Year/Data		F-hour
2014 ESRL Data		0
Variables	Description	Level
TMP_P0_L1_GLC0	Temperature	ground
TMP_P0_L103_GLC0	Temperature	2m
TMP_P0_2L108_GLC0	Temperature	30 hPa above ground
POT_P0_L103_GLC0	Potential Temperature	2m
POT_P0_2L108_GLC0	Potential Temperature	30 hPa above ground
DPT_P0_L103_GLC0	Dew point temperature	2 m
DPT_P0_2L108_GLC0	Dew point temperature	30 hPa above ground
LHTFL_P0_L1_GLC0	Latent heat flux	ground
SHTFL_P0_L1_GLC0	Sensible heat flux	ground
LRGHR_P0_L200_GLC0	Large scale condensate heating rate	entire atmosphere
CNVHR_P0_L200_GLC0	Deep convective heating rate	entire atmosphere
SHAHR_P0_L200_GLC0	Shallow convective heating rate	entire atmosphere
VDFHR_P0_L200_GLC0	Vertical diffusion heating rate	entire atmosphere
SPFH_P0_L103_GLC0	Specific humidity	2 m
RH_P0_L103_GLC0	Relative humidity	2 m
RH_P0_2L108_GLC0	Relative humidity	30 hPa above ground
PWAT_P0_L200_GLC0	Precipitable water	entire atmosphere
WEASD_P0_L1_GLC0	Water equivalent accum. Snow depth	ground
CRAIN_P0_L1_GLC0	Categorical rain	ground
CFRZR_P0_L1_GLC0	Categorical freezing rain	ground
CICEP_P0_L1_GLC0	Categorical ice pellets	ground
CSNOW_P0_L1_GLC0	Categorical snow	ground
CNVMR_P0_L200_GLC0	Deep convective moistening rate	entire atmosphere
SHAMR_P0_L200_GLC0	Shallow convective moistening rate	entire atmosphere
UGRD_P0_L103_GLC0	u wind component	10 m
VGRD_P0_L103_GLC0	v wind component	10 m
VUCSH_P0_2L103_GLC0	u component of vertical shear	1 and 6 km
VVCSH_P0_2L103_GLC0	v component of vertical shear	1 and 6 km
WMIXE_P0_L103_GLC0	wind mixing energy	80 m

GUST_P0_L1_GLC0	wind speed (gust)	ground
USTM_P0_2L103_GLC0	U component storm motion	6 km
VSTM_P0_2L103_GLC0	V component storm motion	6 km
FRICV_P0_L1_GLC0	Frictional velocity	ground
PRES_P0_L1_GLC0	pressure	ground
PRMSL_P0_L101_GLC0	Mean sea level pressure	ground
HGT_P0_L2_GLC0	Geopotential height (cloud base)	cloud base
HGT_P0_L3_GLC0	Geopotential height (cloud tops)	cloud tops
HGT_P0_L5_GLC0	Geopotential height (LCL)	LCL height
5WAVH_P0_L3_GLC0	5 wave geopotential height	cloud tops
UGWD_P0_L200_GLC0	Zonal flux of gravity wave stress	entire atmosphere
VGWD_P0_L200_GLC0	Meridional flux of gravity wave stress	entire atmosphere
HPBL_P0_L1_GLC0	PBL Height	ground
PLPL_P0_2L108_GLC0	Pressure level from which parcel lifted	ground to 255 hPa
DSWRF_P0_L1_GLC0	Downward short-wave radiation flux	entire atmosphere
ULWRF_P0_L8_GLC0	Upward long-wave radiation flux	entire atmosphere
TCDC_P0_L200_GLC0	total cloud cover	entire atmosphere
LCDC_P0_L214_GLC0	low cloud cover	low cloud layer
MCDC_P0_L224_GLC0	medium cloud cover	middle cloud layer
HCDC_P0_L234_GLC0	high cloud cover	high cloud layer
CAPE_P0_L1_GLC0	Convective available potential energy	surface-based
CAPE_P0_2L108_GLC0(0)	CAPE using highest average theta-e in six lowest 30 mb layers	
CAPE_P0_2L108_GLC0(1)	Mean layer cape using avg. theta e of 3 lowest 30-hPa layers	
CAPE_P0_2L108_GLC0(2)	Most unstable CAPE using highest theta-e in lowest 300 hPa	
CIN_P0_L1_GLC0	Convective inhibitation -- surface based	
CIN_P0_2L108_GLC0(0)	CIN using highest average theta-e in six lowest 30 mb layers	
CIN_P0_2L108_GLC0(1)	MLCIN	
CIN_P0_2L108_GLC0(2)	MUCIN	
HLCY_P0_2L103_GLC0(0)	Storm-relative helicity from 0-1 km using Bunkers et al (2000) storm motion	
HLCY_P0_2L103_GLC0(1)	Storm-relative helicity from 0-3 km using Bunkers et al (2000) storm motion	
LFTX_P0_2L100_GLC0	Surface based lifted index	
4LFTX_P0_2L108_GLC0	Best (4 layer) lifted index	
UPHL_P0_2L103_GLC0	2-5 km updraft helicity	

REFD_P0_L103_GLC0	1 km Reflectivity		
REFC_P0_L200_GLC0	Composite reflectivity		
VIS_P0_L1_GLC0	visibility	ground	
TSOIL_P0_L1_GLC0	Soil temperature	surface	
TSOIL_P0_L106_GLC0	Soil temperature	various depths below land surface	
SOILW_P0_L1_GLC0	Volumetric soil moisture content	ground surface	
SOILW_P0_L106_GLC0	Volumetric soil moisture content	same as soil temperature	
GFLUX_P0_L1_GLC0	ground heat flux	surface	
SBT123_P0_2L103_GLC0	Simulated brightness temperature for GOES 12, channel 3		
UOGRD_P0_L103_GLC0	U-component of current	80 m	
VOGRD_P0_L103_GLC0	V-component of current	80 m	
SNOHF_P8_L103_GLC0	Snow phase change heat flux	10 m	
APCP_P8_L1_GLC0_acc	accumulated precip	surface	
NCPCP_P8_L1_GLC0_acc	non-convective accumulated precip	surface	
ACPCP_P8_L1_GLC0_acc	convective precip accumulation	surface	
WEASD_P8_L1_GLC0_acc	accumulated water equivalent snow depth	surface	
MINRH_P8_L103_GLC0	minimum RH	10 m	
TIPD_P8_L200_GLC0	Total icing potential diagnostic	entire atmosphere	
DZDT_P8_2L104_GLC0	vertical velocity	0.5-0.8 sigma	
NLGSP_P8_2L100_GLC0	natural log of surface pressure		
LTNG_P8_L200_GLC0	lightning potential	entire atmosphere	
CNWAT_P8_2L100_GLC0	plant canopy surface water		
RDRIP_P8_L200_GLC0	rate of dripping from canopy to gorund		
SBT124_P8_2L103_GLC0	Simulated brightness temperature for GOES 12, channel 4		
SBT125_P8_2L103_GLC0	Simulated brightness temperature for GOES 12, channel 5		
SURGE_P8_L200_GLC0	Hurricane storm surge		
2015 NCEP Data			
TMP_P0_L1_GLC0	Temperature	ground	Various Isobaric Surfaces:
TMP_P0_L100_GLC0	Temperature	various isobaric surfaces	1000 mb
TMP_P0_L103_GLC0	Temperature	2m	925 mb
POT_P0_L103_GLC0	Potential Temperature	2m	850 mb
DPT_P0_L103_GLC0	Dew point temperature	2 m	700 mb
DPT_P0_L100_GLC0	Dew point temperature	various isobaric surfaces	500 mb

SPFH_P0_L103_GLC0	Specific humidity	2 m
PWAT_P0_L200_GLC0	Precipitable water	entire atmosphere
WEASD_P0_L1_GLC0	Water equivalent accum. Snow depth	ground
CRAIN_P0_L1_GLC0	Categorical rain	ground
CFRZR_P0_L1_GLC0	Categorical freezing rain	ground
CICEP_P0_L1_GLC0	Categorical ice pellets	ground
CSNOW_P0_L1_GLC0	Categorical snow	ground
UGRD_P0_L103_GLC0	u wind component	10 m
VGRD_P0_L103_GLC0	v wind component	10 m
VUCSH_P0_2L103_GLC0	u component of vertical shear	1 and 6 km
VVCSH_P0_2L103_GLC0	v component of vertical shear	1 and 6 km
GUST_P0_L1_GLC0	wind speed (gust)	ground
USTM_P0_2L103_GLC0	U component storm motion	6 km
VSTM_P0_2L103_GLC0	V component storm motion	6 km
PRES_P0_L1_GLC0	pressure	ground
PRMSL_P0_L101_GLC0	Mean sea level pressure	ground
HGT_P0_L2_GLC0	Geopotential height (cloud base)	cloud base
HGT_P0_L3_GLC0	Geopotential height (cloud tops)	cloud tops
HGT_P0_L5_GLC0	Geopotential height (LCL)	LCL height
HPBL_P0_L1_GLC0	PBL Height	ground
PLPL_P0_2L108_GLC0	Pressure level from which parcel lifted	ground to 255 hPa
DSWRF_P0_L1_GLC0	Downward short-wave radiation flux	entire atmosphere
ULWRF_P0_L8_GLC0	Upward long-wave radiation flux	entire atmosphere
TCDC_P0_L10_GLC0	total cloud cover	entire atmosphere
LCDC_P0_L214_GLC0	low cloud cover	low cloud layer
MCDC_P0_L224_GLC0	medium cloud cover	middle cloud layer
HCDC_P0_L234_GLC0	high cloud cover	high cloud layer
CAPE_P0_L1_GLC0	Convective available potential energy	surface-based
CAPE_P0_2L108_GLC0(0)	CAPE using highest average theta-e in six lowest 30 mb layers	
CAPE_P0_2L108_GLC0(1)	Mean layer cape using avg. theta e of 3 lowest 30-hPa layers	
CAPE_P0_2L108_GLC0(2)	Most unstable CAPE using highest theta-e in lowest 300 hPa	
CIN_P0_L1_GLC0	Convective inhibitation -- surface based	
CIN_P0_2L108_GLC0(0)	CIN using highest average theta-e in six lowest 30 mb layers	

CIN_P0_2L108_GLC0(1)	MLCIN	
CIN_P0_2L108_GLC0(2)	MUCIN	
HLCY_P0_2L103_GLC0(0)	Storm-relative helicity from 0-1 km using Bunkers et al (2000) storm motion	
HLCY_P0_2L103_GLC0(1)	Storm-relative helicity from 0-3 km using Bunkers et al (2000) storm motion	
LFTX_P0_2L100_GLC0	Surface based lifted index	
4LFTX_P0_2L108_GLC0	Best (4 layer) lifted index	
REFD_P0_L103_GLC0	1 km Reflectivity	maybe more than 1 height
REFC_P0_L10_GLC0	Composite reflectivity	
VIS_P0_L1_GLC0	visibility	ground
APCP_P8_L1_GLC0_acc	accumulated precip	surface
WEASD_P8_L1_GLC0_acc	accumulated water equivalent snow depth	surface
DZDT_P8_2L104_GLC0	vertical velocity	0.5-0.8 sigma
LTNG_P0_L10_GLC0	lightning potential	entire atmosphere
PRATE_P0_L1_GLC0	precipitation rate	surface
SNOD_P0_L1_GLC0	Snow depth	surface
CPOFP_P0_L1_GLC0	percent of frozen precip	ground
SNOWC_P0_L1_GLC0	snow cover (%)	ground
UGRD_P0_L100_GLC0	u wind component	various isobaric surfaces
VGRD_P0_L100_GLC0	v wind component	various isobaric surfaces
PRES_P0_L2_GLC0	Cloud base level pressure	cloud base
PRES_P0_L3_GLC0	Cloud top pressure	cloud top
HGT_P0_L1_GLC0	Geopotential height of surface	surface
HGT_P0_L100_GLC0	Geopotential height of various isobaric surfaces	varies
HGT_P0_L215_GLC0	Cloud ceiling	
HGT_P0_L247_GLC0	Equilibrium level height	
CDCON_P0_L244_GLC0	Convective cloud cover	
VIL_P0_L10_GLC0	Vertically integrated liquid water	
RETOP_P0_L3_GLC0	Echo tops	
LAND_P0_L1_GLC0	Categorical land (yes/no)	
MSTAV_P0_L106_GLC0	Moisture availability	surface
VGTYP_P0_L1_GLC0	Vegetation Type	surface
ICEC_P0_L1_GLC0	Ice Cover (%)	
TCOLG_P8_L200_GLC0_max	Total column integrated graupel	

WIND_P8_L103_GLC0_max	Wind speed (max?)	10 m
MAXUVV_P8_2L108_GLC0_max	Hourly max vertical velocity in lowest 400 hpa	
MAXDVV_P8_2L108_GLC0_max	Hourly max downward velocity in lowest 400 hPa	
MXUPHL_P8_2L103_GLC0_max	Hourly max updraft helicity over 2-5 km	
MAXREF_P8_L103_GLC0_max	Hourly max reflectivity at 1 km AGL	

Years	Source	Times
2013/2014	ESRL	F1/F2
TMP_P0_L1_GLC0	Temperature	ground
TMP_P0_L103_GLC0	Temperature	2m
TMP_P0_2L108_GLC0	Temperature	30 hPa above ground
POT_P0_L103_GLC0	Potential Temperature	2m
POT_P0_2L108_GLC0	Potential Temperature	30 hPa above ground
DPT_P0_L103_GLC0	Dew point temperature	2 m
DPT_P0_2L108_GLC0	Dew point temperature	30 hPa above ground
LHTFL_P0_L1_GLC0	Latent heat flux	ground
SHTFL_P0_L1_GLC0	Sensible heat flux	ground
LRGHR_P0_L200_GLC0	Large scale condensate heating rate	entire atmosphere
CNVHR_P0_L200_GLC0	Deep convective heating rate	entire atmosphere
SHAHR_P0_L200_GLC0	Shallow convective heating rate	entire atmosphere
VDFHR_P0_L200_GLC0	Vertical diffusion heating rate	entire atmosphere
SPFH_P0_L103_GLC0	Specific humidity	2 m
RH_P0_L103_GLC0	Relative humidity	2 m
RH_P0_2L108_GLC0	Relative humidity	30 hPa above ground
PWAT_P0_L200_GLC0	Precipitable water	entire atmosphere
WEASD_P0_L1_GLC0	Water equivalent accum. Snow depth	ground
CRAIN_P0_L1_GLC0	Categorical rain	ground
CFRZR_P0_L1_GLC0	Categorical freezing rain	ground
CICEP_P0_L1_GLC0	Categorical ice pellets	ground
CSNOW_P0_L1_GLC0	Categorical snow	ground
CNVMR_P0_L200_GLC0	Deep convective moistening rate	entire atmosphere
SHAMR_P0_L200_GLC0	Shallow convective moistening rate	entire atmosphere

UGRD_P0_L103_GLC0	u wind component	10 m
VGRD_P0_L103_GLC0	v wind component	10 m
VUCSH_P0_2L103_GLC0	u component of vertical shear	1 and 6 km
VVCSH_P0_2L103_GLC0	v component of vertical shear	1 and 6 km
WMIXE_P0_L103_GLC0	wind mixing energy	80 m
GUST_P0_L1_GLC0	wind speed (gust)	ground
USTM_P0_2L103_GLC0	U component storm motion	6 km
VSTM_P0_2L103_GLC0	V component storm motion	6 km
FRICV_P0_L1_GLC0	Frictional velocity	ground
PRES_P0_L1_GLC0	pressure	ground
PRMSL_P0_L101_GLC0	Mean sea level pressure	ground
HGT_P0_L2_GLC0	Geopotential height (cloud base)	cloud base
HGT_P0_L3_GLC0	Geopotential height (cloud tops)	cloud tops
HGT_P0_L5_GLC0	Geopotential height (LCL)	LCL height
5WAVH_P0_L3_GLC0	5 wave geopotential height	cloud tops
UGWD_P0_L200_GLC0	Zonal flux of gravity wave stress	entire atmosphere
VGWD_P0_L200_GLC0	Meridional flux of gravity wave stress	entire atmosphere
HPBL_P0_L1_GLC0	PBL Height	ground
PLPL_P0_2L108_GLC0	Pressure level from which parcel lifted	ground to 255 hPa
DSWRF_P0_L1_GLC0	Downward short-wave radiation flux	entire atmosphere
ULWRF_P0_L8_GLC0	Upward long-wave radiation flux	entire atmosphere
TCDC_P0_L200_GLC0	total cloud cover	entire atmosphere
LCDC_P0_L214_GLC0	low cloud cover	low cloud layer
MCDC_P0_L224_GLC0	medium cloud cover	middle cloud layer
HCDC_P0_L234_GLC0	high cloud cover	high cloud layer
CAPE_P0_L1_GLC0	Convective available potential energy	surface-based
CAPE_P0_2L108_GLC0(0)	CAPE using highest average theta-e in six lowest 30 mb layers	
CAPE_P0_2L108_GLC0(1)	Mean layer cape using avg. theta e of 3 lowest 30-hPa layers	
CAPE_P0_2L108_GLC0(2)	Most unstable CAPE using highest theta-e in lowest 300 hPa	
CIN_P0_L1_GLC0	Convective inhibitation -- surface based	
CIN_P0_2L108_GLC0(0)	CIN using highest average theta-e in six lowest 30 mb layers	
CIN_P0_2L108_GLC0(1)	MLCIN	
CIN_P0_2L108_GLC0(2)	MUCIN	

HLCY_P0_2L103_GLC0(0)	Storm-relative helicity from 0-1 km using Bunkers et al (2000) storm motion	
HLCY_P0_2L103_GLC0(1)	Storm-relative helicity from 0-3 km using Bunkers et al (2000) storm motion	
LFTX_P0_2L100_GLC0	Surface based lifted index	
4LFTX_P0_2L108_GLC0	Best (4 layer) lifted index	
UPHL_P0_2L103_GLC0	2-5 km updraft helicity	
REFD_P0_L103_GLC0	1 km Reflectivity	
REFC_P0_L200_GLC0	Composite reflectivity	
VIS_P0_L1_GLC0	visibility	ground
TSOIL_P0_L1_GLC0	Soil temperature	surface
TSOIL_P0_L106_GLC0	Soil temperature	various depths below land surface
SOILW_P0_L1_GLC0	Volumetric soil moisture content	ground surface
SOILW_P0_L106_GLC0	Volumetric soil moisture content	same as soil temperature
GFLUX_P0_L1_GLC0	ground heat flux	surface
SBT123_P0_2L103_GLC0	Simulated brightness temperature for GOES 12, channel 3	
UOGRD_P0_L103_GLC0	U-component of current	80 m
VOGRD_P0_L103_GLC0	V-component of current	80 m
SNOHF_P8_L103_GLC0	Snow phase change heat flux	10 m
APCP_P8_L1_GLC0_acc1h	accumulated precip over last hour	surface
APCP_P8_L1_GLC0_acc2h	2 h accumulated precip	
NCPCP_P8_L1_GLC0_acc2h	2 h accumulated nonconvective precip	surface
NCPCP_P8_L1_GLC0_acc1h	1 hour accumulated non convective precip	surface
ACPCP_P8_L1_GLC0_acc2h	2 h accumulated convective precip	surface
ACPCP_P8_L1_GLC0_acc1h	1 h accumulated convective precip	surface
WEASD_P8_L1_GLC0_acc2h	2 haccumulated water equivalent snow depth	surface
WEASD_P8_L1_GLC0_acc1h	1h accumulated water equivalent snow depth	
MINRH_P8_L103_GLC0_1h	minimum RH	10 m
TIPD_P8_L200_GLC0_1h	Total icing potential diagnostic	entire atmosphere
DZDT_P8_2L104_GLC0_1h	vertical velocity	0.5-0.8 sigma
NLGSP_P8_2L100_GLC0_1h	natural log of surface pressure	
LTNG_P8_L200_GLC0_1h	lightning potential	entire atmosphere
CNWAT_P8_2L100_GLC0_1h	plant canopy surface water	
RDRIP_P8_L200_GLC0_1h	rate of dripping from canopy to gorund	

SBT124_P8_2L103_GLC0_1h	Simulated brightness temperature for GOES 12, channel 4	
SBT125_P8_2L103_GLC0_1h	Simulated brightness temperature for GOES 12, channel 5	
SURGE_P8_L200_GLC0_1h	Hurricane storm surge	

2015 ESRL Data	Variables	Level
TMP_P0_L1_GLC0	Temperature	ground
TMP_P0_L103_GLC0	Temperature	2m
POT_P0_L103_GLC0	Potential Temperature	2m
DPT_P0_L103_GLC0	Dew point temperature	2 m
SPFH_P0_L103_GLC0	Specific humidity	2 m
RH_P0_L103_GLC0	Relative humidity	2 m
PWAT_P0_L200_GLC0	Precipitable water	entire atmosphere
PRATE_P0_L1_GLC0	Precipitation rate	
SNOD_P0_L1_GLC0	Snow depth	
WEASD_P0_L1_GLC0	Water equivalent accum. Snow depth	ground
RHPW_P0_L10_GLC0	Relative Humidity with respect to Precipitable water	
CRAIN_P0_L1_GLC0	Categorical rain	ground
CFRZR_P0_L1_GLC0	Categorical freezing rain	ground
CICEP_P0_L1_GLC0	Categorical ice pellets	ground
CSNOW_P0_L1_GLC0	Categorical snow	ground
CPOFP_P0_L1_GLC0	Percent frozen precip	ground
SNOWC_P0_L1_GLC0	Percent snow cover	
UGRD_P0_L103_GLC0	u wind component	various
VGRD_P0_L103_GLC0	v wind component	various
VUCSH_P0_2L103_GLC0	u component of vertical shear	1 and 6 km
VVCSH_P0_2L103_GLC0	v component of vertical shear	1 and 6 km
GUST_P0_L1_GLC0	wind speed (gust)	ground
USTM_P0_2L103_GLC0	U component storm motion	6 km
VSTM_P0_2L103_GLC0	V component storm motion	6 km
PRES_P0_L1_GLC0	pressure	ground
PRES_P0_L2_GLC0	Cloud base level pressure	cloud base
PRES_P0_L3_GLC0	Cloud top pressure	cloud top
PRMSL_P0_L101_GLC0	Mean sea level pressure	ground

HGT_P0_L1_GLC0	Geopotential height (surface)	
HGT_P0_L215_GLC0	Geopotential height (cloud ceiling)	
HGT_P0_L3_GLC0	Geopotential height (cloud tops)	cloud tops
HGT_P0_L5_GLC0	Geopotential height (LCL)	LCL height
HGT_P0_L247_GLC0	Geopotential height (EL)	
5WAVH_P0_L3_GLC0	5 wave geopotential height	cloud tops
HPBL_P0_L1_GLC0	PBL Height	ground
PLPL_P0_2L108_GLC0	Pressure level from which parcel lifted	ground to 255 hPa
DSWRF_P0_L1_GLC0	Downward short-wave radiation flux	entire atmosphere
VBDSF_P0_L1_GLC0	Visible beam downward solar flux	sfc
VDDSF_P0_L1_GLC0	Visible diffuse downward solar flux	
ULWRF_P0_L8_GLC0	Upward long-wave radiation flux	entire atmosphere
TCDC_P0_L200_GLC0	total cloud cover	entire atmosphere
LCDC_P0_L214_GLC0	low cloud cover	low cloud layer
MCDC_P0_L224_GLC0	medium cloud cover	middle cloud layer
HCDC_P0_L234_GLC0	high cloud cover	high cloud layer
CAPE_P0_L1_GLC0	Convective available potential energy	surface-based
CAPE_P0_2L108_GLC0(0)	CAPE using highest average theta-e in six lowest 30 mb layers	
CAPE_P0_2L108_GLC0(1)	Mean layer cape using avg. theta e of 3 lowest 30-hPa layers	
CAPE_P0_2L108_GLC0(2)	Most unstable CAPE using highest theta-e in lowest 300 hPa	
CIN_P0_L1_GLC0	Convective inhibitation -- surface based	
CIN_P0_2L108_GLC0(0)	CIN using highest average theta-e in six lowest 30 mb layers	
CIN_P0_2L108_GLC0(1)	MLCIN	
CIN_P0_2L108_GLC0(2)	MUCIN	
HLCY_P0_2L103_GLC0(0)	Storm-relative helicity from 0-1 km using Bunkers et al (2000) storm motion	
HLCY_P0_2L103_GLC0(1)	Storm-relative helicity from 0-3 km using Bunkers et al (2000) storm motion	
LFTX_P0_2L100_GLC0	Surface based lifted index	
4LFTX_P0_2L108_GLC0	Best (4 layer) lifted index	
UPHL_P0_2L103_GLC0	2-5 km updraft helicity	
VIL_P0_L10_GLC0	Vertically integrated liquid	
RETOP_P0_L3_GLC0	Level of cloud tops (echo tops)	
REFD_P0_L103_GLC0	1 km and others Reflectivity	
REFC_P0_L200_GLC0	Composite reflectivity	

VIS_P0_L1_GLC0	visibility	ground
TSOIL_P0_2L106_GLC0	Soil temperature	various
MSTAV_P0_L106_GLC0	Moisture availability	surface
SOILW_P0_2L106_GLC0	Volumetric soil moisture content	various
VGTYP_P0_L1_GLC0	Vegetation type	
SBT123_P0_L8_GLC0	Simulated brightness temperature for GOES 12, channel 3	
SBT113_P0_L8_GLC0	Simulated brightness temperature for GOES 11, channel 3	
SBT114_P0_L8_GLC0	Simulated brightness temperature for GOES 11, channel 4	
ICEC_P0_L1_GLC0	Ice cover	surface
APCP_P8_L1_GLC0_acc1h	accumulated precip over last hour	surface
APCP_P8_L1_GLC0_acc2h	2 h accumulated precip	
WEASD_P8_L1_GLC0_acc2h	2 haccumulated water equivalent snow depth	surface
WEASD_P8_L1_GLC0_acc1h	1h accumulated water equivalent snow depth	
TCOLG_P8_L200_GLC0_max1h	Total column integrated graupel	
WIND_P8_L103_GLC0_max1h	max wind speed	10 m
DZDT_P8_2L104_GLC0_avg1h	vertical velocity between 0.5 and 0.8 sigma	
MAXUVV_P8_2L108_GLC0_max	Hourly max vertical velocity in lowest 400 hpa	
MAXDVV_P8_2L108_GLC0_max	Hourly max downward velocity in lowest 400 hPa	
MXUPHL_P8_2L103_GLC0_max	Hourly max updraft helicity over 2-5 km	
MAXREF_P8_L103_GLC0_max	Hourly max reflectivity at 1 km AGL	

2012 Data	Source	Hours
	ESRL	0/1
TMP_P0_L1_GLC0	Temperature	ground
TMP_P0_L103_GLC0	Temperature	2m
TMP_P0_2L108_GLC0	Temperature	30 hPa above ground
POT_P0_L103_GLC0	Potential Temperature	2m
POT_P0_2L108_GLC0	Potential Temperature	30 hPa above ground
DPT_P0_L103_GLC0	Dew point temperature	2 m
DPT_P0_2L108_GLC0	Dew point temperature	30 hPa above ground
LHTFL_P0_L1_GLC0	Latent heat flux	ground
SHTFL_P0_L1_GLC0	Sensible heat flux	ground

LRGHR_P0_L200_GLC0	Large scale condensate heating rate	entire atmosphere
CNVHR_P0_L200_GLC0	Deep convective heating rate	entire atmosphere
SHAHR_P0_L200_GLC0	Shallow convective heating rate	entire atmosphere
VDFHR_P0_L200_GLC0	Vertical diffusion heating rate	entire atmosphere
SPFH_P0_L103_GLC0	Specific humidity	2 m
RH_P0_L103_GLC0	Relative humidity	2 m
RH_P0_2L108_GLC0	Relative humidity	30 hPa above ground
PWAT_P0_L200_GLC0	Precipitable water	entire atmosphere
WEASD_P0_L1_GLC0	Water equivalent accum. Snow depth	ground
CRAIN_P0_L1_GLC0	Categorical rain	ground
CFRZR_P0_L1_GLC0	Categorical freezing rain	ground
CICEP_P0_L1_GLC0	Categorical ice pellets	ground
CSNOW_P0_L1_GLC0	Categorical snow	ground
CNVMR_P0_L200_GLC0	Deep convective moistening rate	entire atmosphere
SHAMR_P0_L200_GLC0	Shallow convective moistening rate	entire atmosphere
UGRD_P0_L103_GLC0	u wind component	10 m
VGRD_P0_L103_GLC0	v wind component	10 m
VUCSH_P0_2L103_GLC0	u component of vertical shear	1 and 6 km
VVCSH_P0_2L103_GLC0	v component of vertical shear	1 and 6 km
WMIXE_P0_L103_GLC0	wind mixing energy	80 m
GUST_P0_L1_GLC0	wind speed (gust)	ground
USTM_P0_2L103_GLC0	U component storm motion	6 km
VSTM_P0_2L103_GLC0	V component storm motion	6 km
FRICV_P0_L1_GLC0	Frictional velocity	ground
PRES_P0_L1_GLC0	pressure	ground
PRMSL_P0_L101_GLC0	Mean sea level pressure	ground
HGT_P0_L2_GLC0	Geopotential height (cloud base)	cloud base
HGT_P0_L3_GLC0	Geopotential height (cloud tops)	cloud tops
HGT_P0_L5_GLC0	Geopotential height (LCL)	LCL height
5WAVH_P0_L3_GLC0	5 wave geopotential height	cloud tops
UGWD_P0_L200_GLC0	Zonal flux of gravity wave stress	entire atmosphere
VGWD_P0_L200_GLC0	Meridional flux of gravity wave stress	entire atmosphere
HPBL_P0_L1_GLC0	PBL Height	ground

PLPL_P0_2L108_GLC0	Pressure level from which parcel lifted	ground to 255 hPa
DSWRF_P0_L1_GLC0	Downward short-wave radiation flux	entire atmosphere
ULWRF_P0_L8_GLC0	Upward long-wave radiation flux	entire atmosphere
TCDC_P0_L200_GLC0	total cloud cover	entire atmosphere
LCDC_P0_L214_GLC0	low cloud cover	low cloud layer
MCDC_P0_L224_GLC0	medium cloud cover	middle cloud layer
HCDC_P0_L234_GLC0	high cloud cover	high cloud layer
CAPE_P0_L1_GLC0	Convective available potential energy	surface-based
CAPE_P0_2L108_GLC0(0)	CAPE using highest average theta-e in six lowest 30 mb layers	
CAPE_P0_2L108_GLC0(1)	Mean layer cape using avg. theta e of 3 lowest 30-hPa layers	
CAPE_P0_2L108_GLC0(2)	Most unstable CAPE using highest theta-e in lowest 300 hPa	
CIN_P0_L1_GLC0	Convective inhibitation -- surface based	
CIN_P0_2L108_GLC0(0)	CIN using highest average theta-e in six lowest 30 mb layers	
CIN_P0_2L108_GLC0(1)	MLCIN	
CIN_P0_2L108_GLC0(2)	MUCIN	
HLCY_P0_2L103_GLC0(0)	Storm-relative helicity from 0-1 km using Bunkers et al (2000) storm motion	
HLCY_P0_2L103_GLC0(1)	Storm-relative helicity from 0-3 km using Bunkers et al (2000) storm motion	
LFTX_P0_2L100_GLC0	Surface based lifted index	
4LFTX_P0_2L108_GLC0	Best (4 layer) lifted index	
UPHL_P0_2L103_GLC0	2-5 km updraft helicity	
REFD_P0_L103_GLC0	1 km Reflectivity	
REFC_P0_L200_GLC0	Composite reflectivity	
VIS_P0_L1_GLC0	visibility	ground
TSOIL_P0_L1_GLC0	Soil temperature	surface
TSOIL_P0_L106_GLC0	Soil temperature	various depths below land surface
SOILW_P0_L1_GLC0	Volumetric soil moisture content	ground surface
SOILW_P0_L106_GLC0	Volumetric soil moisture content	same as soil temperature
GFLUX_P0_L1_GLC0	ground heat flux	surface
SBT123_P0_2L103_GLC0	Simulated brightness temperature for GOES 12, channel 3	
UOGRD_P0_L103_GLC0	U-component of current	80 m
VOGRD_P0_L103_GLC0	V-component of current	80 m
SNOHF_P8_L103_GLC0	Snow phase change heat flux	10 m
APCP_P8_L1_GLC0_acc1h	accumulated precip over last hour	surface

APCP_P8_L1_GLC0_acc2h	2 h accumulated precip	
NCPCP_P8_L1_GLC0_acc2h	2 h accumulated nonconvective precip	surface
NCPCP_P8_L1_GLC0_acc1h	1 hour accumulated non convective precip	surface
ACPCP_P8_L1_GLC0_acc2h	2 h accumulated convective precip	surface
ACPCP_P8_L1_GLC0_acc1h	1 h accumulated convective precip	surface
WEASD_P8_L1_GLC0_acc2h	2 haccumulated water equivalent snow depth	surface
WEASD_P8_L1_GLC0_acc1h	1h accumulated water equivalent snow depth	
MINRH_P8_L103_GLC0_1h	minimum RH	10 m
TIPD_P8_L200_GLC0_1h	Total icing potential diagnostic	entire atmosphere
DZDT_P8_2L104_GLC0_1h	vertical velocity	0.5-0.8 sigma
NLGSP_P8_2L100_GLC0_1h	natural log of surface pressure	
LTNG_P8_L200_GLC0_1h	lightning potential	entire atmosphere
CNWAT_P8_2L100_GLC0_1h	plant canopy surface water	
RDRIP_P8_L200_GLC0_1h	rate of dripping from canopy to gorund	
SBT124_P8_2L103_GLC0_1h	Simulated brightness temperature for GOES 12, channel 4	
SBT125_P8_2L103_GLC0_1h	Simulated brightness temperature for GOES 12, channel 5	
SURGE_P8_L200_GLC0_1h	Hurricane storm surge	