Algorithm Calculation of Melt Pool Width
1 Locate laser beam position: x_{laser} and y_{laser}
2 Points to traverse:
$$X = \{x_{laser} - c_x : \Delta x : x_{laser} + c_x\}$$
$$Y = \{y_{laser} - c_y : \Delta y : y_{laser} + c_y\}$$
3 for y in Y:
   1 for x in X:
      1 Locate $T(x_l, y) = T_m$ and $T(x_r, y) = T_m$
   2 Width defined by T_m for a certain y:
$$w_y = x_r - x_l$$
4 Melt pool width $w = \max(w_y)$
- In this case study, $\Delta x = \Delta y = 1 \ \mu m$, $c_x = 150 \ \mu m$, and $c_y = 100 \ \mu m$