

## Contents

*[2026-01-25 Sun 09:54]*

attempting to figure out why lines 45-45 seem to be pointing to wrong elements of I vector?

// Initial state. State values of QA0, QB0, QT0

let y0 = State::new(I[2], I[3], I[4]);

think if should be I 3, 4, 5?

*[2026-01-25 Sun 11:50]* C-u C-c !

going create a new model script, strip out the "total pool" stuff and see if I can graph the concentrations new name will be "jam<sub>twopoolnottotal</sub>"

remember in Rust , vector designations begin at 0 ...

*[2026-01-26 Mon 12:39]*

sent text to Sylvain Renevey asking for help, also put a question on Rust users group asking for suggestions

- need to ask Sylvain why both “// declare the external Rust crates required //use ode<sub>solvers</sub>::rk4::\*; use ode<sub>solvers</sub>::\*,”

– should be every feature, therefor rk4 line not necessary, covered by others?

*[2026-01-27 Tue 10:41]*

Professor Juan Zometa from the International University of Berlin, answered my question on Rust Users group, and said that he had encountered the same problem using the ode<sub>solvers</sub> crate, inability to extract non-state variables! He solved his problem by changing ode solvers written as part of the Russell consortium called russell<sub>ode</sub>. Then he converted a model he had of a mechanical system to my bio one, using the russell<sub>ode</sub> solver and it appears to work great! Now to test it and try it, next to see if I can graph!