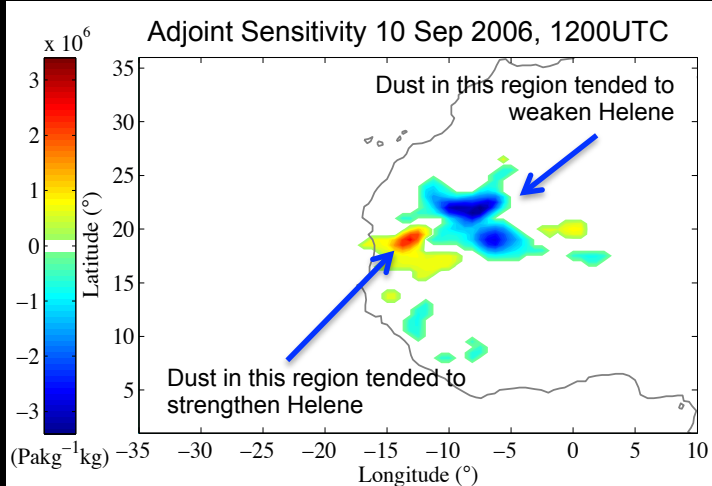
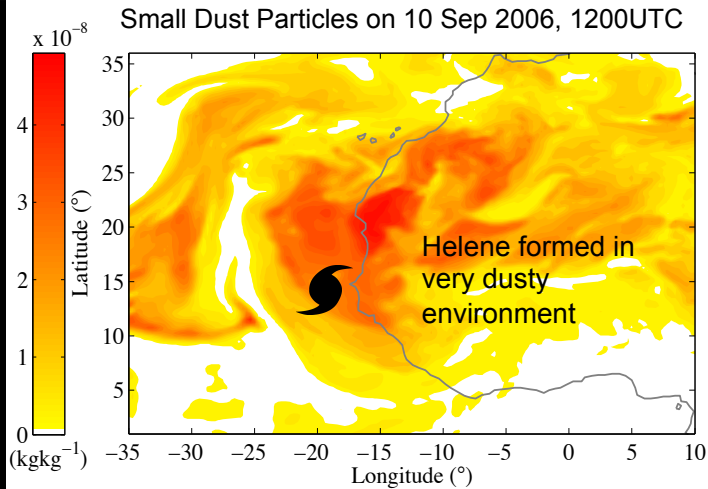
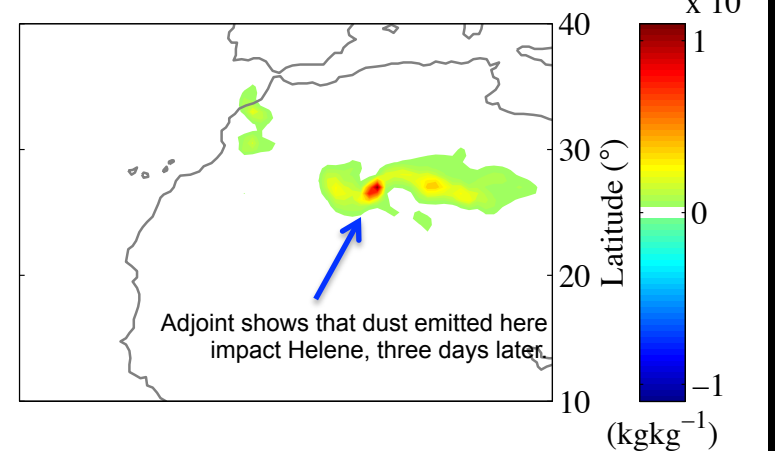


Investigating sensitivity to dust during the formation of hurricane Helene (2006) using the GEOS-5 Adjoint



- Tropical cyclones can have very diverse sensitivity to dust structures.
- Intensity of specific storms can be both increased and decreased by dust when perturbations aligned with sensitivity.
- Sensitivity to dust rapidly decreases as the storm intensifies and organizes.

Sensitivity to Dust Emission 07 Sep 2006, 0300UTC



- The adjoint can be used to determine sensitivity to sources and could be useful for improving surface flux estimation.