

Earth Syst. Dynam. Discuss., referee comment RC2  
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## **Comment on esd-2022-41**

Anonymous Referee #2

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Referee comment on "Reliability of resilience estimation based on multi-instrument time series" by Taylor Smith et al., Earth Syst. Dynam. Discuss.,  
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The impact of data noise on estimating two resilience metrics, variance and lag-1 autocorrelation, with satellite data was assessed in this study. The topic addressed is very importance, because satellite products are widely used to quantify the resilience of terrestrial ecosystems. My major concern is that it is within our expectation that data noise will affect the reliability of the metrics, what's the new finding of this study? I hope two aspects may be investigated in depth: 1. What's the uncertainty of the existing satellite products when used for quantifying resilience? For this purpose, the 'real noise' of the data needs to be quantified. 2. What's the uncertainty of using the products to depict the temporal changes in ecosystem resilience? For this purpose, the temporal changes in the noise are also need to be quantified.