Errata

- List of papers:

  VII P. Helgesson and H. Sjöstrand, "Treating model defects by fitting smoothly varying parameters: energy-dependent model parameters in nuclear data evaluation," *Submitted to Annals of Nuclear Energy*, February, 2018

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  VII P. Helgesson and H. Sjöstrand, "Treating model defects by fitting smoothly varying model parameters: Energy dependence in nuclear data evaluation", *Annals of Nuclear Energy*, **120**, 35-47 (2018).

- p. 25, before Eq. (2.23):

  Per definition, the maximum-likelihood (ML) estimate of $\boldsymbol{\beta}$ is the choice of $\boldsymbol{\beta}$ that maximizes $p_{\boldsymbol{\beta}|\mathbf{y}}(\boldsymbol{\beta})$, the probability density function (PDF) for $\boldsymbol{\beta}$, given the observed data $\mathbf{y}$.

  $\longrightarrow$

  Per definition, the maximum-likelihood (ML) estimate of $\boldsymbol{\beta}$ is the choice of $\boldsymbol{\beta}$ that maximizes $p_{\mathbf{Y}|\boldsymbol{\beta}}(\mathbf{y})$, the probability density function (PDF) for the observed data $\mathbf{y}$, given $\boldsymbol{\beta}$.

- p. 51, 1st line:

  a linear function of the observable. If so, it may be advantageous to iteratively improve $\mathbf{S}$.

  $\longrightarrow$

  linear transformations of the observables. If so, Eq. (3.2) must be slightly modified, and it may be advantageous to iteratively improve $\mathbf{S}$.

- p. 86, end of paragraph following Eq. (6.2): (n,n$_1$) $\rightarrow$ (n,n$'_1$)

- p. 92, line 3 of Eq. (6.14): $c_\nu^2 f_{\mathrm{ref.}}^2(E,c) \rightarrow c_\nu^2 f_{\mathrm{ref.}}(E_i,c) f_{\mathrm{ref.}}(E_j,c)$

- p. 94, Eq. (6.16):

$$\frac{\partial \mathbf{y}_{\mathrm{r}}}{\partial y_i} = \left(\mathbf{S}^{\mathrm{T}}\boldsymbol{\Omega}\mathbf{S}^{-1}\right)^{-1}\mathbf{S}^{\mathrm{T}}\boldsymbol{\Omega}^{-1}\mathbf{E}_i = \left[\left(\mathbf{S}^{\mathrm{T}}\boldsymbol{\Omega}\mathbf{S}^{-1}\right)^{-1}\mathbf{S}^{\mathrm{T}}\boldsymbol{\Omega}^{-1}\right]_{\bullet i} = [\mathbf{S}^{-}]_{\bullet i}$$

$$\longrightarrow$$

$$\frac{\partial \mathbf{y}_{\mathrm{r}}}{\partial y_i} = \left(\mathbf{S}^{\mathrm{T}}\boldsymbol{\Omega}^{-1}\mathbf{S}\right)^{-1}\mathbf{S}^{\mathrm{T}}\boldsymbol{\Omega}^{-1}\mathbf{E}_i = \left[\left(\mathbf{S}^{\mathrm{T}}\boldsymbol{\Omega}^{-1}\mathbf{S}\right)^{-1}\mathbf{S}^{\mathrm{T}}\boldsymbol{\Omega}^{-1}\right]_{\bullet i} = [\mathbf{S}^{-}]_{\bullet i}$$

- p. 95, Eq. (6.19)

$$\xi(\tilde{\eta}_\nu) f_{\mathrm{ref}}(E_i,c) f_{\mathrm{ref}}(E_j,c) e^{-\frac{(E_i-E_j)}{2\lambda_0^2}}$$

$$\longrightarrow$$

$$\xi(\tilde{\eta}_\nu) f_{\mathrm{ref}}(E_i, c) f_{\mathrm{ref}}(E_j, c) e^{-\frac{(E_i - E_j)^2}{2\lambda_0^2}}$$

- p. 99, after Eq. (6.21):
  where E is the energy of the incoming neutron

  $$\longrightarrow$$

  where E is the energy of the incoming or outgoing particle

  - Clarification: in this implementation, E is the incoming neutron's energy only.

- Paper IV, p. 9: "TABLE IV" and units (eV for all columns except ℓ, J) missing in the caption of the table.