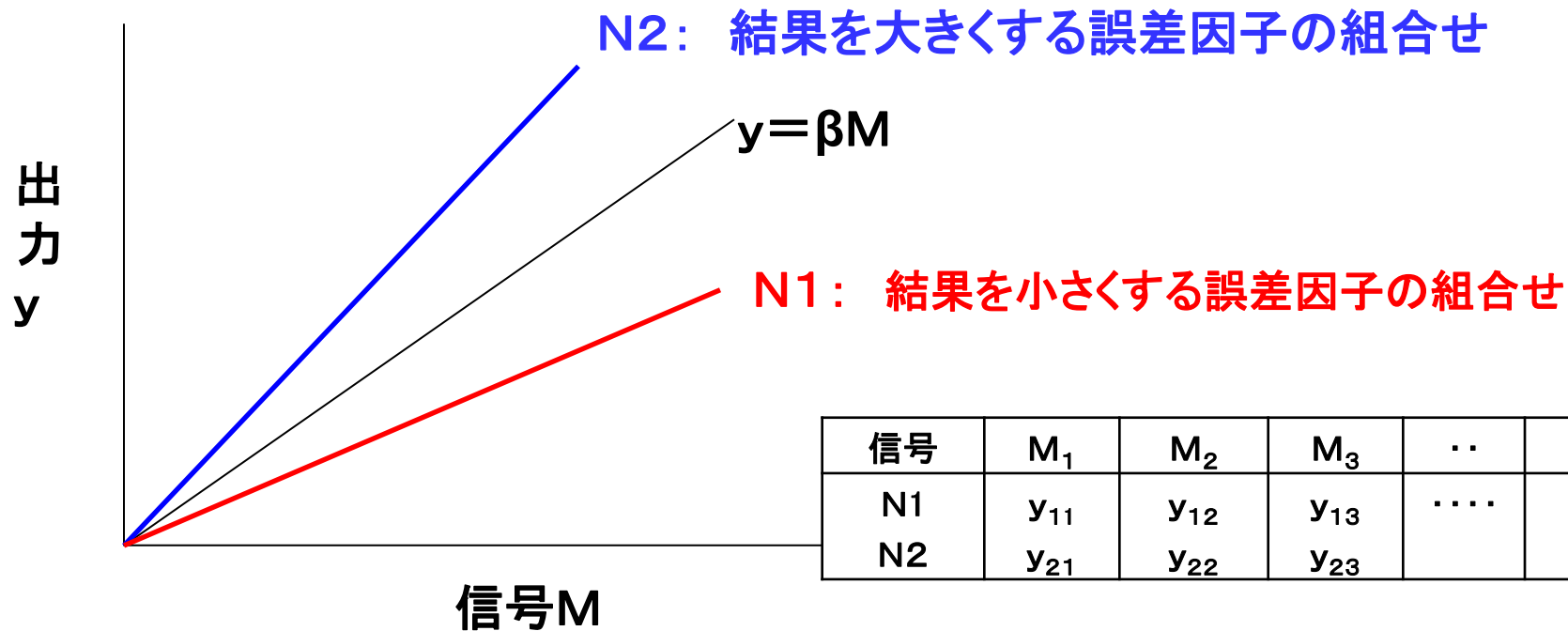


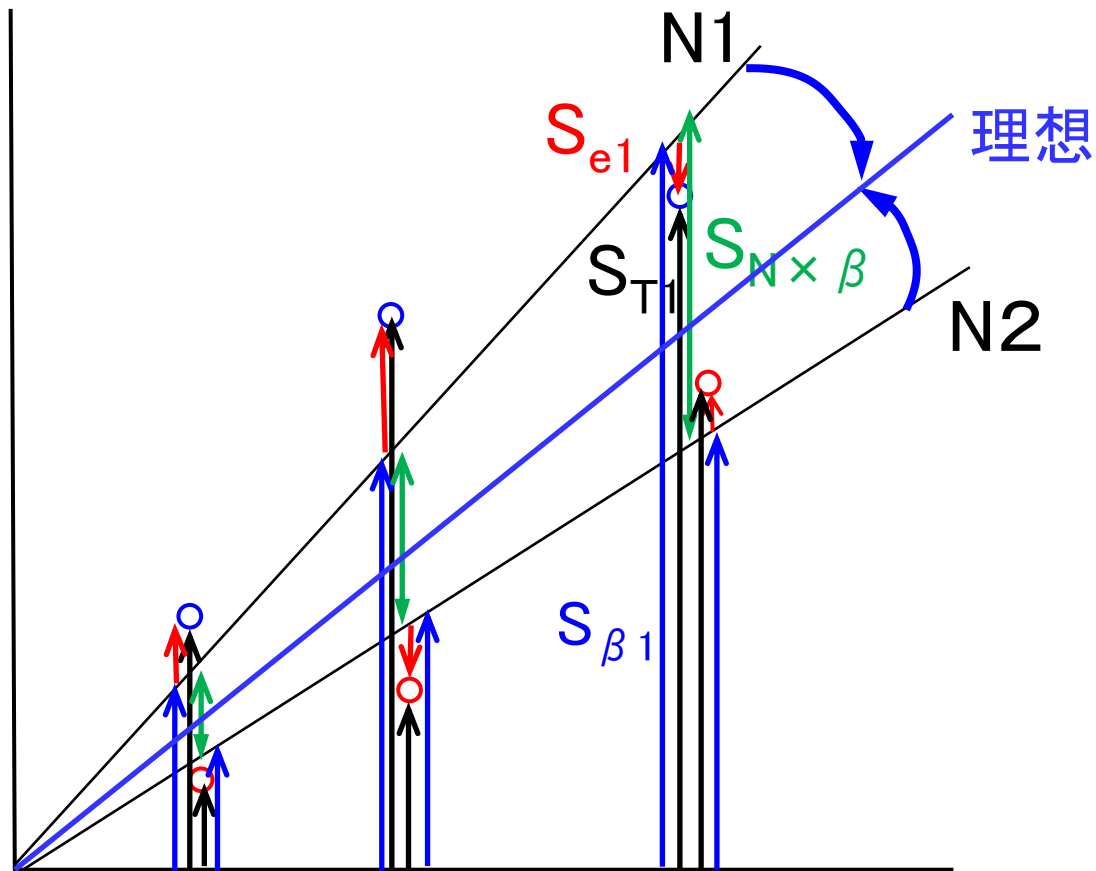
誤差の調合



影響の大きな誤差によりSN比をみたいが
実験規模は大きくしたくない

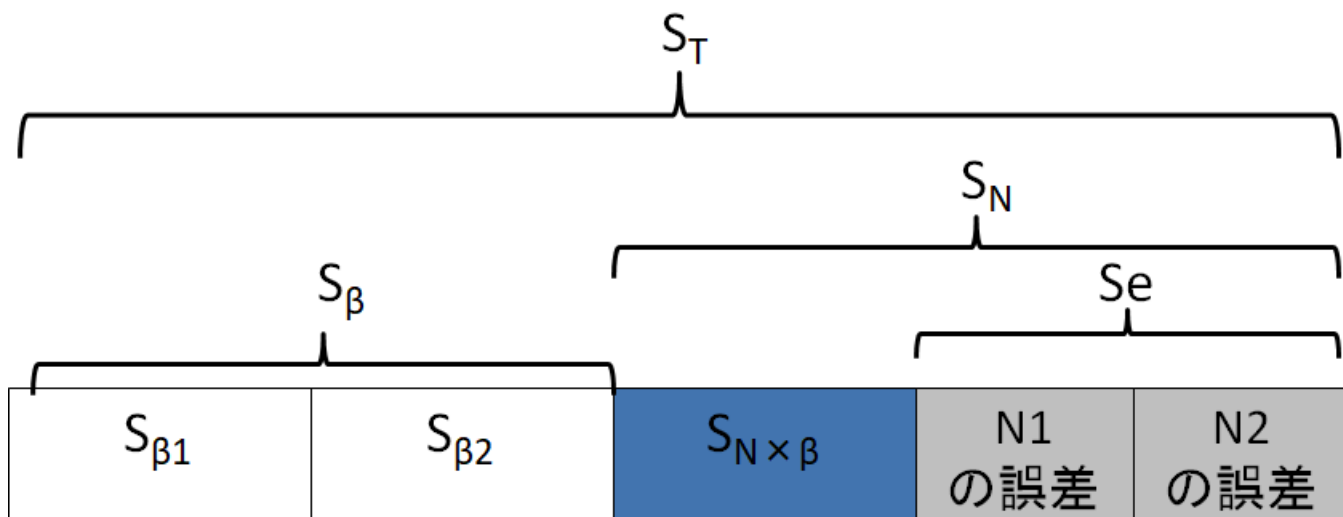
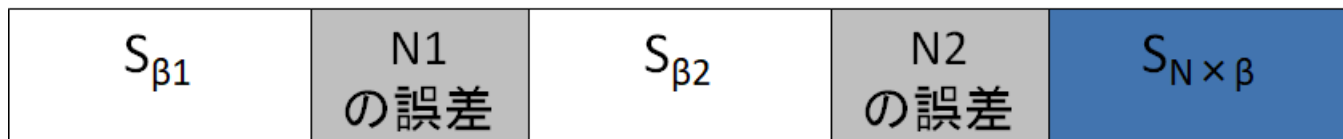
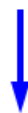


特性值



信号因子

2つの傾きのばらつき



誤差因子の数 n

信号	M_1	M_2		M_k	線形式
N1	y_{11}	y_{12}		y_{1k}	$L_1 = M_1 \times y_{11} + M_2 \times y_{12} + \dots + M_k \times y_{1k}$
N1	y_{11}	y_{12}		y_{1k}	$L_2 = M_1 \times y_{21} + M_2 \times y_{22} + \dots + M_k \times y_{2k}$
:	:	:	:	:	
Nn	y_{n1}	y_{n2}		y_{nk}	$L_1 = M_1 \times y_{n1} + M_2 \times y_{n2} + \dots + M_k \times y_{nk}$

$$S_T = y_{11}^2 + \dots + y_{nk}^2$$

$$(f = nk)$$

$$S_\beta = \frac{L^2}{nr} = \frac{(L_1 + L_2 + \dots + L_k)^2}{n(M_1^2 + M_2^2 + \dots + M_k^2)}$$

$$(f = 1)$$

$$S_{N \times \beta} = \frac{L_1^2 + L_2^2 + \dots + L_n^2}{r} - S_\beta$$

$$(f = n - 1)$$

$$S_e = S_T - S_\beta - S_{N \times \beta}$$

$$(f = n(k - 1))$$

$$S_N = S_{N \times \beta} + S_e$$

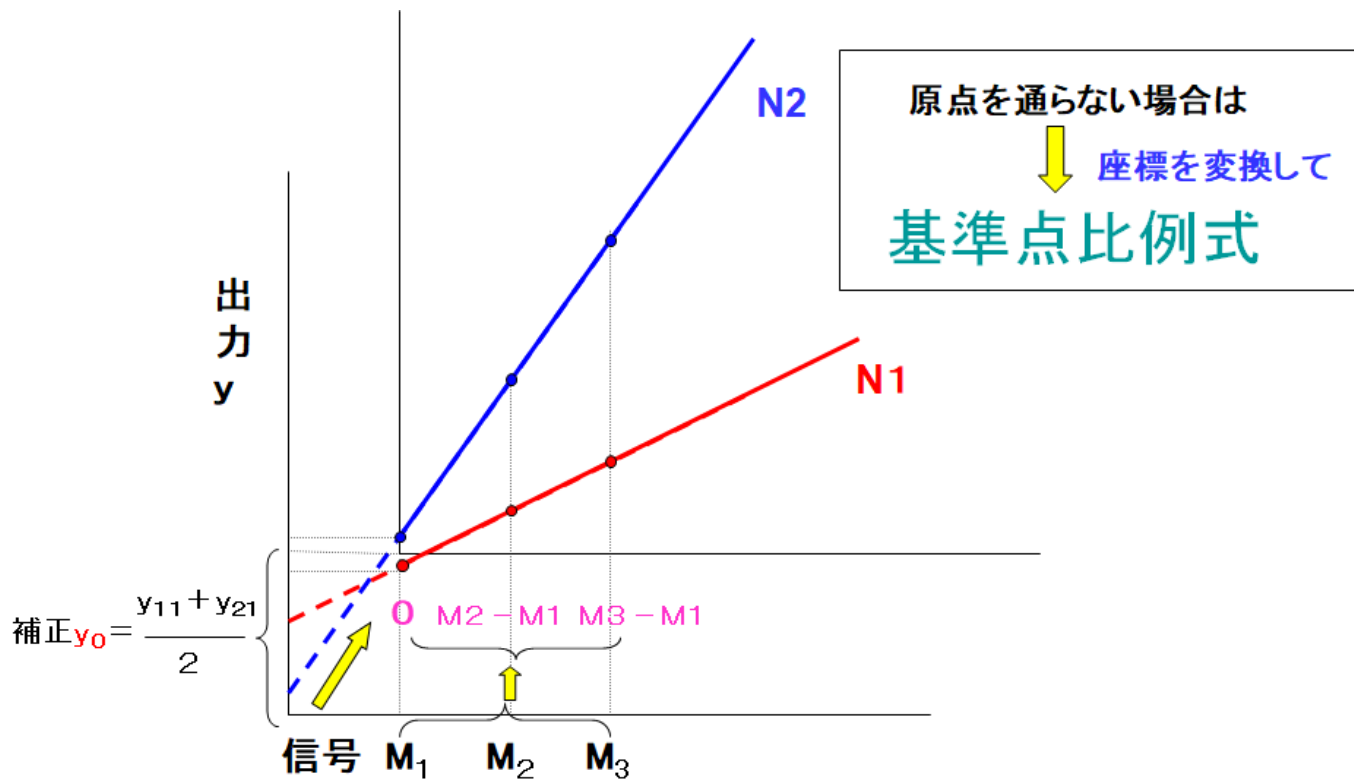
$$(f = nk - 1)$$

$n=2$ のとき

$$S_{N \times \beta} = \frac{(L_1 - L_2)^2}{2r} \quad (f = 1)$$

Source	f	S	V
β	1	S_β	V_β
$N \times \beta$	$n - 1$	$S_{N \times \beta}$	$V_{N \times \beta}$
e	$n(k - 1)$	S_e	V_e
T	nk	S_T	
(N)	$(nk - 1)$	(S_N)	(V_N)

$$\eta = 10 \log \frac{\frac{1}{nr} (S_\beta - V_e)}{V_N}$$



信号	M_1	M_2	M_3		信号	$M_1 - M_1 = 0$	$M_2 - M_1$	$M_3 - M_1$
N1	y_{11}	y_{12}	y_{13}	→	N1	$y_{11} - y_0$	$y_{12} - y_0$	$y_{13} - y_0$
N2	y_{21}	y_{22}	y_{23}		N2	$y_{21} - y_0$	$y_{22} - y_0$	$y_{23} - y_0$