The Texas Observatory for Algal Succession Time-Series (TOAST). This system is a real-time, continuous monitoring observatory using an Imaging FlowCytobot (IFCB) to image phytoplankton and monitor potential harmful algal species in the nearshore waters at the University of Texas Marine Science Institute lab in Port Aransas, Texas.

A team of Texas A&M University and Woods Hole scientists manages the maintenance and operation of the IFCB. The purpose of the IFCB monitoring efforts is to detect toxic phytoplankton responsible for harmful algal blooms (HABs) along the Texas coast. HABs are capable of causing large fish kills and the presence of blooms can result in closures to shellfish harvesting due to accumulated toxins within the shellfish. The real-time and continuous operation of the IFCB has been instrumental in providing early warning for toxic HABs and preventing human illness due to ingestion of toxic shellfish. The collected data has provided insight into the seasonal dynamics of phytoplankton along the coast of Texas and has contributed to the discovery of a new species of dinoflagellate, a common group of marine phytoplankton.

To read more, visit http://gcoos.org