Erratum: Constraints on the chaotic inflationary scenario with a nonminimally coupled ''inflaton'' field from the cosmic microwave background radiation anisotropy [Phys. Rev. D 58, 023004 (1998)]

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The expressions for the mode functions (3.13) and (3.14) we employed as the conserved quantities during all phases contained an error. The correct expressions are as follows:

$$\varphi_k(\tau)=\frac{1}{\sqrt{2k}(2\pi)^{3/2}R(\tau)}e^{-ik\tau}\left(1-\frac{i}{k\tau}\right) \quad \text{vacuum, matter,}$$

$$=\frac{1}{\sqrt{2k}(2\pi)^{3/2}R(\tau)}e^{-ik\tau} \quad \text{radiation,}$$

where

$$R(\tau)=-\frac{\sqrt{1+\psi}}{H\tau} \quad \text{vacuum} \quad \tau\in(-\infty,-\tau_2),$$

$$=\frac{2\tau_1\tau}{\tau_0^2} \quad \text{radiation} \quad \tau\in\left(\tau_2,\frac{\tau_1}{2}\right),$$

$$=\frac{\tau^2}{\tau_0^2} \quad \text{matter} \quad \tau\in(\tau_1,\tau_0).$$

Then we can match the mode functions at each phase. As a result our expressions should be modified by simply replacing H by $H/\sqrt{1+\psi}\approx H/\sqrt{\psi}$. Thus, our main results (3.40), (3.41), (4.5), and (4.8) are written as

$$\Delta^{(\mathrm{CL})}_{\mathrm{GW},\lambda\lambda'}=\frac{\kappa^2H^2}{(2\pi)^3(1+\psi)}\left[\frac{3j_1(k\tau)}{k\tau}\right]^2\delta_{\lambda\lambda'},$$

$$\frac{\lambda}{\xi^2}=\frac{(16\pi)^3}{31.0}\left(\frac{Q_{\mathrm{rms-PS}}}{T_0}\right)^2\approx 1.8\times10^{-7}.$$

Note that the dependence of λ/ξ^2 on ψ has disappeared.

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