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Interactive comment on "Structural variations in basal decollement and internal deformation of the Lesser Himalayan Duplex trigger landscape morphology in NW Himalayan interiors" *by* Saptarshi Dey et al.

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Dear Dr. Hergarten,

First of all, thank you for your valuable feedback. I read your comments thoroughly and would like to raise a few points in this regard.

1. In Fig.2a, the river profile is bumpy and I agree to that. In those cases, the river width is less than 30m, therefore, SRTM is of no use. We had to go for ALOS PALSAR 12.5m DEM. still, with such narrow gorge around, picking the river-line is a bit difficult. That's

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why the long profile is bumpy. But, for the analysis, we used the profile smoothing tool from topotoolbox, so, the bumpiness is partially nullified. For reference, I have added the smoothed long profile here. Please note that the ruggedness of data upstream from K2 is probably due to existence of a reservoir. The ruggedness remained even after using the hydrological fill function.

2. Swath width is mentioned in the figure caption, but we will add it in the figure in revision.

3. In case of figure 2c, the profile is 'mismatch' with the stretch shown in Fig. 2a. This is because, Fig.2c is an extrapolated long-profile. The Chenab river has a N-S traverse over the MCR-2. So, we took the upstream and downstream segment of the MCR-2 and projected it on a perpendicular traverse to the strike of the orogen/ the regional structures. so, the dx is fig.2c, corresponds to the width of the second crustal ramp and not the original along-river length. I have provided a sketch for the same.

4. Regarding the typos, We used the popular software named 'Grammarly' for thorough check of the text. I will re-run the check and revise it accordingly. On similar note, we will look at the text for a proper ordering and revise it soon.

Thanks again for such a quick review.

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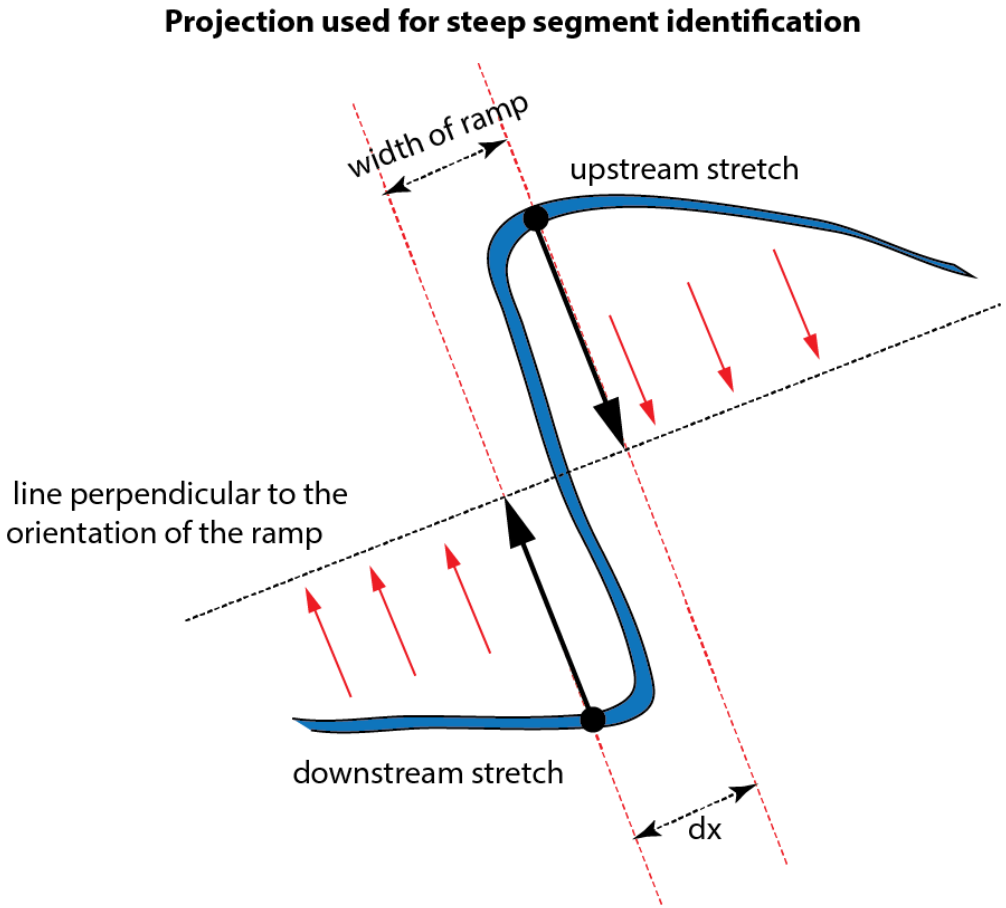

Fig. 1. Illustration explaining orthogonal projection used in Fig. 2c

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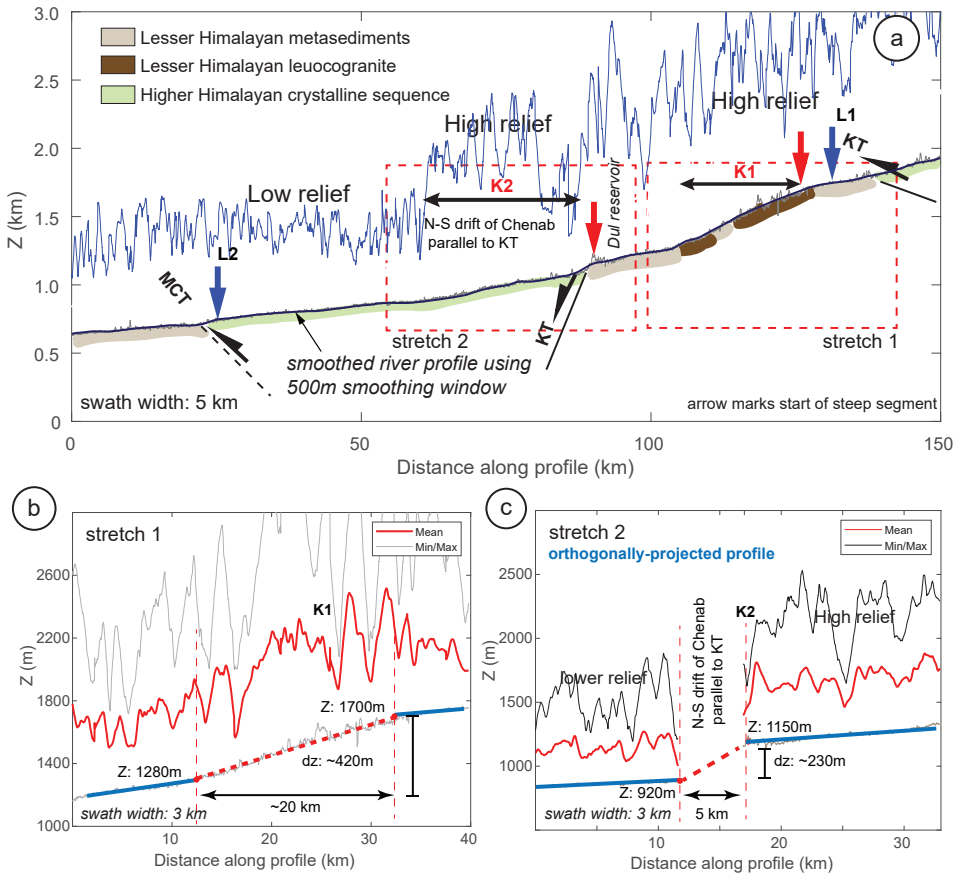

Fig. 2. revised smoothed long profile for Fig.2

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