$\eta(x,t)$  $h_{n-1}(x,t)$  $\mathbf{u}_{n-1}(x,t)$  $w_{n-1}(x,t)$  $\phi_{n-1}(x,t)$  $h_k(x,t)$  $\mathbf{u}_k(x,t)$  $z_{n-3/2}(x,t)$  $w_k(x,t)$  $\phi_k(x,t)$  $h_1(x,t)$  $\mathbf{u}_1(x,t)$  $z_{k-1/2}(x,t)$  $w_1(x,t)$  $\phi_1(x,t)$  $h_0(x,t)$  $\mathbf{u}_0(x,t)$  $z_{1/2}(x,t)$  $w_0(x,t)$  $\phi_0(x,t)$  $z_b(x)$