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CORRECTION
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Corrigendum: Exploiting Thermochronology to Quantify Exhumation Histories and Patterns of Uplift Along the Margins of Tibet

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A Corrigendum on

Exploiting Thermochronology to Quantify Exhumation Histories and Patterns of Uplift Along the Margins of Tibet
by Kevin P., Furlong, Eric, Kirby, C., Gabriel, Creason, Peter J. J., Kamp, Ganqing, Xu, Martin, Danišík, Xuhua, Shi, and Kip V., Hodges. (2021). Front. Earth Sci. 9:688374. doi: 10.3389/feart.2021.688374

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In the original article, there was a mistake in the legend of **Figure 2** as published. An incorrect citation for Shi et al. (in preparation) was given. The correct legend appears below.

Further, a few of the authors of the article were not initially included in the published version. The corrected authors list now includes C. Gabriel Creason, Peter J. J. Kamp, Ganqing Xu, Martin Danišík, Xuhua Shi, and Kip V. Hodges.

The corrected **Author Contributions** statement appears below.

AUTHOR CONTRIBUTIONS

KF and EK conceived and designed the project, analyzed data, accomplished the modeling, and wrote the paper. CGC did preliminary modeling to constrain models used in Figures 8 and 9. Contributions to the data shown in Figure 7 are as follows: XS organized and executed the field sampling; PK oversaw the (U-Th)/He and FT analyses; GX did the whole mineral separations and the AFT and ZFT analyses; MD did the (U-Th)/He analyses; KVH did the Ar/Ar analyses.

In the original article, the reference for Shi et al. (in preparation) was incorrectly written as 'Shi, X., Kirby, E., Furlong, K., Creason, G., Kamp, P., Xu, G., et al.2020Protracted Exhumation from Oligocene to Present in the Xuelongbao Massif*J. Asian Earth Sci.*1412710.1016/j.jseaes.2010.03.008'

This should be 'Shi, X., Kirby, E., Furlong, K., Creason, G., Kamp, P., Xu, G., Danišík, M., Wang, G., He, J., Fan, C., Xu, G., Su, Z., and Wang, E.', in preparation, Protracted exhumation from Oligocene to present in the Xuelongbao massif.

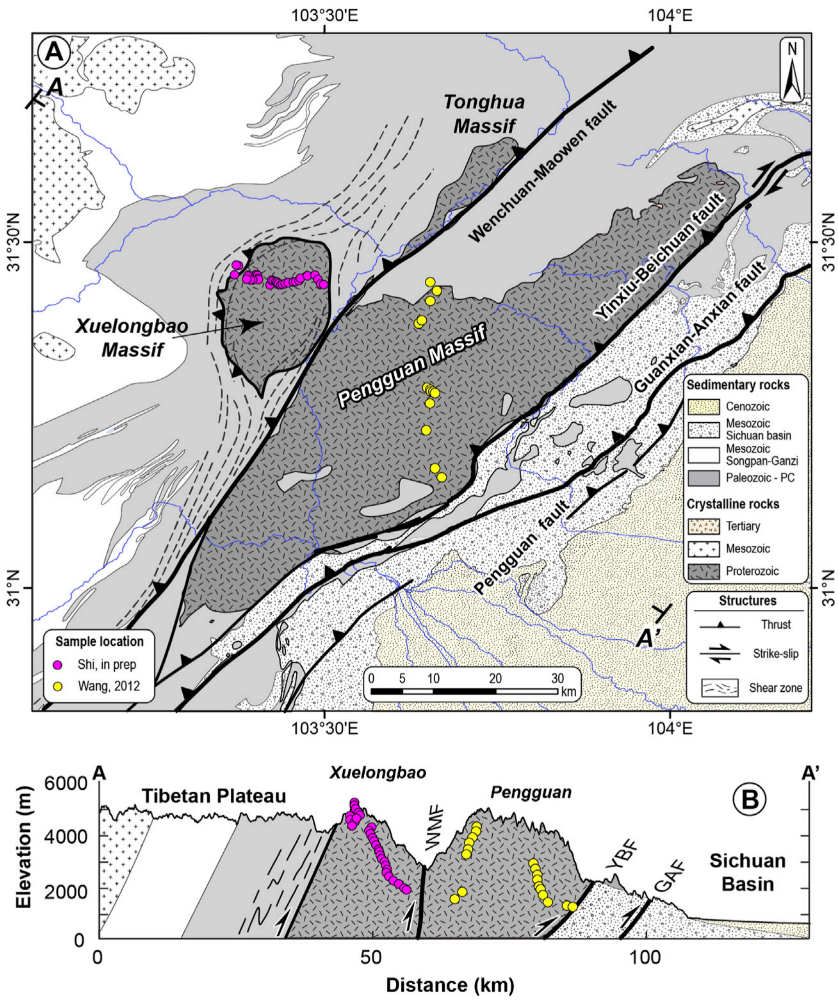

FIGURE 2 | (A) Simplified geology of the Longmen Shan and western Sichuan Basin after Burchfiel et al., 1995; Kirby et al., 2002; Airaghi et al., 2018a. Sample locations of data used in this paper are shown in colored circles. Yellow—data from Wang et al., 2012 in the Pengguan Massif. Pink—data from Shi et al. (2020) from the Xuelongbao Massif. **(B)** Cross-section showing the location of sample transects relative to major structures in the Longmen Shan.

There are also errors with the citation of the reference in multiple locations in the article. A correction has been made to the section **'Case Study: Multi-stage Exhumation in Eastern Tibet,'** Paragraph 1:

'To illustrate these principles, we use a densely sampled age-elevation transect from the Xuelongbao Massif, in the central Longmen Shan (Figures 1, 2) to explore the effects variations in exhumation history. The massif is composed primarily of granodiorite and tonalite plutonic rocks of Neoproterozoic age (748 ± 7 Ma; Zhou et al., 2006) in intrusive contact with Mesoproterozoic schists and paragneisses along its eastern and southern margins (Zhou et al., 2006). Sheared Paleozoic units form a carapace around the western and northern margins of the massif. We collected an age-elevation transect that spans elevations from ~1,600 m at the base of the massif to nearly the summit just below 5,500 m (Figure 7). These data have been described in Kirby et al. (2013), Creason et al. (2016), and Shi et al. (2020), and complete analytical details are in Shi et al. (in prep.). We describe briefly the primary results and trends in these data that motivate the thermal models. Although other data exist from this massif (e.g., Godard et al., 2009; Tan et al., 2017; Shen et al., 2019), we focus on this single data set here for simplicity. The Godard et al. (2009) data set includes Zircon (U-Th)/He age results for samples from locations near the samples of this study. These data lie between and compliment the AFT and ZFT results shown in Figure 7, as expected based on the relative closure temperatures of these systems. However, the vertical extent of these data is limited and do not substantively inform the exhumation history'.

A correction has also been made in Paragraph 4:

'Significant cooling (and exhumation) is recorded by systematic age-elevation relationships in ZFT (closure T of

~230°C–250°C, Reiners and Brandon, 2006), AFT (closure T of ~110°C–120°C, Ketcham et al., 1999), and AHe (closure T of ~60°C, Flowers et al., 2009) systems. Importantly, we do not expect a significant effect of radiation damage on the systematics of He retention in apatite (Flowers et al., 2009) for such young samples that cooled rapidly from well above temperatures where such damage anneals (Shi et al., in prep). These data reveal three important characteristics of the cooling history that any exhumation model needs to honor. First, there is a break in slope of the ZFT data at ~3,500 m elevation that marks an apparent increase in exhumation rate. Second, ZFT ages are nearly invariant (at ~ 15 Ma) with elevation below this point, and AFT ages are similar at higher elevations. As we discuss below, this is characteristic of rapidly cooled crustal sections, but is rarely observed in transects with more limited topographic relief. Third, AFT ages from the lowermost samples are nearly the same age as paired AHe samples. This requires a second relatively recent period of accelerated cooling and exhumation, as explained below'.

The **Acknowledgements** are also modified in light of change of authorship.

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The authors apologize for these errors and state that this does not change the scientific conclusions of the article in any way. The original article has been updated.