The lidar ratio in CALIOP data over CONUS is worse because there are no internal layer boundaries between types. CALIOP scene is less homogeneous than HSRL classification. CALIOP detection algorithm does not attempt to detect aerosol types; boundaries between types are defined solely by changes in backscatter intensity. Ironically, the higher SNR allows CALIOP to detect albedo effects in cases of lower backscatter intensity than HSRL. This is an advantage for discriminating small changes in atmospheric aerosol properties. The CALIOP lidar ratio data is used as input to the CALIOP processing algorithms to retrieve aerosol extinction. The CALIPSO Vertical Feature Mask version 4 will include a correction for attenuation from overlying layers. The CALIOP Level 2 Version 4 aerosol lidar ratio data will be used to account for attenuation caused by overlying layers. Note that when there is significant attenuation, dust and polluted dust may be selected even in cases having depolarization of only a few percent. In these cases the CALIOP assumes dust is selected. Here are the distributions of all dust and polluted dust cases vs. the CALIOP lidar ratio at 532 nm for CALIOP and HSRL, respectively. The CALIOP lidar ratio data is used as input to the CALIOP processing algorithms to retrieve aerosol extinction. The CALIPSO Vertical Feature Mask version 4 will include a correction for attenuation from overlying layers. The CALIOP Level 2 Version 4 aerosol lidar ratio data will be used to account for attenuation caused by overlying layers. Note that when there is significant attenuation, dust and polluted dust may be selected even in cases having depolarization of only a few percent. In these cases the CALIOP assumes dust is selected. Here are the distributions of all dust and polluted dust cases vs. the CALIOP lidar ratio at 532 nm for CALIOP and HSRL, respectively. The CALIOP lidar ratio data is used as input to the CALIOP processing algorithms to retrieve aerosol extinction. The CALIPSO Vertical Feature Mask version 4 will include a correction for attenuation from overlying layers. The CALIOP Level 2 Version 4 aerosol lidar ratio data will be used to account for attenuation caused by overlying layers. Note that when there is significant attenuation, dust and polluted dust may be selected even in cases having depolarization of only a few percent. In these cases the CALIOP assumes dust is selected. Here are the distributions of all dust and polluted dust cases vs. the CALIOP lidar ratio at 532 nm for CALIOP and HSRL, respectively. The CALIOP lidar ratio data is used as input to the CALIOP processing algorithms to retrieve aerosol extinction. The CALIPSO Vertical Feature Mask version 4 will include a correction for attenuation from overlying layers. The CALIOP Level 2 Version 4 aerosol lidar ratio data will be used to account for attenuation caused by overlying layers. Note that when there is significant attenuation, dust and polluted dust may be selected even in cases having depolarization of only a few percent. In these cases the CALIOP assumes dust is selected.