

Radiosonde temperature bias-correction in ERA-40

Kazutoshi Onogi and Niko Sokka

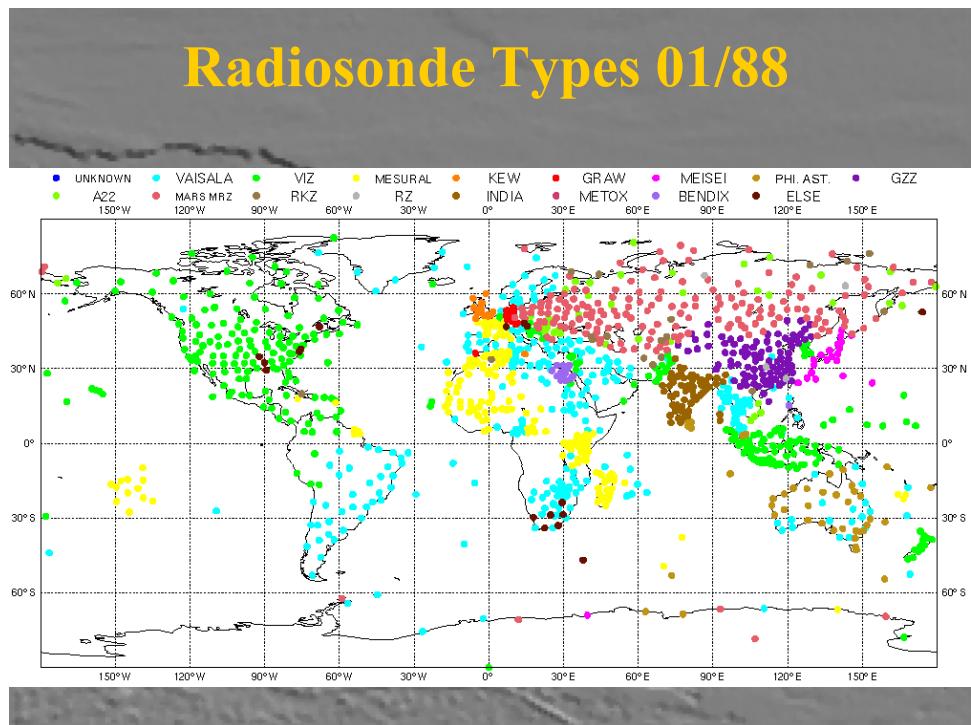
ECMWF

Challenges

- Incomplete station history

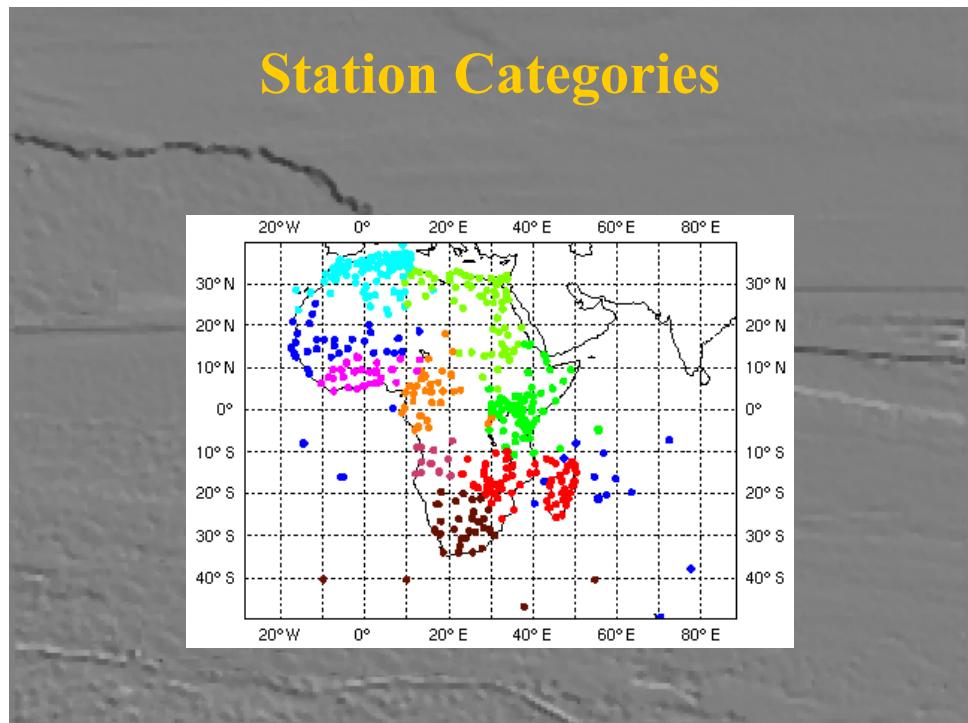
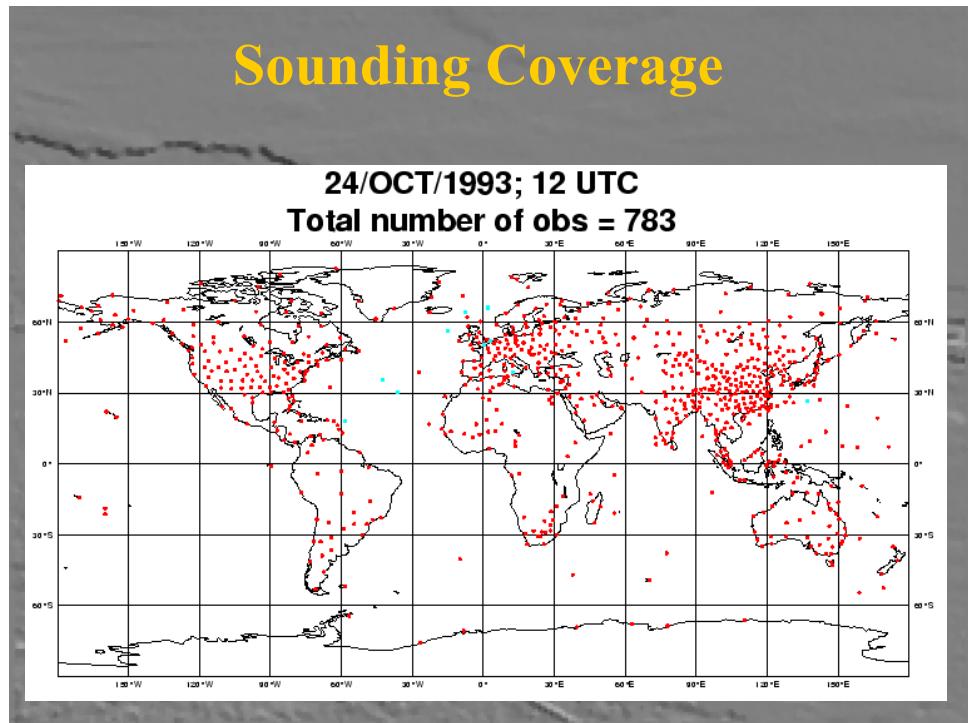
Design Objectives

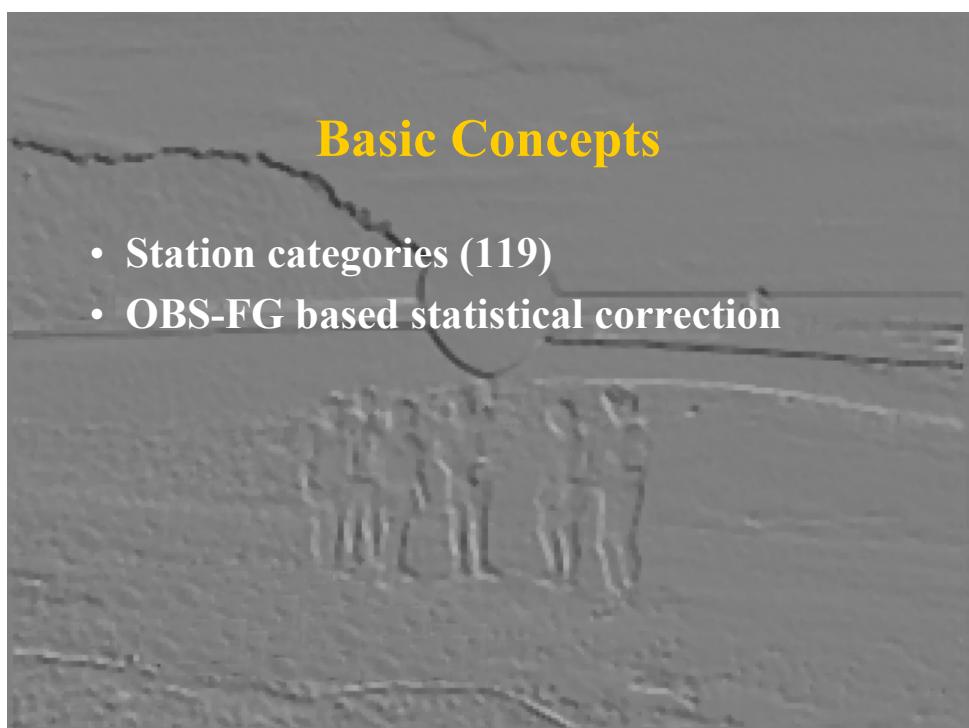
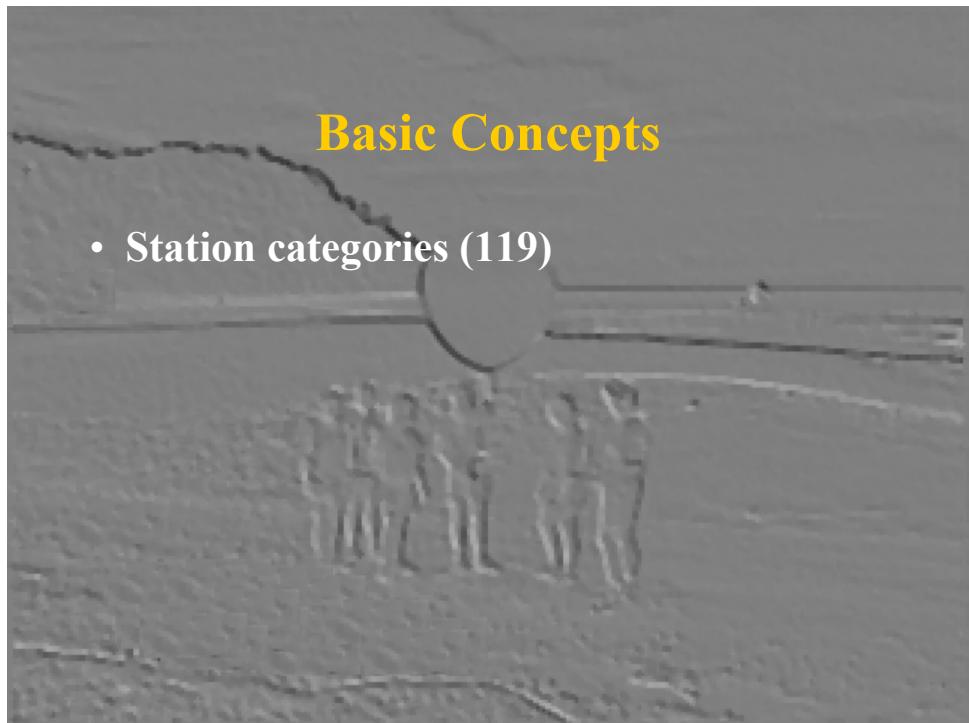
- Automatic correction
- Reproducability
- Reliability
- Robustness
- Consistency
- Modifiability

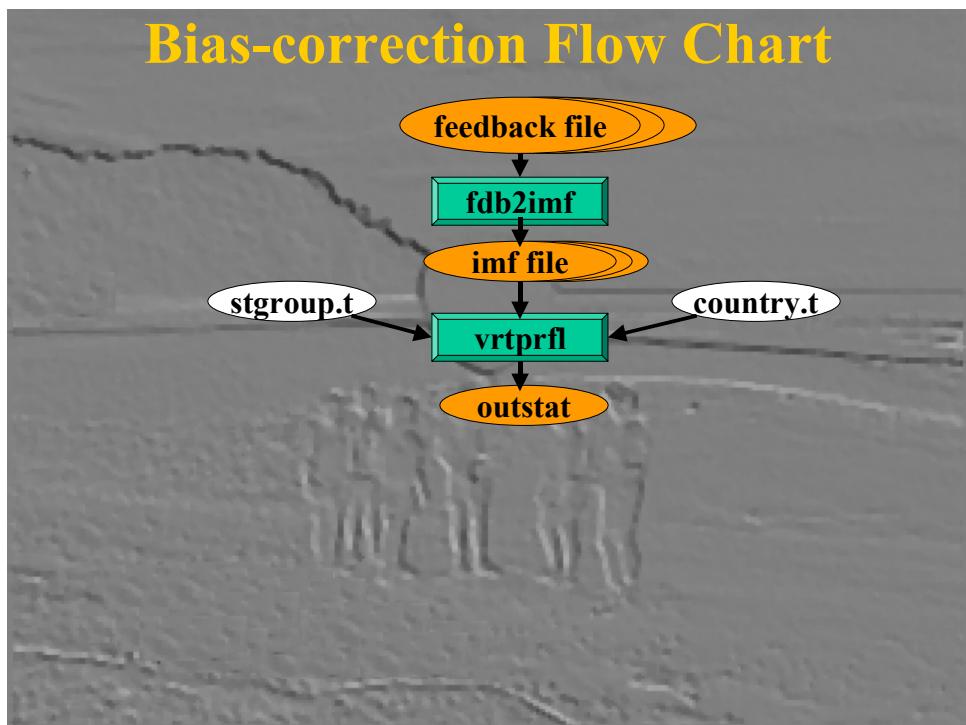
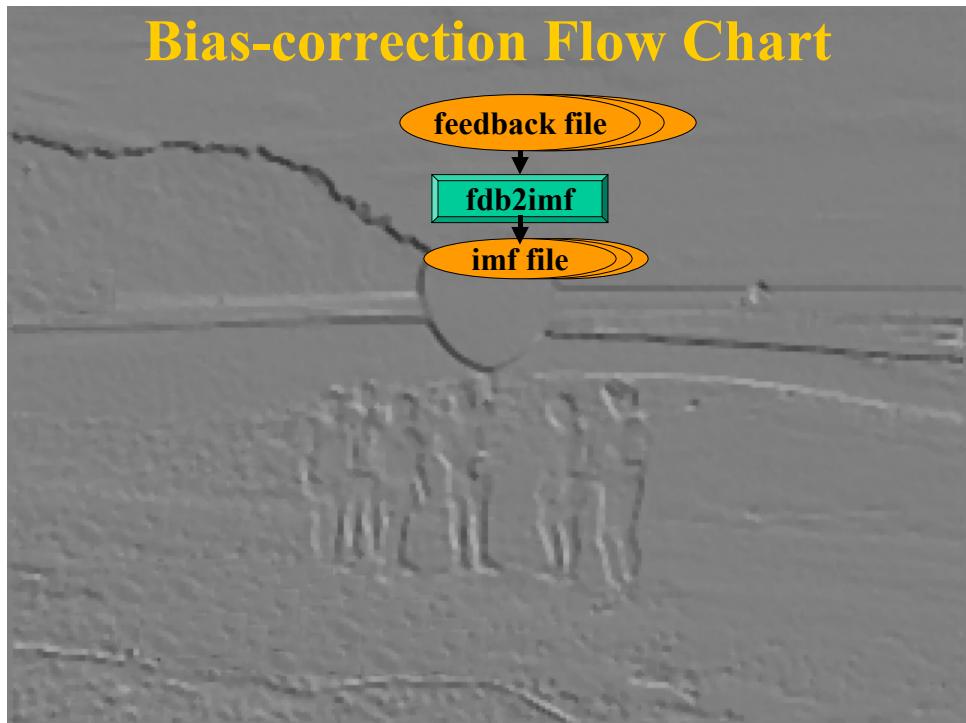


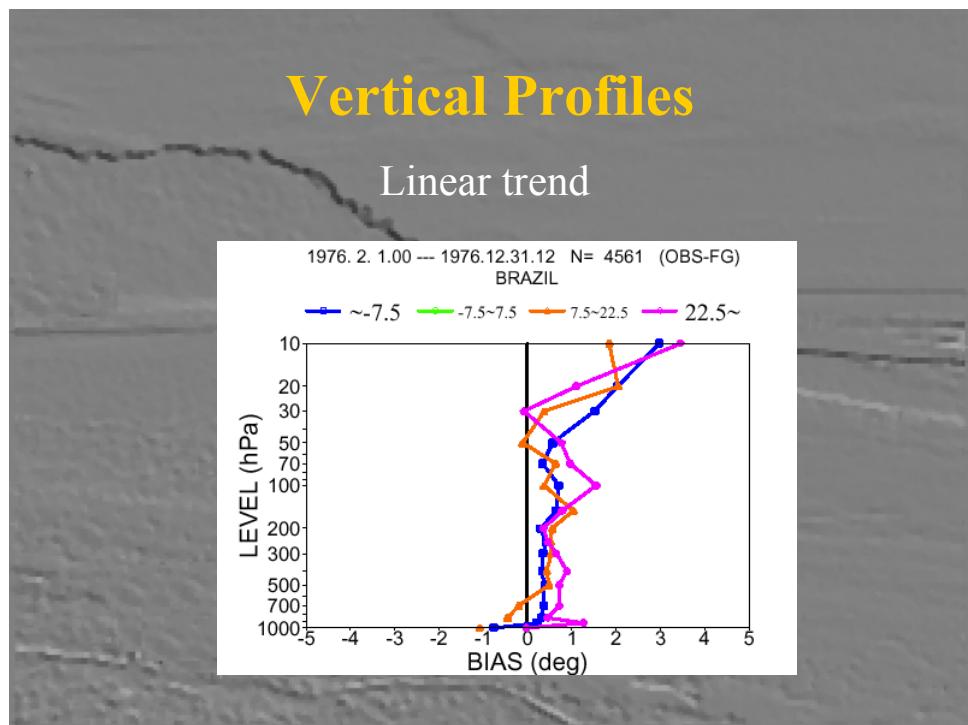
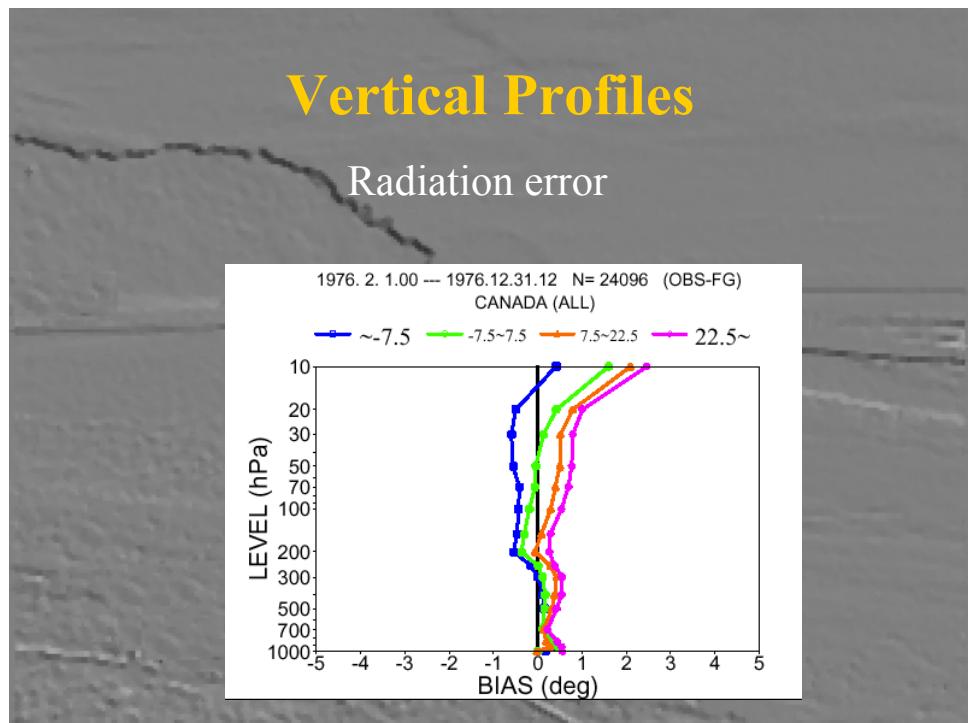
Challenges

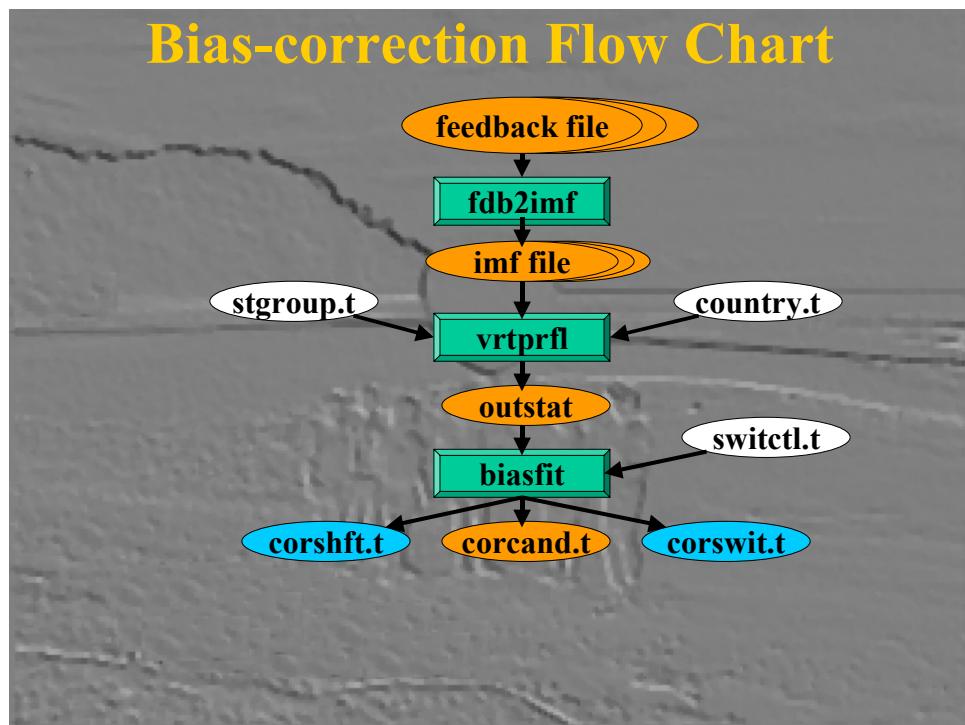
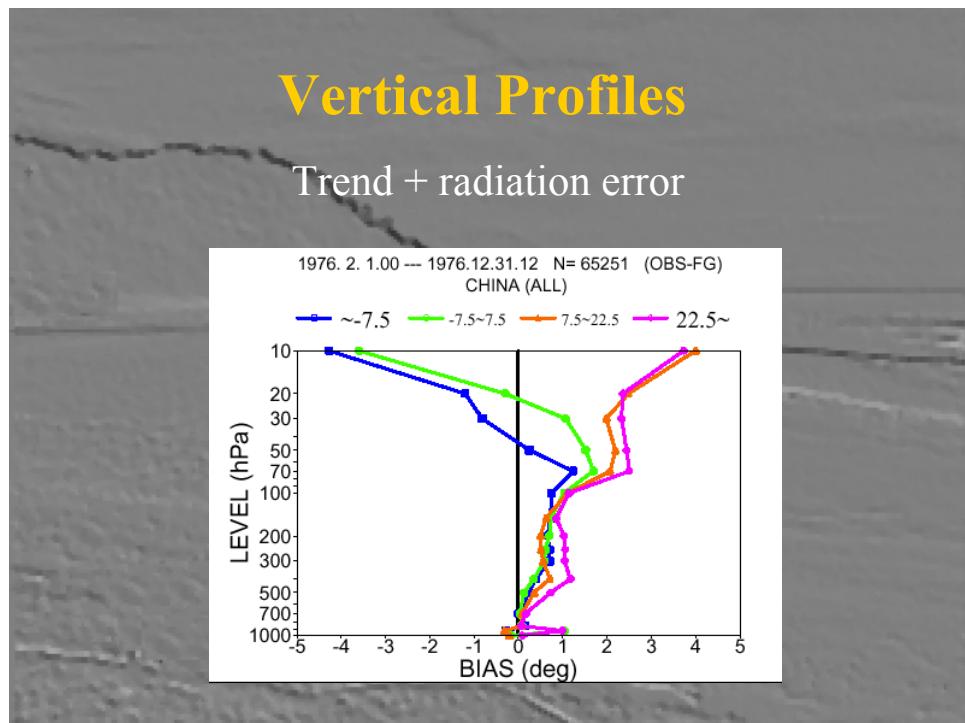
- Incomplete station history
- Monitoring in production

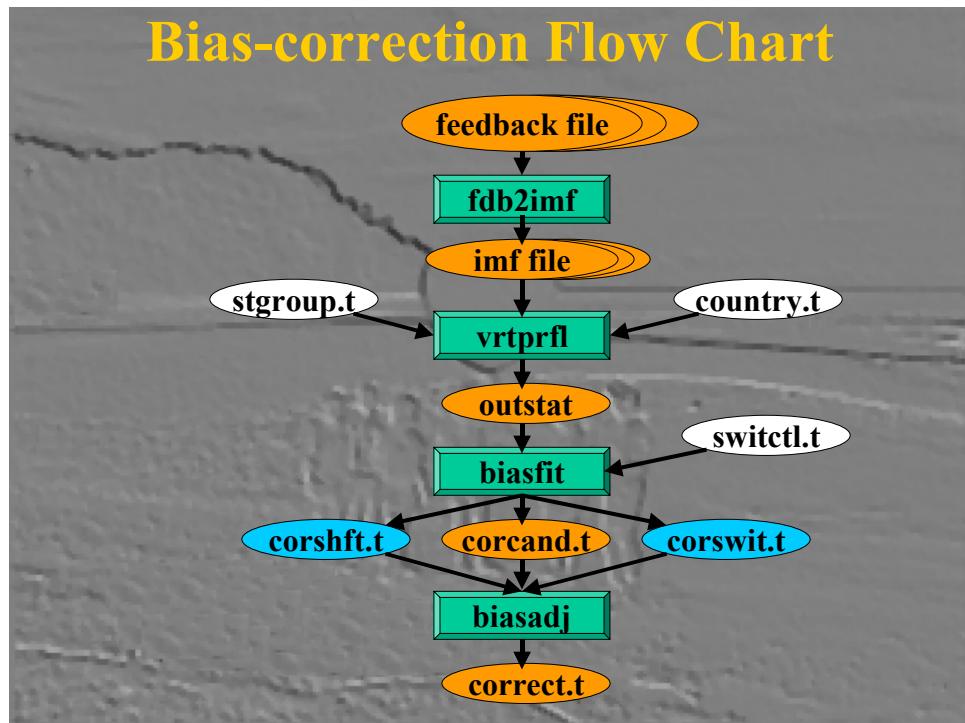
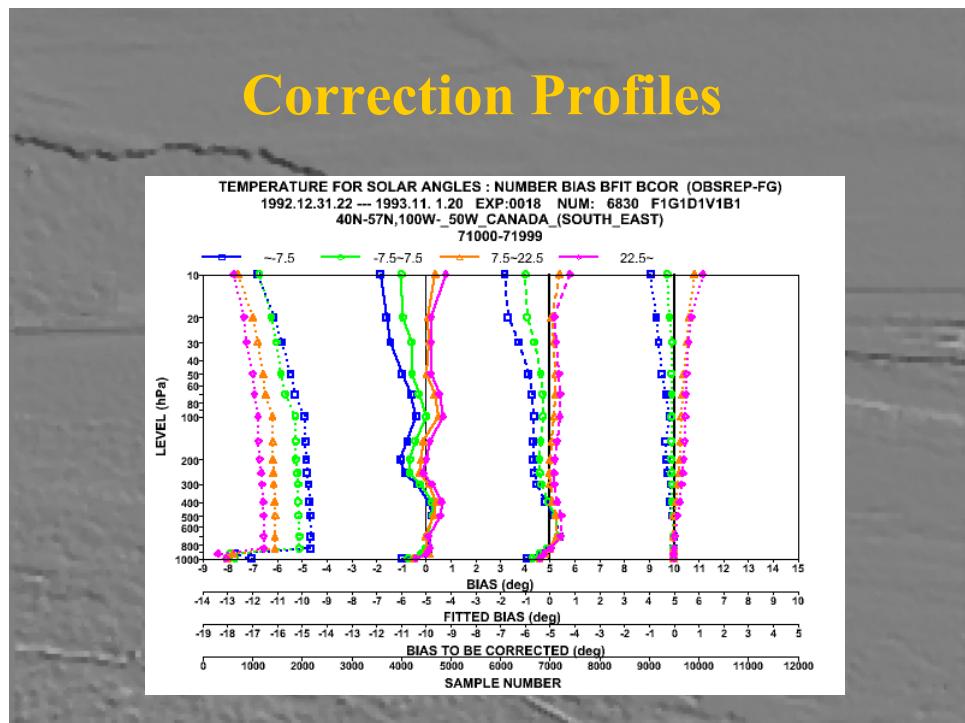


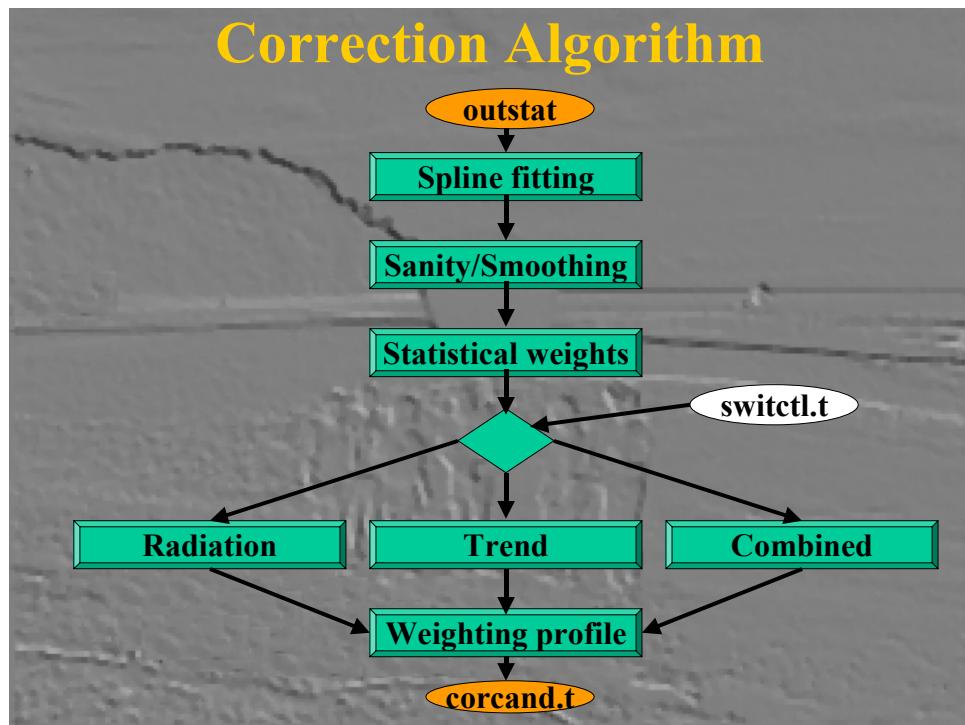






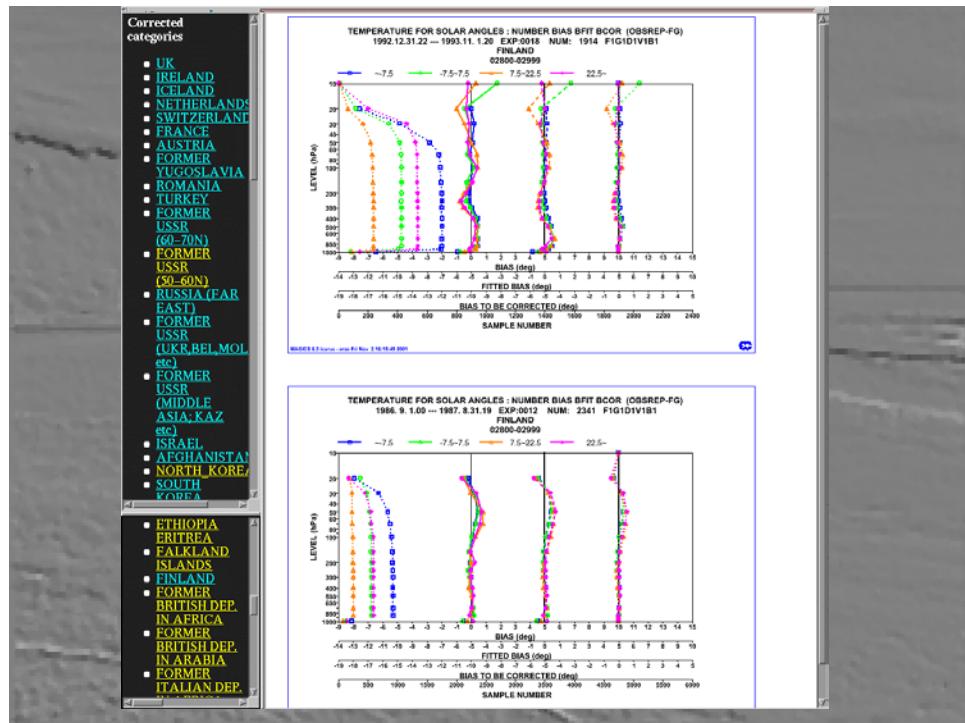






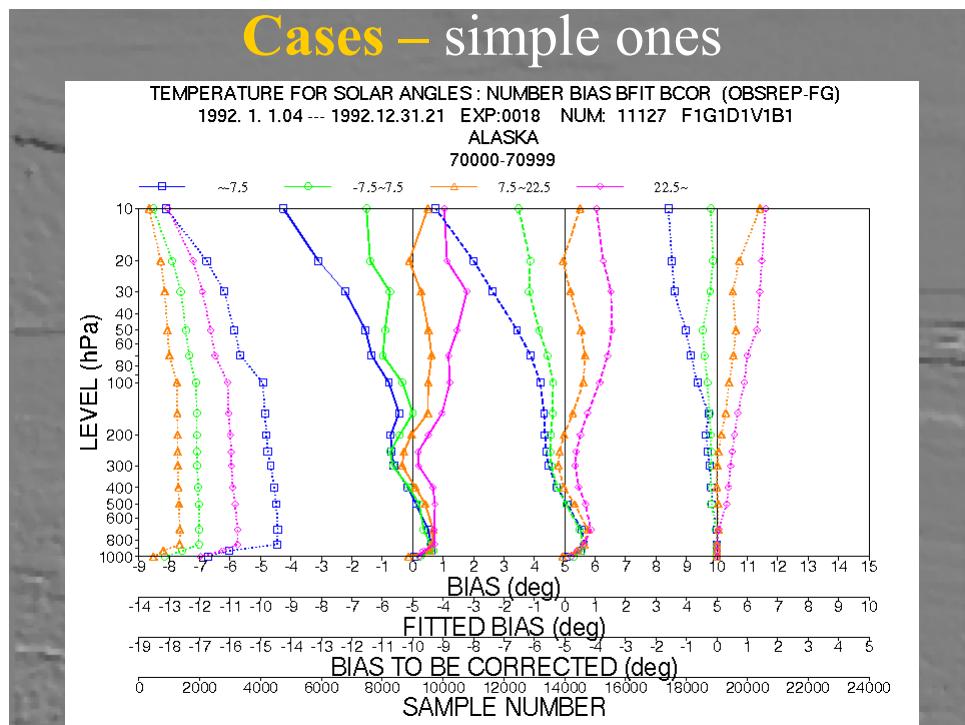
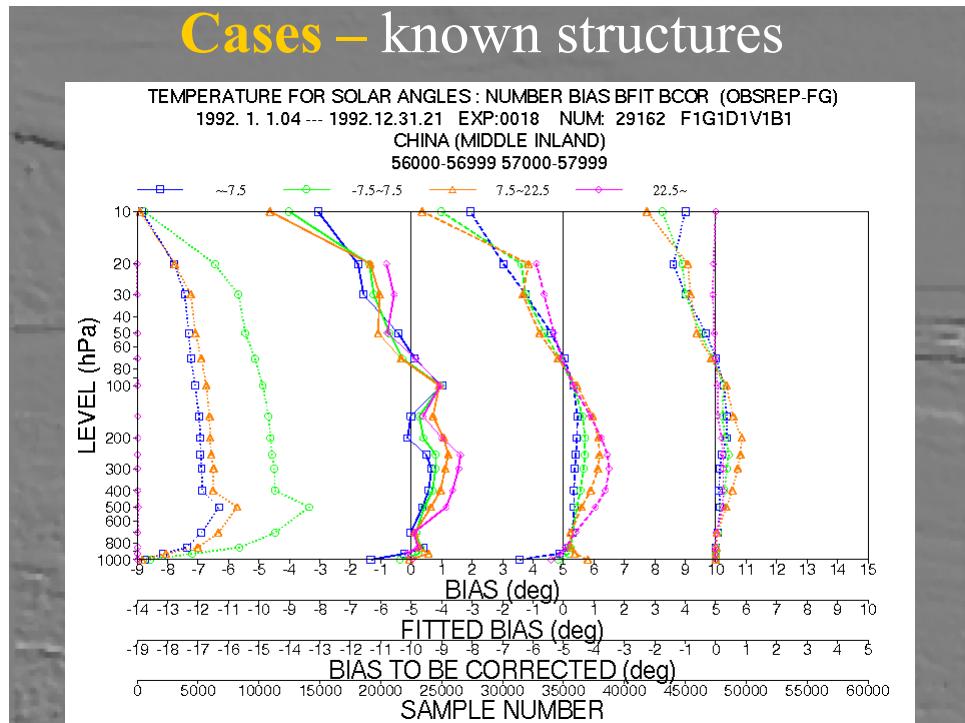
Basic Concepts

- Station categories (119)
- OBS-FG based statistical correction
- Visual monitoring

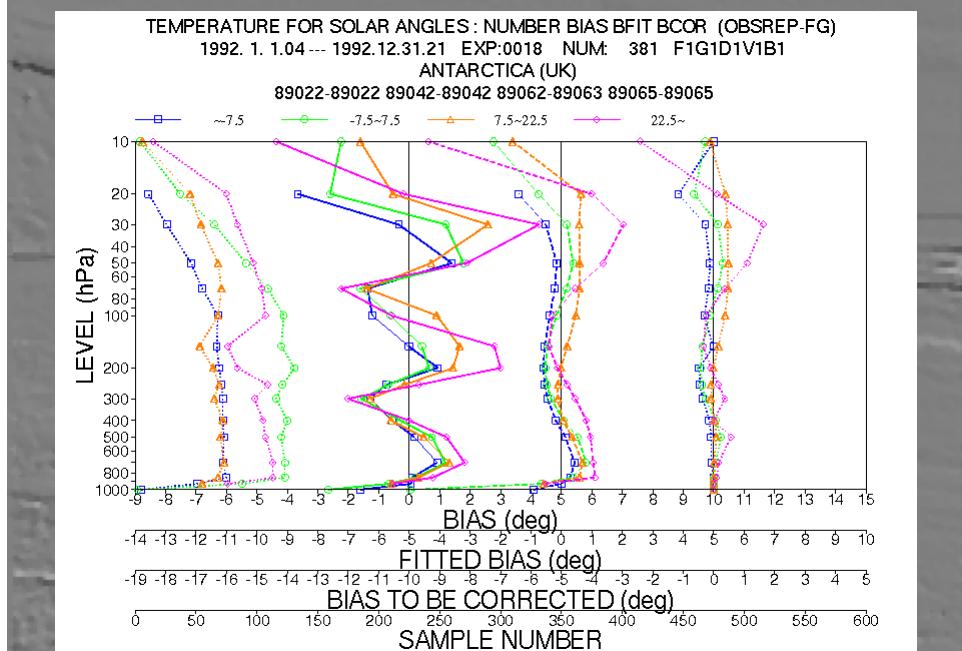


Currently

- Stream 1 active
 - 48 corrected categories
- Streams 2 & 3 passive
 - Statistics
 - Experiences



Cases – model biases



Cases – “unbiased”

