Interactive comment on "An automated method for the evaluation of the pointing accuracy of sun-tracking devices" *by* Dietmar J. Baumgartner et al.

Anonymous Referee #3

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This paper introduces s device that can be used to assess the accuracy of solar tracking systems, which is based on processing of solar images recorded by a camera mounted on the tracking system. It is a useful tool which would help station operators to ensure the quality of pyrheliometer of diffuse radiation measurements obtained by shadowing disks or spheres. Furthermore, results of the system's performance at a monitoring site where direct irradiance measurements are conducted is presented. The paper's contents fall well within the scopes of AMT. The presentation and methodology are clear, apart from some minor issues discussed below, therefore I believe that he paper can accepted for publication after minor revisions.

Specific comments

P3, L14: Please clarify what is meant by detecting misalignment of the solar disk of 0.5°, while the system is designed to have much better precision.

P3, L22: it is not clear to me what is meant by "mounting in perfect horizontal alignment on the tracking system". Consequently, I cannot understand the need for derotating the images.

P3, L26: In step (iv) what kind of data are used for the fitted line? Is it the position of the center vs time, vs azimuth angle, or what? Furthermore, it is not clear how the angle (φ) is defined, since -to my understanding- the (solar) image border is circular. Maybe a sketch would help the reader to understand more easily the geometry.

P5, L3: It is stated that the error in the circle fit is one pixel. Doesn't this error depend on the resolution of the camera? Please state in the text how many pixels (on average) are along the diameter of the solar image.

P5, L15: Please explain what exactly is the "zero point position". It is introduced for the first time here, without having been defined. I would guess that it is a kind of an offset due a misalignment of the system on the tracker. However, later in the discussion of Figure 6 I see that the zero point is used to assess the tracking accuracy of a commercial tracker, which confuses me.