



Supplement of

Lifecycle of updrafts and mass flux in isolated deep convection over the Amazon rainforest: insights from cell tracking

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Supplement

Table S1: List of ISO days from 2014 and 2015 in the “YYYYMMDD” format.

20140310, 20140311, 20140313, 20140326, 20140331, 20140401, 20140409, 20140420, 20140423, 20140426, 20140430, 20140503, 20140521, 20140604, 20140606, 20140611, 20140612, 20140622, 20140625, 20140626, 20140704, 20140709, 20140710, 20140712, 20140717, 20140718, 20140722, 20140725, 20140729, 20140804, 20140809, 20140811, 20140815, 20140827, 20140901, 20140907, 20140908, 20140909, 20140910, 20140913, 20140916, 20140922, 20140928, 20141004, 20141006, 20141112, 20141117, 20141128, 20141202, 20141205, 20141206, 20141217, 20141218, 20141219, 20141221, 20141222, 20141223, 20141225, 20141227, 20141228, 20141230, 20141231
20150104, 20150106, 20150112, 20150118, 20150224, 20150302, 20150303, 20150313, 20150314, 20150315, 20150322, 20150323, 20150329, 20150330, 20150401, 20150412, 20150415, 20150503, 20150507, 20150509, 20150510, 20150511, 20150522, 20150523, 20150524, 20150527, 20150528, 20150607, 20150609, 20150610, 20150614, 20150716, 20150722, 20150806, 20150902, 20150904, 20151012, 20151013, 20151103, 20151125

Table S2: Proportion of cells (in percentage) with different cell lifetimes in each lifetime bin.

Lifetime (L) in minutes	Bin 1	Bin 2	Bin 3	Bin 4	Bin 5
$36 \leq L \leq 60$	34	37	32	32	38
$60 < L \leq 120$	46	43	46	46	44
$120 < L \leq 240$	18	19	19	20	17
$240 < L \leq 360$	1.7	1.8	2.0	2.2	1.4

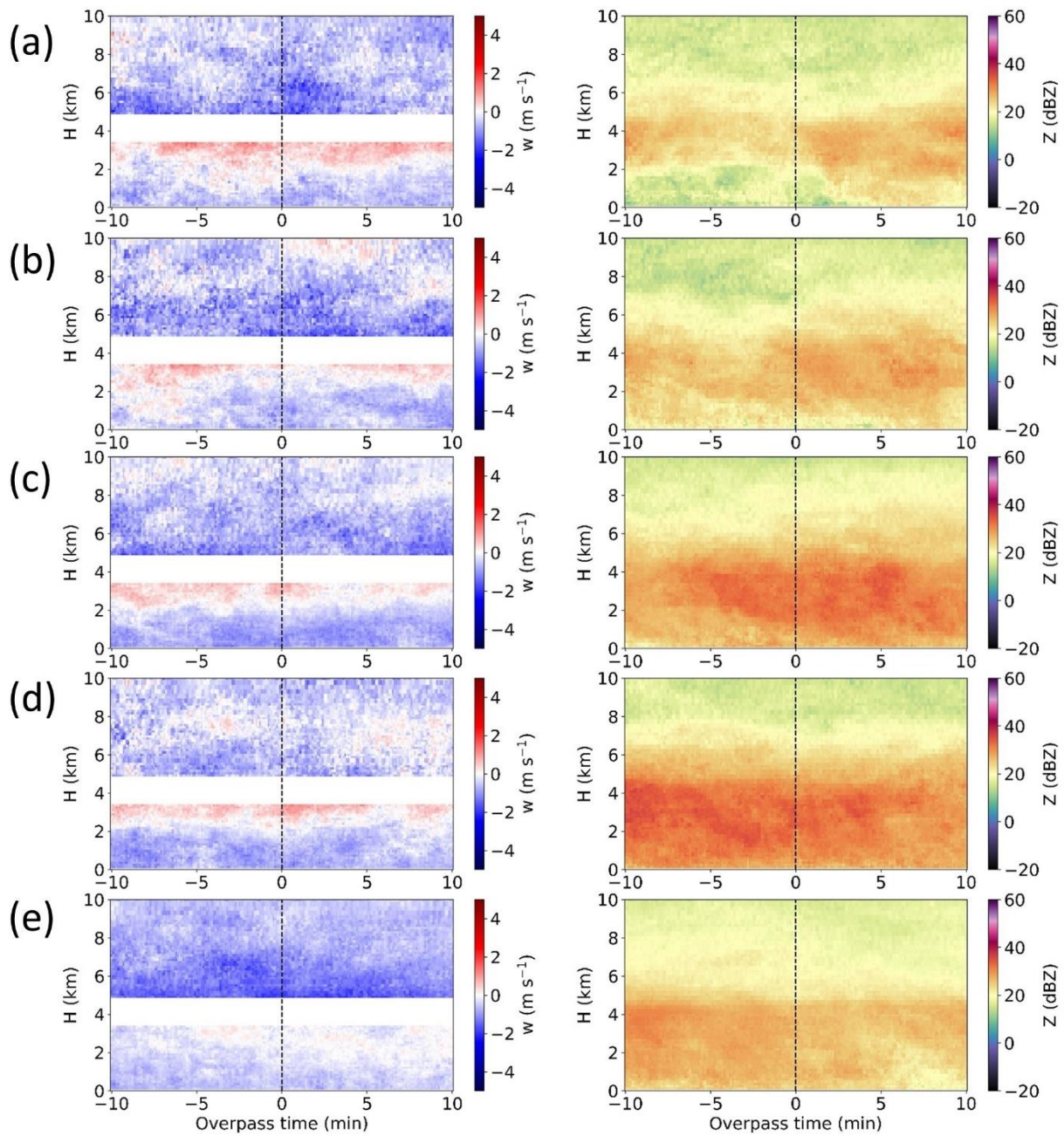


Figure S1: Time-height composites of vertical velocity (w) and reflectivity (Z) from the RWP for DCCs in the (a) developing, (b) early mature, (c) mature, (d) late mature, and (e) dissipating lifecycle stage (composites represent median values across the DCCs classified within each lifecycle stage).

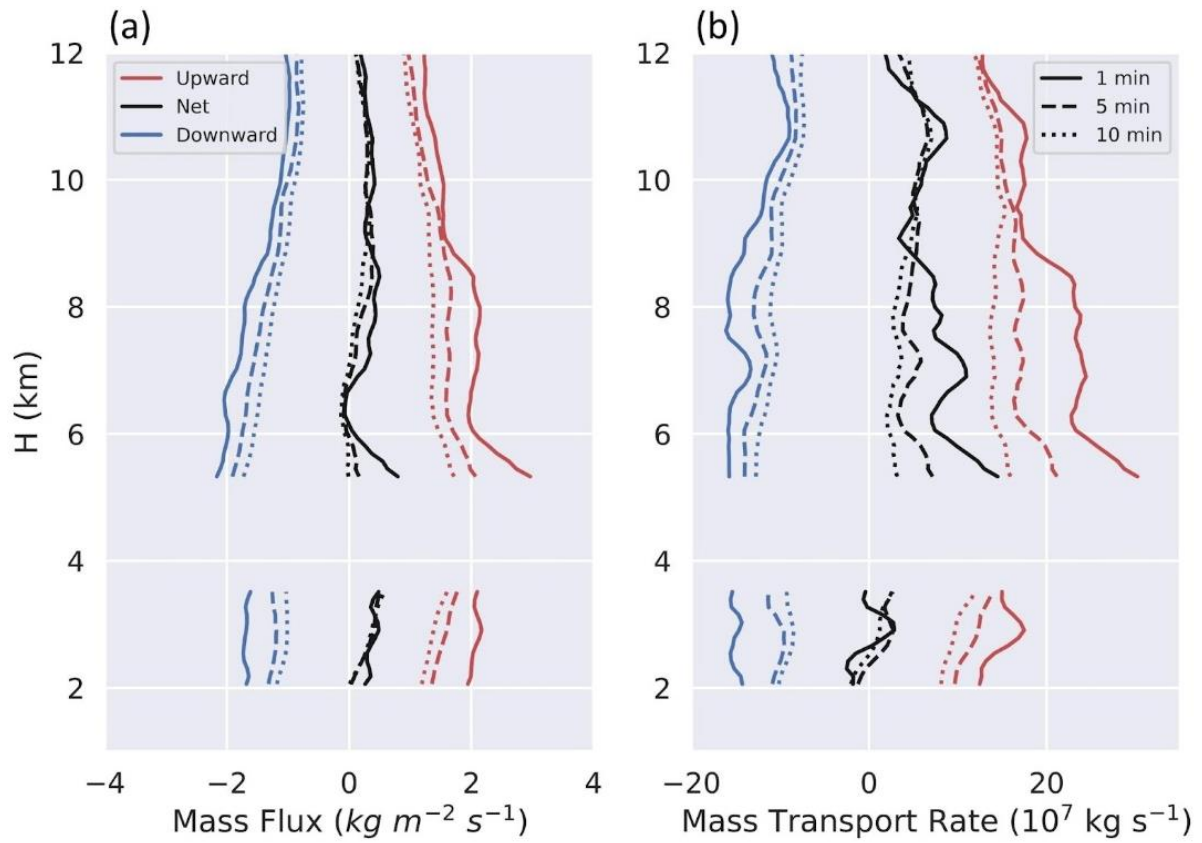


Figure S2: Profiles of mass flux and mass transport rate calculated based on RWP observations up to 1, 5, and 10 mins before and after the passage of the DCCs.

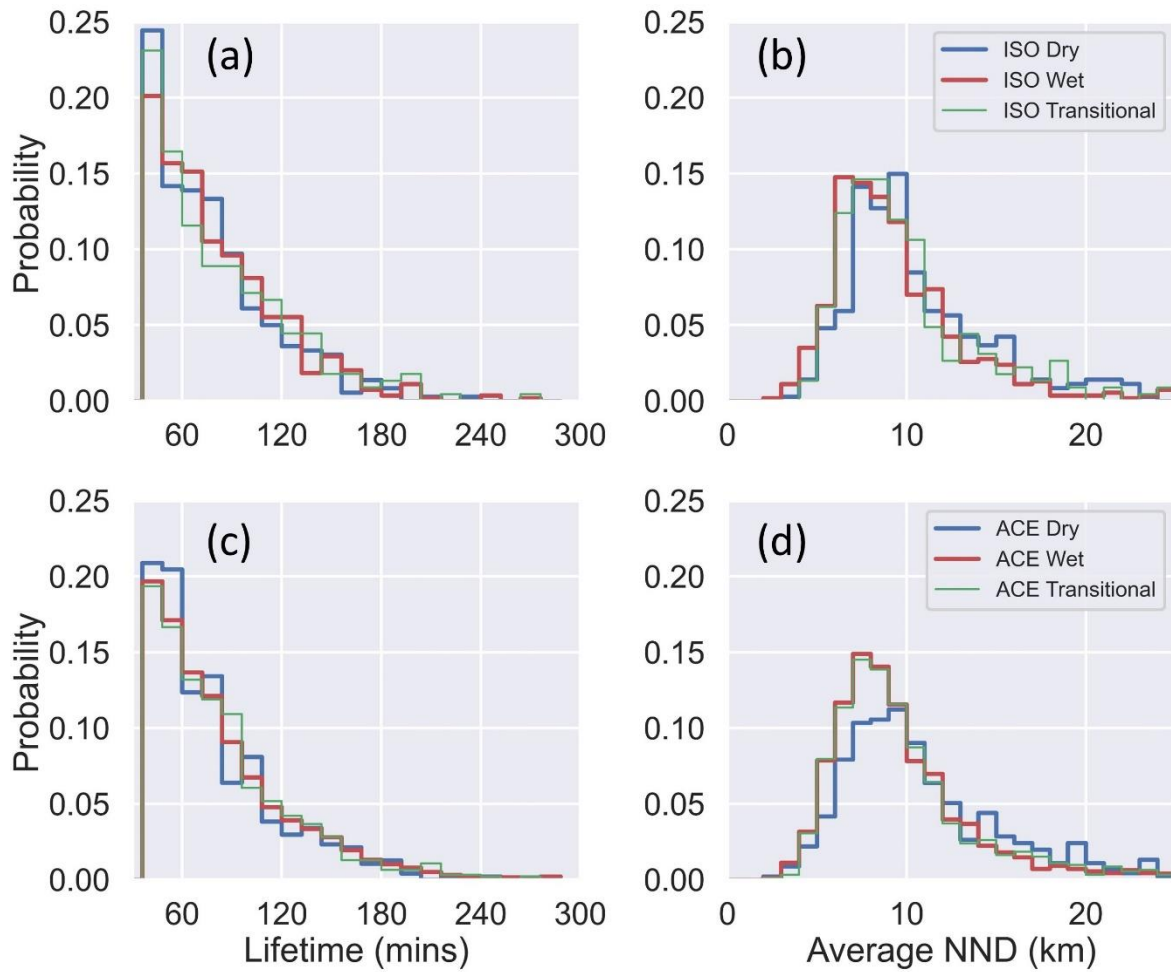


Figure S3: Seasonal histograms of the DCC lifetime and average nearest neighbor distance (NND) for cells observed on (a,b) ISO days and (c,d) ACE days.

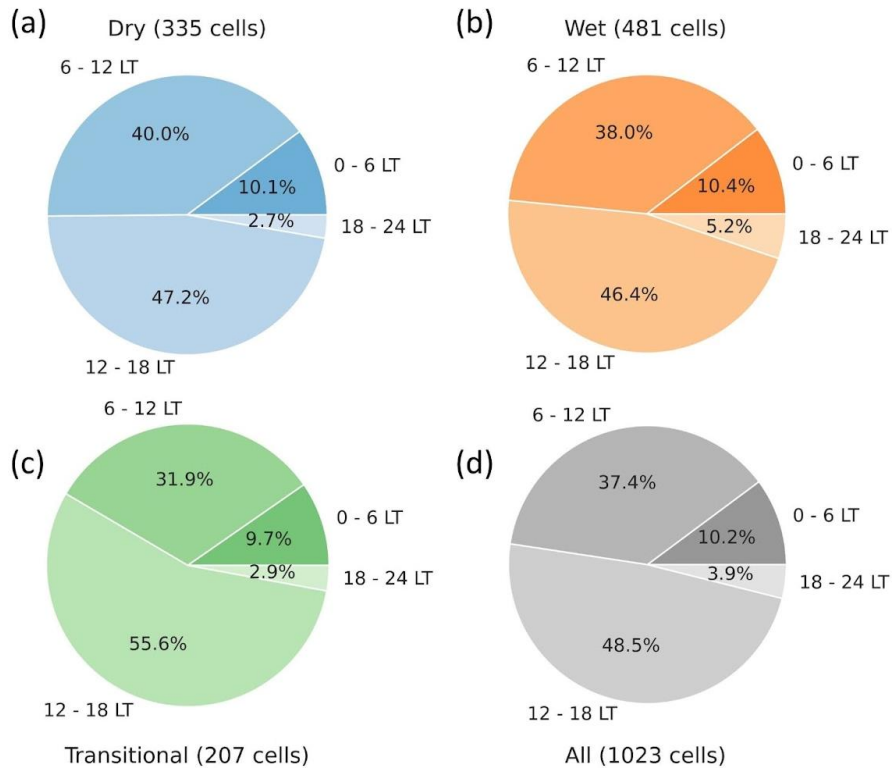


Figure S4: The relative proportion of cells initiating pre-sunrise (0 and 6 LT), in the morning (6 and 12 LT), in the afternoon (12 and 18 LT), or in the evening (18-24 LT) during the three seasons.