Results of TEM Analysis
C. H. van der Bogert
Institut für Planetologie, Münster, Germany

FC3.0.2.2.3

Slice	Description
#17	▪ Amorphous material with rounded crystalline metallic grains (<~200nm) ▪ Qualitative EDX analyses of glass indicate mixtures of Si, O, Mg, Fe, Ni and S

C2054,0,35,16,9

Slice	Description
#41	▪ Amorphous material with rounded crystalline metallic grains (<100 nm) ▪ Small FeNi and FeS grains (<100 nm) ▪ Qualitative EDX analyses of glass/metallic grains indicate mixtures of Si, O, Mg, Fe, Ni and S
#42	▪ Amorphous material with rounded crystalline metallic grains (<100 nm) ▪ Qualitative EDX analyses of glass vary from pure Si and O to Si and O mixed with primarily Mg and Fe, sometimes with Cr
#44	▪ Also analyzed with TOF-SIMS ▪ Amorphous material with rounded crystalline metallic grains (<100 nm) ▪ Qualitative EDX analyses of glass vary from pure Si and O to Si and O mixed with primarily Mg and Fe ▪ Section also contains larger (1 x 0.5 µm) and smaller Ti, O-rich grains. These appear to be contaminants.

C2054,0,35,24,5

Slice	Description
#21	▪ Similar to C2054,0,35,16,9 ▪ Amorphous material with rounded crystalline metallic grains (<100 nm) ▪ Qualitative EDX analyses of glass/metallic grains indicate mixtures of Si, O, Mg, Fe, Ni and S, sometimes with Cr ▪ One Cr-rich metallic grain was observed (~100 nm in diameter)

C2004,1,44,4,5

Slice	Description
#47	▪ Also analyzed with TOF-SIMS ▪ Amorphous material with rounded crystalline metallic grains (<100 nm) ▪ Qualitative EDX analyses of glass/metallic grains indicate mixtures of Si, O, Mg, Fe, Ni and S ▪ At one end of the particle is a calcite grain (1.6 x 0.5 µm), identified by its diffraction pattern and EDX composition. Adjacent to this grain is a smaller Ti, O-rich crystalline phase. Both appear to be contaminants. ▪ Reference: van der Bogert, Golla-Schindler and Stephan (2007) *MAPS* **43**, A153.