BLOCK AND ASH FLOWS

Laura Pioli

BAF: how do they form

- Gravitational collapse or explosive disruption of typically andesitic to rhyodacitic lava domes, or from collapse of vulcanian columns

Soufriere Hills, Montserrat

BAF

- Typically small, 10^3-10^6 m^3
- Typical runouts of a few km (rarely more than 10)
- Very dense: v vary with slope, 5-20 m/s
- T 400-600 ºC
- The deposits may reach 100 m thickness in valleys, and just a few m on ridges

BAF

- Clast-supported
- Juvenile is dense, non to poorly vesicular
- Poorly sorted
- Block may reach up to 15 m in diameter

- Jointing
- Friction marks
- Elutriation pipes
- Distal facies are fine grained
- Levees
- Commonly interbedded with lahars and fluvial deposits