

→ So the change ~~between~~ <sup>transition</sup> between (eq.3)  $\leftrightarrow$  (eq.6) is a ~~change~~ <sup>transition</sup> between integer  $\leftrightarrow$  non-integer values.

→ Since (eq.6) is also defined ~~for integer~~ <sup>for integer</sup> values like (eq.3), we have to take care that this is always ~~fulfilled~~ fulfilled.

→ We do this ~~by~~ <sup>the</sup> using floor function for (eq.9)

$$(eq. 9^1 v2) \quad I. \quad y_1' = y_1 + \left\lfloor \frac{\Delta_1(-1 + \Delta x_{12})}{2x_1 + 1} \right\rfloor$$

$$\Leftrightarrow (eq. 9^2 v2) \quad II. \quad y_1 = y_1' - \left\lfloor \frac{\Delta_1(-1 + \Delta x_{12})}{2x_1 + 1} \right\rfloor$$

of cours  $y_i$  and  $y_i'$  will not generate the same  $\bar{n}$  anymore, but we will see, that this is not a problem for our calculations, in the next steps.

→ With this, we also have to change the solution for  $z_{12}$ .

$$y_1' = y_1^m + \left\lfloor \frac{\Delta_1(-1 + \Delta x_{12})}{2x_1 + 1} \right\rfloor$$

$$\text{and } y_1' = x_2(-\Delta_2 + \Delta_1) + (2x_2 + 1)z_{12}$$

$$x_2(-\Delta_2 + \Delta_1) + (2x_2 + 1)z_{12} = y_1^m + \left\lfloor \frac{\Delta_1(-1 + \Delta x_{12})}{2x_1 + 1} \right\rfloor$$

$$\Leftrightarrow (2x_2 + 1)z_{12} = y_1^m + \left\lfloor \frac{\Delta_1(-1 + \Delta x_{12})}{2x_1 + 1} \right\rfloor - x_2(-\Delta_2 + \Delta_1)$$

$$\Leftrightarrow (eq. 10 v2) \quad z_{12} = \frac{1}{2x_2 + 1} \left\{ y_1^m + \left\lfloor \frac{\Delta_1(-1 + \Delta x_{12})}{2x_1 + 1} \right\rfloor - x_2(-\Delta_2 + \Delta_1) \right\}$$

Have attention, that we add additionally second floor brackets to this equation, for getting an integer  $z_{12}$ .