

# chang\_fujita\_1999\_version01

## 1 “environment” component

This component has no equations.

## 2 “E” component

$$\frac{d(E)}{d(time)} = (delta\_E\_rxn1 + delta\_E\_rxn2 + delta\_E\_rxn12 + delta\_E\_rxn9)$$

## 3 “E\_i” component

$$\frac{d(E\_i)}{d(time)} = (delta\_E\_i\_rxn5 + delta\_E\_i\_rxn6 + delta\_E\_i\_rxn9 + delta\_E\_i\_rxn15)$$

## 4 “ED” component

$$\frac{d(ED)}{d(time)} = (delta\_ED\_rxn11 + delta\_ED\_rxn12)$$

## 5 “ED\_i” component

$$\frac{d(ED\_i)}{d(time)} = (delta\_ED\_i\_rxn14 + delta\_ED\_i\_rxn15)$$

## 6 “ENaD” component

$$\frac{d(ENaD)}{d(time)} = (delta\_ENaD\_rxn11 + delta\_ENaD\_rxn13)$$

## 7 “ENaD\_i” component

$$\frac{d(ENaD\_i)}{d(time)} = (delta\_ENaD\_i\_rxn14 + delta\_ENaD\_i\_rxn16)$$

## 8 “ENa” component

$$\frac{d(ENa)}{d(time)} = (delta\_ENa\_rxn1 + delta\_ENa\_rxn3 + delta\_ENa\_rxn13)$$

## 9 “ENa\_i” component

$$\frac{d(ENa\_i)}{d(time)} = (delta\_ENa\_i\_rxn5 + delta\_ENa\_i\_rxn7 + delta\_ENa\_i\_rxn16)$$

## 10 “ECl” component

$$\frac{d(ECl)}{d(time)} = (delta\_ECl\_rxn2 + delta\_ECl\_rxn4)$$

## 11 “ECl\_i” component

$$\frac{d(ECl\_i)}{d(time)} = (delta\_ECl\_i\_rxn6 + delta\_ECl\_i\_rxn8)$$

## 12 “ENaCl” component

$$\frac{d(ENaCl)}{d(time)} = (delta\_ENaCl\_rxn3 + delta\_ENaCl\_rxn4 + delta\_ENaCl\_rxn10)$$

### 13 “ENaCl<sub>i</sub>” component

$$\frac{d(ENaCl_i)}{d(time)} = (\delta_{ENaCl_i,rxn7} + \delta_{ENaCl_i,rxn8} + \delta_{ENaCl_i,rxn10})$$

### 14 “Na” component

$$\frac{d(Na)}{d(time)} = (\delta_{Na,rxn1} + \delta_{Na,rxn4} + \delta_{Na,rxn11})$$

### 15 “Na<sub>i</sub>” component

$$\frac{d(Na_i)}{d(time)} = (\delta_{Na_i,rxn5} + \delta_{Na_i,rxn8} + \delta_{Na_i,rxn14})$$

### 16 “Cl” component

$$\frac{d(Cl)}{d(time)} = (\delta_{Cl,rxn2} + \delta_{Cl,rxn3})$$

### 17 “Cl<sub>i</sub>” component

$$\frac{d(Cl_i)}{d(time)} = (\delta_{Cl_i,rxn6} + \delta_{Cl_i,rxn7})$$

### 18 “D” component

$$\frac{d(D)}{d(time)} = (\delta_{D,rxn12} + \delta_{D,rxn13})$$

### 19 “D<sub>i</sub>” component

$$\frac{d(D_i)}{d(time)} = (\delta_{D_i,rxn16} + \delta_{D_i,rxn15})$$

## **20 “reaction1” component**

This component has no equations.

## **21 “reaction2” component**

This component has no equations.

## **22 “reaction3” component**

This component has no equations.

## **23 “reaction4” component**

This component has no equations.

## **24 “reaction5” component**

This component has no equations.

## **25 “reaction6” component**

This component has no equations.

## **26 “reaction7” component**

This component has no equations.

## **27 “reaction8” component**

This component has no equations.

## **28 “reaction9” component**

This component has no equations.

## **29 “reaction10” component**

This component has no equations.

## **30 “reaction11” component**

This component has no equations.

## **31 “reaction12” component**

This component has no equations.

## **32 “reaction13” component**

This component has no equations.

## **33 “reaction14” component**

This component has no equations.

## **34 “reaction15” component**

This component has no equations.

## **35 “reaction16” component**

This component has no equations.