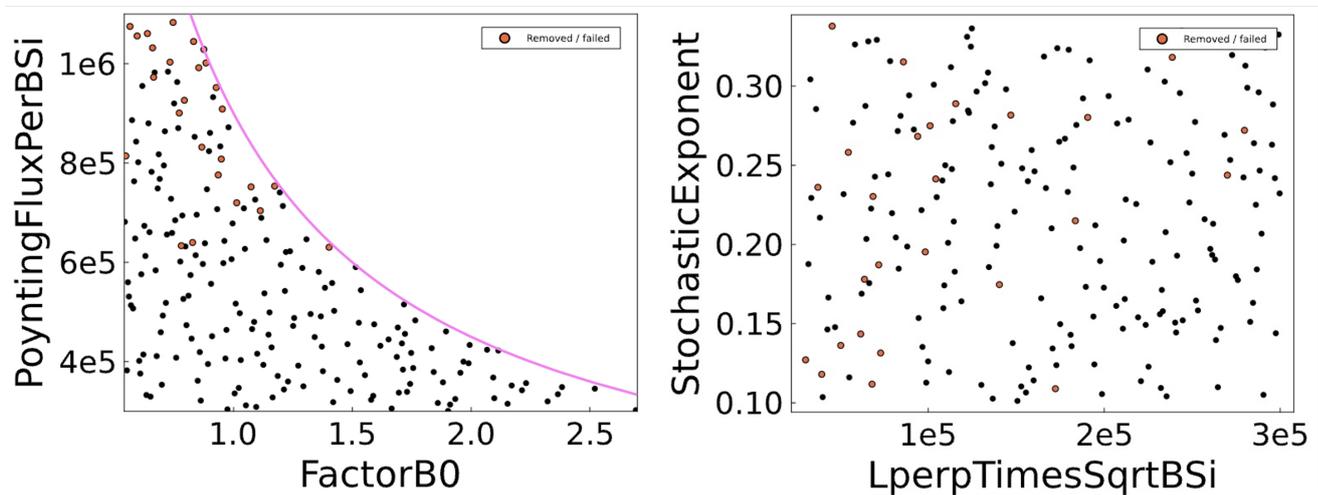


Figure S1. Scatter plots of MaxPro design samples to perform AWSOM simulations for select pairs of input parameters for CR2152 (solar maximum), overlaid with the non-physical and failed runs