ERRATA ET ADDITIF

à l'article de S. Bergia, P. Lugli et N. Zamboni : "Zero-point energy, Planck's law and the prehistory of stochastic electrodynamics. Part II : Einstein and Stern's paper of 1913" (Vol. 5, n° 1, 1980, pp. 39-62).

p. 44 ligne 14 : ajouter : "and T. Brody for helpful suggestions and comments"

p. 45 "Gebilde" est à traduire plutôt par "structures" (d° dans la note 32)

ligne 16 : lire "thermal" au lieu de "thermic"

ligne 17 : ajouter un renvoi ([41]) après la virgule

lignes 4 et 5 à partir du bas : "mechanical" au lieu de "magnetic"

p. 47 ligne 3 à partir du bas : "not very" au lieu de "indeed"

p. 48 ligne 3 : "natural" au lieu de "spontaneous"

Note 38 : "real laws for resonators" et non "effective resonator's law"

Note 40 fin de la 5ème ligne : "superimposed"

Notes dont la correspondance est modifiée ;

numéro du texte :	41	28	29	30
numéro de la note :	28	29	30	rien.

Addendum

Jiménez, de la Peña and Brody (J.L. Jiménez, L. de la Peña, T.A. Brody, *The zero-point term in cavity radiation*, IFUNAM-79-11 ; *Einstein y la distribucion de Planck*, presented at the Einstein Symposium of Puebla (México), July 1979) have recently re-analysed Einstein and Stern's (ES) paper and found the origin of the inconsistencies in their derivation. The central point lies in that ES did not observe that accepting a zero-point term in the oscillator's momentum fluctuations implies the presence of a similar term in the radiation field, if there is to be equilibrium. Unless a zero-point term is introduced in the spectral density, the mean square value of the momentum fluctuations for the case in which the energy of the oscillations excited by the radiation is negligible with respect to the zero-point energy of the oscillator, computed by ES as $\overline{\Delta_W^2} = \frac{1}{5\pi} hc\sigma\rho\tau$, (the subscript W stands here for Wien, as the term gives rise to the Wien distribution) vanishes, inconsistently, at T = 0. On the other hand, the Einstein-Hopf derivation of $\overline{\Delta^2}$ as a function of ρ makes no assumption about the nature of ρ : if ρ contains a temperature-independent term, so must $\overline{\Delta^2}$, which therefore, accounts for the entire electromagnetic field. If then $\overline{\Delta_W^2}$ is added to $\overline{\Delta^2}$ to give

$$\overline{\Delta^2} + \overline{\Delta_W^2} = 2kTP\tau \qquad (1)$$

the non thermal part is contained twice in the left hand side, whereas *it should not appear at all*, as it is only the thermal part which should be equated to $2kTP\tau$. Eq.(1) is to be replaced by

$$\overline{\Delta^2} - \overline{\Delta_0^2} = 2kTP\tau \qquad (2)$$

where $\overline{\Delta_0^2} = (\overline{\Delta^2})_{T=0}$, which, once the spectrum of the zero-point field is given as in SED, leads to a Planck spectral distribution with a zero-point term.