Interactive comment on “Brief communication: Antarctic sea ice gain does not compensate for increased solar absorption from Arctic ice loss” by Christian Katlein et al.

W. Eschenbach

willis@surfacetemps.org

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The values given in Figure 1 (b) are not correct. According to the CERES satellite data, from 2001-2014 the amount of sunlight absorbed into the arctic oceans is between 50 and 55 W/m². Antarctic oceans varied between 55 and 58 W/m² over the period.

The authors give values from 150 to 180 W/m² for the Arctic and from 180 to 245 W/m² for the Antarctic.

The Kiehl-Trenberth global energy budget gives a global average value of 167 W/m² for absorption, and the CERES data gives a global average of 162 W/m² ... the authors’ claim is larger than the K/T global average.
There is a separate issue. The CERES data shows a clear peak in Arctic oceanic absorption during the 2012 low in sea ice. There is no indication of this in the APP-x data.

Best regards,

w.

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Fig. 1.
Fig. 2.

Average Absorbed Shortwave Flux
CERES EBAF Data, Mar-2000 to Feb-2015
Avg Globe: 162.3  NH: 160.3  SH: 164.3  Trop: 214.3
Arc: 48.5  Ant: 35.2  Land: 137.8  Ocean: 171.8  W/m²
Average Absorbed Shortwave Flux Poleward of 50° Latitude
CERES EBAF Data, Mar-2000 to Feb-2015
Avg Globe: 54.5  NH: 52.2  SH: 56.5  Trop: NaN
Arc: 45.3  Ant: 44.2  Land: NaN  Ocean: 54.5 W/m²

Fig. 3.