

$$\delta_{2t}u_{m-\frac{1}{2},n} + U\delta_{2x}u_{m-\frac{1}{2},n} + \delta_x P_{m-\frac{1}{2},n} = 0$$

$$\delta_{2t}w_{m,n-\frac{1}{2}} + U\delta_{2x}w_{m,n-\frac{1}{2}} + \delta_z P_{m,n-\frac{1}{2}} = \left\langle b_{m,n-\frac{1}{2}} \right\rangle^z$$

$$\delta_{2t}b_{m,n} + U\delta_{2x}b_{m,n} + N^2 \left\langle w_{m,n} \right\rangle^z = 0$$

$$\delta_x u_{m,n} + \delta_z w_{m,n} = 0$$