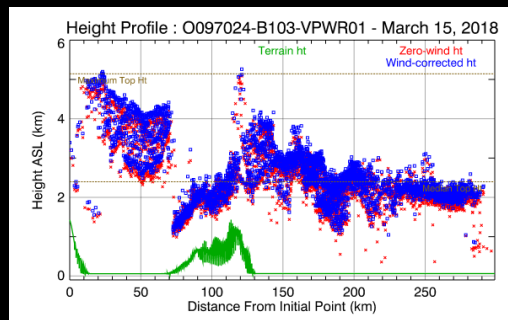
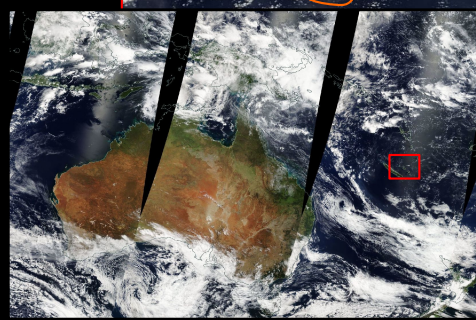
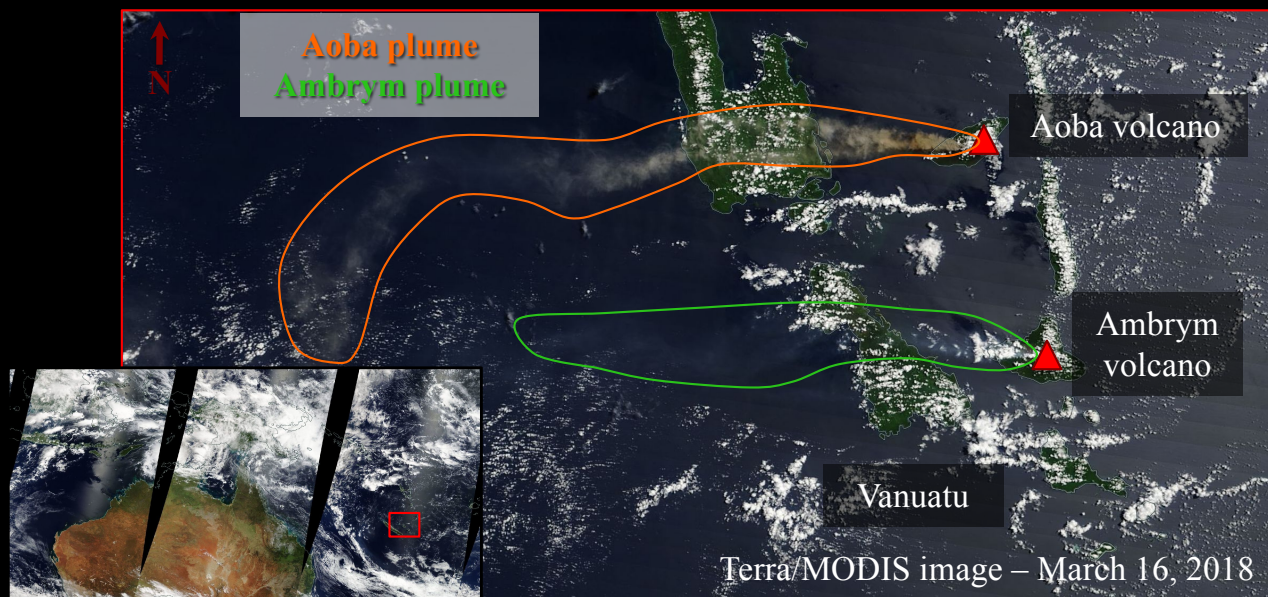


Volcanic eruption plume from Aoba Volcano, Vanuatu

MISR Active Aerosol Plume-Height (AAP) Project 15 March 2018

Volcanic eruptions can generate significant amounts of atmospheric aerosols that can have **regional to global impacts**. To determine the influence of volcanic eruptions, **accurate plume heights** are needed, but are **difficult to obtain due to the hazardous nature of volcanic eruptions**. Stereo images from NASA's Multi-Angle Imaging Spectroradiometer (**MISR**) make it possible to retrieve plume height in ongoing eruptions using parallax. Multi-angle images facilitate distinguishing eruption plumes from metrological clouds and remobilized ash.

Aoba volcano located on Ambae, one of the Vanuatu Island chain in the SW Pacific, began displaying heightened activity on 30 August 2017. On March 15, 2018 MISR observed a plume **reaching ~5 km**. The plume appears darker than a nearby plume emitted by **Ambrym volcano** to the south, suggesting higher ash content. Particles were transported to the East. The plume dropped in altitude to **~3 km**, before rising again as it was transported over neighboring islands. The plume then settled to an altitude of **~2 km**. At this altitude, the **direct** (ash fall) and **indirect** (surface temperature) effects are likely to remain **local-regional**. Activity remains high at Aoba, with the potential for ongoing eruptions to cause significant **regional hazards to populations and aviation**.



Red = zero-wind height
Blue = wind-corrected height
Green = surface elevation

