ER2 Desired Measurements for CLASIC
June 2007 SGP

	MEASUREMENT SOURCE	DESIRED MEASUREMENTS AND PRODUCTS
INSTRUMENT SYSTEMS	**Cloud Radar System (CRS),** W-Band (95 GHz)	1) Vertical profiles of calibrated radar reflectivity 2) Vertical profiles of Doppler velocity 3) Vertical profiles of estimated IWC 4) Vertical profiles of linear depolarization ratio 5) (ASCII files and quick look plots for all of the above quantities) Resolution: 5 sec resolution?
	Cloud Physics Lidar (CPL) (1064, 532, and 355 nm)	1) Vertical profiles of attenuated backscatter coefficient 2) Vertical profile of depolarization ratio 3) Cloud and aerosol layer boundaries at 1 second resolution 4) Vertical profiles of cloud and aerosol extinction 5) Optical depth estimates as a function of time (aerosol optical depth, cloud optical depth, boundary layer optical depth, cirrus optical depth, total optical depth) 6) Extinction to backscatter ratios 7) Vertical profile of cloud particle size for ice clouds
	MODIS Airborne Simulator (MAS), Multi-Spectral IR, Near IR, Visible	1) Calibrated and geolocated spectral radiances (need to list channels here maybe, based on what is needed for some of the retrievals of higher order products listed below).
HIGH LEVEL PRODUCT DEVELOPMENT	**MODIS Airborne Simulator (MAS),** Multi-Spectral IR Imager	1) Optical depth 2) Effective radius 3) Cloud top height (temperature) 4) Cloud fraction 5) Cloud phase 6) Aerosol & cloud optical depth separately
AIRCRAFT STATE PARAMETERS	**ER2 Navigation Recorder**	1) GPS/INS Altitude 2) Attitude 3) Pitch 4) Roll 5) Latitude 6) Longitude 7) Air Temperature 8) Pressure 9) Heading 10) True Air Speed