



$$s = \frac{k}{\omega}$$

$$a \equiv \left. \frac{ds}{d\mu} \right|_n = \left. \frac{ds}{d\mu} \right|_n d\mu$$

$$b = \left. d\omega \right|_n = \left. \frac{d\omega}{d\mu} \right|_n d\mu$$

$$c = \left. ds \right|_{\omega} = s \left(n - \frac{dn}{d\omega} \left. \frac{d\omega}{d\mu} \right|_n, \mu + \delta\mu \right) - s(n, \mu)$$

$$= \left. - \frac{ds}{dn} \right|_{\mu} \frac{dn}{d\omega} \left. \frac{d\omega}{d\mu} \right|_n + \left. \frac{\partial s}{\partial \mu} \right|_n d\mu$$

$$= - \frac{dk}{dn}$$

$$\left. ds \right|_{\omega} = \left(\frac{\partial s}{\partial \mu} \right) d\mu$$

MRN142

Derivative of phase slowness with structure at constant frequency from normal mode