I enjoyed reading "A simplified method for the detection of convection using high resolution imagery from GOES-16". The authors did a good job responding to my previous comments. But I think this paper needs some revision before being accepted, as I will describe in detail below.

Line 7: As a suggestion, "The ability to detect convective regions and to add latent heating to drive convection in weather forecast models is the most important skill in forecasting severe weather systems."

Line 12-15: As a suggestion, "Relatively new geostationary satellites, Geostationary Operational Environmental Satellites-16 and -17 (GOES-16 and GOES-17), along with Himawari-8, can make up for this lack of vertical information through the use of very high spatial and temporal resolutions, allowing to better observe bubbling features on convective cloud tops."

Line 20: Please provide a long name of MRMS.

Line 21: Please specify accuracy measures reported here.

Line 46: The 'peakedness' and 'surrounding area' criteria are not well explained by the following sentence.

Line 50: Please replace "at -10°C or higher" to "at -10°C height or above"

Line 50-51: Does Zhang and Qi (2010)'s method use the threshold for convective precipitation?

Line 62: Tb has not yet been defined.

Line 87: Please specify which Meteosat series.

Line 93: Please explain how "mesoscale sectors" is defined.

Line 96 "errors from cloud movements": Could you please elaborate on the errors from cloud movements?

Line 99: Change "Tb" to "Tb from IR channels"

Line 140-142 "It is a rather sophisticated classification…": Shouldn't this sentence be moved after the sentence "Details of the classification can be found in Zhang et al. (2016)." in line 137.

Line 182 "inverse Gaussian": It might be misleading with the term, inverse Gaussian distribution used in probability theory. Please use a different term.

Line 183: Please change "Tb shape" to "the Tb matrix"

Line 190-191 "Since one-minute data can be noisy, the decreasing trend was considered instead of an actual difference in Tb during 10minutes.": would leave this sentence out.

Line 199 "Using two channels help find the same clouds in different levels.": How are both channels used to find the same clouds? Does it mean that both channels need to satisfy the conditions? Please clarify, and change "help" to "helps".

Line 202: Change "make" to "makes"

Line 221: Change "relative to" to "due to"

Line 223: Please correct "texturs".

Line 236: It would be better to put the paragraph for the Sobel operator after the paragraph that describes screening scenes with VIS and IR channels (i.e., lines 223-234).

Line 238: Please mention how the thresholds, 0.4 and 0.9, were obtained. Change "implies" to "imply"

Line 239: "... with very high gradients." to "... with very high gradients, respectively."

3. Methodology: It would be good to have a flowchart for the methodology so that readers can have an overview of the methods used in this study.

Line 246: Isn't it southwest, not southeast?

Line 248-249: The radar data could be described in section 2.2, and the sentence would be something like "The two cells appeared in the composited NEXRAD radar data…"

Line 254: "channels 10" to "channels 10 (7.3 μm)". Please correct "the white circle".

Line 259-260: Change "The only two matrices in this scene that satisfied both criteria of maintaining the shape of developing cells and growing vertically over ten time steps were the two in blue circles." to "The two matrices in the blue box satisfied both criteria of maintaining the shape of developing cells and growing vertically over ten time steps.", or please revise it better.

Line 276: Please describe what parallax correction is and how it is calculated/corrected.

Line 289 "from different time": It would be better to provide the times when each coloured box was detected.

Line 291: "minute" to "minutes"

Line 293 "This shows a need to use both channels in the detection.": Does it mean that both channels need to be satisfied together in the detection? Please clarify.

Line 296 "the Tb method": It would be good to name the two methods for growing cloud detection and mature cloud detection method, respectively, in the Methodology section beforehand and use them in the following discussions.

Line 300 "Black regions superimposed on the brightness temperature map in Fig. 6c represent…": It would be good to also superimpose the detected mature convective clouds on the MRMS map, same as in Figure 5 for a better comparison.

4.3 Statistical results with one-month data: The part that explains the method seems to be quite huge, so it might be better to move them to the Methodology section.

Line 329: Using a threshold of 0.5 looks a reasonable compromise as well. It would be good to discuss the optimal balance between POD and FAR. It would be good to explain which one is the more important factor and why.

Line 333 "... mature convective clouds in the earlier stage…": Does it mean detecting clouds that grow into mature convective clouds?

Line 335-336 "... for its potential use in the short-term forecast, …": Is it okay to have small POD in the short-term forecast. Please give an explanation on it.

Figure 7: Please remove "(a)".

Line 337-338 "Figure 8b shows results including MRMS data 10 minutes after the detection period.": What does it mean to include MRMS data 10 min. after the detection period? Why were the data 10 min. after the detection period included? Please clarify.

Line 339-340 "Fig. 8b still shows its ability to detect convection earlier than MRMS.": It is unclear how Fig. 8b shows the ability of detecting convection earlier than MRMS.

Figure 9: Please add labels for x-axis with units.

Line 360: When all the windows were first collected, what were the thresholds used for each channel?

Line 365: Please add "... for channel 8 and 10, respectively." at the end.

Table 2 and 3: How are the first two columns obtained? How is the overall accuracy calculated? Please more clarify how the experiment is conducted for Table 2 and 3.

Line 375-376 "Therefore, it makes sense again that the growth rate at channel 10 has to be bigger to catch up lower Tb in channel 8.": Why does the growth rate at channel 8 needs to be caught by channel 10?

Line 377-378: Please give a reference.

Line 382-383: Could you explain more why false alarms are most detrimental to data assimilation? and please give a reference.

Line 385-387: What if the POD is so small that only a few convective clouds with most precipitation are detected? Could you please explain more on the last two sentences?

Line 390: "...to detect convective clouds" to "...to detect convective clouds in two different stages…"

Line 403 "extremely": It sounds a bit too strong. Please remove it or replace it with another word.

Results and Discussion: The labels in most figures are so small that can hardly be identified.

Please check typos and tense throughout the manuscript.