Family of Lamé spheroconal quadrupole harmonic current distributions on spherical surfaces of magnetic induction fields with constant gradients inside and vanishing asymptotically outside [*Rev. Mex. Fis.* 62 (2016) 362-368]

L. Medina and E. Ley-Koo

Received 11 August 2017; accepted 14 August 2017

The following typographical errors have been identified:

1) The exponent 2 in the coefficients $h_{n_i}(k_i^2)$, in paragraph before Eq. (16) should be deleted, because they appear only linearly in the Lamé functions and their derivatives in Eq. (15).

2) In Eq. (16) the correct coefficients are $h_{n_2}(k_2^2)$ and $h_{n_1}(k_1^2)$ consistent with the statement in the fifth line above.

3) A coefficient of 2 in Table I is missing. The corrected numerical Table in such coefficients, Eq. (3), follows.

TABLE I. Coefficients of cartesian components of internal magnetic induction field from Eq. (16), for sucessive values of the asymmetry distribution parameters σ[0, 60], k_1^2, k_2^2, and the nodal elliptic cone numbers $n_1 = 2$, $n_2 = 0$, and, $n_1 = 0$, $n_2 = 2$, for the upper and lower signs, respectively.

$\sigma\,[^\circ]$	k_1^2	k_2^2	$\left(-2k_2^2 \pm 2\sqrt{1-k_1^2k_2^2}\right) x\hat{i}$	$2y\hat{j}$	$\left(-2k_1^2 \mp 2\sqrt{1-k_1^2k_2^2}\right) z\hat{k}$
0	0	1.0000	$-2+2=0$ $-2-2=-4$	2	$0-2=-2$ $0+2=2$
5	0.0962	0.9038	$-1.8077+1.9111=1.1034$ $-1.8077-1.911=-3.7188$	2	$-01923-1.9111=-2.1034$ $-01923+1.9111=1.7188$
10	0.1848	0.8152	$-1.6304+1.8432=0.2128$ $-1.6304-1.8432=-3.4736$	2	$-0.3696-1.8432=-2.2128$ $-0.3696+1.8432=1.4736$
15	0.2679	0.7321	$-1.4641+1.7932=0.3290$ $-1.4641-1.7932=-3.2573$	2	$-0.5359-1.7932=-2.3290$ $-0.5359+1.7932=1.2573$
20	0.3473	0.6527	$-1.3054+1.7588=0.4534$ $-1.3054-1.7588=-3.0642$	2	$-0.6946-1.7588=-2.4534$ $-0.6946+1.7588=1.0642$
25	0.4242	0.5758	$-1.1515+1.7387=0.5871$ $-1.1515-1.7387=-2.8902$	2	$-0.8485-1.7387=-2.5871$ $-0.8485+1.7387=0.8902$
29	0.4849	0.5151	$-1.0302+1.7323=0.7021$ $-1.0302-1.7323=-2.7625$	2	$-0.9698-1.7323=-2.7021$ $-0.9698+1.7323=0.7625$
30	0.5000	0.5000	$-1+2\sqrt{\frac{3}{4}}=-1+\sqrt{3}$ $1-2\sqrt{\frac{3}{4}}=-1-\sqrt{3}$	2	$-1-2\sqrt{\frac{3}{4}}=-1-\sqrt{3}$ $1+2\sqrt{\frac{3}{4}}=-1+\sqrt{3}$
31	0.5151	0.4849	$-0.9698+1.7323=0.7625$ $-0.9698-1.7323=-2.7021$	2	$-1.0302-1.7323=-2.7625$ $-1.0302+1.7323=0.7021$
35	0.5758	0.4242	$-0.8485+1.7387=0.8902$ $-0.8485-1.7387=-2.5871$	2	$-1.1515-1.7387=-2.8902$ $-1.1515+1.7387=0.5871$
40	0.6527	0.3473	$-0.6946+1.7588=1.0642$ $-0.6946-1.7588=-2.4534$	2	$-1.3054-1.7588=-3.0642$ $-1.3054+1.7588=0.4534$
45	0.7321	0.2679	$-0.5359+1.7932=1.2573$ $-0.5359-1.7932=-2.3290$	2	$-1.4641-1.7932=-3.2573$ $-1.4641+1.7932=0.3290$
50	0.8152	0.1848	$-0.3696+1.8432=1.4736$ $-0.3696-1.8432=-2.2128$	2	$-1.6304-1.8432=-3.4736$ $-1.6304+1.8432=0.2128$
55	0.9038	0.0962	$-01923+1.9111=1.7188$ $-01923-1.9111=-2.1034$	2	$-1.8077-1.9111=-3.7188$ $-1.8077+1.911=1.1034$
60	1.0000	0	$0+2=2$ $0-2=-2$	2	$-2-2=-4$ $-2+2=0$