2/14/02

Aircraft "in-situ" Instrumentation NRL P-3 – CRYSTAL-FACE Configuration

I. Airborne Data System.

A. Acquisition. ADS2 (Motorola 68040 based). NCAR Distributed Sampling Modules (1 unit). Analog, digital and serial recording available at adjustable rates (1,5,25,250 sps).

B. Operator Station. Intel L440GX+ Motherboard with 2 Pentium III-500 CPU's, 512 MB Memory, Redhat Linux 7.2 OS. 9GB Disk Storage with RAID-1. General Digital 17 inch 1280x1024 TFT Flat Panel Color Monitor. IBM-DRHS36D 36GB Removable Disk Drives In Kingston Carriers (2 units). Exabyte Model EXB-8505 Tape Drive. UPS.

C. Data Display/Distribution. NCAR/RAF "WINDS" real time display package. Ascii serial data feed available to Users via network link.

II. Aircraft Position, Velocity and Attitude.

A. Honeywell Model HG1095-AC03 Laseref SM Inertial Reference System . (Research). LATITUDE, LONGITUDE,PITCH, ROLL, HEADING, VERTICAL VELOCITY, VERTICAL ACCELLERATION, N-S GROUND SPEED COMPONENT, E-W GROUND SPEED COMPONENT, ALTITUDE(MSL).

B. Trimble TANS III Global Positioning System. (GPS).LATITUDE, LONGITUDE, N-S GROUND SPEED COMPONENT, E-W GROUND SPEED COMPONENT, ALTITUDE(MSL).

III. Static Pressures.

A. Rosemount Model 1201F1 Pressure Transducer – Fuselage Pitot/Static.

IV. Dynamic Pressures.

A. Rosemount Model 1221F1VL – Radome Gust Probe.

B. Rosemount Model 1221F1VL - Fuselage Pitot/Static.

V. Temperatures.

A. Rosemount Type 102 Non-deiced Sensor — Rosemount Model 510BF Amplifier - Starboard Fuselage Mount.

B. Rosemount Type 102 Non-deiced Sensor — Rosemount Model 510BF Amplifier - Port Fuselage Mount.

VI. Dew Point and Humidity.

A. General Eastern, Model 1011B Dew Point Hygrometer - Starboard Fuselage Mount.

B. SpectraSensors Open Path TDL Laser Hygrometer – Bomb Bay Mount.

VII. Flow Angle Sensors, Radome Gust Probe.

A. Attack - Rosemount Model 1221F1VL Differential Pressure Transducer.

B. Sideslip - Rosemount Model 1221F1VL Differential Pressure Transducer.

3-D Wind Field: WIND SPEED, WIND DIRECTION, VERTICAL WIND SPEED, N-S WIND COMPONENT, E-W WIND COMPONENT.

VIII. Geometric Altitude.

A. Standard Navy P-3 Radar Altimeter - Fuselage Mount, 0 to 1,500 m AGL. ALTITUDE(AGL).