TerAlta Coastal Study

- **Information Age geography** has been enhanced by georeferenced imagery.
- **Georeference imagery** has been enhanced by technology breakthroughs.
- **Breakthroughs** are enhanced by collaboration with
  - Scientific Institutions
  - Research Universities
  - Industry Partners
TerAlta has begun receiving low altitude onshore angled coastal imagery and is currently exploring future applications of this valuable new point of view.

The new point of view is the result of a new tool; namely a vessel based low altitude balloon which collects and transmits superresolution georeferenced imagery and other atmospheric data. The vessel offers a unique point of view of coastal features which could not otherwise be obtained from land based collection systems or aircraft. Aircraft cannot not fly low enough and the land based imagery cannot not obtain the onshore angle of view.

Once the onshore angled coastal imagery is compiled in TerAlta, inundation scenarios can be projected leading to important sea level rise disaster mitigation planning.

This very low cost tool is able to collect information for coastal regions erosion, bathymetry, river and fresh water inputs, seagrass and coral reef biomes, mangrove in coastal environments and high resolution assessment of air quality. Inundation scenarios can be projected leading to important sea level rise disaster mitigation planning.

Another expected result is Stereoscopic Photogrammetric Imagery from a brace of multiple balloons which will provide a new near shore bathymetry tool. Finally, the vessel launched ALTA balloon has no turbulence from propulsion which uniquely qualifies it for sampling air quality.

TerAlta is an online repository for high resolution aerial imagery in multiple heights and angles. It will include both coastal and land imagery for a variety of locations. National Science Foundation’s Ecosystem to Pipeline Research at FIU
An **ALTA Smart Balloon** (1) can be flown on one or more tethers (2) and is controlled by an iPad (3), on which its images can be controlled and viewed instantly. The images are transmitted, saved and georeferenced in real time to the TerAlta server.

http://Teralta.com
http://TerraFly.com
http://CAKE.FIU.edu
http://UC.FIU.edu

Dr. Naphtali D. Rishe rishe@fiu.edu