
TIME DISCRETISATION – ALTERNATIVES

3-LEVEL ADAMS-BASHFORTH for the explicit part:

$$R(u, T) = \frac{23}{12}(uDT)^n - \frac{16}{12}(uDT)^{n-1} + \frac{5}{12}(uDT)^{n-2}$$

- More stable.
- Requires 2 storage levels
- Still only one evaluation per time step.

OTHER SCHEMES:

- e.g. Leapfrog, Adams-Moulton
- Either have the same stability or require more storage.

NEW SCHEME:

- Merryfield and Shizgal, claims to be both explicit and unconditionally stable, requiring only 1 storage.
- Should test this out on some small problems!