

# INTREPID Processing Flow

**IMPORT**  
survey aircraft raw data, diurnal, GPS data, flight logs

**NAVIGATION**  
merge aircraft GPS data with base station GPS; apply differential corrections

**EDITING**  
spreadsheet, profile and flight path editors analyze and control data with survey specifications. Sensor data are checked for spikes, gaps, erroneous values; flight paths are checked for deviations in velocity, location and terrain clearance.

**Magnetics Altimeter**

**GRIDDING**  
sensor data is gridded in the 'raw' state to identify problems requiring further processing. Location quality and signal/noise quality are verified.

**Radiometrics**

**DIURNAL SYNCHRONIZATION**  
if the diurnal data was not included in the imported data, then a diurnal database is created where it is synchronized either through <date + time> + fiducial> with the main database

**256 SPECTRA RADIOMETRIC CORRECTIONS**  
processing is applied to the 256-channel data in the following sequence:  
principle component noise adjustment  
dead time adjustment  
energy calibration  
cosmic, aircraft and radon background removal  
standard channel extraction (K, U Th TotalCount)  
calculation of effective height

**DIURNAL and GRF CORRECTIONS**  
diurnal and Geold reference field corrections are made

**STANDARD 3 CHANNEL CORRECTIONS**  
stripping and height attenuation corrections are applied to K, U and Th; these are then reduced to equivalent ground concentrations

**PARALLAX CORRECTIONS**

**TIE LINE LEVELLING**  
cross over points between traverse and control lines are identified and a suite of tie line leveling corrections are applied as required (x-y. polynomial, loop closure levelling). Raw magnetics are always tie line levelled; radiometrics are only levelled in extreme cases.

**MICROLEVELLING**  
microlevelling is used for subtle corrections in the aeromagnetics. If required for Uranium, microlevelling is done only after Green's method is applied.

**POST PROCESSING FILTERS**  
fully processed data can then be filtered as desired, i.e., reduction to pole, vertical derivatives, AGC, continuations, etc.

**URANIUM LEVELLING**  
Green's method can be applied where levelled K and Th are used to better level U. Microlevelling is the applied to U.

**EXPORT AND FINAL PRODUCTS**  
final products include located and gridded data on CD-Rom and DAT's stacked profiles, contour and colour image maps. All hardcopy and digital products are first generated as preliminary, checked and only made final after final approval by client.