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Interactive comment on "Towards Objective Identification and Tracking of Convective Outflow Boundaries in Next-Generation Geostationary Satellite Imagery" *by* Jason M. Apke et al.

Anonymous Referee #2

Received and published: 14 September 2019

- General/Overall Comments

This work represents a unique application of an optical flow technique to high spatio-temporal geostationary imagery for the problem of identifying and tracking outflow boundaries. This paper is very well written and the work is well executed for the single case study described. Clearly, there is much more to be done and the author highlights these things, but I think this work is a great start and worthy of publication.

Recommend publication with only minor updates needed.

- Specific Comments

Line 10: change 15 min full disk to 10 min full disk (ABI Mode 6 is now used operationally)

Line 255: It is not clear to this reviewer how you define a "convective area". The word, "area", is used which would imply a group of pixels (presumably convective in this context). When working backwards toward this convection "area", is the convective area found when coming to the first pixel meeting the brightness temperature threshold?

- Technical Corrections

The following references cited in the text were not found in the References section:

Rotunno et al, 1988 Smalley et al 2007 Baker and Matthews, 2004 Van Den Broeke and Alsarraf, 2006

Line 165: Remove "spatially" from this sentence: "Thus,most optical flow computations initially spatially subsample images to where all displacements 166 are initially less than 1-pixel (Anandan, 1989; discussed more in Section 3.1), which can cause fast moving small features to be lost."

Line 285: replace ",etc." with ",for example".

Interactive comment on Atmos. Meas. Tech. Discuss., doi:10.5194/amt-2019-131, 2019.