Assignment 2 Notes

**Submission**

14/12/2018 before 18:00 Upload in moodle

Report\_ <FULL\_NAME\_SID>(individual submission)

**Assignment 2 Brief: High Altitude and Long Range Research Aircraft**

HALO - The High Altitude and LOng Range Research Aircraft is a new Research Aircraft for atmospheric research and earth observation.

The concept behind HALO is to provide a platform for airborne atmospheric science and Earth observation using a well-equipped flying laboratory.

The HALO - aircraft is based on a production G550 business jet from Gulfstream Aerospace Cooperation and is equipped with several sensors.

The designed software system must provide automatic monitoring and display of these sensors during a flight to the research crew.

The system will use the following primary sensors:

• Pressure

• Temperature

• Humidity

• Radiation

• Wind speed

The system must also provide the following derived measurement:

• Measurement of the 3-D wind field and turbulence (derived from Wind speed and pressure) The user has a screen display that continuously indicates all six primary and derived measurements, as well as the current time and date.

The user can request the system to report the highest and lowest values of any of the five primary measurements during the previous 24 hour period.

The user will be able to calibrate the sensors against known values and to set the current time and date.