

## Supplementary Material

### **MODIS-based smoke detection shows that daily smoke cover dampens fire severity in initial burns but not reburns in complex terrain**

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Fig. A1. Spearman rank correlation coefficients ( $r_s$ ) between smoke variables and weather (italicized) from the sample points used in the models of fire severity. Note that multicollinearity between smoke variables was addressed during the variable selection process prior to generating the final fire severity models. From upper left, variables are: Aerosol Optical Density at 47 and 55  $\mu\text{m}$ ; plume injection height; smoke cover from the Terra and Aqua sensors and the daily mean, minimum and maximum of these values; the Energy Release Component; wind speed and direction (“eastness” and “northness”); maximum temperature and minimum relative humidity.

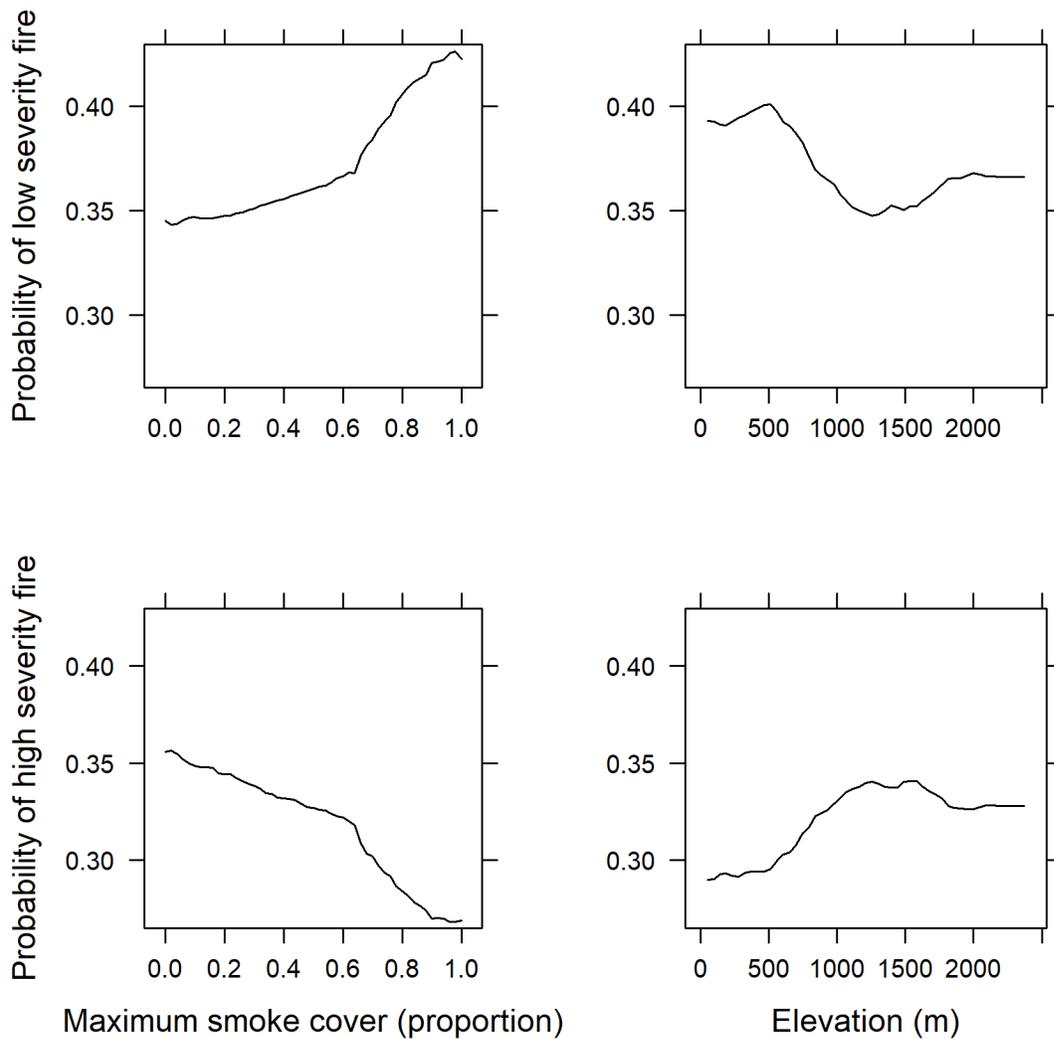


Figure A2. Individual influence of maximum smoke cover and elevation on the marginal probability of low and high-severity fire in non-reburns, shown by partial dependence plots. Compare with the smoke-elevation interaction shown in Figure 8.