## Sweet Cython code for planet search finding

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## 1 Why period search algorithm are important?

## 1.1 Statistical assumptions

We assume that  $y_i \sim \mathcal{N}(m(t_i), \sigma_i)$ , where

$$m(t_i) = \begin{cases} h, & \text{if } t_0 \le t_i \le t_0 + w, \\ d, & \text{otherwise,} \end{cases}$$
 (1)