

Supplement of Earth Syst. Sci. Data, 9, 791–808, 2017
<https://doi.org/10.5194/essd-9-791-2017-supplement>
© Author(s) 2017. This work is distributed under
the Creative Commons Attribution 3.0 License.



Open Access
Earth System
Science
Data

Supplement of

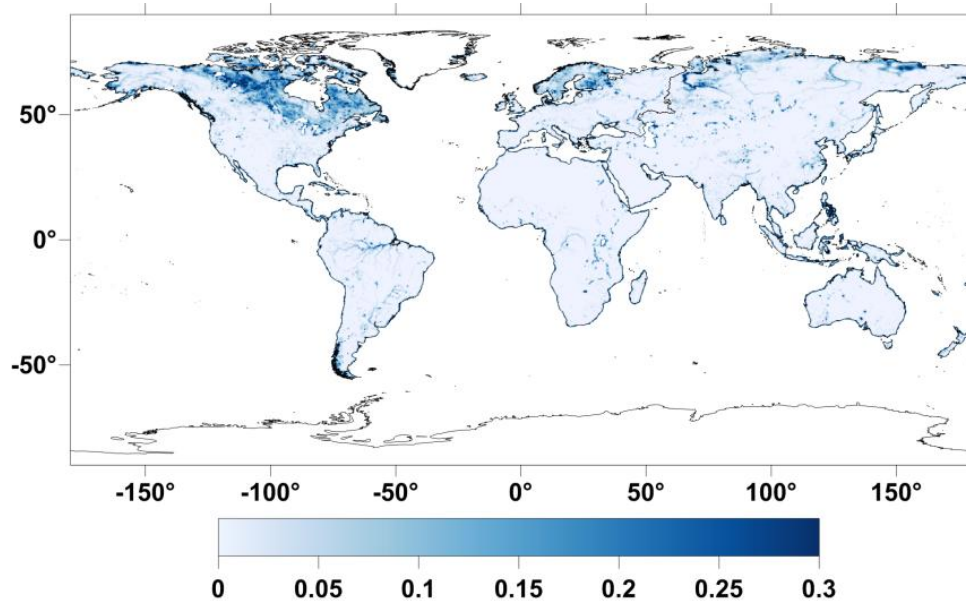
A global satellite environmental data record derived from AMSR-E and AMSR2 microwave Earth observations

J. Du et al.

Correspondence to: Jinyang Du (jinyang.du@ntsg.umd.edu)

The copyright of individual parts of the supplement might differ from the CC BY 3.0 License.

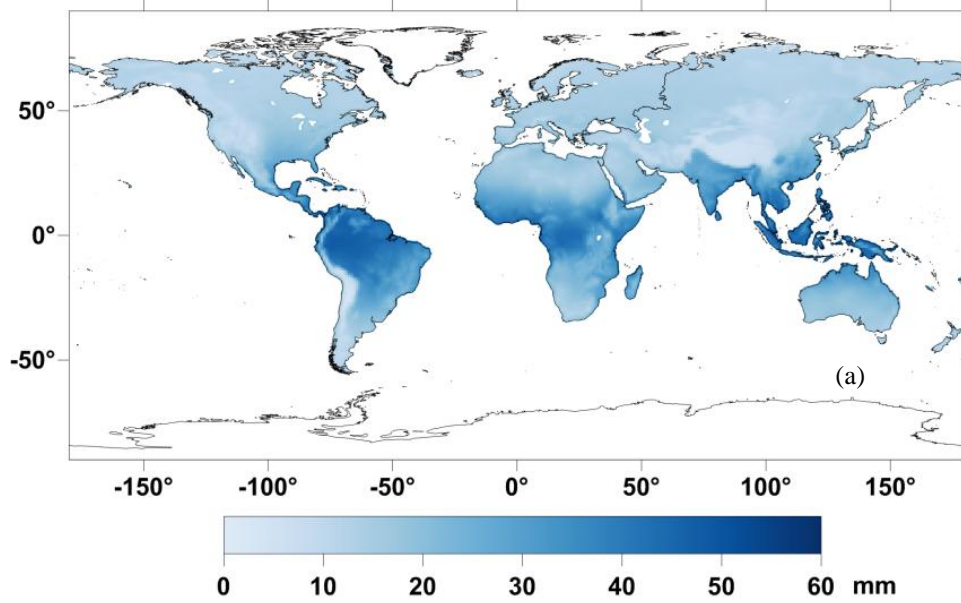
5



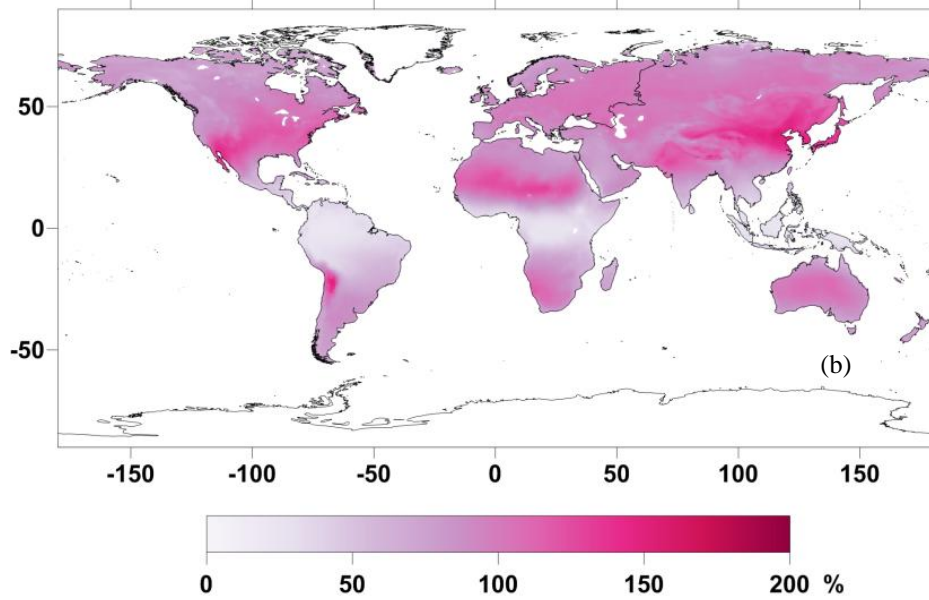
10

Supplementary Figure 1: The 25-km MOD44W static water map aggregated from original 250-m resolution.

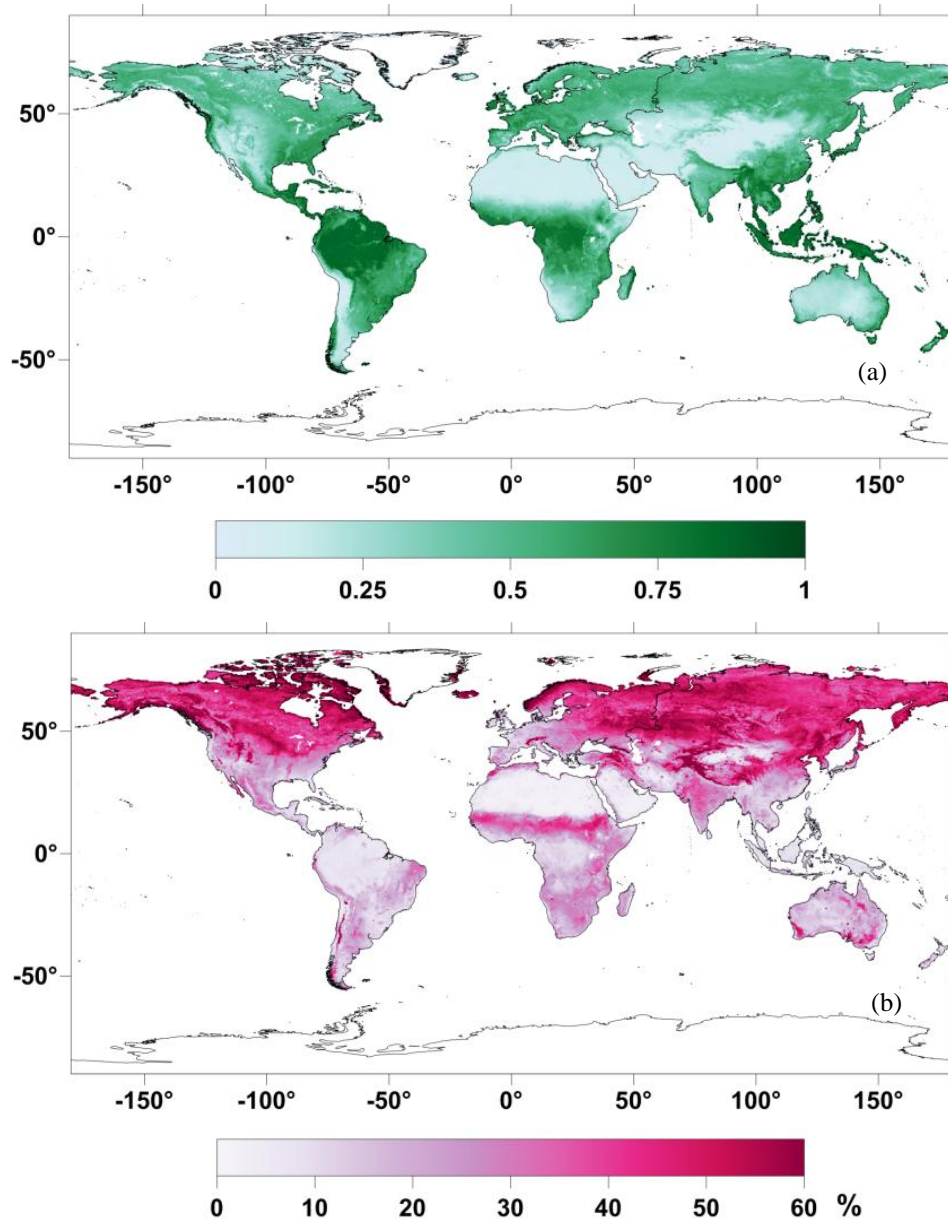
15



5



Supplementary Figure 2: AIRS climatology atmosphere precipitable water vapor (*PWV*) mean (a) and 2 times the coefficient of variation (b) for years 2003-2010 and 2013-2015.



5 Supplementary Figure 3: Annual mean (a) and the coefficient of variation (b) of GIMMS3g NDVI over years 2003-2010 and 2013-2015

Supplementary Table 1: Statistical mean, temporal standard deviation (SD) and temporal range calculated from LPDR monthly composites over respective full-year AMSR-E (2003-2010) and AMSR2 (2013-2015) portions of record. The LPDR parameters analyzed are separated by ascending and descending orbit retrievals for fractional water (fw), precipitable water vapor (PWV), daily maximum/minimum surface air temperature (Tmx and Tmn), X-band vegetation optical depth (VOD) and surface volumetric soil moisture (vsm).

	Mean		SD		Range	
	AMSR-E	AMSR2	AMSR-E	AMSR2	AMSR-E	AMSR2
Ascending						
fw	0.04	0.04	0.00	0.00	0.01	0.01
PWV (mm)	20.87	20.37	1.79	1.45	5.46	4.66
Tmx ($^{\circ}C$)	25.81	25.57	1.39	1.32	4.68	4.31
VOD	1.03	1.00	0.06	0.06	0.17	0.15
vsm (cm^3/cm^3)	0.14	0.13	0.01	0.01	0.03	0.03
Descending						
fw	0.04	0.04	0.01	0.01	0.02	0.02
PWV (mm)	22.30	21.85	1.67	1.41	5.28	4.85
Tmn ($^{\circ}C$)	13.53	13.66	1.14	1.12	3.84	3.87
VOD	1.01	1.02	0.08	0.07	0.20	0.17
vsm (cm^3/cm^3)	0.14	0.15	0.01	0.01	0.03	0.03