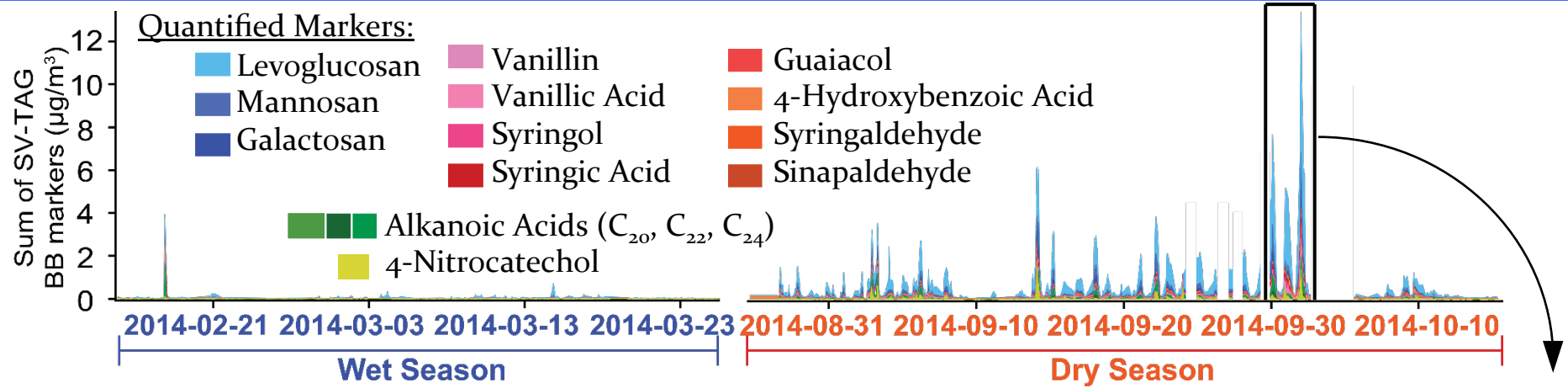
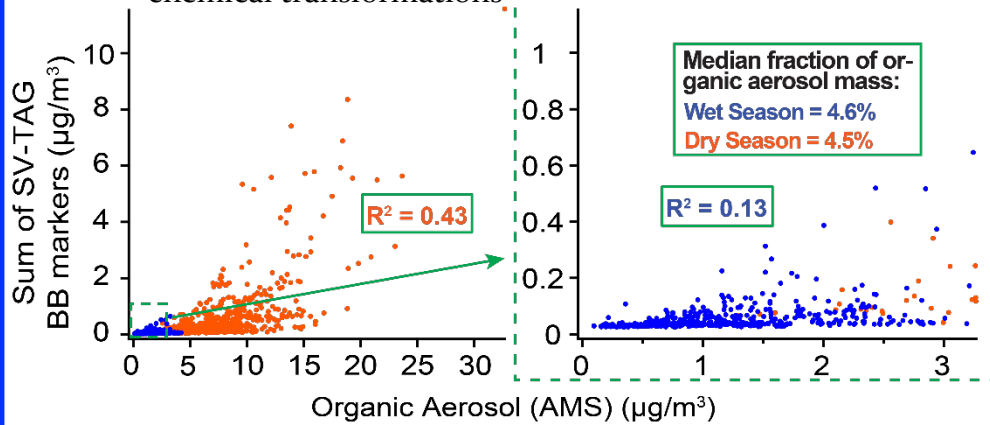
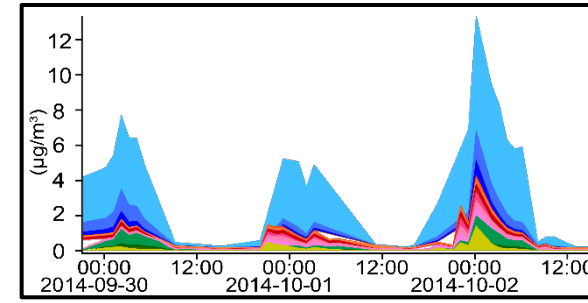


Hourly Speciated SVOCs from Biomass Burning in Amazonia

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- 15 quantified biomass burning markers measured by Semi-volatile Thermal Desorption Aerosol Gas Chromatograph (SV-TAG)
- Dry Season >> Wet Season; Nighttime >> Daytime
- Levoglucosan 40% of quantified markers by mass
- Variability in marker ratios on different nights indicative of burning conditions & chemical transformations



Quantified primary emission markers show similar contributions to total OA in both wet and dry seasons:
 → Median BB tracer contribution ~5% of OA mass
 → Occasional contributions of 25-50% OA mass



Speciated and Classified I/SVOC Emission Factors (EFs) from Fresh Emissions of Western US Fuels

Coty Jen and Allen Goldstein, UC Berkeley

Fire-integrated gas+particle I/SVOC analysis using TD-GCxGC EI/VUV HRTofMS with online derivatization

Volatilities between C₁₂ and C₃₆ n-alkane equivalent

Determined Emission Factors for ~3000 unique compounds across 28 different fuels

~150 positively identified compounds

~400 compounds classified into chemical families

Lower MCE → Higher I/SVOC EFs (smoldering)

Log(EF) decreases linearly with MCE

Mass spectral database of measured compounds and their fuel source(s) (sharable and NIST compatible)

