Data: $\boldsymbol{X}_1, \ldots, \boldsymbol{X}_n$
Result: estimated model parameters by Manly backward model
Initialization: full Manly mixture model $\boldsymbol{M}_{full}$ with $K \times p$ non-zero skewness parameters
while *the current model* $\boldsymbol{M}_{current}$ *has not reached Gaussian mixture model* **do**

    1. find all non-zero skewness parameters in the current model $\boldsymbol{M}_{current}$, $\lambda_1, \ldots, \lambda_s$;
    2. construct new models $\boldsymbol{M}_{new,1}, \ldots, \boldsymbol{M}_{new,s}$ to compare with;
    3. $\boldsymbol{M}_{new,j}$ sets the previous $K \times p - s$ skewness parameters and λ_j to be zero;
    4. call function `Manly.EM()` to run the EM algorithm for each new model;
    5. initialize with the parameters of model $\boldsymbol{M}_{current}$ to speed the algorithm;
    if *at least one new model has lower BIC than the original model* $\boldsymbol{M}_{current}$ **then**
        find the smallest BIC among the new models; the corresponding new model $\boldsymbol{M}_{new}$ is selected and let $\boldsymbol{M}_{current} \leftarrow \boldsymbol{M}_{new}$.
    else
        break;
        the current model $\boldsymbol{M}_{current}$ is the final solution reached by Manly backward algorithm.
    end
end