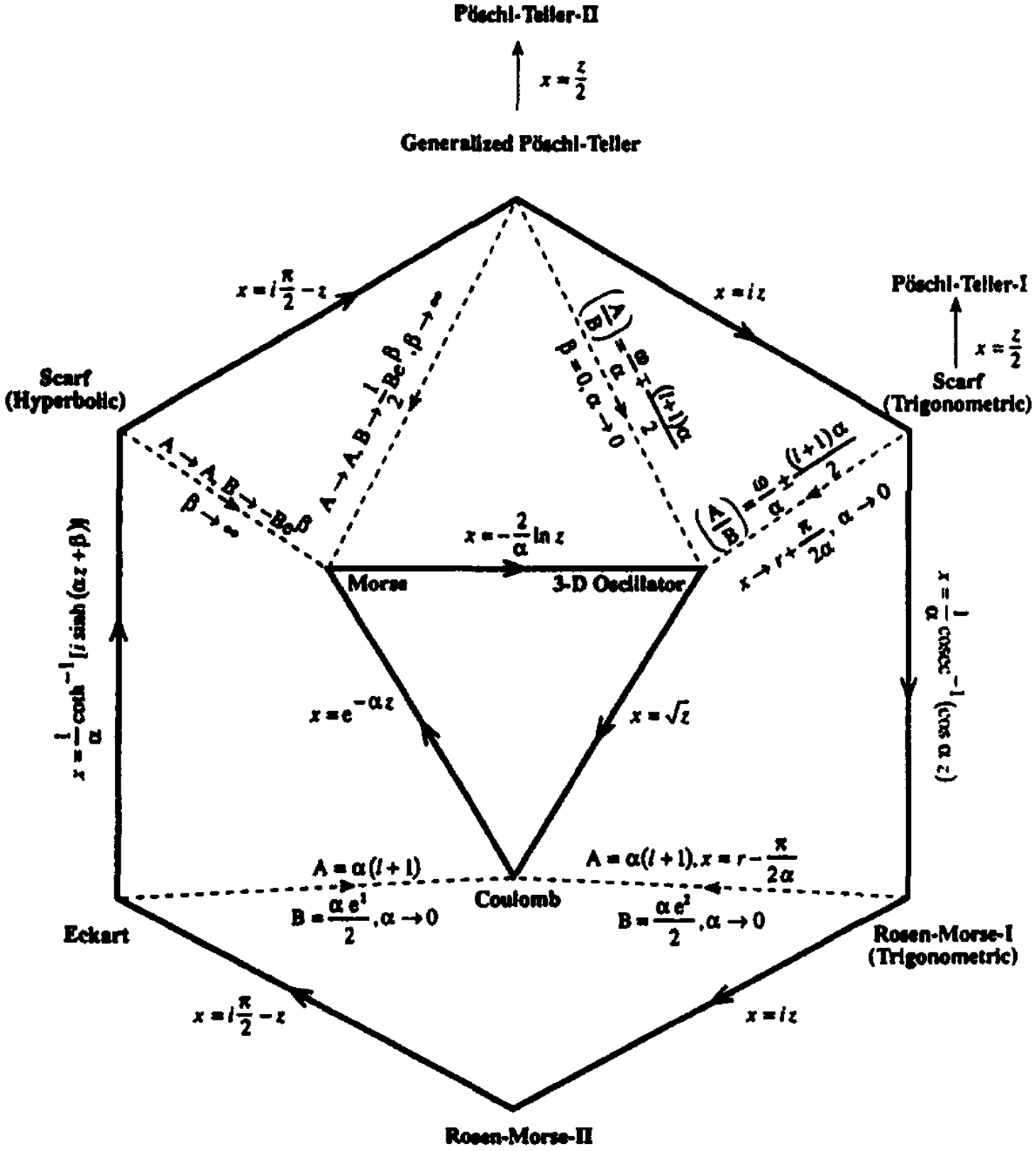
Pöschl-Teller-II
$x = \frac{z}{2}$
Generalized Pöschl-Teller
$x = i\frac{\pi}{2} - z$
$x = iz$
Pöschl-Teller-I
$x = \frac{z}{2}$
Scarf
(Hyperbolic)
Scarf
(Trigonometric)
$A \to A, B \to -B e^{\beta}, \beta \to \epsilon$
$A \to A, B \to \frac{1}{2} B e^{\beta}, \beta \to \epsilon$
$\left(\frac{B}{A}\right) = \frac{\omega}{\alpha} \pm \frac{(l+1)\alpha}{2}$
$B = 0, \alpha \to 0$
$\left(\frac{A}{B}\right) = \frac{\omega}{\alpha} \pm \frac{(l+1)\alpha}{2}$
$x \to r + \frac{\pi}{2\alpha}, \alpha \to 0$
$x = -\frac{2}{\alpha} \ln z$
Morse
3-D Oscillator
$x = \frac{1}{\alpha} \coth^{-1}[i \sinh(\alpha z + \beta)]$
$x = \frac{1}{\alpha} \operatorname{cosec}^{-1}(\cos \alpha z)$
$x = e^{-\alpha z}$
$x = \sqrt{z}$
$A = \alpha(l+1)$
$A = \alpha(l+1), x = r - \frac{\pi}{2\alpha}$
Coulomb
$B = \frac{\alpha e^2}{2}, \alpha \to 0$
$B = \frac{\alpha e^2}{2}, \alpha \to 0$
Eckart
Rosen-Morse-I
(Trigonometric)
$x = i\frac{\pi}{2} - z$
$x = iz$
Rosen-Morse-II