Generation and Quality Control of GPCCs Monitoring Product

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Data Base of the Monitoring Product

- CLIMAT- and SYNOP-data
- Semi-automated Quality Control

- Available with a delay of two months

EUMETSAT

Quality Control for the Monitoring Product

- QC based on four steps:
  1. Consistency check at station level between CLIMATs from several centres (should be identical – in theory)
  2. Statistic check against 1%- and 99%-percentile of station-/grid time-series
  3. First Analysis to compare gridded data with long-term means, ~7% of data are flagged for additional manual check
  4. Spatial consistency check, manually at global map for land surface

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Gridding of the Monitoring Product

- Grids are produced by means of a modified SPEREMAP scheme
- Minimum 4, Maximum 10 stations used per grid cell
- Geometric scheme combining angular and inverse distance weighting
  - Distance weighting similar to IDW with given empirical weighting functions

$S_2 \quad S_1 \quad$ Grid point $\quad\quad S_3 \quad\quad S_4 \quad\quad\quad w_1 > w_2 > w_3 > w_4$
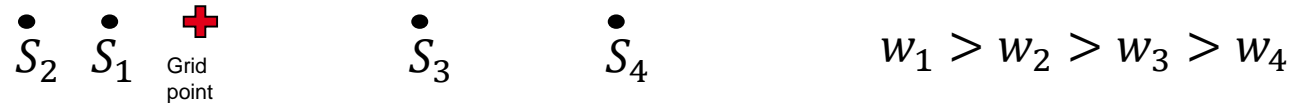
  - Angular weighting to reduce influence of clustered stations

$S_1 \quad + \quad S_3 \; S_5$
$S_2 \quad$ Grid point $\quad S_4 \quad\quad w_1, w_2 > w_3, w_4, w_5$

  - Compute gradients to calculate non-observed extremes

$S_2 \quad S_1 \quad$ Grid point $\quad\quad S_3 \quad\quad S_4$