CROSS CORRELATIONS BETWEEN VARIOUS SOLAR WIND PARAMETERS AND BETWEEN THE SOLAR WIND PARAMETERS AND MAGNETIC ACTIVITY INDICES AE, a_p, and Dst

	B_z(SM)	B_z(SE)	$\langle B_z(SM)\rangle$	$\langle B_z(SE)\rangle$	v	$v\langle B_z(SM)\rangle$	σ_B	$v\sigma_B$	T	ρ	ρv^2	$v^2\langle B_z(SM)\rangle$	B^2	$vB^2\sin^4\frac{\theta}{2}$	B	AE_1	a_{p1}	Dst_2
1. B_z(SM)	1.0																	
2. B_z(SE)	.90	1.0																
3. $\langle B_z(SM)\rangle$	.82	.74	1.0															
4. $\langle B_z(SE)\rangle$	.73	.82	.88	1.0														
5. v	.01	.00	.04	.04	1.0													
6. $v\langle B_z(SM)\rangle$	.80	.72	.97	.85	-.09	1.0												
7. σ_B	.00	.01	-.12	-.11	.29	-.17	1.0											
8. $v\sigma_B$	.00	.01	-.09	-.08	.57	-.18	.93	1.0										
9. T	.00	.01	-.02	-.01	.71	-.12	.45	.65	1.0									
10. ρ	-.01	.00	-.14	-.14	-.34	-.10	.26	.10	-.14	1.0								
11. ρv^2	-.01	.00	-.15	-.14	.25	-.20	.52	.54	.35	.75	1.0							
12. $v^2\langle B_z(SM)\rangle$	.73	.65	.88	.77	-.21	.97	-.20	-.25	-.22	-.05	-.23	1.0						
13. B^2	.01	.01	-.33	-.32	.06	-.34	.51	.46	.25	.30	.46	-.33	1.0					
14. $vB^2\sin^4\frac{\theta}{2}$	-.55	-.43	-.65	-.52	.14	-.70	.38	.39	.27	.16	.35	-.71	.62	1.0				
15. B	.00	.01	-.34	-.33	.09	-.35	.56	.50	.29	.31	.47	-.33	.93	.57	1.0			
16. AE_1	-.57	-.51	-.62	-.55	.42	-.67	.33	.42	.38	.04	.33	-.68	.28	.52	.34	1.0		
17. a_{p1}	-.37	-.32	-.51	-.45	.43	-.59	.47	.57	.44	.14	.49	-.64	.49	.62	.49	.68	1.0	
18. Dst_2	.38	.30	.46	.39	-.39	.51	-.24	-.34	-.32	.17	-.13	.53	-.32	-.47	.34	-.50	-.60	1.0

B_z(SM): Z-component of Interplanetary Magnetic Field in Solar Magnetospheric coordinate system.

B_z(SE): Z-component of Interplanetary Magnetic Field in Solar Ecliptic coordinate system.

$\langle B_z(SM)\rangle$: Only southward Z-component in SM.

$\langle B_z(SE)\rangle$: Only southward Z-component in SE.

v: Solar Wind velocity.

σ_B: rms standard deviation of interplanetary magnetic field.

T: Solar Wind temperature.

ρ: Solar Wind density.

ρv^2: Proportional to Solar Wind kinetic pressure.

AE_1: Auroral Electrojet hourly average index with 1-hour time lag behind solar wind parameters.

a_{p1}: Hourly a_p interpolated from 3-hourly indices and used with 1-hour time lag.

Dst_2: Hourly Dst used with 2-hour time lag behind solar wind.

7. "Kitchen Sink" correlation between different interplanetary parameters and indices - Smart, Garrett, and Shea.