

Author Correction: *Extreme rainfall triggered the 2018 rift eruption at Kīlauea Volcano*
Farquharson, J. I. and Amelung, F.

In this article, there is a misstatement regarding the precursory summit inflation. In the abstract and in the main text we state “*consistent with the lack of precursory summit inflation*”. However, there was a small amount (2–3 cm) of localised summit inflation detected with GPS starting ~2 weeks prior to the eruption. The text would more accurately read “*consistent with the lack of substantial precursory summit inflation.*” This has implications for intrusion terminology. The subtle uplift signal indicates that the intrusion was not solely “passive,” as we refer to it in the article; rather, it was a “hybrid” intrusion (Poland et al. 2014) caused by both a decrease in the extensional stress (due to pore fluids in this case) and magma pressurisation, the latter smaller than in the previous hybrid intrusion. This suggests that infiltrating rainwater was not the only factor influencing the intrusion. As we state in the article, “*pore pressure can act as a trigger mechanism in a critically stressed—or ‘primed’—volcanic system.*” Our main conclusion that rainfall-induced pore pressure changes played a role in the initiation of the 2018 intrusion remains unchanged.

In addition, the analogy between the 2018 activity and the 1924 eruption is not appropriate. We state that “*historical precipitation records show that Kīlauea’s May 1924 eruption ... also followed extremely wet conditions.*” The 1924 eruption started with lava lake subsidence in February (Jaggard and Finch, 1924) and not on 10 May 1924 as we use in the article (reported by the *Global Volcanism Program*). We therefore cannot directly link the extreme rainfall observed in April 1924 to the *onset* of the eruptive period. The 1924 eruption falls close enough to the defined cusp between the ‘wet’ and ‘dry’ parts of the year (early March) that if an earlier date in February is assumed for the onset then it would fall in the ‘dry’ period, slightly influencing the probability analysis shown in Extended Data Fig. 3. If we were to treat the 1924 eruption as ‘dry’, then a total of 35 historical eruptions have occurred in the ‘wet’ season, still significantly greater than the expected binomial probability distribution (29 eruptions in the ‘wet’ season).

We note also that in Figures 2c and 2e, rainfall is mistakenly reported in units of m rather than mm. The distribution statistics of these data remain the same.

We regret both errors, and thank Mike Poland and his USGS colleagues for bringing them to our attention.

Poland, M.P., Miklius, A. and Montgomery-Brown, E.K., 2014. Magma supply, storage, and transport at shield-stage Hawaiian volcanoes. In *Characteristics of Hawaiian volcanoes* (Vol. 1801, pp. 179-234). Reston, Va: US Geol. Surv..

Jaggard, T.A. and Finch, R.H., 1924. The explosive eruption of Kīlauea in Hawaii, 1924. *American Journal of Science*, (47), pp.353-374.