Supplementary Figure 1 Timescale separation in models of symbiosis: state space reduction, multiple attractors and initialization by Pfab et al. Coral model. Cycle-free versions of graph for the auxiliary $variables. \ Yellow: auxiliary \ variables \ that \ when \ buffered \ interrupt \ all \ cycles \ in \ the \ graph.$ Does not show redundant solutions (that just add buffers to ready solutions with less buffers). Number of buffers: 0 Number of buffers: 1 Number of buffers: 2 r_{CS} ρ_N **j**sg c_{ROS} **j**cp **j**npq **ј**нс ρ_C **j**eC *jco*₂ r_{CS} ρ_N **j**sg c_{ROS} r_{CH} **j**npq j_{HG} ρ_C **j**eC **j**co₂ r_{CS} **j**sg c_{ROS} r_{CH} **j**npq **ј**нG **j**eL r_{CS} ρ_N **j**sg c_{ROS} **j**npq **ј**нG j_{eL} j_{eC} **j**co₂ Number of buffers: 3 r_{CS} ρ_N **j**sg c_{ROS} r_{CH} **ј**ср **j**npq **ј**нG **j**eC r_{CS} ρ_N **j**sg c_{ROS} r_{CH} јсР **ј**нс j_{eL} **j**co₂ r_{CS} ρ_N **j**sg c_{ROS} r_{CH} **j**npq **ј**нс ρ_C **j**eC *jco*₂ r_{CS} ρ_N **j**sg c_{ROS} јсР **j**npq **ј**нс ρ_C **j**eC **j**co₂ Number of buffers: 4 r_{CS} ρ_N **j**sg c_{ROS} r_{CH} јсР **j**npq jнG ρ_C j_{CO2} r_{CS} ρ_N **j**sg c_{ROS} **j**npq jнG j_{eL} ρ_C j_{CO_2} r_{CS} ρ_N **j**sg c_{ROS} r_{CH} j_{CP} **j**npq jнG ρ_C **j**co₂ r_{CS} ρ_N **j**sg r_{CH} c_{ROS} **ј**ср **j**npq jнG j_{eL} ρ_C r_{CS} ρ_N c_{ROS} r_{CH} **ј**сР **ј**нG **j**eL *j*_{CO₂} r_{CS} ρ_N **j**sg c_{ROS} r_{CH} j_{CP} **j**npq jнG j_{eL} ρ_C **j**eC *jco₂* r_{CS} ρ_N **j**sg c_{ROS} r_{CH} **ј**ср **j**npq jнG ρ_C **j**eC **j**co₂ r_{CS} ρ_N **j**sg c_{ROS} r_{CH} **ј**ср **j**npq jнG ρ_C j_{eL} **j**eC *j*co₂ r_{CS} r_{CH} c_{ROS} **ј**сР **j**HG **j**eL ρ_C **j**co₂ r_{CS} ρ_N **j**sg c_{ROS} r_{CH} **j**npq **ј**нG j_{eL} **j**co₂ r_{CS} ρ_N **j**sg c_{ROS} r_{CH} јсР **j**npq **ј**нс **j**eL ρ_C **j**eC *jco*₂ r_{CS} ρ_N **j**sg **ј**ср **j**_{NPQ} **ј**нс j_{eL} ρ_C **j**eC *j*_{CO₂} Number of buffers: 5 r_{CS} ρ_N **j**sg c_{ROS} j_{NPQ} $\boldsymbol{j_{HG}}$ **j**eL ρ_C *jco*₂ r_{CS} ρ_N **j**sg c_{ROS} **ј**ср **j**npq j_{HG} ρ_C jco₂ r_{CS} ρ_N **j**sg r_{CH} c_{ROS} **ј**ср **j**npq j_{HG} ρ_C **j**eC jco₂ r_{CS} **j**sg c_{ROS} r_{CH} **j**npq j_{HG} j_{eL} jco₂ Number of buffers: 6

Number of buffers: 7