SCIENCE WHEN FLIGHT RATE AND TURN TIME DON'T MATTER. Michael Mealling, Masten Space Systems.

Introduction: Masten Space System's line of suborbital vehicles is engineered to minimize operational costs and support high flight rates. Depending on payload integration times it will be possible to fly multiple times in one day every day. This greatly expands the range of techniques and processes available to a scientist.

Comprehensive survey based datasets. High flight rates and low per-flight costs allow measurements of changing phenomenon over long periods of time. Flights can happen every day at a certain time (high automobile traffic periods, day/night change, etc) or can take advantage of daily conditions (weather phenomenon in the area, upper atmospheric effects, solar events, etc) over a longer period of time. Increased data creates increased certainty in the outcome.

Targets of Opportunity. Fast vehicle integration and prep times allow for atmospheric and astronomical observations of fleating events such as hurricanes, supernova, and gamma ray bursts.

"What If" Science. With access to the environment of space costing just a few thousand of dollars it is possible to create programs where initial hypothesis or systems can be tested quickly and easily. Instead of lengthy analysis to determine if a flight is necessary the research can simply fly a payload to find out the answer. Instead of a space flight coming at the end of the research process it can be done much earlier and more often.

Additional Information: For more information please see http://masten-space.com or send email to Michael Mealling at mmealling@masten-space.com