Forecast Discussion for September 4, 2010

Large-scale features

The tropics have quieted considerably from the day before. Tropical Storm Earl has made landfall in Nova Scotia and Fiona has dissipated. The main features of interest are now Tropical Depression Eleven-E approaching the Bay of Campeche (labeled ‘2’), the remnants of Gaston (labeled ‘1’), and PGI39L south of the Cape Verde Islands (labeled ‘3’) as seen in Fig. 1. These features are also evident as areas of high total precipitable water (TPW) in Fig. 2. Regions of relatively low TPW are now nearly surrounding the remnants of Gaston (PGI38L), and seem to be impinging on the western and northern edges of AL99 (PGI39L). The primary upper-level feature depicted in the CIMMS upper-level wind analysis (Fig. 3) is a large upper-level low over the Lesser Antilles that is not impacting any of the systems. An anticyclone appears to be developing over the remnants of Gaston.
Bay of Campeche

The broad area of low pressure seen yesterday over the Gulf of Tehuantepec became Tropical Depression Eleven-E overnight and began moving northward. Convection associated with the system has migrated northward over the Bay of Campeche. The consensus of the global models continues to spin the system up, and NHC currently gives the system a moderate (30%) chance of development into a tropical depression during the next two days. Due to its proximity to land, it may not remain offshore long enough to impact operations. Since the system has not yet been designated by NHC with a compute, no guidance is available.
The remnants of Gaston

At 1200 UTC, the remnants of Gaston was located near 16.3 N and 45.6 W (Fig. 4) with maximum sustained winds of 30 kt and was moving to the west-northwest at 13 kt, much faster than previously. Convection flared overnight near the center, but an exposed center is now seen on visible imagery. Convection continues to bubble, suggesting the long-term viability of the system, but also that imminent regeneration is unlikely. There is some controversy as to whether the relative lack of convection today is due to dry air or other factors. The track guidance (Fig. 5) shows Gaston continuing to move westward and likely impacting St. Croix in four days. The intensity guidance shows an interesting dichotomy (Fig. 6) with the statistical guidance showing rapid intensification, in some cases to a category 4 storm), whereas the dynamical guidance is bearish, mostly showing little intensification during the period. The GFS, the most bullish of the global models, has started to back off in its intensification of this system.
AL99

The convection associated with AL99 has elongated and weakened considerably overnight. NHC is no longer carrying the system as AL99. With the current motion of the system toward the northwest, this system is unlikely to be a player for operations. We continue to look eastward for following systems.