

Preface	
by J. D. Scargle	1
SigSpec User's Manual	
by P. Reegen	3
1. What is SIGSPEC?	4
2. How to Run SIGSPEC	7
2.1. Projects	7
2.2. Quiet mode	12
3. Input	12
3.1. The time series input file	12
3.2. The .ini file	12
3.3. Time series columns representing time and observable	13
3.4. Time series columns containing statistical weights	13
3.5. Time series columns containing subset identifiers	15
3.6. Lower frequency limit	18
3.7. Upper frequency limit and Nyquist Coefficient	19
3.8. Frequency spacing and oversampling ratio	20
3.9. Accuracy of MultiSine fits	21
3.10. Program termination	23
4. Default Output	24
4.1. Spectra	26
4.2. Residual time series	27
4.3. Result files	28
5. Analysis of the Time-domain Sampling	29
5.1. Spectral window	29
5.2. Sampling profile	30
5.3. Sock Diagram	31
5.4. Phase Distribution Diagram	34
6. MultiSine Output	35

6.1.	MultiSine tracks	36
6.2.	MultiSine profiles	38
7.	Preview	39
8.	Correlograms	41
9.	Time-resolved Analysis	42
10.	SIGSPEC AntiAIC: Anti-aliasing Correction Mode	47
11.	Analysis of Harmonics	51
12.	MultiFile Mode	56
12.1.	How to handle multiple time series	56
12.2.	Differential significance spectra	58
13.	The Built-in Simulator	62
13.1.	The simulator mode	63
13.2.	Random numbers	63
13.3.	Sinusoidal signal	64
13.4.	Polynomial trend	67
13.5.	Exponential trend	69
13.6.	Serially correlated noise	70
13.7.	Temporally correlated noise	72
13.8.	Random steps	74
13.9.	Zero-mean adjustment	76
14.	Signal-to-Noise Ratio and Lomb-Scargle Periodogram	77
15.	Frequently Asked Questions	80
15.1.	Changing sig in a prewhitening sequence	80
15.2.	The effect of binning	81
15.3.	Binning of extremely strong signals	82
15.4.	Linear interpolation: more information?	83
15.5.	Which sig threshold is reasonable?	84
16.	Keywords Reference	85
17.	Online availability	96

Cinderella User's Manual

by P. Reegen	99
1. What is CINDERELLA?	99
2. Projects	100
3. Input	100
3.1. Time series input files	100
3.2. SIGSPEC result files	101
3.3. The .cnd file	105
4. Indexing	106
5. Dataset Types	106
5.1. Target datasets	107
5.2. Comparison datasets	107
5.3. Datasets to ignore	107
5.4. Default type	107
6. Conditional Mode	108
6.1. Candidate selection	110
6.2. Amplitude transformation	112
7. Composed Mode	114
7.1. Output for composed mode	114
8. Keywords Reference	115
9. Online availability	117

Combine User's Manual

by P. Reegen	119
1. What is COMBINE?	119
2. Input	120
3. How COMBINE Works	120
3.1. Sig vs. csig	120
3.2. Frequency resolution	120
3.3. Limit of harmonic order	121

3.4.	Equivalent sig	121
3.5.	Reliability and sensitivity	122
4.	Output	123
5.	Order of Input Rows	127
6.	Rejecting Unwanted Linear Combinations	128
7.	Keywords Reference	128
8.	Online availability	130