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A New IGAC/iLEAPS/WMO Initiative on Biomass Burning

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Biomass burning changes the land surface drastically and leads to the release of large amounts of trace gases and aerosol particles that play important roles in atmospheric chemistry and climate. In addition, there is large uncertainty on how climate change and global change will impact the frequency, intensity, duration, and location of biomass burning in the short- and long-term, making their emissions a large source of uncertainty in future atmospheric composition. Therefore biomass burning and its emissions need to be observed and modeled accurately to understand the composition of the atmosphere and how it changes at different temporal and spatial scales. Significant gaps remain in our understanding of the contribution of deforestation and savanna, forest, agricultural waste, and peat fires to emissions. International activities (e.g., interdisciplinary laboratory measurements and field campaigns that integrate ground-based and airborne observations, as well as detailed analysis of satellite data and numerical modeling results) will help to better quantify the present and future impact of biomass burning emissions on the composition and chemistry of the Earth's atmosphere. Therefore IGAC, iLEAPS, and WMO have held a workshop on biomass burning in summer 2012 and subsequently created a new joint initiative on biomass burning. The initiative aims to coordinate the world-wide and interdisciplinary activities in order to improve our quantitative understanding of biomass burning. It is in its start-up phase and input from the community is invited. More information is available at http://www.igacproject.org/BiomassBurning .