**2nd Review of "University of Warsaw Lagrangian Cloud Model (UWLCM) 1.0: a modern Large-Eddy Simulation tool for warm cloud modeling with Lagrangian microphysics" by Dziekan et al. (doi:10.5194/gmd-2018-281)**

The revised manuscript addresses most of my comments thoroughly. However, I have some minor comments before the manuscript can be accepted for publication.

Note that I will reference the lines in the tracked-changes version of the manuscript.

**Minor Comments**

P. 1, ll. 9 – 11: I agree that a time step of the order of 0.1 s is necessary for condensation and collection. However, I would clearly state that this time step can be facilitated by substepping, and not by running the entire model using a time step of 0.1 s.

P. 3, l. 25: To avoid confusion, state clearly what is contained in each dimension of $F_u$. In particular, state that large-scale subsidence is not applied to the vertical component of $F_u$.

P. 5, ll. 23 ff.: I assume that $K_{i,k}$ is the collection and not the coalescence kernel. Collection is the product of collision and subsequent coalescence. Both processes need to happen that two droplets merge into one, i.e., droplets need to collide (which is not always happening due to hydrodynamic interactions of the droplets) and to coalesce (which is not always happening due to surface tension effects). That is also the reason why $K_{j,k}$ usually contains two efficiencies, one for the collision of (super-) droplets j and k and one for the coalescence of (super-) droplets j and k. I recommend writing about collection (or collision-coalescence) if the authors address the eventual merging of the droplets (http://glossary.ametsoc.org/wiki/Collection_efficiency).

P. 6, l. 23: For clarity, write about the "transport by the mean air flow" and not "advection by air flow". Advection usually refers to the transport in an Eulerian framework, which is not the case here.

P. 7, ll. 25 – 28: Of course, condensation changes the radius of small droplets rapidly. However, this has only a minuscule effect on the overall supersaturation, since although the small droplets change their radius rapidly they do not deplete a large amount of supersaturation which is largely produced by dynamics. Therefore, if the interplay of the depletion of supersaturation by the integral droplet growth and the production of supersaturation by dynamics is not represented correctly, activation will be overestimated. However, substepping is not the only approach to solve this problem. In fact, it has been solved more than 40 years ago: Clark (1973, doi: *10.1175/1520-0469(1973)030<0857:NMOTDA>2.0.CO;2*) developed an approach to analytically solve for the mean supersaturation during a time step that can be used to model activation successfully. This approach has been used in many other detailed cloud models before.

P. 9, ll. 27 – 34: Unterstrasser et al. (2017, doi: 10.5194/gmd-10-1521-2017) showed successfully that longer time steps can be used for collection. However, I do not doubt the author's results. But I assume the reason for the need for substepping is the unusually small number of superdroplets used in their simulations, which overestimates the growth of individual superdroplets, which can be mitigated by substepping. This should be stated as such. (The authors use 40 superdroplets per grid box, most other studies use about 100.)

Fig. 2: To avoid confusion, label the axes in the figure.

P. 19, l. 25: Isn't there a year to the RAMS technical description?

P. 21, ll. 14 – 18: I agree that the width of the droplet spectra in the Lagrangian cloud model might be too narrow since they miss certain processes that are implicitly "included" by numerical diffusion in Eulerian bin models. However, naming specific processes can be misleading. Moreover, the correct consideration of “lucky droplets” might only be possible in Lagrangian cloud models, and can never be captured in Eulerian bin models that are based on the Smoluchowski equation that does not include statistical effects.

P. 21, ll. 23- 26: I recommend to cite Hoffmann (2016, doi:*10.1175/MWR-D-15-0234.1*). His study on spurious supersaturations in Lagrangian cloud models stated the explanations given here.

P. 22, l. 20: I think it is worthwhile to note that the timestep of 0.1 s can be reached by substepping, not by running the entire model with a timestep of 0.1 s.