The authors revised the manuscript carefully, I'm generally satisfied with the revisions and improvements. I have only one minor remark. The drivers of leaf onset and leaf senescence may be different. In table 1, the authors seem to mix the drivers and threshold values of the two processes? Or the authors only listed the drivers of leaf onset? Please clarify it. It's better to list the drivers and threshold values separately.

We thank the reviewer for appreciating our revisions.

Table 1 contains two sections: a first part describing the main features of each land surface model, and a second part detailing the temperature and moisture thresholds for the start and end of the growing season in the phenology schemes. In the revised version of table 1, we report this difference clearly in the table caption and we distinguish between thresholds for the start and end of the growing season.

Table 1. Grid spatial resolution used for each land surface model (LSM) and brief summary of their main features. PFT stands for Plant Functional Type and CFT stands for Crop Functional Type. The second part gives further details on the temperature and moisture thresholds for start (S) and end (E) of the growing season in the phenology schemes.

LSM	Original Resolution	PFT	Soil level	CFT	Phenology scheme	Phenology drivers	Root zone
CLM 4.5	1.25° x 0.9375°	15	15	1 C3	evergreen; seasonal-deciduous; stress-deciduous	Soil temperature; soil moisture; day-length	Zeng (2001)
CLM 5.0	0.5° x 0.5°	15	20	2 C3	evergreen; seasonal-deciduous; stress-deciduous	Soil temperature; moisture day-length; precipitation	Jackson et al. (1996)
JULES-ES	1.875° x 1.25°	13	4	1 C3, 1 C4	Deciduous trees	Surface temperature	Wiltshire et al. (2020a)
JSBACH	1.9° x 1.9°	12	5	1 C3, 1 C4	evergreen; summergreen; raingreen; grasses; tropical crops; extra-tropical crops	air temperature; soil temperature; soil moisture; NPP	Kleidon (2004)
LPJ-GUESS	0.5° x 0.5°	25	2	3 C3, 2 C4	evergreen; seasonal-deciduous; stress-deciduous	Air temperature; soil moisture	Root in top soil layer[†]; Herbaceous PFTs 90%, Woody PFTs 60%
ORCHIDEE	0.5° x 0.5°	15	11	1 C3, 1 C4	deciduous; dry and semi-arid; grasses and crops; grasses and crops	Air temperature; soil moisture; soil moisture	Exponential profile within the 2m soil; Krinner et al. (2005)
ISBA-CTRIP	1° x 1°	16	14	1 C3, 1 C4	leaf biomass	Leaf biomass	Canadell et al. (1996)

LSM	Temperature variable	Temperature threshold	Moisture variable	Moisture Threshold	Reference
CLM 4.5	Third soil layer* temperature	0 °C (S,E)	Third soil layer* water potential	-2 MPa (S,E)	Oleson et al. (2013)
CLM 5.0	Third soil layer** temperature	0 °C (S,E)	Third soil layer** water potential	-0.6 MPa (S), -2 MPa (E)	Lawrence et al. (2018)
JULES-ES	mean daily surface temperature	depending on PFT and whether S/E: 5 °C, 6.85 °C (S,E)	None	N/A	Clark et al. (2011)
JSBACH	depending on the phenology: air; pseudo-soil temperature	depending on the phenology and whether S/E: 4°C, 10°C, or critical heat sum (S,E)	soil moisture in the root zone	wilting point of 0.35 m/m (S,E)[†]	Mauritsen et al. (2019); Reick et al. (2021)
LPJ-GUESS	Mean daily air temperature	Sum above 5 °C (S)	water stress scalar (ω)	minimum of ω (ω_{min}) (S,E)	Smith et al. (2014)
ORCHIDEE	mean daily air temperature weekly temperature	Sum above -5 °C, 0°C (S) depending on PFT: 2, 5, 7, 10, 12 °C (E)	weekly relative soil moisture	5 days moisture increase (S) depending on PFT: 0.2, 0.3 m^3/m^3 (E)	Botta et al. (2000); Krinner et al. (2005)
ISBA-CTRIP	no phenology model: LAI is deduced from leaf biomass through Specific Leaf Area, which depends on nitrogen content				Delire et al. (2020)

* about 6cm depth. ** 9cm depth. [†] relative soil moisture content above which growth is possible and below which growth stops and shedding sets in.