**Geoscientific
Model Development**

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Supplement of

ClimKern v1.2: a new Python package and kernel repository for calculating radiative feedbacks

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Supplementary Information

Kernel	Method			
	1	2	3	4
BMRC	1.52	1.45	1.71	1.69
CAM3	1.48	1.41	1.68	1.66
CAM5	1.48	1.41	1.66	1.64
CERES	1.54	1.47	1.75	1.73
CloudSat	1.34	1.28	1.52	1.50
ECHAM6	1.37	1.31	1.54	1.52
ECMWF-RRTM	1.53	1.45	1.73	1.72
ERA5	1.51	1.43	1.70	1.68
GFDL	1.44	1.38	1.62	1.60
HadGEM2	1.59	1.52	1.78	1.76
HadGEM3-GA7.1	1.50	1.43	1.69	1.67
mean	**1.48**	**1.41**	**1.67**	**1.65**
std	**0.07**	**0.07**	**0.08**	**0.08**

Table S1: The global annual mean water vapor feedback values (in $Wm^{-2}K^{-1}$) calculated using each kernel and each of the four water vapor feedback methods. The last two rows contain the kernel mean and standard deviation of the water vapor feedbacks for each method.

Kernel	Method			
	1	2	3	4
BMRC	-0.01	0.08	-0.25	-0.23
CAM3	0.05	0.14	-0.19	-0.16
CAM5	0.09	0.17	-0.13	-0.10
CERES	0.24	0.32	0.01	0.04
CloudSat	0.18	0.26	-0.03	-0.01
ECHAM6	0.22	0.30	0.02	0.04
ECMWF-RRTM	0.15	0.24	-0.07	-0.06
ERA5	0.08	0.17	-0.15	-0.12
GFDL	0.19	0.27	-0.02	0.01
HadGEM2	0.21	0.29	0.01	0.01
HadGEM3-GA7.1	0.12	0.21	-0.10	-0.08
mean	**0.14**	**0.22**	**-0.08**	**-0.06**
std	**0.08**	**0.08**	**0.09**	**0.09**

Table S2: The global annual mean TOA residual terms (in $Wm^{-2}K^{-1}$) for each kernel and water vapor feedback methods. The last two rows contain the kernel mean and standard deviation of the residuals.