# Foil C2044N1 Preliminary Examination

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June, 2006

This foil was cut in half ("a" and "b") in order for it to fit into our sample holder. Both halves were scanned at low resolution for craters.

## Low Resolution Crater Scanning

JEOL 840A Scanning Electron Microscope
Measurement Conditions: 10 kV, 5nA, 200x magnification
Secondary electron imaging of an area of 33.7 $mm^2$ ("a") and 25.1 $mm^2$ ("b")

## Crater Locations

No craters were found in foil half "a"; the estimated limits of resolution are ~1-2 $\mu$m. Five craters larger than 1 $\mu$m were found in foil have "b". The coordinates of the corners given in the table below refer to the corners of the foil, not the corners of the area scanned.

| Crater | X (mm) | Y (mm) | Crater | X (mm) | Y (mm) |
|---|---|---|---|---|---|
| upper left corner | 32.356 | 33.195 | upper right corner | 17.642 | 34.353 |
| lower left corner | 32.545 | 34.862 | lower right corner | 17.742 | 36.091 |
| 1 | 19.021 | 35.286 | 4* | 28.225 | 33.954 |
| 2 | 22.441 | 34.163 | 5 | 19.755 | 35.376 |
| 3* | 28.225 | 33.954 | | | |

*craters 3 and 4 are a double crater, thus the identical coordinates; see photos below.

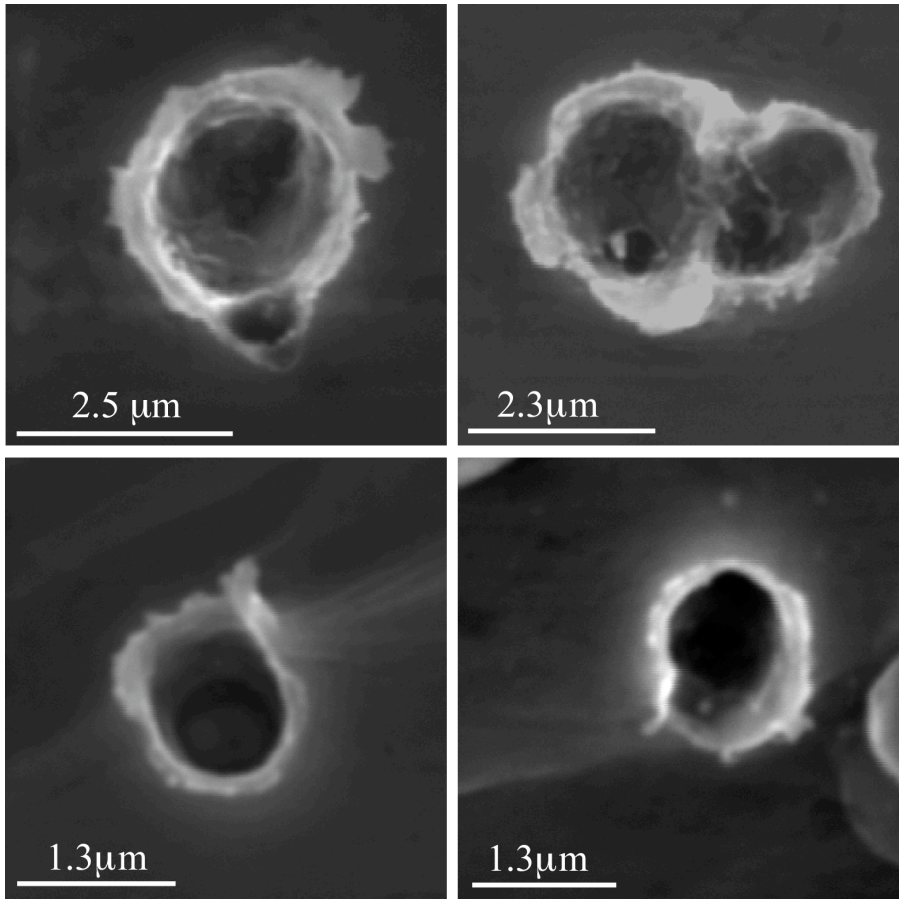
# Crater Size Distribution

| Crater | Image File | Size ($\mu$m) | Crater | Image File | Size ($\mu$m) |
|---|---|---|---|---|---|
| 1 | foil3b_173 | 2.51 | 4 | foil3b_45_R | 2.01 |
| 2 | foil3b_94 | 1.32 | 5 | foil3b_206 | 1.31 |
| 3 | foil3b_45_L | 2.32 | | | |

| Bin size ($\mu$m) | # of craters | Flux (#/mm$^2$) |
|---|---|---|
| 1.76 – 2.63 | 3 | 0.12 |
| 1.17 – 1.76 | 2 | 0.08 |

## Photos

Craters from C2044N1”b”



## Crater Compositional Information

| Crater | Size ($\mu$m) | Qualitative Composition (EDX) | Crater | Size ($\mu$m) | Qualitative Composition (EDX) |
|---|---|---|---|---|---|
| 1 | 2.51 | C, O, Ni, Mg, Si | 4 | 2.01 | C, O, Fe, Mg, Si, S |
| 2 | 1.32 | C, O, Fe, Ni, Mg, Si, S | 5 | 1.31 | C, O, Fe, Ni, Mg, Si, S |
| 3 | 2.32 | C, O, Fe, Ni, Si, S | | | |