Dictionary of geophysical fields

variable name	description		units / range
ME	topography elevation on 3 staggered grids		*m* (may be negative, if below sea-level)
	IP1	grid	
	1200	scalar	
	1199	UU	
	1198	VV	
MF	filtered topography (on scalar grid only)		*m*
MG	land fraction ("land-sea mask")		0.0 – 1.0 (no unit)
VF	vegetation fraction per class (26 classes)		0.0 – 1.0 (no unit)
J1	percentage of sand per layer (5 layers)		0.0 – 100.0 %
J2	percentage of clay per layer (5 layers)		0.0 – 100.0 %
VG	class number of dominant vegetation type		1 – 26 (integer, no unit)
GA	glacier fraction (same as VF(2))		0.0 – 1.0 (no unit)
MF	filtered ME (using GEM topo filter)		*m*
LH	launching height		*m*
Y7,Y8,Y9	subgrid topography gradient correlations		no unit
Z0,ZP	(effective) roughness length for momentum		*m*
ZP	ln(Z0)		no unit

Table of vegetation classes and corresponding roughness lengths

n	class	Z0 (m)	n	class	Z0 (m)
1	(sea) water	0.001	14	long grass	0.08
2	glacier	0.0003	15	crops	0.08
3	inland lake	0.001	16	rice	0.08
4	evergreen needle-leaf trees	1.5	19	sugar	0.35
5	evergreen broadleaf trees	3.5	18	maize	0.25
6	deciduous needle-leaf trees	1.0	19	cotton	0.1
7	deciduous broadleaf trees	2.0	20	irrigated crops	0.08
8	tropical broadleaf trees	3.0	21	urban	1.35
9	drought deciduous trees	0.8	22	tundra	0.01
10	evergreen broadleaf shrubs	0.05	23	swamp	0.05
11	deciduous shrubs	0.15	24	desert	0.05
12	thorn shrubs	0.15	25	mixed wood forests	1.5
13	short grass and forbs	0.02	26	mixed shrubs	0.05

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