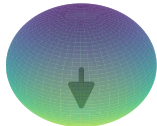


(a) Analytical Solution

$$z_a = -1.0$$

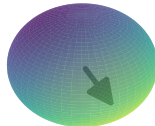
$|0\rangle$



$|1\rangle$

$$z_a = -0.9$$

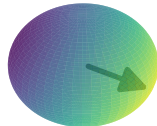
$|0\rangle$



$|1\rangle$

$$z_a = -0.5$$

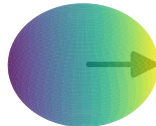
$|0\rangle$



$|1\rangle$

$$z_a = 0.0$$

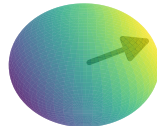
$|0\rangle$



$|1\rangle$

$$z_a = 0.5$$

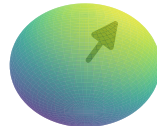
$|0\rangle$



$|1\rangle$

$$z_a = 0.9$$

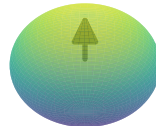
$|0\rangle$



$|1\rangle$

$$z_a = 1.0$$

$|0\rangle$



$|1\rangle$