

• Time Gant, Closure EQ:

• Based on diamond. Use

$$\frac{\psi_{i+1/2} + \psi_{i-1/2}}{2} = \delta_t \psi_i$$

$$\delta_t = \frac{\psi_{i+1/2} + \psi_{i-1/2}}{2\psi_i}$$

• LO Eq, time integrated,  $(\cdot)$  indicates Time averaged

$$\frac{\langle \psi \rangle_R^{n+1} - \langle \psi \rangle_R^n}{\Delta t} + \text{Succ Stubs} \left( \frac{\langle \psi \rangle_R^n}{\langle \psi \rangle_R^n} \right) \langle \psi \rangle_R^{n+1} + \left( \frac{\langle \psi \rangle_R^n}{\langle \psi \rangle_R^n} \right) \langle \psi \rangle_R^{n+1} + \langle \psi \rangle_R^{n+1} = \dots$$

• Need to eliminate  $\langle \psi \rangle_R^{n+1}$

$$\frac{\langle \psi \rangle_R^{n+1} + \langle \psi \rangle_R^{n+1}}{2 \langle \psi \rangle_R^{n+1}} = \delta_{t,R}^{n+1}$$

• So we need  $\delta_{t,R}^+$ ,  $\delta_{t,R}^-$ ,  $\delta_{t,L}^+$ ,  $\delta_{t,L}^-$

• Equation Becomes:

$$\frac{2(\delta_{t,R}^+ \langle \psi \rangle_R^{n+1} - \langle \psi \rangle_R^{n+1})}{\Delta t} + \dots = \dots$$