2nd report

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During this week I was able to extract the stress field around a dislocation in the origo. I extended the code with this functionality. The objectum oriented structure helped me to easilly output the field to the standard file stream.

The code base is in C++ the extracted field is *1024 x 1024* in size. I zoomed in to the acquired region and went along with fine resolution to extract the filed around the central dislocation (0 0 1). I wrote a helper function to output the filed after the load of the stress matrix and used that.

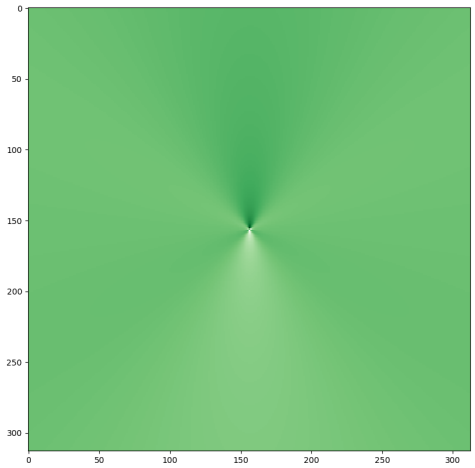
I plotted the stress matrix with *matplotlib*.

```
void PeriodicShearStressELTE::outPutStress(){
  float size = (float) stress_matrix_size / 16.;

  float res = 0.0001;

  for(float i = - size / 4096.; i < size / 4096.; i+=res){
    for(float j = - size / 4096.; j < size / 4096.; j+=res){
      fout << xy(i, j) << ";";
    }
    fout << "\n";
  }
}
```

Where the function *xy(double x, double y)* calculates the field around the dislocation at points *x, y*. And finally the field itself:



And zoomed in: