



Glenda Project – Microclimate & Severe Weather Research

Division of the Pullman Geoscience Research Foundation



Meteorological Sounding Rockets



Glenda Project has the capability to launch a reusable sounding rocket delivery system designed to place instrument packages into environments such as thunderstorms and tornados previously considered to be too hazardous or inaccessible using traditional platforms such as balloons, aircraft, helicopters, kites, etc.

Using a mixture of active and passive sensor packages, data is collected in real time for immediate use, in order to develop more effective severe weather alert measures.

Mobile Ground Station Applications



Glenda Project utilizes sensors combined with ground based laptops to provide a digital based chart record of ground baseline conditions mapped over time.

Without knowing ground level weather conditions, there is no effective baseline to compare with between the sensors deployed into severe weather.

Weather Balloons



The balloon launched instrument package called a radiosonde contains instruments capable of making direct measurements of air temperature, humidity, pressure, wind velocity, and wind direction. These observed data are transmitted immediately to the ground station by a radio transmitter located within the instrument package.



Glenda Project – Support for First Responders

Storm Intercept Teams



In order to obtain data from dynamic weather phenomena, it is necessary to seek out and intercept storms and to launch sensors into the heart of the disturbance, capture the data, and return the data for immediate processing and analysis. Hence the name, Intercept Team.

Unlike other storm "chase" teams, the Dayton Intercept Team is equipped with advanced sensors including on-board Doppler radar allowing them to concentrate less on chasing storms, and more on positioning themselves to intercept storms.

All information and storm observations are relayed by the Dayton Intercept Team in real time to the Pendleton National Weather Service and to the local Emergency Management office which results in local and regional severe weather alerts being issued.

One storm on July 8th, 2012 created a micro-burst over the north residential area of the town of Dayton causing extensive local damage, which was recorded by the team's on-board equipment. Responding to the affected area, the team was able to assist with and coordinate emergency services response. They coordinated storm debris removal to assist with the response of fire, ambulance and law enforcement units, the evacuation of an elderly person trapped in their residence by storm debris, and assisted with crowd control until power was restored by the power company hours later.

