

Erratum to: Understanding the SAM influence on the South Pacific ENSO teleconnection

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In the aforementioned contribution, an error was noted in the calculation of the expected values for the columns labeled ‘1970s’ and ‘1990s’ in Table 1, which also changes the Chi-squared probability of independence. For the 1970s, the changes in expected counts result in no significant relationship between the El Niño-Southern Oscillation (ENSO) and the Southern Annular Mode (SAM), which is consistent with the nearly even distribution of the

many La Niña events in that decade between SAM positive, SAM neutral, and SAM negative events (Table 1). As a result, our original conclusion of a significant relationship between ENSO and SAM in the 1970s is incorrect. In the 1990s, the Chi-squared probability changed to $p < 0.07$, still suggesting a moderately strong relationship between ENSO and SAM in this decade. This relationship is brought about by in phase events occurring more often than expected by chance and out of phase events occurring less often than expected by chance, as identified in original manuscript. A corrected version of Table 1 appears below.

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Table 1 Number of months by category used in the composites and the expected counts (*italic*) based on the joint standardized ENSO-SAM distribution (Fig. 1) for 1957–2009 (1979–2009 in parentheses)

	Total (1979–2009)	DJF	MAM	JJA	SON	1950s ^a	1960s	1970s	1980s	1990s	2000s
SAM+ only	88 (52)	24	19	23	22	4	26	12	11	18	17
	<i>83.07 (51.39)</i>	<i>22.14</i>	<i>17.64</i>	<i>22.88</i>	<i>20.38</i>	<i>2.89</i>	<i>22.23</i>	<i>11.96</i>	<i>14.58</i>	<i>18.00</i>	<i>14.09</i>
SAM– only	69 (45)	17	20	21	11	3	11	12	17	11	15
	<i>78.50 (47.00)</i>	<i>20.47</i>	<i>20.92</i>	<i>20.19</i>	<i>16.92</i>	<i>5.06</i>	<i>14.98</i>	<i>13.33</i>	<i>15.00</i>	<i>13.60</i>	<i>15.91</i>
La Niña only	59 (29)	14	18	11	16	1	8	21	11	7	11
	<i>67.01 (35.45)</i>	<i>16.66</i>	<i>19.47</i>	<i>13.46</i>	<i>17.40</i>	<i>0.78</i>	<i>9.32</i>	<i>21.47</i>	<i>15.11</i>	<i>8.54</i>	<i>12.40</i>
El Niño only	75 (47)	17	19	23	16	7	14	8	16	15	15
	<i>71.55 (41.93)</i>	<i>15.95</i>	<i>17.09</i>	<i>19.62</i>	<i>18.91</i>	<i>8.17</i>	<i>12.90</i>	<i>8.82</i>	<i>13.48</i>	<i>16.06</i>	<i>11.60</i>
La Niña/SAM+	65 (38)	20	17	13	15	1	9	17	14	14	10
	<i>56.55 (30.05)</i>	<i>15.77</i>	<i>13.51</i>	<i>11.44</i>	<i>15.63</i>	<i>0.44</i>	<i>9.97</i>	<i>16.33</i>	<i>10.79</i>	<i>9.38</i>	<i>8.74</i>
El Niño/SAM–	67 (36)	19	17	13	18	11	11	9	7	19	10
	<i>57.06 (32.51)</i>	<i>13.96</i>	<i>14.06</i>	<i>14.71</i>	<i>14.10</i>	<i>8.17</i>	<i>9.30</i>	<i>7.48</i>	<i>9.90</i>	<i>13.32</i>	<i>9.23</i>
La Niña/SAM–	53 (26)	13	14	11	15	0	9	18	12	4	10
	<i>53.44 (27.49)</i>	<i>14.58</i>	<i>16.02</i>	<i>10.10</i>	<i>12.97</i>	<i>0.78</i>	<i>6.72</i>	<i>18.20</i>	<i>11.10</i>	<i>7.08</i>	<i>9.86</i>
El Niño/SAM+	47 (27)	9	7	15	16	3	11	6	10	13	4
	<i>60.38 (35.55)</i>	<i>15.09</i>	<i>11.85</i>	<i>16.67</i>	<i>16.99</i>	<i>4.67</i>	<i>13.80</i>	<i>6.71</i>	<i>9.63</i>	<i>17.63</i>	<i>8.17</i>
Climatology	103 (62)	25	25	26	27	6	21	17	22	19	18
	<i>98.43 (60.61)</i>	<i>23.39</i>	<i>25.44</i>	<i>26.92</i>	<i>22.69</i>	<i>5.06</i>	<i>20.78</i>	<i>15.72</i>	<i>20.42</i>	<i>16.40</i>	<i>20.00</i>
Chi-square probability ^b	0.07 (0.16)	0.14	0.37	0.78	0.28	0.32	0.44	0.95	0.31	0.07	0.36
SAM events	157 (97)	41	39	44	33	7	37	24	28	29	32
ENSO events	134 (76)	31	37	34	32	8	22	29	27	22	26
In phase events	132 (74)	39	34	26	33	12	20	26	21	33	20
Out of phase events	100 (53)	22	21	26	31	3	20	24	22	17	14

Also given is the Chi-square probability of independence for rows 1–9 of each column, and total number of SAM, ENSO, in phase (sum of rows 5 and 6), and out of phase events (sum of rows 7 and 8) at the bottom of the Table

^a The statistics presented for this column are based only on El Niño and SAM events since there were no La Niña events during 1957–1959

^b The null distribution is approximately chi-square when the expected counts in each cell are more than 5, in other cases the null distribution may violate this approximation