



$$\text{sensitivity} = \frac{\text{detected spikes}}{\text{total spikes}} = 1 - \frac{\text{misses}}{\text{total spikes}}$$

$$\text{precision} = \frac{\text{detected spikes}}{\text{total detections}} = 1 - \frac{\text{falsed etections}}{\text{total detections}}$$

$$ER = 1 - F_1\text{score} = 1 - 2 \frac{\text{sensitivity} \times \text{precision}}{\text{sensitivity} + \text{precision}}$$