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|  |  | Key features |
| 1 | Basic sim | Conc  Flux  Tdc |
| 2 | Fe SO4 | Add Fe and SO42- |
| 3 | Grid | Maxnpts, job, xl |
| 4 | Depositional flux | w00 |
| 5 | Porosity | p0 p00 |
| 6 | OMModel2 | Compare OMModel1, OMModel2 |
| 7 | Limitation – inhibition | KTEA, KIn |
| 8 | Inorganic reactions | Knh4ox |
| 9 | Adsorption | NH4 adsorption, KPO4P |
| 10 | Bioturb | imix 0, 2, DB0,xs  α0, xirrig |
| 11 | High salinity | Sal1 Sal2 |
| 12 | Sulfide sensitivity | KH2S |
| 13 | MPB | Rgpp |
| 14 | Zones | Add three zones |
| 15 | OM initial profile | OM\_Top, OM\_Min, InitMinDepth |
| 16 | Timing | Spinup, substeps, firststeps, justwaitabit |
| 17 | POM special rectangle | Fluxon, fluxoff |
| 18 | POM special triangle | Swibc |
| 19 | Time and POM | Swibc |
| 20 | kOM | Vary pomspecial2dic |
| 21 | Bottom boundary | Deep\_vals |

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|  |  | Key features |  |  |
| 1 | Basic sim | Conc  Flux  Tdc |  | Run the model for one year.  Open candi-examples\_results.code-workspace.  Open the R folder. Open the file SixPlotsCandi-Examples.R. Run this script to generate the plots.  The plots will appear in the directory above. |
| 2 | Fe SO4 | Add Fe and SO42- |  | Add Fe(OH)3A and SO42- to aed\_sdg\_vars, default\_vals, which sets the flux and concentration at the sediment-water interface. |
| 3 | Grid | Maxnpts, job, xl |  | Use job to change the grid from fixed width (0) to exponentially increasing (2).  Use xl to change the depth of the sediment simulated, from say, 10 cm to 40 cm.  Use maxnpts to set the number of layers simulated. Note that job 0 requires maxnpts to be depth × integer + 1. |
| 4 | Depositional flux | w00 |  | Set the deposition rate to be large or small. Plot and save the results after each simulation. |
| 5 | Porosity | p0, p00, bp |  | Run two simulations with high and low porosity. p0 is the porosity at the sediment-water interface, and p00 is the porosity at the deep.  What is bp? |
| 6 | OMModel2 | OMModel1, OMModel2 |  |  |
| 7 | Limitation – inhibition | KTEA, KIn |  |  |
| 8 | Inorganic reactions | Knh4ox |  |  |
| 9 | Adsorption | NH4 adsorption, KPO4P |  |  |
| 10 | Bioturb | imix 0, 2, DB0,xs  α0, xirrig |  |  |
| 11 | High salinity | Sal1 Sal2 |  |  |
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| 13 | MPB | Rgpp |  |  |
| 14 | Zones | Add three zones |  |  |
| 15 | OM initial profile | OM\_Top, OM\_Min, InitMinDepth |  |  |
| 16 | Timing | Spinup, substeps, firststeps, justwaitabit |  |  |
| 17 | POM special rectangle | Fluxon, fluxoff |  |  |
| 18 | POM special triangle | Swibc |  |  |
| 19 | Time and POM | Swibc |  |  |
| 20 | kOM | Vary pomspecial2dic |  |  |
| 21 | Bottom boundary | Deep\_vals |  |  |