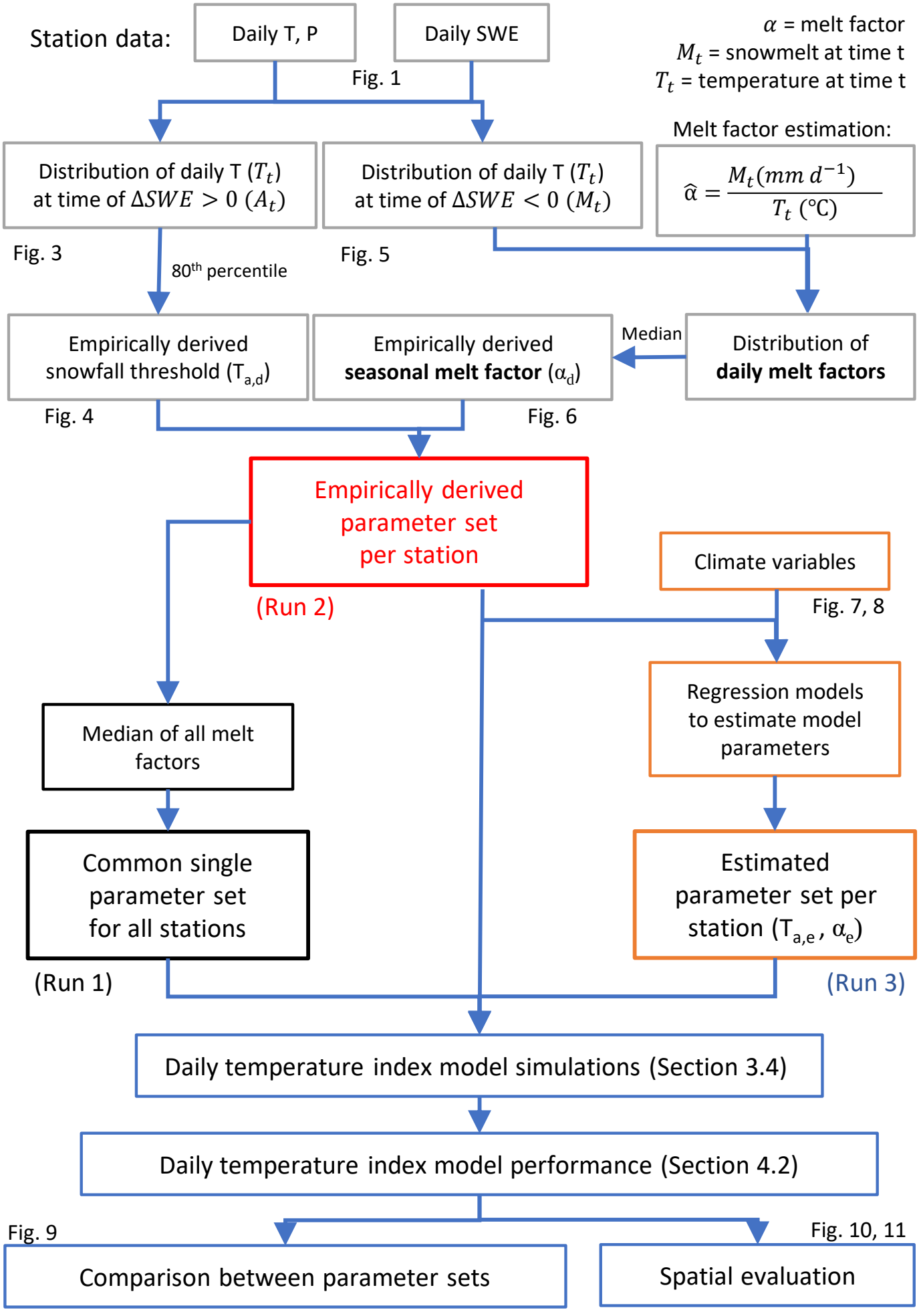
Station data:
Daily T, P
Daily SWE
Fig. 1
α = melt factor
M_t = snowmelt at time t
T_t = temperature at time t
Melt factor estimation:
$\hat{\alpha} = \frac{M_t(mm\ d^{-1})}{T_t\ (°C)}$
Distribution of daily T (T_t) at time of $\Delta SWE > 0$ (A_t)
Distribution of daily T (T_t) at time of $\Delta SWE < 0$ (M_t)
Fig. 3
Fig. 5
80th percentile
Empirically derived snowfall threshold ($T_{a,d}$)
Empirically derived **seasonal melt factor** (α_d)
Median
Distribution of **daily melt factors**
Fig. 4
Fig. 6
Empirically derived parameter set per station
(Run 2)
Climate variables
Fig. 7, 8
Regression models to estimate model parameters
Median of all melt factors
Common single parameter set for all stations
Estimated parameter set per station ($T_{a,e}$, α_e)
(Run 1)
(Run 3)
Daily temperature index model simulations (Section 3.4)
Daily temperature index model performance (Section 4.2)
Fig. 9
Fig. 10, 11
Comparison between parameter sets
Spatial evaluation