

2) Diagnosis of observations

Subjective analysis:

- originally: synoptic weather charts.**
- assimilation of information from many sources (pattern recognition).**
- advantages: human brain is good at it.**
- disadvantages: time consuming; does not incorporate laws of physics; not on a regular grid.**

Objective analysis:

- interpolate observations to a regular grid.**
- link variables dynamically (hydrostatic balance).**
- "first guess"---previous estimate.**
 - observational increment.**
 - analysis increment.**
 - weight analysis increment near observations.**
 - weight first guess in absence of observations.**