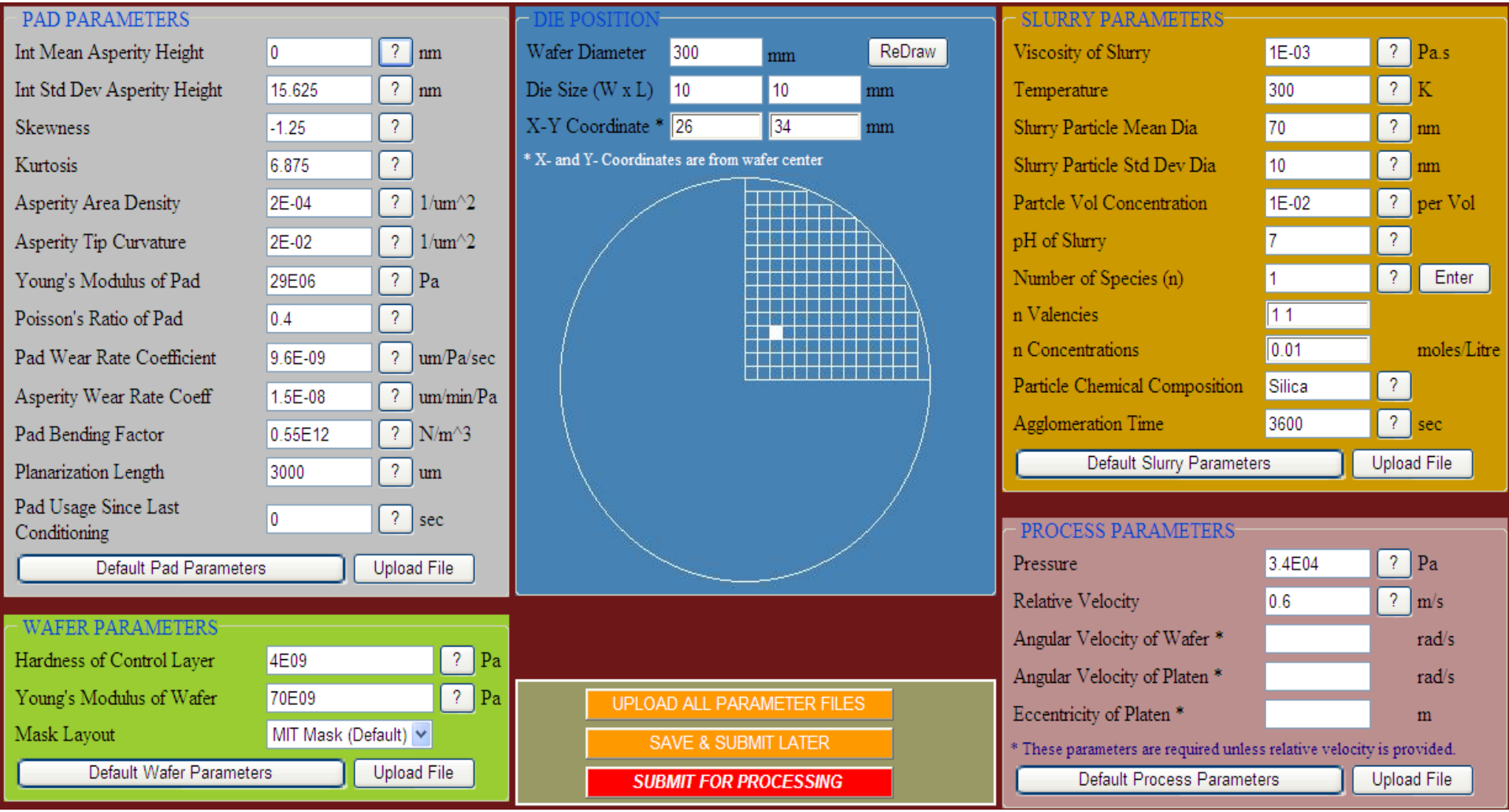
# CMP *Sim 2.0*

# Sample Input

1. Slurry Agglomeration Limited by Reaction (RLA)
2. Slurry Agglomeration Limited by Diffusion (DLA)

# RLA


PAD PARAMETERS
Int Mean Asperity Height 0 ? nm
Int Std Dev Asperity Height 15.625 ? nm
Skewness -1.25 ?
Kurtosis 6.875 ?
Asperity Area Density 2E-04 ? 1/um^2
Asperity Tip Curvature 2E-02 ? 1/um^2
Young's Modulus of Pad 29E06 ? Pa
Poisson's Ratio of Pad 0.4 ?
Pad Wear Rate Coefficient 9.6E-09 ? um/Pa/sec
Asperity Wear Rate Coeff 1.5E-08 ? um/min/Pa
Pad Bending Factor 0.55E12 ? N/m^3
Planarization Length 3000 ? um
Pad Usage Since Last Conditioning 0 ? sec
Default Pad Parameters
Upload File
DIE POSITION
Wafer Diameter 300 mm
ReDraw
Die Size (W x L) 10 10 mm
X-Y Coordinate * 26 34 mm
* X- and Y- Coordinates are from wafer center
SLURRY PARAMETERS
Viscosity of Slurry 1E-03 ? Pa.s
Temperature 300 ? K
Slurry Particle Mean Dia 70 ? nm
Slurry Particle Std Dev Dia 10 ? nm
Partcle Vol Concentration 1E-02 ? per Vol
pH of Slurry 7 ?
Number of Species (n) 1 ? Enter
n Valencies 1 1
n Concentrations 0.01 moles/Litre
Particle Chemical Composition Silica ?
Agglomeration Time 3600 ? sec
Default Slurry Parameters
Upload File
WAFER PARAMETERS
Hardness of Control Layer 4E09 ? Pa
Young's Modulus of Wafer 70E09 ? Pa
Mask Layout MIT Mask (Default)
Default Wafer Parameters
Upload File
UPLOAD ALL PARAMETER FILES
SAVE & SUBMIT LATER
SUBMIT FOR PROCESSING
PROCESS PARAMETERS
Pressure 3.4E04 ? Pa
Relative Velocity 0.6 ? m/s
Angular Velocity of Wafer * rad/s
Angular Velocity of Platen * rad/s
Eccentricity of Platen * m
* These parameters are required unless relative velocity is provided.
Default Process Parameters
Upload File

# DLA

## PAD PARAMETERS

| | | | |
|---|---|---|---|
| Int Mean Asperity Height | 0 | ? | nm |
| Int Std Dev Asperity Height | 15.625 | ? | nm |
| Skewness | -1.25 | ? | |
| Kurtosis | 6.875 | ? | |
| Asperity Area Density | 2E-04 | ? | 1/um^2 |
| Asperity Tip Curvature | 2E-02 | ? | 1/um^2 |
| Young's Modulus of Pad | 29E06 | ? | Pa |
| Poisson's Ratio of Pad | 0.4 | ? | |
| Pad Wear Rate Coefficient | 9.6E-09 | ? | um/Pa/sec |
| Asperity Wear Rate Coeff | 1.5E-08 | ? | um/min/Pa |
| Pad Bending Factor | 0.55E12 | ? | N/m^3 |
| Planarization Length | 3000 | ? | um |
| Pad Usage Since Last Conditioning | 0 | ? | sec |

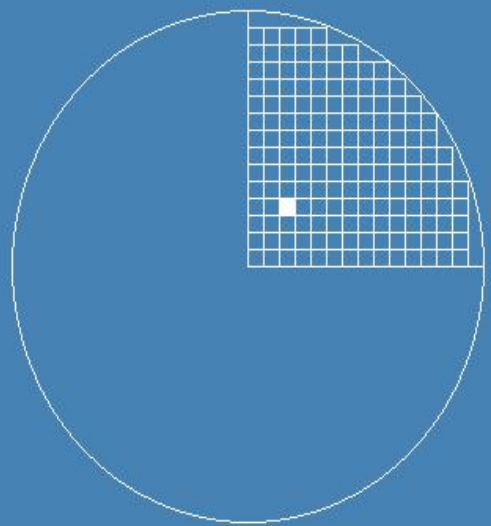
Default Pad Parameters | Upload File

## DIE POSITION

| | | | |
|---|---|---|---|
| Wafer Diameter | 300 | | mm |
| Die Size (W x L) | 10 | 10 | mm |
| X-Y Coordinate * | 26 | 34 | mm |

ReDraw

* X- and Y- Coordinates are from wafer center



## SLURRY PARAMETERS

| | | | |
|---|---|---|---|
| Viscosity of Slurry | 1E-03 | ? | Pa.s |
| Temperature | 300 | ? | K |
| Slurry Particle Mean Dia | 70 | ? | nm |
| Slurry Particle Std Dev Dia | 10 | ? | nm |
| Partcle Vol Concentration | 1E-02 | ? | per Vol |
| pH of Slurry | 3 | ? | |
| Number of Species (n) | 1 | ? | Enter |
| n Valencies | 1 1 | | |
| n Concentrations | 0.01 | | moles/Litre |
| Particle Chemical Composition | Silica | ? | |
| Agglomeration Time | 3600 | ? | sec |

Default Slurry Parameters | Upload File

## WAFER PARAMETERS

| | | | |
|---|---|---|---|
| Hardness of Control Layer | 4E09 | ? | Pa |
| Young's Modulus of Wafer | 70E09 | ? | Pa |
| Mask Layout | MIT Mask (Default) | | |

Default Wafer Parameters | Upload File

UPLOAD ALL PARAMETER FILES

SAVE & SUBMIT LATER

SUBMIT FOR PROCESSING

## PROCESS PARAMETERS

| | | | |
|---|---|---|---|
| Pressure | 3.4E04 | ? | Pa |
| Relative Velocity | 0.6 | ? | m/s |
| Angular Velocity of Wafer * | | | rad/s |
| Angular Velocity of Platen * | | | rad/s |
| Eccentricity of Platen * | | | m |

* These parameters are required unless relative velocity is provided.

Default Process Parameters | Upload File