Author Response to Reviewer-ABCD of Paper-5736:

Adaptive Variational Nonlinear Chirp Mode Decomposition

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RC: Reviewer Comment, *AR: Author Response*, □: *Manuscript Text*

1. Experimental Validation

RC: **Perhaps an enlargement of the relevant parts of the graph would be useful.**

AR: Ok, I changed this. Please see Fig.1 for details.

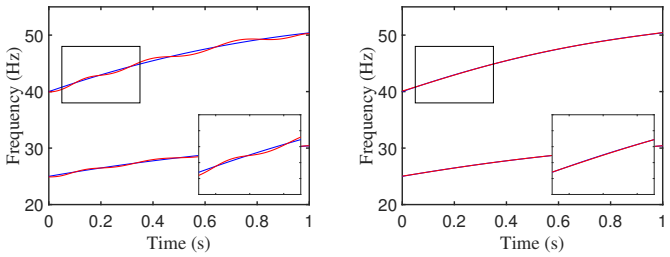

Figure 1: The estimated IFs by different algorithms (blue: true; red: estimated): (a) VNCMD, (b) AVNCMD.

2. Technical Correctness

RC: **There are some minor errors: in Equation (1), notation u_i^{k+1} is from [1] and does not follow the paper's adopted notation.**

AR: Ok, I corrected this:

The arctangent demodulation technique may be introduced to update the IF increment, i.e.,

$$\Delta f_k^{(i)}(t) = \frac{v_k^{(i)}(t) \cdot \left(u_k^{(i)}(t)\right)' - u_i^{k+1}(t) u_k^{(i)}(t) \cdot \left(v_k^{(i)}(t)\right)'}{2\pi \left[\left(u_k^{(i)}(t)\right)^2 + \left(v_k^{(i)}(t)\right)^2\right]}. \tag{1}$$

Great, you're so careful.

References

[1] Shiqian Chen, Xingjian Dong, Zhike Peng, Wenming Zhang, and Guang Meng. Nonlinear chirp mode decomposition: A variational method. *IEEE Transactions on Signal Processing*, 65(22):6024–6037, 2017.