# Supplement of Cloud Regimes Over the Amazon Basin: Perspectives From the GoAmazon2014/5 Campaign

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**Table S1. Cloud type definitions based on cloud boundaries and thickness. Table adapted from Giangrande et al., (2017).**

| Cloud type | Cloud-based height | Cloud-top height | Cloud thickness |
|---|---|---|---|
| **Shallow** | < 3 km | < 3 km | No restriction |
| **Congestus** | < 3 km | 3-8 km | >= 1.5 km |
| **Deep convection** | < 3 km | > 8 km | >= 5 km |
| **Altocumulus** | 3-8 km | 3-8 km | < 1.5 km |
| **Altostratus** | 3-8 km | 3-8 km | >= 1.5 km |
| **Cirrostratus/Anvil** | 3-8 km | > 8 km | >= 1.5 km |
| **Cirrus** | > 8 km | > 8 km | No restriction |

**Table S2. MCS event days during GoAmazon2014/5 and associated to the large-scale regime cluster and type (propagating, local).**

| MCS Event | Regime | MCS Type |
|-----------|--------|-------------|
| 140107 | 5 | Local |
| 140119 | 4 | Local |
| 140207 | 5 | Local |
| 140211 | 4 | Propagating |
| 140311 | 4 | Local |
| 140327 | 4 | Local |
| 140401 | 4 | Propagating |
| 140410 | 4 | Local |
| 140414 | 4 | Local |
| 140417 | 4 | Propagating |
| 140506 | 4 | Local |
| 140509 | 5 | Propagating |
| 140516 | 4 | Local |
| 140530 | 4 | Local |
| 140611 | 2 | Local |
| 140619 | 3 | Propagating |
| 140626 | 4 | Propagating |
| 140711 | 3 | Local |
| 140728 | 2 | Local |
| 140816 | 2 | Local |
| 140908 | 2 | Propagating |
| 141004 | 4 | Local |
| 141006 | 4 | Local |
| 141010 | 5 | Propagating |
| 141127 | 5 | Propagating |
| 141210 | 5 | Local |
| 141225 | 5 | Local |

| | | |
|---|---|---|
| 150201 | 4 | Propagating |
| 150409 | 4 | Local |
| 150413 | 4 | Propagating |
| 150425 | 4 | Propagating |
| 150621 | 4 | Local |
| 150623 | 3 | Local |
| 150725 | 2 | Local |
| 150730 | 1 | Propagating |
| 150830 | 3 | Propagating |
| 151019 | 2 | Local |
| 151024 | 2 | Propagating |
| 151028 | 4 | Local |
| 151029 | 5 | Local |
| 151104 | 5 | Local |
| 151105 | 5 | Local |
| 151109 | 4 | Local |
| 151114 | 1 | Local |
| | | |
| | | |
| | | |
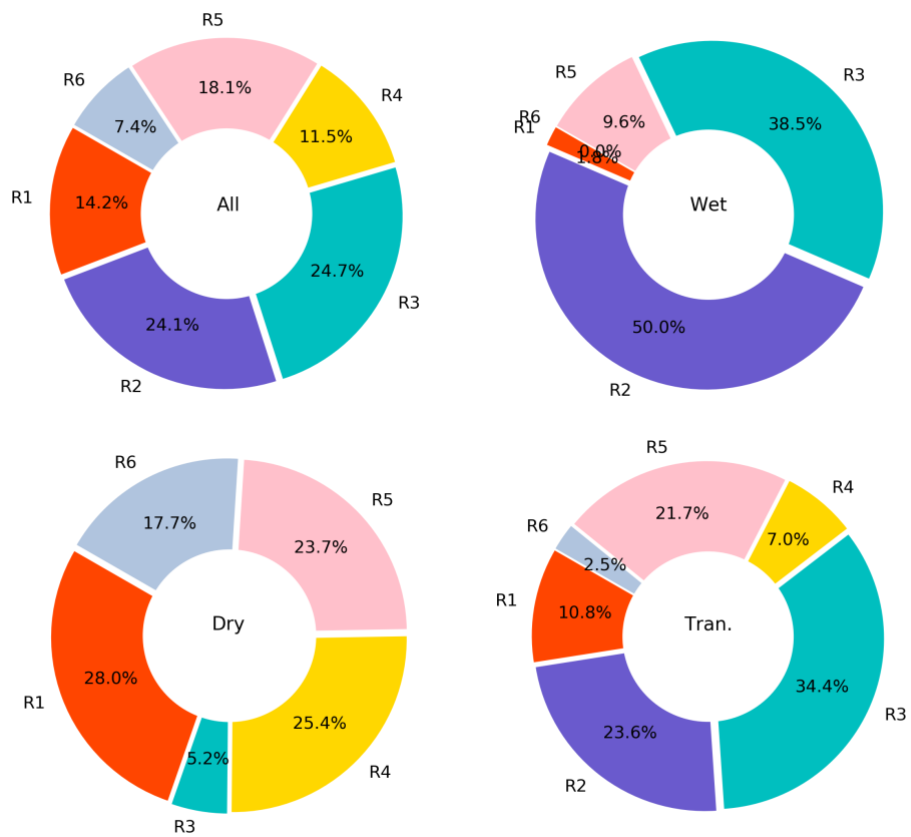
**Figure S1. As in Figure 1, but for a six cluster solution. Note that the individual clusters (e.g, 'regime 1') do not retain the same cluster numbers from one solution to another.**
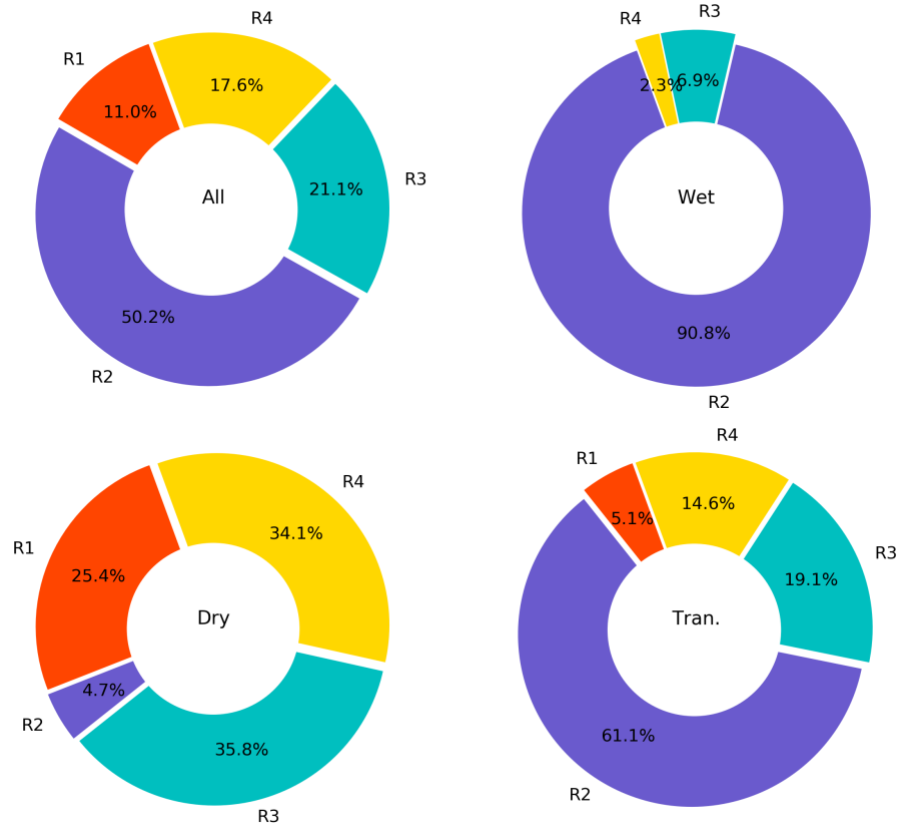
**Figure S2. As in Figure S1, but for the four cluster solution.**
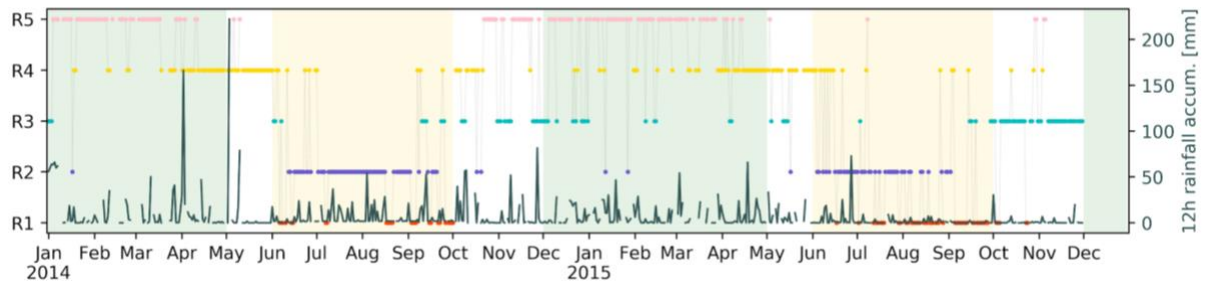
**Figure S3. Time series cluster results as in Figure 2, but using standardized inputs. The green shading indicates the wet seasons and the yellow shading indicates the dry seasons according to calendar definition.**
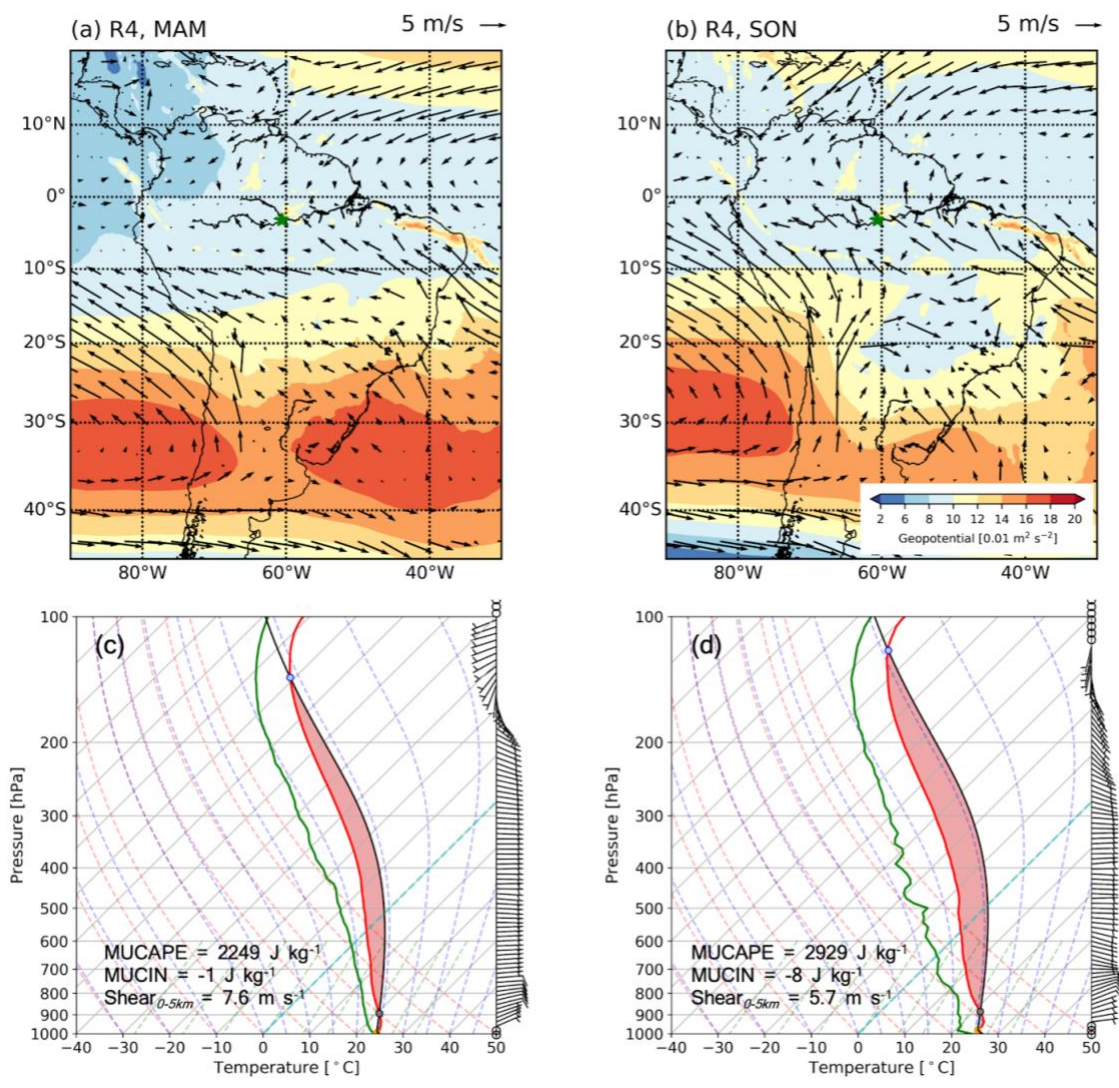
**Figure S4. Composite ERA5 large-scale patterns (a,b), and 1200 UTC soundings (c,d) for March through May (MAM) and September through November (SON) regime 4.**
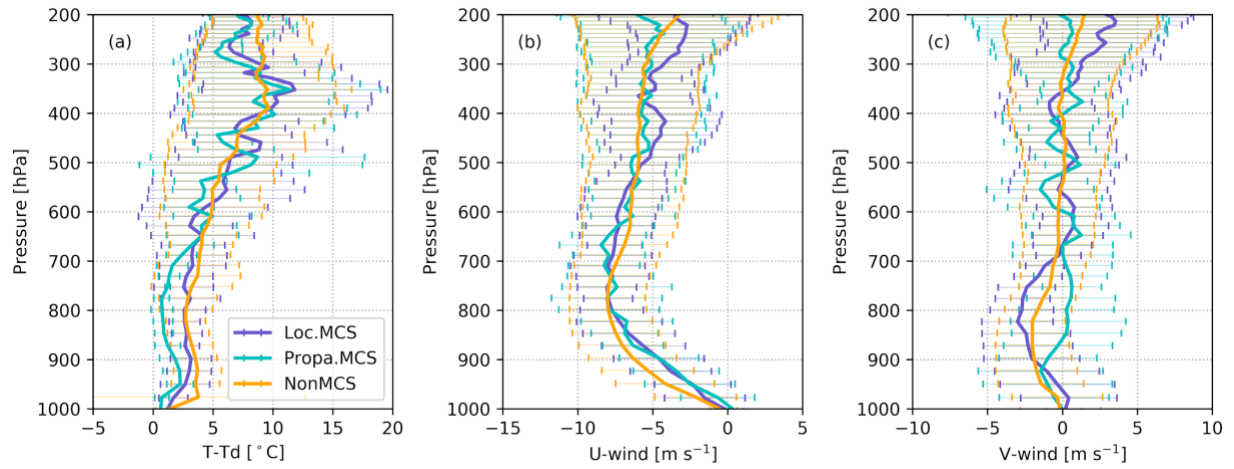
**Figure S5. Profiles of radiosonde quantities for nonMCS, local MCS, and propagating MCS cases in regime 4.**
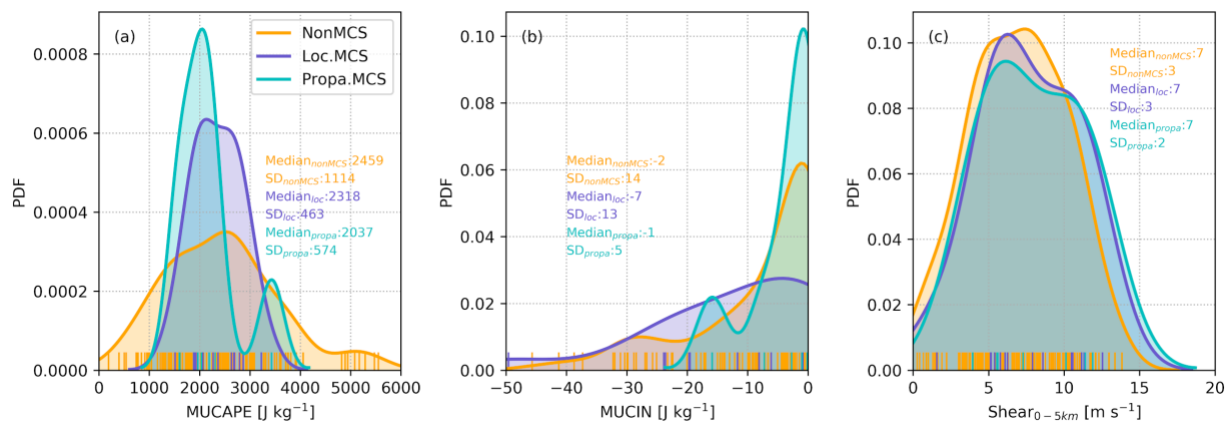
**Figure S6. Histograms for MUCAPE, MUCIN, and low-level wind shear for nonMCS, local MCS, and propagating MCS cases in regime 4.**