Global land surface climatology data retrieved from IASI measurements

D. K. Zhou¹, A. M. Larar¹, X. Liu¹, W. L. Smith²–³, L. L. Strow⁴, P. Yang⁵, P. Schlüssel⁶, and X. Calbet⁶

¹NASA Langley Research Center, Hampton, VA, USA; ²Hampton University, Hampton, VA, USA; ³Hampton University, Hampton, VA, USA; ⁴University of Maryland Baltimore County, Baltimore, MD, USA; ⁵Texas A&M University, College Station, TX, USA; ⁶EUMETSAT, Darmstadt, Germany

Hyperspectrally-resolved surface emissivity and skin temperature derived from IASI measurements for climate studies – a technique separates surface emissivity from skin temperature by representing the emissivity spectrum with EOFs derived from a laboratory measured emissivity database.

What’s in the poster? algorithm, error estimation, results, validation, diurnal & seasonal variation, and discussion.

2007.07 Monthly Mean at 0.5–deg. Scale: Land Surf Temp (K)

2007.07 Monthly Mean at 0.5–deg. Scale: Land Surf Emis at 950 (1/cm)
Global land surface climatology data retrieved from IASI measurements

D. K. Zhou¹, A. M. Larar¹, X. Liu¹, W. L. Smith²,³, L. L. Strow⁴, P. Yang⁵, P. Schlüssel⁶, and X. Calbet⁶

¹NASA Langley Research Center, Hampton, VA, USA; ²Hampton University, Hampton, VA, USA;  
³Hampton University, Hampton, VA, USA; ⁴University of Maryland Baltimore County, Baltimore, MD, USA;  
⁵Texas A&M University, College Station, TX, USA; ⁶EUMETSAT, Darmstadt, Germany

Hyperspectrally-resolved surface emissivity and skin temperature derived from IASI measurements for climate studies – a technique separates surface emissivity from skin temperature by representing the emissivity spectrum with EOFs derived from a laboratory measured emissivity database.

What’s in the poster? algorithm, error estimation, results, validation, diurnal & seasonal variation, and discussion.

Data available upon request.

Email: daniel.k.zhou@nasa.gov