

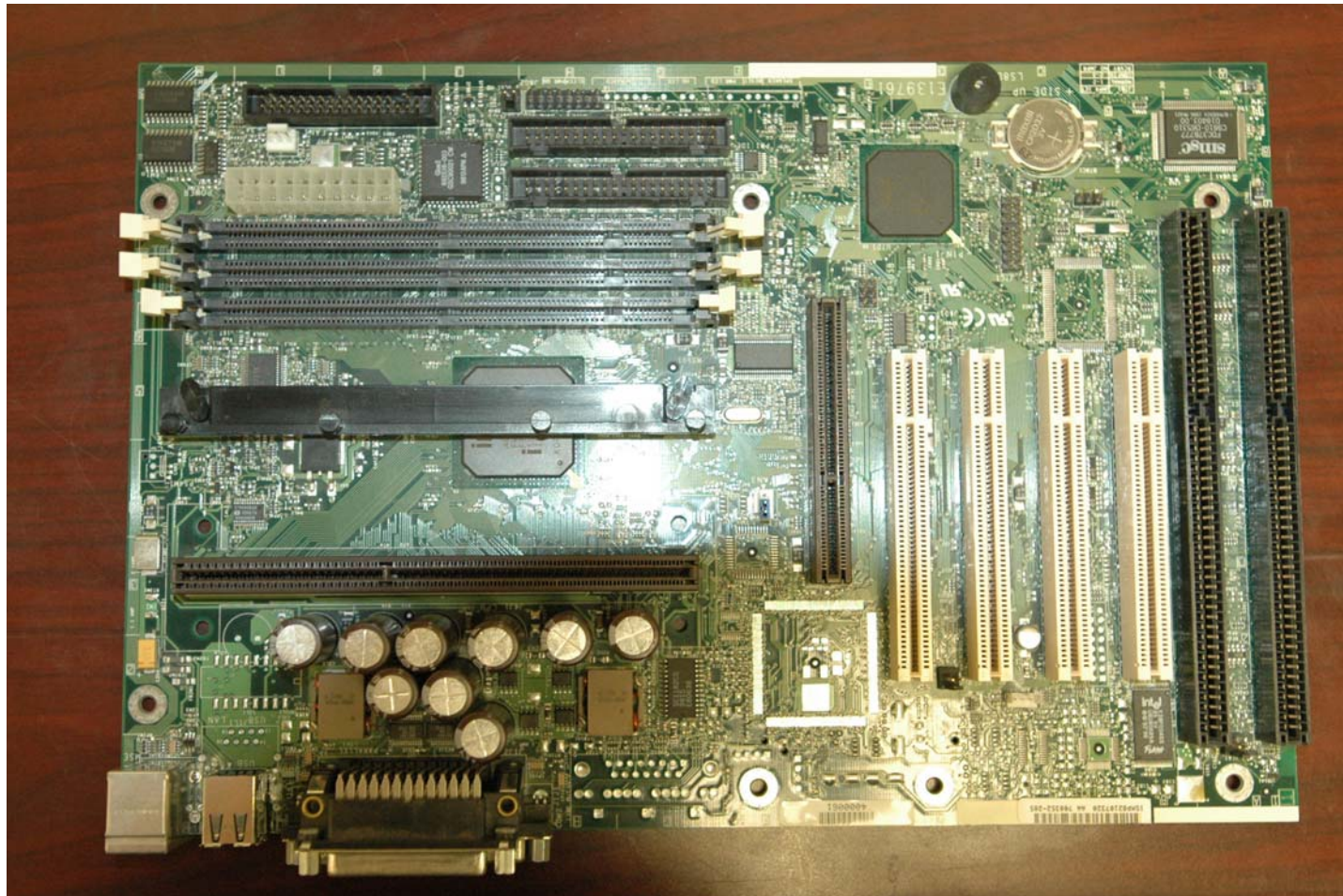


# Whiskers on USB housing of PC Mother Board

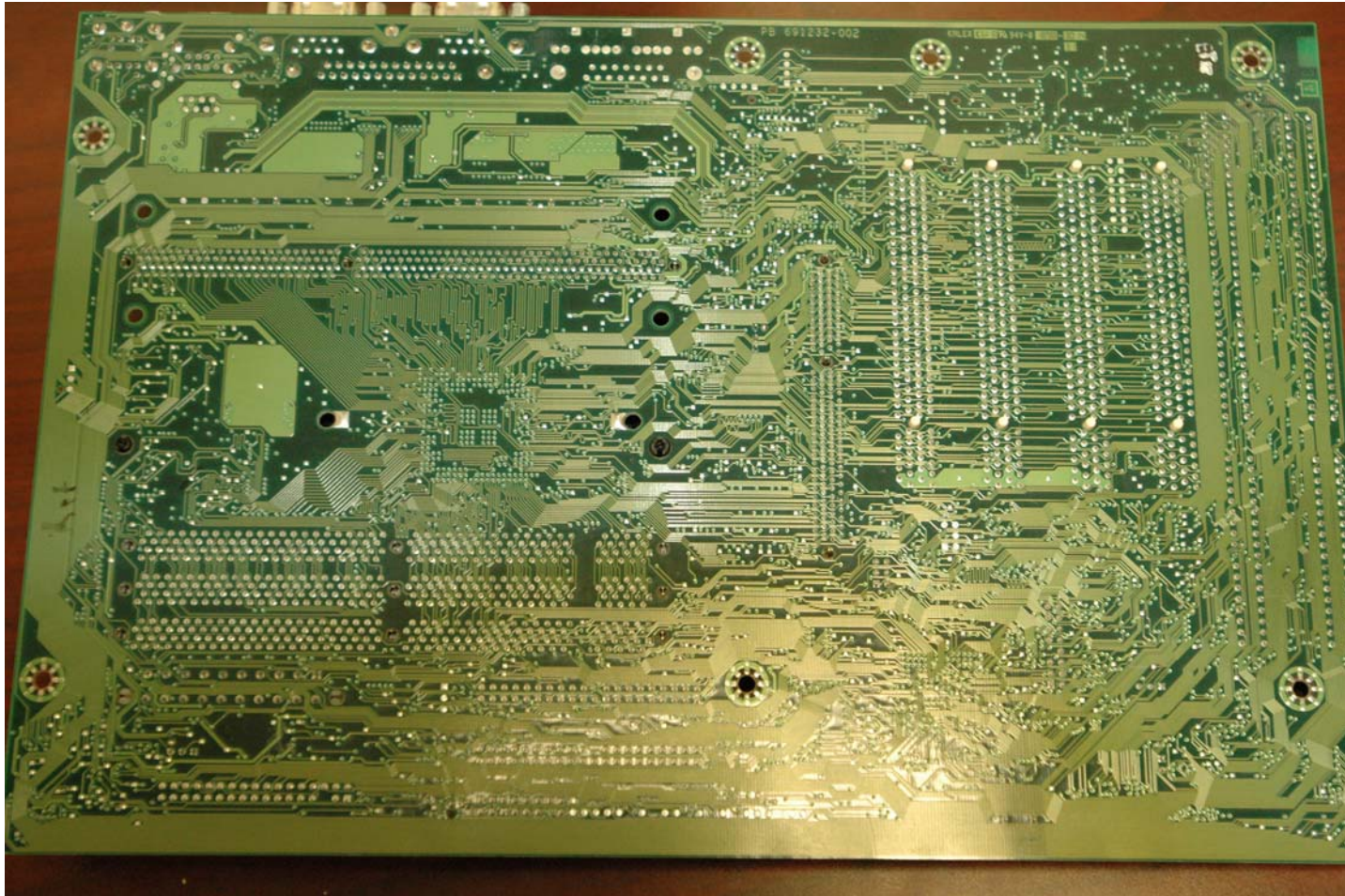
## September 5, 2008

- A PC motherboard was examined for presence of tin whiskers.
- Tin whiskers were observed on USB housing.
- Observed whiskers were long enough to bridge fine pitched perimeter leaded packaged integrated circuits on the PWAs.

# Top Surface



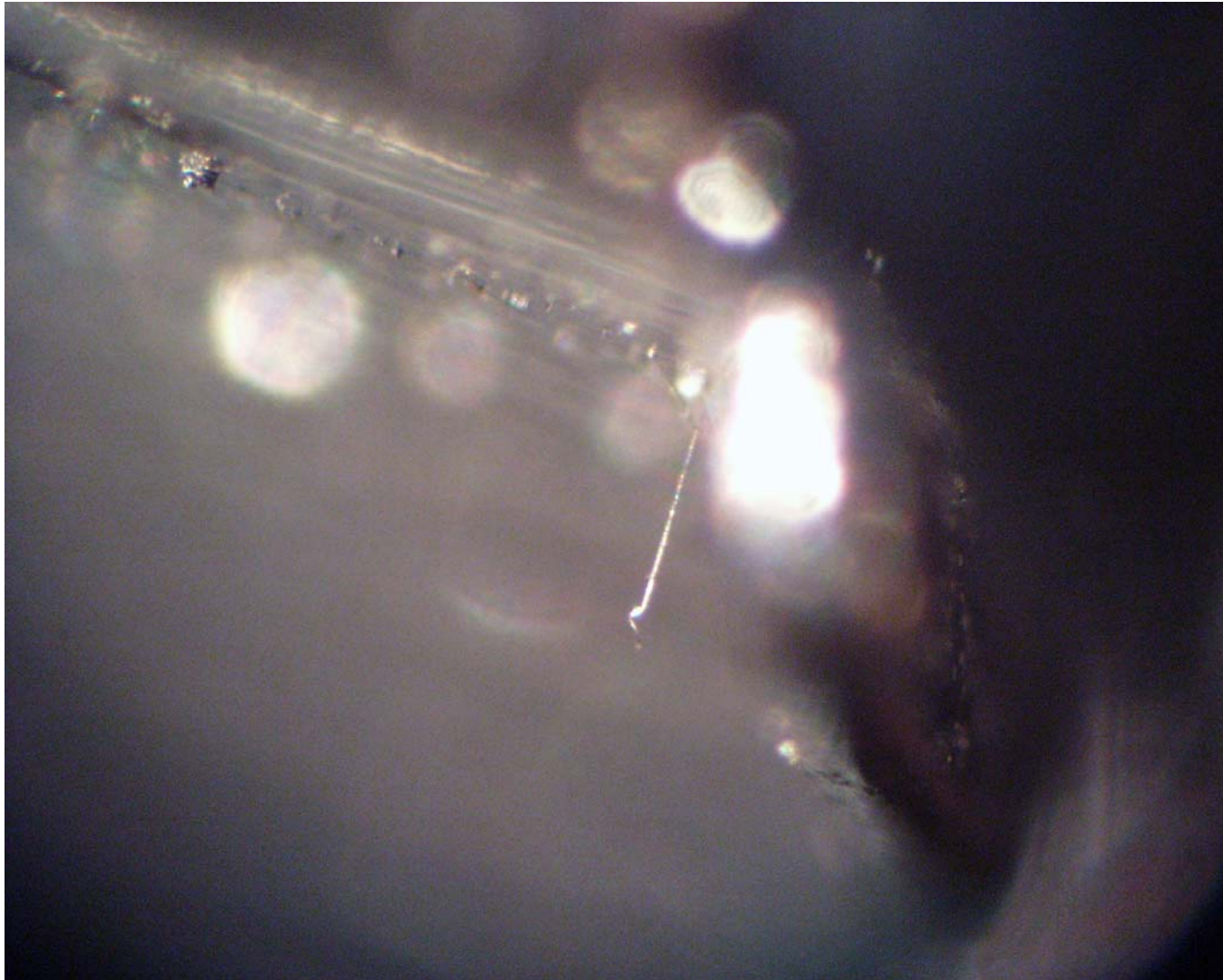
# Bottom Surface



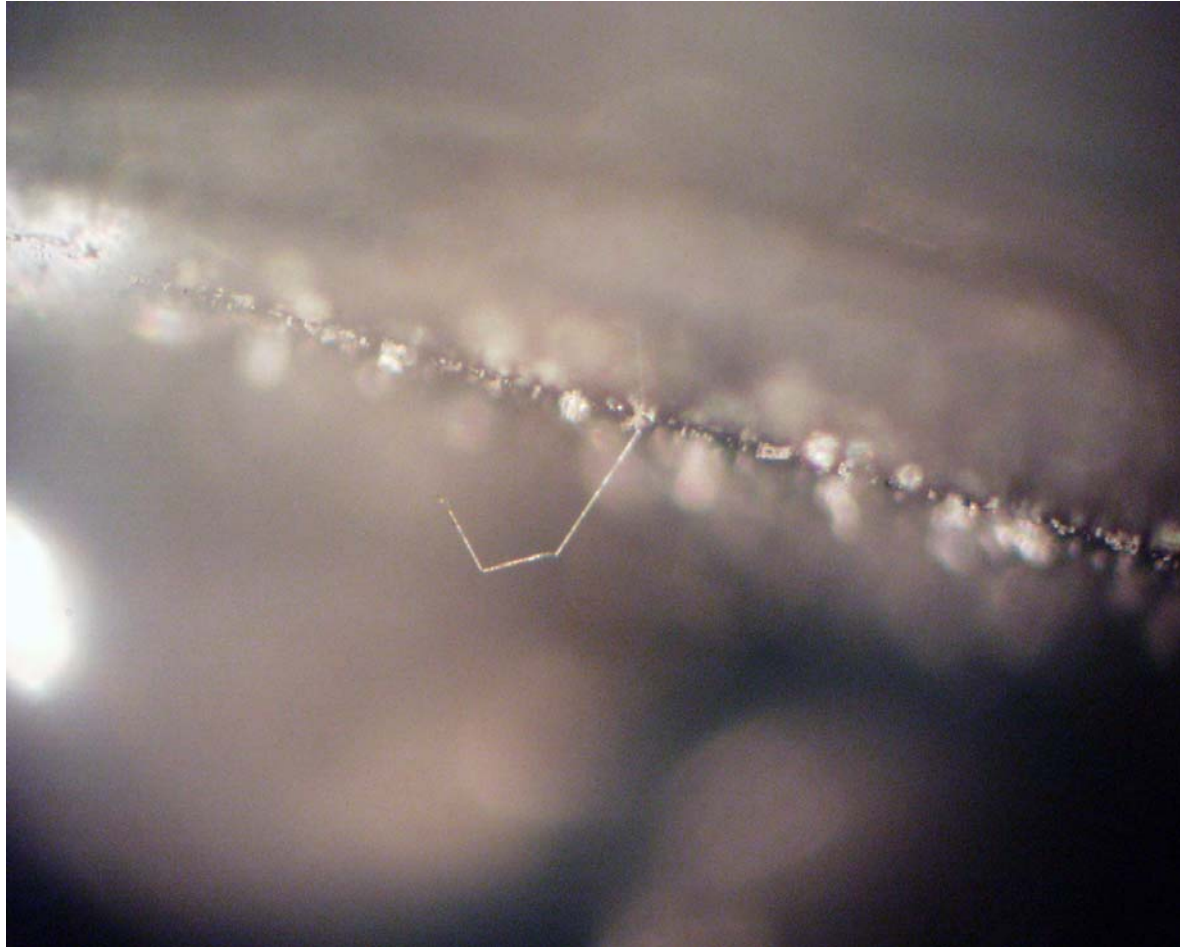
# Connector Section



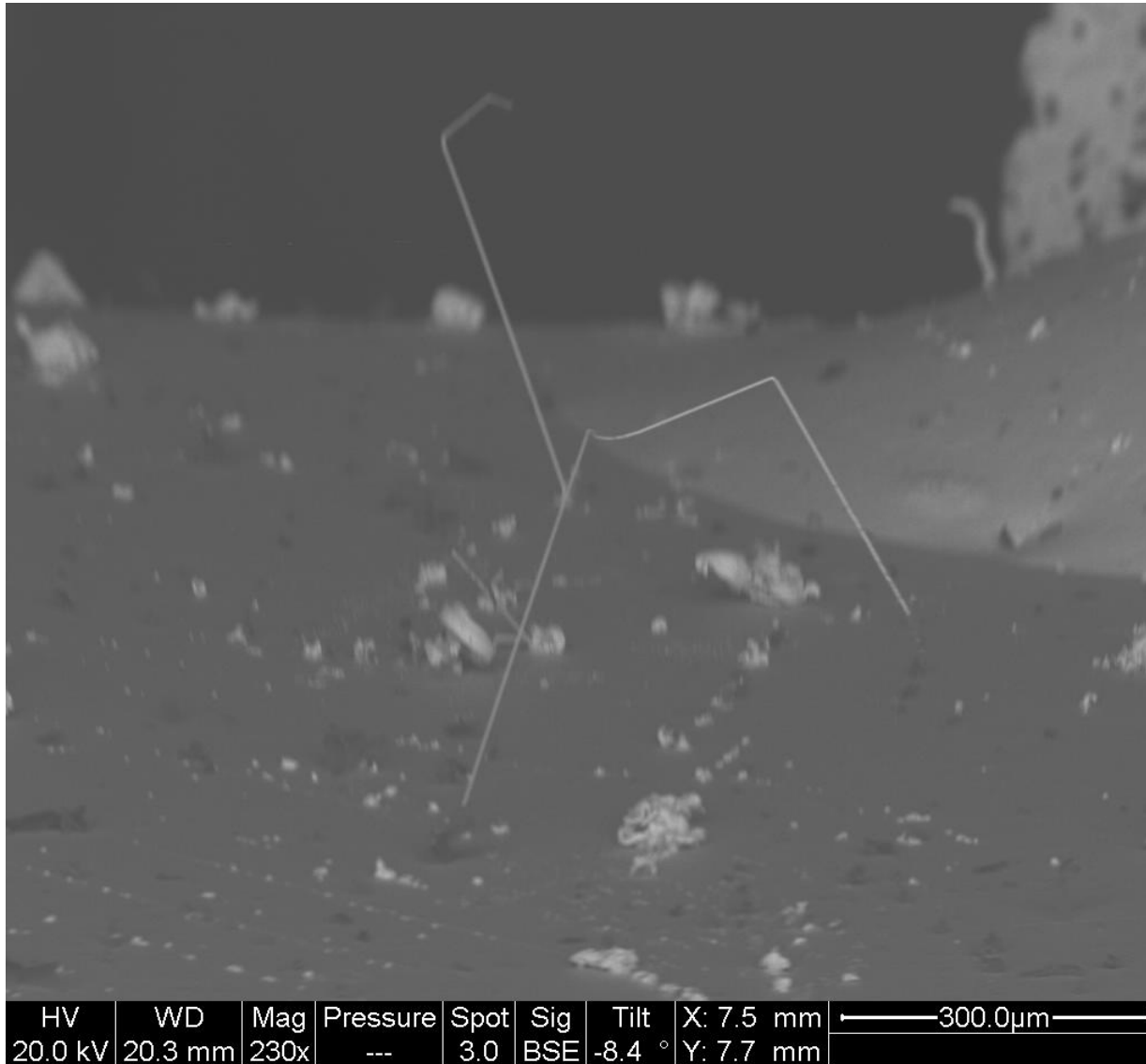
# Optical View of Long Whisker on USB Housing



# Optical View of Whisker On USB Housing



# ESEM Image of Long Whisker of USB



# Summary

- XRF analysis of USB housing found ~8 micron thick tin over copper.
- Whisker greater than 900 microns were observed on USB housing.
- Whisker could become dislodged and create a reliability issue.



## Contact:

- For information on tin whiskers and assistance with tin whisker related issues, please contact
- Dr. Michael Osterman ([osterman@calce.umd.edu](mailto:osterman@calce.umd.edu))
- Images taken by Research Associate Lyudmyla Panashchenko