In this paper, the authors investigate the resonance decays and electroweak (EW) radiations that are interleaved with the QCD evolution within the Vincia Parton Shower (PS) algorithm. This provides an interesting and, in my opinion, valuable insight into the treatment of finite-width effects within parton cascades and especially to an electroweakly enhanced antenna parton shower. There are, however, a number of issues that should be addressed before I could recommend the publication of this manuscript in Scipost.

1. In Section 2, the authors attempt to draw out their prescription for the treatment of recursive resonant decays. I find the text here somewhat confusing, especially in point 3 of Section 2.1 and the following descriptions for Fig.1. I would urge the authors to reword this section and make their points more clear.

2. To remedy the double-counting that is a result of the unphysical interleaving between the QCD and the EW phase spaces, a veto algorithm has been introduced. The authors should explain why their veto trigger, d_{ij}, has been defined in this form for the initial and final states. How the arbitrary parameter R is tuned and what would be the effect of assuming other values for it. Is it a universal constant or a scale/model-dependent one?

3. In Section 4, a lengthy analysis has been given to provide validation for the proposed PS enhancements. Unfortunately, most of the validation has been done using non-observable quantities for the resonant treatment resulting in small enhancements in the predicted signals. Given the smallness of these enhancements, compared to the size of the signals, it would be interesting to know how computationally expensive the corresponding calculations are. Also, no validation for individual EW splitting kernels has been given.

4. Since the interleaving of the QCD and the EW phase spaces inflicts an unphysical postulation over the PS implementation, comparison with theoretical predictions and/or experimental measurements would be necessary to show the validity of the resulting algorithm.

5. What is the ΔR parameter in Fig.8?

I would recommend the publication of this paper in Scipost after the authors make the revisions suggested above.