

Erratum: On-chip thermometry for microwave optomechanics implemented in a nuclear demagnetization cryostat [Phys. Rev. Applied 12, 044066 (2019)]

X. Zhou,^{1,2} D. Cattiaux,¹ R.R. Gazizulin,¹ A. Luck,¹ O. Maillet,¹ T. Crozes,¹ J-F. Motte,¹
O. Bourgeois,¹ A. Fefferman,¹ and E. Collin¹

¹Univ. Grenoble Alpes, Institut Néel - CNRS UPR2940, 25 rue des Martyrs, BP 166, 38042 Grenoble Cedex 9, France

²Since 01/10/2017: IEMN, Univ. Lille - CNRS UMR8520, Av. Henri Poincaré, Villeneuve d'Ascq 59650, France



(Received 29 March 2022; published 8 April 2022)

DOI: [10.1103/PhysRevApplied.17.049901](https://doi.org/10.1103/PhysRevApplied.17.049901)

At the time of the work reported in this Article, two of our opto-mechanical samples have been packaged in identical cells; these samples were very similar, apart from the *nature of the microwave cavities*. In one cell, these microwave cavities were meanders (as shown in Fig. 1 center) while in the other they were $\lambda/4$ coplanar resonators (similar to Ref. [5]). In both cases, we had 3 cavities coupled evanescently to a transmission line [visible in Fig. 1 (a)], in two of which we had a $50\ \mu\text{m}$ long nano-mechanical beam. The resonance frequencies of the cavities had been designed to be almost identical for the two setups (about 6.00 GHz, 6.25 GHz and 6.45 GHz). It turns out that our cells have been swapped, such that the cavity picture in Fig. 1 (b) is *incorrect*: it should be the coplanar one. As a consequence, the cavity characteristic impedance is $50\ \Omega$ (instead of about $500\ \Omega$ for the meander). The reported coupling parameter g_0 is correct (about $g_0 \approx 0.55\ \text{Hz}$), which therefore means that the mechanical mode that is dealt with is the *in-plane one*. Indeed the g_0 of the out-of-plane first flexure is expected about 10 times weaker, which makes it immeasurable. These are the only aspects that have to be modified from the original manuscript. None of the claims of the paper are affected by this fact, and all the quoted numbers and results are accurate.