Dear Victor,

according to your recommendation, we revised our manuscript according to the comments by the referees. Point-by-point answers to all referee comments are given in our responses in the interactive discussion. Below we provide a list of the major changes (line numbers refer to the discussion paper).

Many thanks and best regards, Christian.

cleaned up the order of affiliations

p 14051 l 9-10: rewritten acc. to reviewer comment

p 14054 l 24: addition acc. to reviewer comment

p 14055 l 1: addition acc. to reviewer comment

p 14056 l 17-24: rewritten acc. to reviewer comment

p 14058 l 1-3: reformulation, concretization, and inlining footnote

p 14059 l 11-16: concretization and inlining footnotes.

Sect 3.5: Add description of relative monthly mismatch

p 14061 l 2: addition acc. to reviewer comment

p 14062 l 12: addition acc. to reviewer comment

p 14063 l 2-4: reformulation and inlining footnote, removing a contradition spotted by Referee 1

p 14064 l 20-21: additions acc. to reviewer comment

p 14064: inlining footnote 6

p 14066 l 26: rewritten acc. to reviewer comment

p 14067 l 6: addition and start of new paragraph

p 14067 l 16: inlining footnote 7, additions acc. to reviewer comment

p 14069 l 15 - p 14070 l 3: substantially rewritten and enlarged acc. to reviewer comments

acknowledgement: Added acknowledgements for Peter Brown, Victor Browkin, and the two anonymous referees

Figures/tables: Update all graphics
- to introduce the optical weighting according to relative mismatch
  also for monthly plots, in response to reviewer comment on seasonal cycle

- to switch to Jena MLS version oc_1.3 (other methods are up to date).

Added Fig A7 to illustrate the decadal trends discussed in Sect 4.2.2.