

Catalog of DSpace Supplemental Online Material (v. 11-December-2020)

for

**Comparison of the Murchison CM2 and Allende CV3 Chondrites**

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This supplemental data is available through the AMNH Library archives and may be accessed via the URL <http://dx.doi.org/10.5531/sd.eps.7>

This archive includes:

- 1) Fendrich\_Ebel-Catalog-11dec2020.pdf, this document.
- 2) ClastTypeInfo.xlsx, a list of grayscale values used in item 3, below.
- 3) AppendixA\_Figures.pdf, four figures A1 through A4.

For each of four polished surfaces analyzed, in folders "Allende" and "Murchison":

- 1) X-ray element maps mosaicked from 32-bit raw TIFF frames, in one section at 1 micron/pixel resolution (Murchison/r1-1micron), with masks (\_xx, 8-bit). Most software (c. 2020 C.E.) cannot read 32-bit images. They can be read with the free NIH java-based tool ImageJ (FIJI).
- 2) Red-Green-Blue (RGB) composite 24-bit maps of Mg-Ca-Al, Si-Ca-Fe, and Fe-Ni-S, annotated with scale bars. Native resolution is 100 dpi. Murchison MgCaAl indicates the location of a 1 micrometer (micron) map subregion "r1". Maps of subregion r1 are included in a subfolder.
- 3) Outlines of clasts in section maps, manually produced in Adobe Illustrated cs5 with grayscale (AI gray level 3) mask, as vector layer output as SVG file (\_objects.svg).
- 4) Outlines of clasts in section maps, as numbered by FIJI software, as 8-bit B/W TIFFs (\_Ijoutlines.tif).
- 5) Grayscale map of clasts by visual inspection of clast type, as 8-bit B/W TIFF, 100 dpi, non-interlaced (\_gsClasts.tif).
- 6) Clast pixel location map RGB 24-bit RGB (\_rgbClasts.tif).
- 7) Spreadsheets:
  - a) Listing of all clasts, centers of mass, areas, RGB colors in (5), bounding box, as tab-delimited ASCII files (-rgbTab.txt)
  - b) Output of clast analysis using all of the above, including sizes of clasts (pixels) and sums of element intensities in clasts and matrix in ASCII format (-clastData.csv) and in Microsoft Excel (c. 2020) format (-clastData.xls).
  - c) Conversion information for counts/pixel to wt%

- 8) Graphs (additional graphs may readily be generated from the spreadsheets)
  - a) elements: Mg vs Al,
  - b) apparent size vs. element abundance: AOAs, CAIs, "true" chondrules
- 9) False-color pixel mineral identity map and legend (\_minerals.tif). These maps contain metadata.

Note: Adobe Illustrator (cs5) layered files are not included. AI is a proprietary format and cs5 is no longer supported by Adobe. These files are available from the second author by request. The .svg (scalable vector graphics) version 1.1 files contain layers made in cs5.