Erratum: Multifractional theories: an unconventional review

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Due to an error by the typesetters, tables 7 and 8 contain two typos. The correct tables should read (in boldface the corrected numbers):

T_q ($\alpha_0 = 1/2 = \alpha$)	t_* (s)	ℓ_* (m)	E_* (GeV)	A, B	source
Muon lifetime	$< 10^{-18}$	$< 10^{-9}$	$> 10^{-7}$	—	[55]
Lamb shift	$< 10^{-27}$	$< 10^{-19}$	$> 10^2$	—	[55]
Measurements of α_{QED}	—	—	—	—	[56]
$\Delta\alpha_{\text{QED}}/\alpha_{\text{QED}}$ quasars	—	—	—	—	[51]
Gravitational waves (pseudo)	$< 10^{-44}$	$< 10^{-35}$	$> 10^{19}$	—	[58]
Cherenkov radiation	$< 10^{-81}$	$< 10^{-73}$	$> 10^{57}$	—	this paper
GRBs				—	
CMB black-body spectrum	$< 10^{-26}$	$< 10^{-18}$	$> \mathbf{10^2}$	—	[59]
CMB primordial spectra	—	—	—	< 0.4	[59]

Table 7. Bounds on the hierarchy of multifractional spacetimes with q -derivatives for $\alpha_0 = 1/2 = \alpha$. “Pseudo” indicates bounds obtainable in the stochastic view, where T_q is regarded as an approximation of $T_{\gamma=\alpha}$.

T_q ($\alpha_0, \alpha \ll 1/2$)	t_* (s)	ℓ_* (m)	E_* (GeV)	source
Muon lifetime	$< 10^{-11}$	$< 10^{-3}$	$> 10^{-13}$	this paper
Lamb shift	$< 10^{-21}$	$< 10^{-13}$	$> 10^{-4}$	this paper
Gravitational waves (pseudo)	$< 10^{-22}$	$< 10^{-14}$	$> 10^{-2}$	this paper
Cherenkov radiation	$< 10^{-57}$	$< 10^{-49}$	$> 10^{33}$	this paper
GRBs	$< 10^{-39}$	$< 10^{-30}$	$> 10^{14}$	[58]
CMB black-body spectrum				
T_q ($\alpha_0 = 1/2 = \alpha$)	t_* (s)	ℓ_* (m)	E_* (GeV)	source
muon lifetime	$< 10^{-17}$	$< 10^{-8}$	$> 10^{-8}$	this paper
Lamb shift	$< 10^{-26}$	$< 10^{-18}$	$> 10^1$	this paper
Gravitational waves (pseudo)	$< 10^{-42}$	$< 10^{-33}$	$> 10^{17}$	this paper
Cherenkov radiation	$< 10^{-79}$	$< 10^{-71}$	$> 10^{55}$	this paper
GRBs	$< 10^{-57}$	$< 10^{-48}$	$> 10^{32}$	[58]
CMB black-body spectrum	$< 10^{-26}$	$< 10^{-18}$	$> 10^1$	this paper

Table 8. Absolute bounds (obtained for $\alpha_0, \alpha \ll 1$, upper part) and bounds for $\alpha_0 = 1/2 = \alpha$ (lower part) on the hierarchy of multifractional spacetimes with q -derivatives with measure (9.2). The key formulæ used to compute the constraints in the table are: for the muon lifetime, $t_* < (u\delta\tau/\tau_0^{\alpha_0})^{1/(1-\alpha_0)}$ replacing eq. (139) of [56], with $u = 1$; for the Lamb shift, $E_* > \{u\delta E/[(2 - \alpha_0)\Delta E]\}^{1/(\alpha_0-1)}|E_{2S}|$ replacing eq. (142) of [56], with $u = 2 - \alpha_0$; for gravitational waves, eq. (9.7) with $u_\mu \propto C_\mu/(3 - \alpha_\mu)$ and $2C_\mu = 1$; for GRBs, eq. (9.9) [$u = O(1)$]; for Cherenkov radiation, eq. (9.11) with $2C_\mu = 1$ [$u = O(1)$]; for the CMB black-body spectrum, a data fit with eq. (3.5) of [59] with the factor $1/\alpha_0$ in the denominator replaced by $u = 1$. “Pseudo” indicates bounds obtainable in the stochastic view, where T_q is regarded as an approximation of $T_{\gamma=\alpha}$.

The other tables and the arXiv version are correct.

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