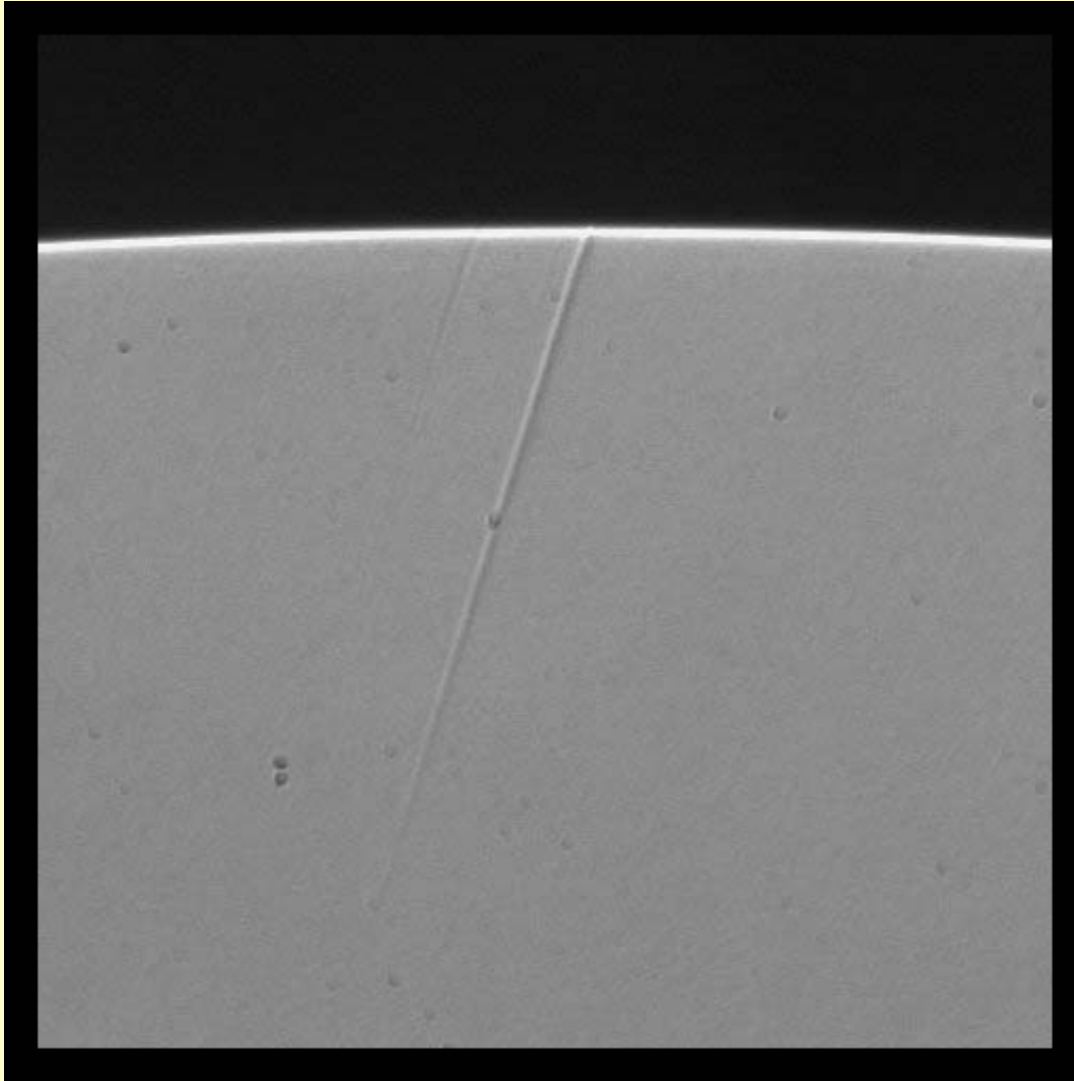


Automated
Submicron Crystal Slip
Detection Systems



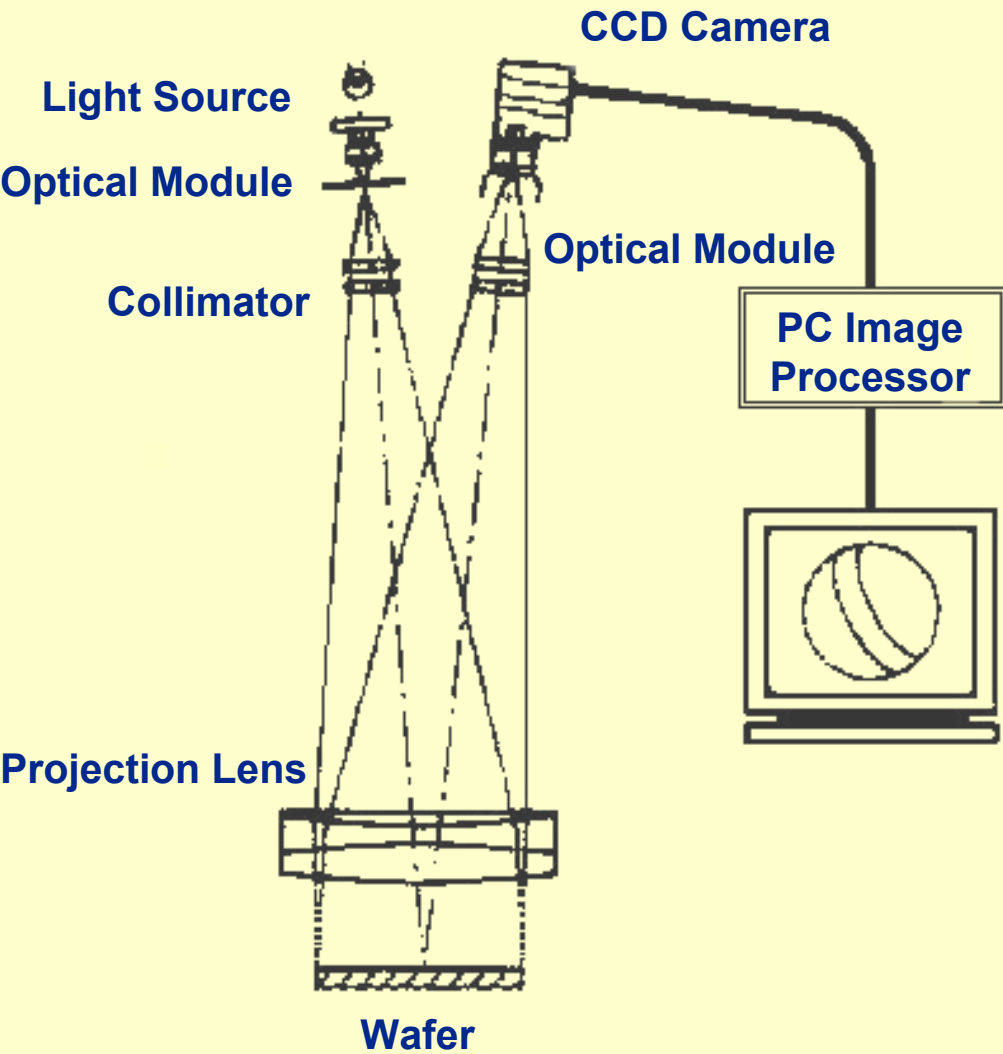
The SlipFinder is Useful for Detecting Dislocations that Occur During Many Types of Wafer Processes:

- **SOI**
- **Epitaxy**
- **Diffusion**
- **Post Implant Annealing**
- **RTP**

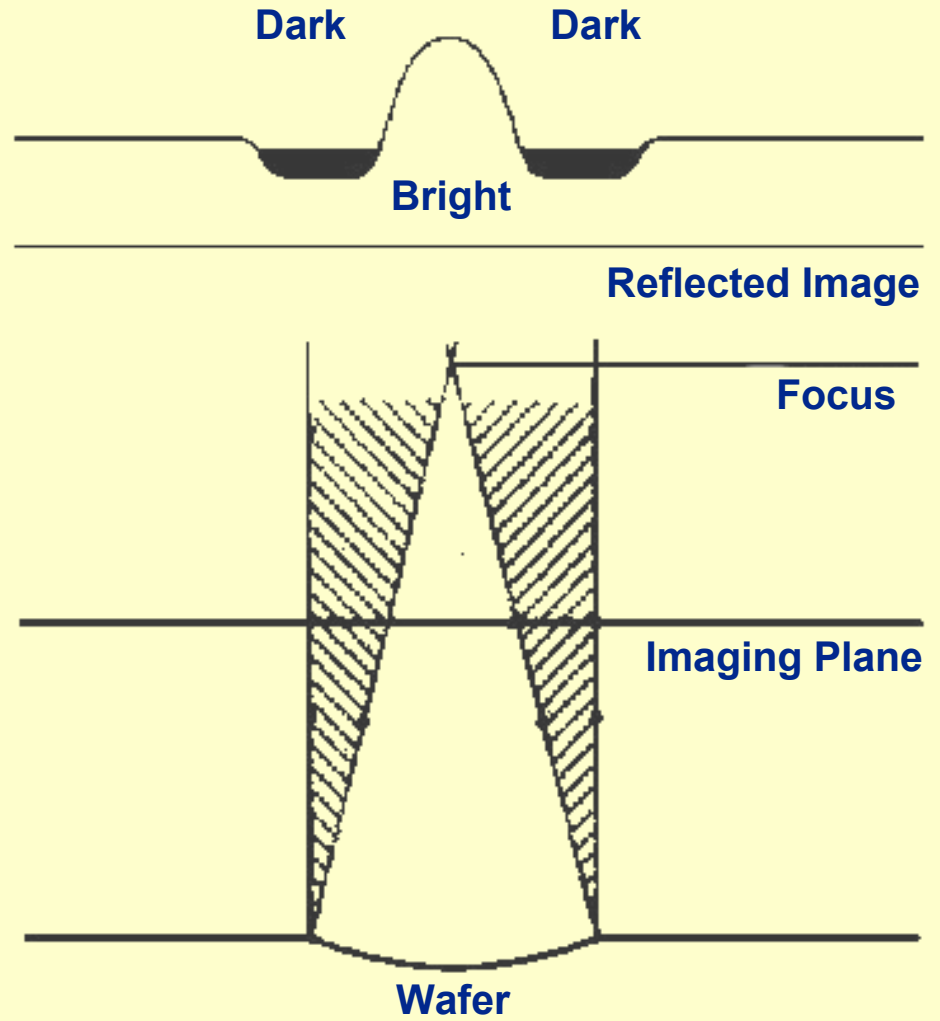


- **Slip Detection – Relies on Magic Mirror™ technique**
- **Field of View: 15mm X 11mm**
- **Slip Visualization Sensitivity:**
 - Less than 0.05 microns depth**
 - 150 microns length**
- **AutoSlip Software Sensitivity:**
 - 1mm minimum length**
- **Other Defects such as Particles and Pits can be Visualized**

High Magnification Magic Mirror™ Method Used on the SlipFinder



Magic Mirror™ Optics Schematic



Magic Mirror™ Optical Imaging Principle
Reflected image resulting from concavity

Hologenix 200mm Slip Finder YIS-200HM

Automated 2 Cassette Slip Detection System



- Fully Automated Slip Detection
- Sub-micron Detection Sensitivity
- Optical Field of View 15mm X 11mm
- Non-contact Notch, Flat-Finding and Centering Technology
- 150-200 mm Wafer Inspection
- Approx. 60 Wafers per Hour
- Dual Cassette
- SECS-GEM - Optional
- Adjustable Inspection and Slip Detection Recipes
- Class 1 Clean Room Compatible
- Windows Software Environment

www.hologenix.com

Hologenix 200mm Manual Load Slip Finder

Automated Slip and Defect Detection System



- **Low Cost**
- **Fully Automated Slip Detection**
- **Sub-micron Detection Sensitivity**
- **Detects Other Surface Defects**
- **Field of View: 15mm X 11mm with SlipFinder Optics**
- **Field of View: 0.5mm, 1mm or 5mm with Nomarski DIC Optics**
- **Throughput depends on Magnification, Wafer Size, and Inspection Region**
- **50-200mm Wafer Inspection; Optional 300mm**
- **Automated Defect Classification**
- **Adjustable Inspection and Slip/Defect Detection Recipes**
- **Upgradeable to Cassette Loading System**



Hologenix 300mm Slip Finder YIS-300HM

Automated 2 FOUP Slip Detection System

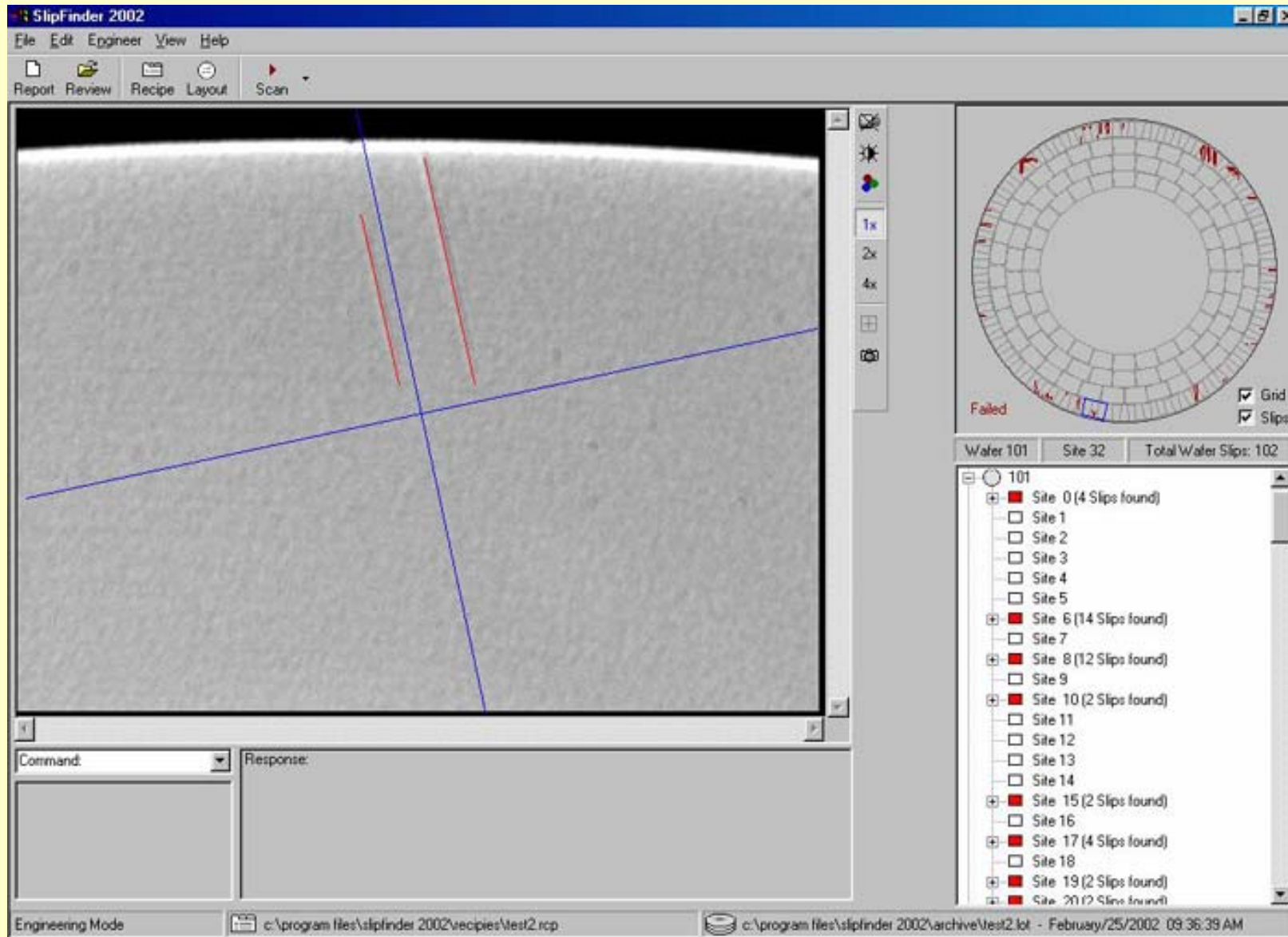


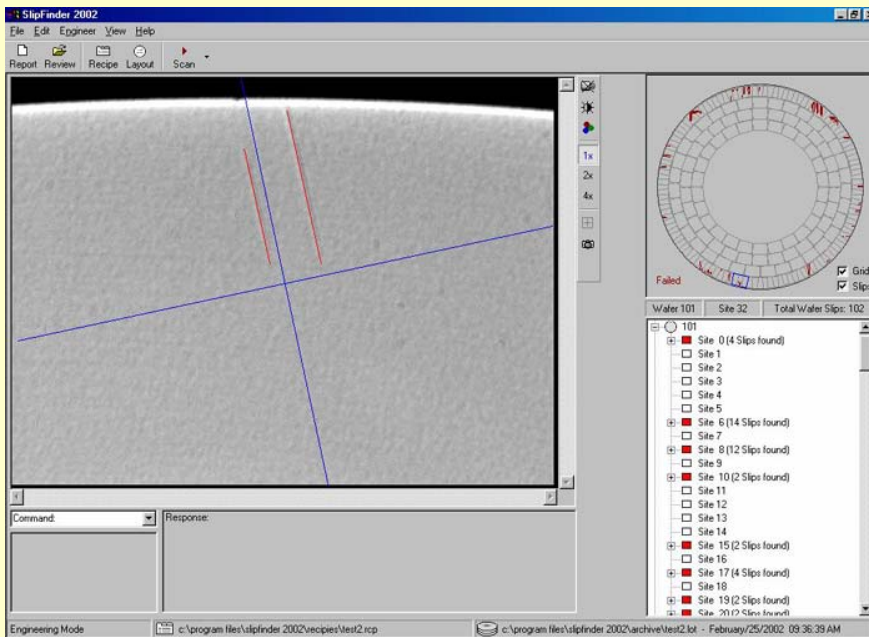
- Fully Automated Slip Detection
- Full or Partial Wafer Inspection
- Edge Grip
- Adjustable Inspection and Slip Detection Recipes
- Sub-micron Detection Sensitivity
- Optical Field of View: 15mm X 11mm
- Approx 15 – 80 WPH
- Dual FOUPs; Optional FOSB, Open Cassette
- Optical Non-Contact Notch Finding
- Class M1 Mini-Environment
- Windows XP Software Environment
- SECS-GEM via RS232 or HSMS
- Full Factory Automation
- Sorter Capabilities – Optional OCR

www.hologenix.com

Hologenix Automated Slip Finder Software

AutoSlip – System User Interface

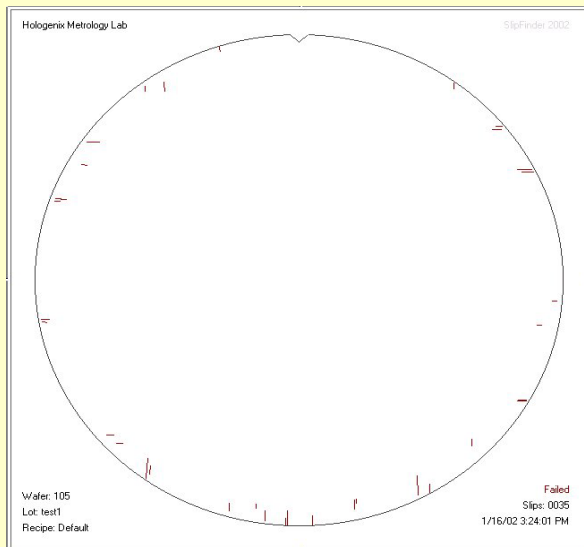
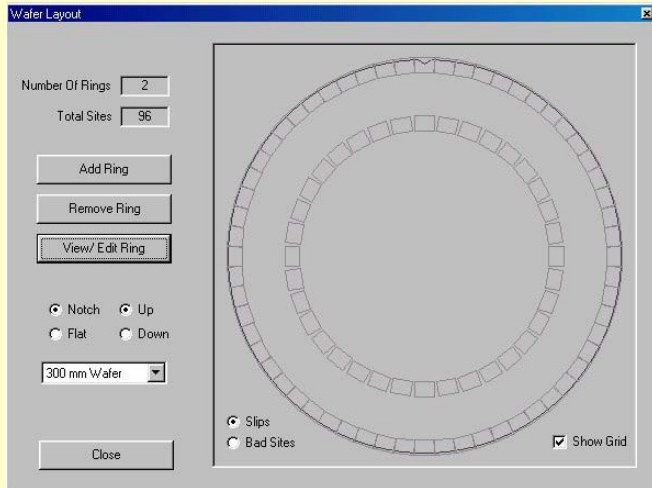




- Automated Detection of Slip Lines
- Detect, Count, Locate and Measure (Length)
- Windows XP Interface
- Adjustable Sensitivity
- Adjustable Edge Exclusion
- Graphic Display of Wafer with Highlighted Slip Sectors
- Wafer Accept/Reject Recipes
- Lotfile Reports, Image Archiving and Printing
- Automated, Semi-Automated and Engineering Mode

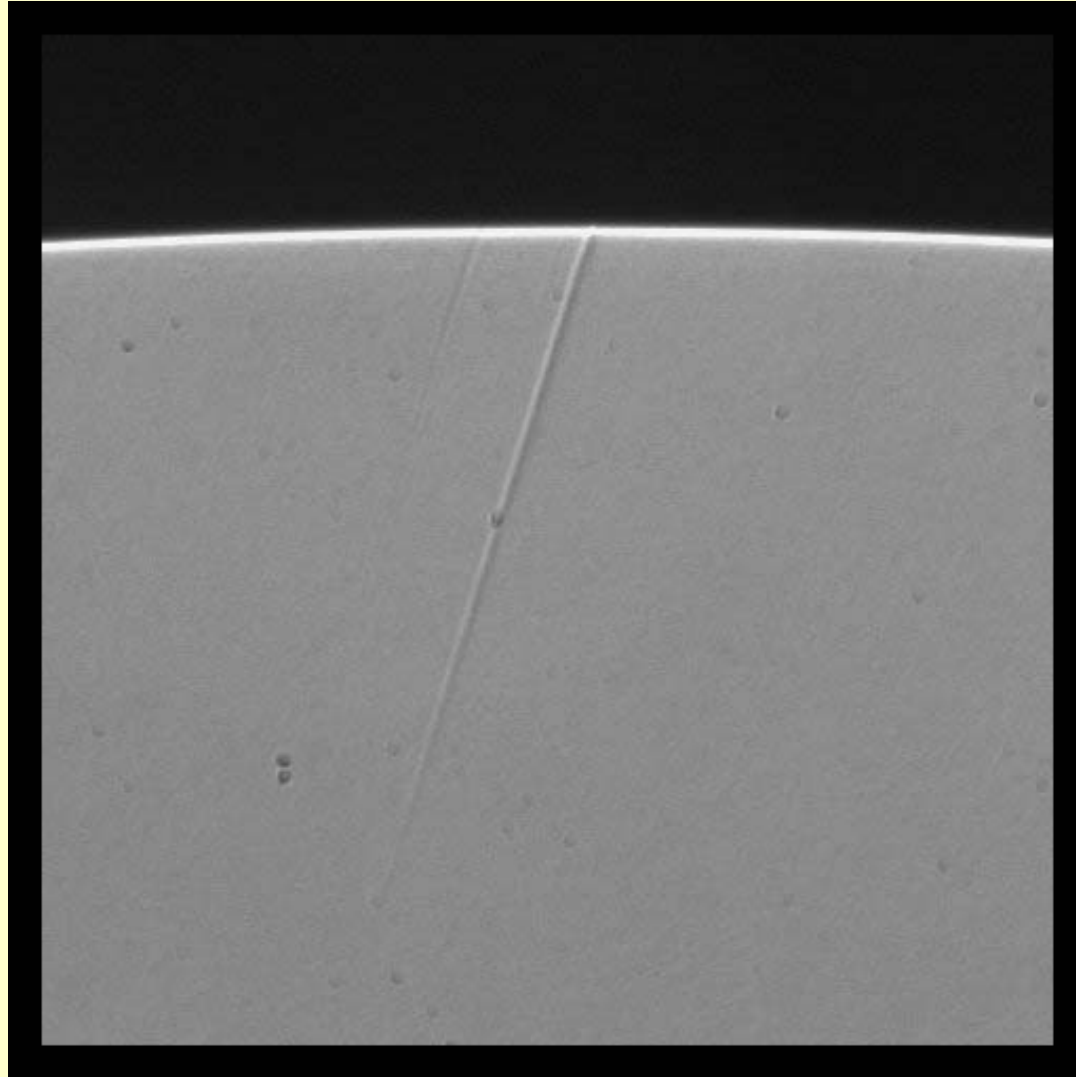
Hologenix Automated Slip Finder Software

AutoSlip System - New Features

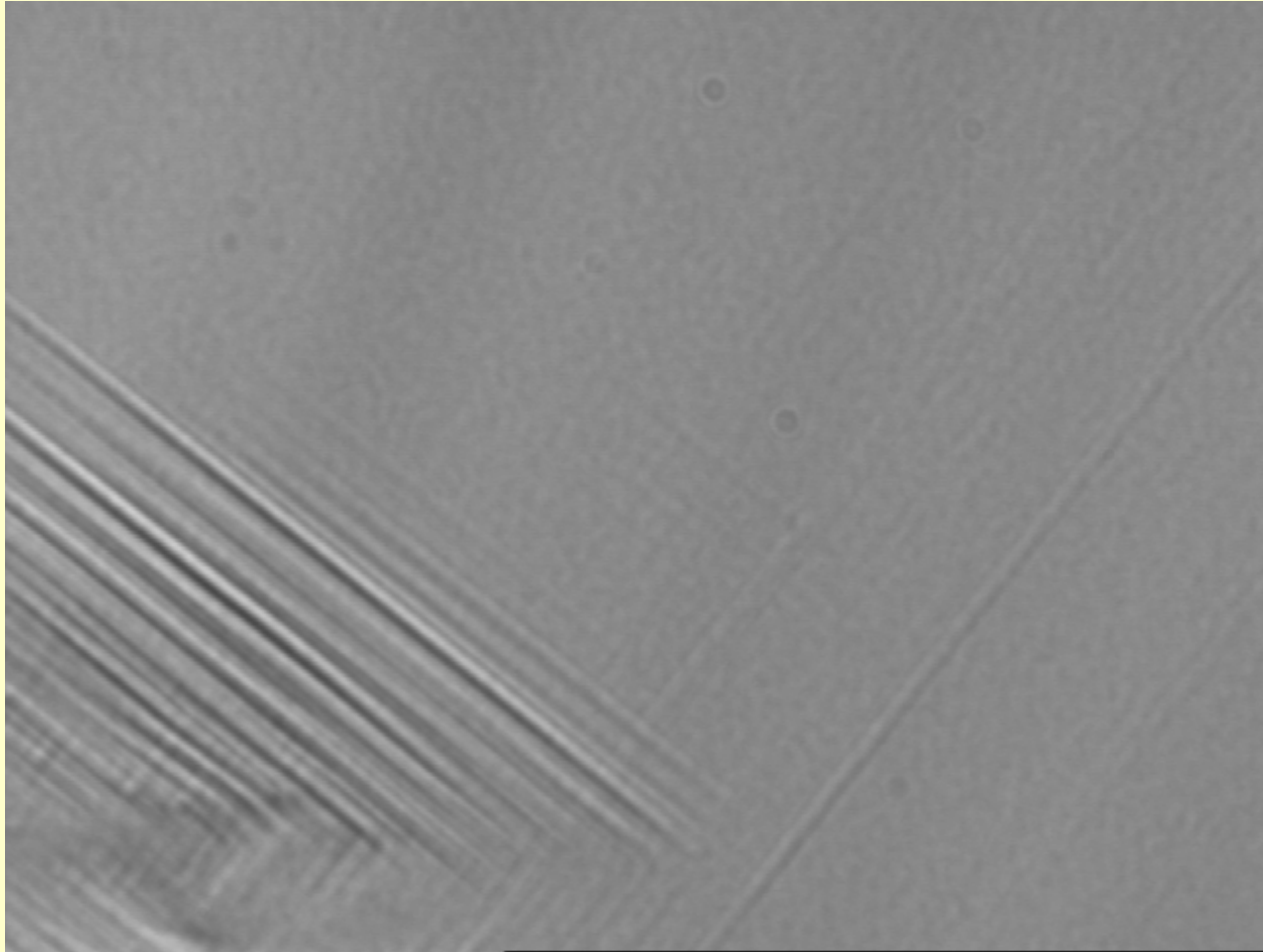


- **Inspection Locations are Completely Configurable via a Layout/Grid Option**
- **All Slip Lines are Reported in mm using Wafer Coordinates**
- **System Outputs Wafer Maps Showing Actual Orientation and Length of Slip Lines**
- **Stitching - Sections of Slip Lines from Different Fields of View can be Automatically Combined and Reported as One Long Slip Line**
- **System can be Configured to Stop the Inspection Upon the 1st Failure to Improve Throughput**
- **SOI Edge Exclusion Measurement Capability**

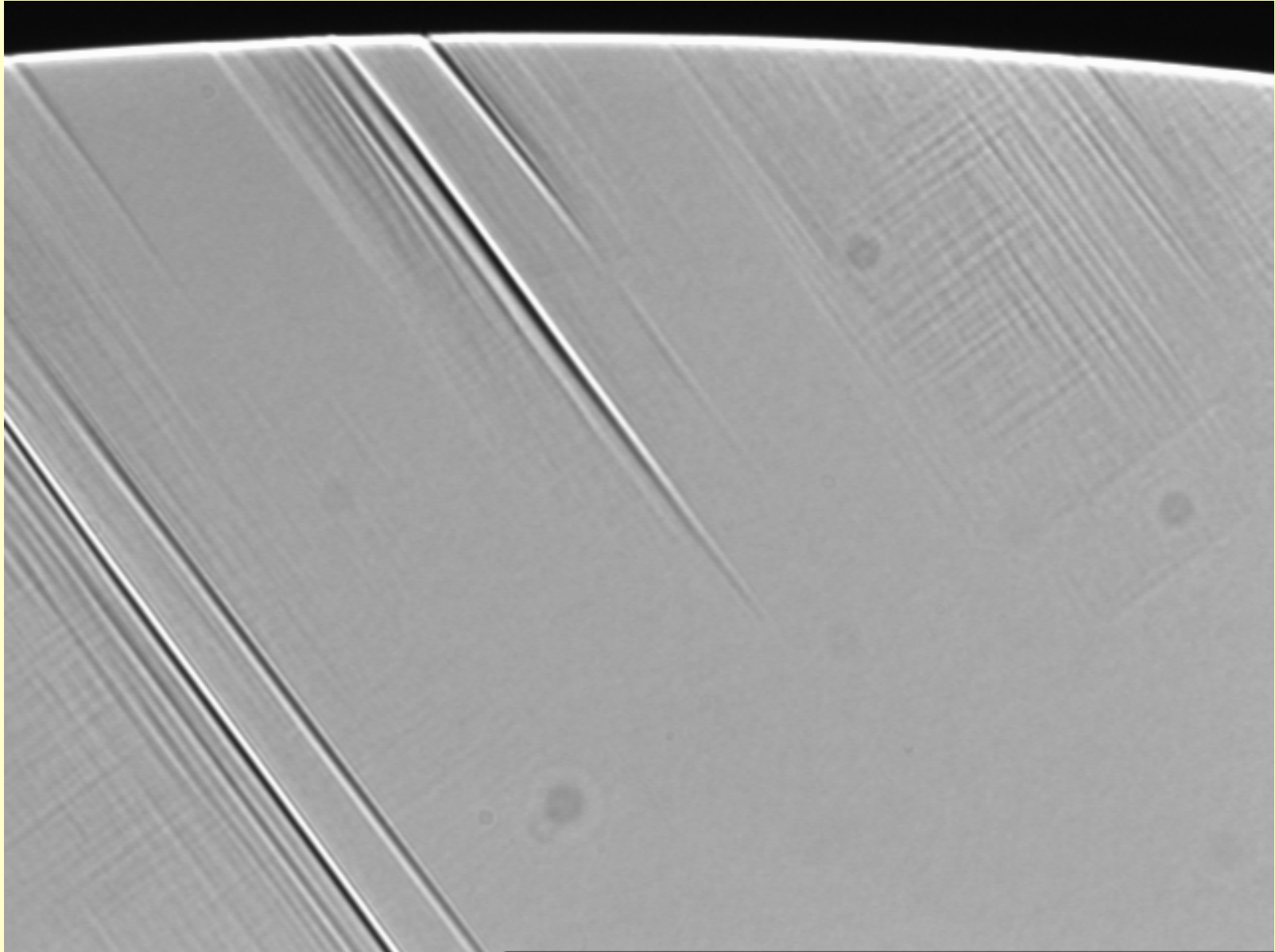
Standard Slip Image



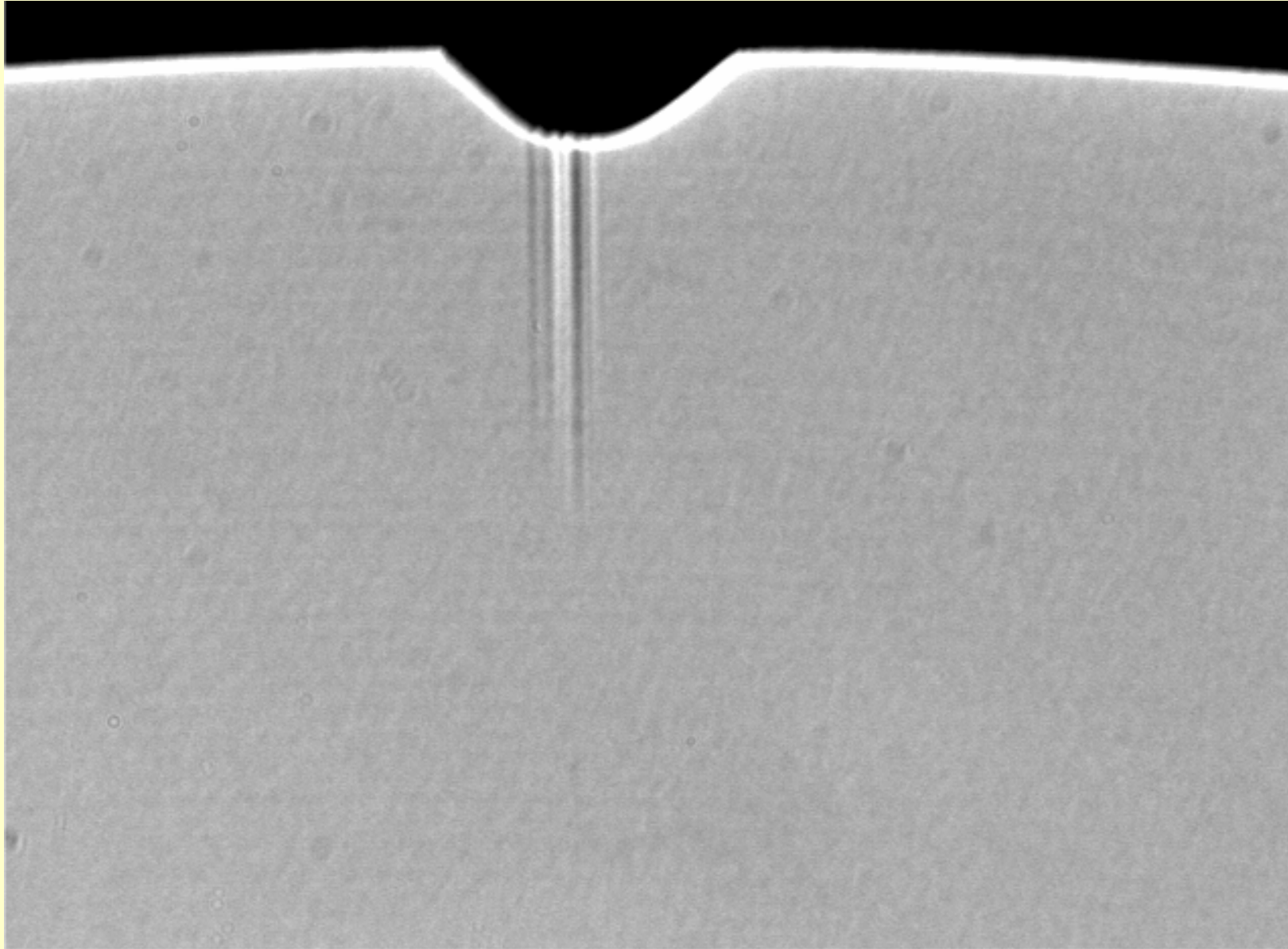
Interior Image 300mm SOI Wafer



Slip Example



Slip Example



Patterned Wafer Typically Non-Automated Inspection

