TRAIL Microcard Update

Mark Phillips

UNT Libraries

May 25, 2022

UNT Team



Mark Phillips



Hannah Tarver (Metadata Metadata Metadata)

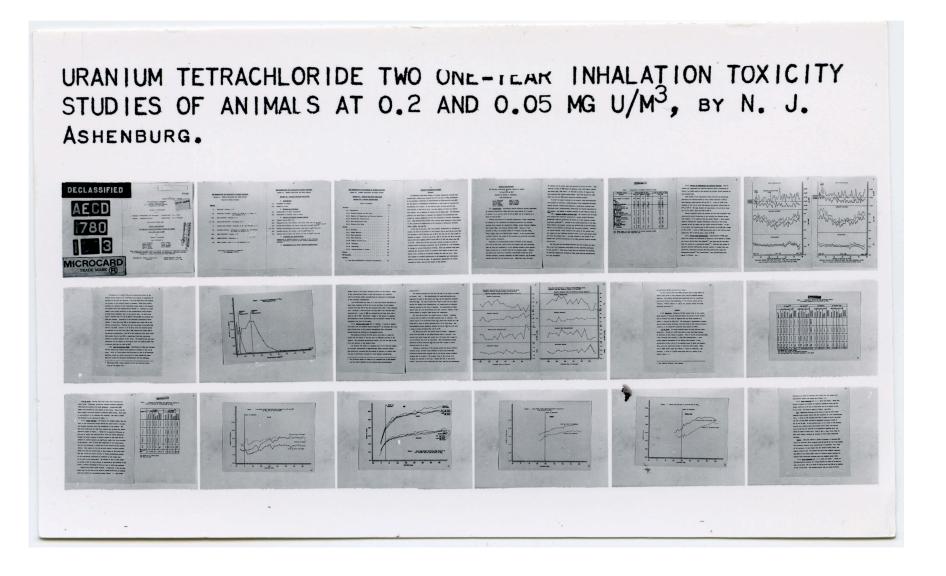


Morgan Milburn
TRAIL Graduate Student
(Makes everything come together)

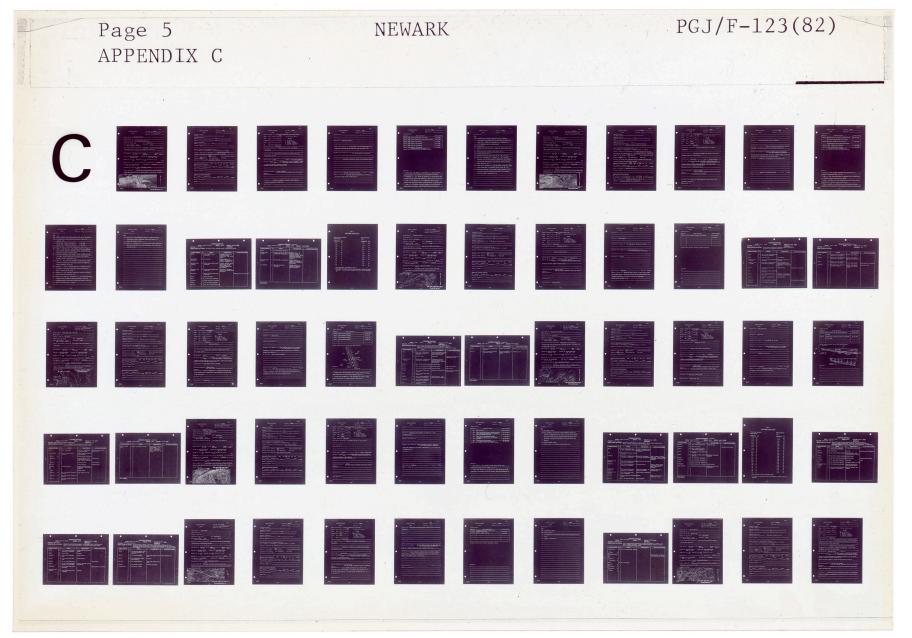


Candice Thornton
TRAIL Imaging Student
(Scan, Scan, Scan)

Microcard



Not to be confused with microfiche



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Microcard Characteristics

- Opaque microformat
- Image printed photographically on 3x5 inch paper
- Started in the 1940's and reached height in the 1950's
- By the 1960's it had been replaced by microfiche which was a superior format.
- While 3x5 is the US standard, some vendors (READEX) used 6x9 cards.
- Card sizes also differed in Europe

MICROCARDS: A BRIEF SURVEY OF THEIR DEVELOPMENT
AND A

UNION LIST OF RESEARCH MATERIALS
IN OPAQUE MICROTEXT

A thesis submitted to the Graduate Council of Kent State University in partial fulfillment of the requirements for the degree of Master of Arts

> by EVA MAUDE TILTON 1957

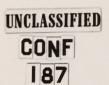
TRAIL Interest in Microcard

- Early publications from Atomic Energy Commission distributed on microcard
- Collection not well cataloged, usually because of the format
- Microcard is a small small small subset of library microformat collections with the bulk going to microfiche and microfilm
- Readers and digitization systems are challenging to maintain for patrons
- Microcard collections of technical reports were not widely distributed.

Challenges of Microcard

- Cards are opaque (micro opaque cards), you can't shine light through it.
- Vendors have expensive, highly customized machines for transmissive film-based formats (microfiche).
- Most vendors haven't ever seen a Microcard
- Unknown image quality present on Microcards, "how much information can we actually resolve"
- Vendors generally have to customize or build a scanner for scanning these.
- How much do they cost? Vendor quotes by image vs per card.

A FACILITY FOR THE PRODUCTION OF Pu238. R. N. CONF-187-1 TETZLAFF (Du Pont de Nemours (E. 1.) & Co. SAVANNAH RIVER LAB., AIKEN, S. C.). [JULY 1963]. CONTRACT AT(07-2)-1. 16P. UC-4





IOFI

DTIE MICROCARD ISSUANCE

END

CONF-186-3

ELASTIC SCATTERING OF ATOMS AND MOLECULES IN THE THERMAL ENERGY RANGE. FINAL REPORT.

RICHARD B. BERNSTEIN (MICHIGAN. UNIV., ANN ARBOR AND WISCONSIN. UNIV., MADISON). [1963]. CONTRACT [AT(11-1)-321]. 33P.

UNCLASSIFIED

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DTIE MICROCARD

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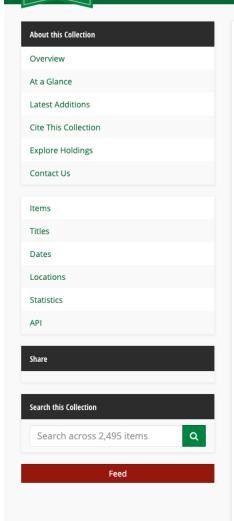


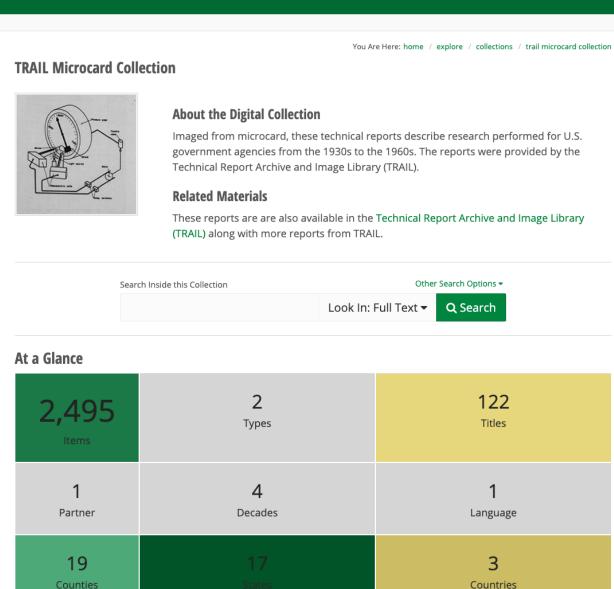
3 months, 2 weeks ago

Last Updated

Q 🕋







6 months, 2 weeks ago

Collection Created

19,817

Latest Additions





















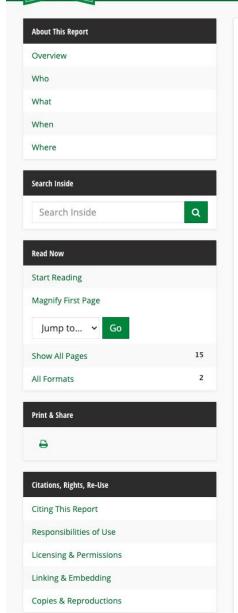




VIEW ALL

Q A

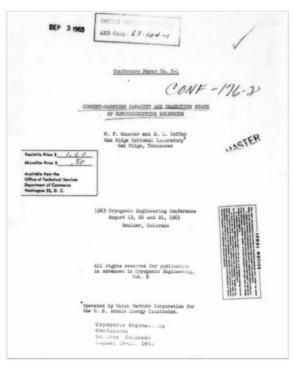
UNT Digital Library



You Are Here: home / unt libraries government documents department / this report

Current-Carrying Capacity and Transition State of Superconducting Solenoids

% One of 73 reports in the series: AEC publication CONF available on this site.



WHAT SHOW

Description

Montgomery and Chandrasekhar and Hulm suggested models for predicting Im and Hm of high-field superconducting solenoids. Montgomery's model for predicting the degradation effect of superconducting solenoids leads to a unique coil quenching characteristics if geometrically similar solenoids are considered. Experiments do not verify these predicted results. Chandrasekhar and Hulm's model leads to one unique coil quenching characteristic for all solenoids with identical wire type and turn distance; coils with identical load factor should display identical values im and Hm. An analysis of the surface currents in an ideal superconducting infinitely long solenoid demonstrated possible forms of shielding currents. Experiments with ... continued below

Physical Description

15 pages; illustrations.

Creation Information

Gauster, W. F. & Coffey, D. L. September 3, 1963.

Context

This **report** is part of the collection entitled: Technical Report Archive and Image Library and one other and was provided by UNT Libraries Government Documents Department to UNT Digital Library, a digital repository hosted by the UNT Libraries. More information about this report can be viewed below.

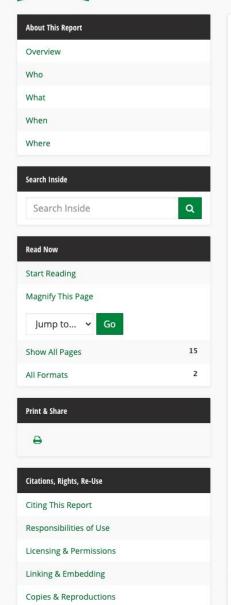
> a Search

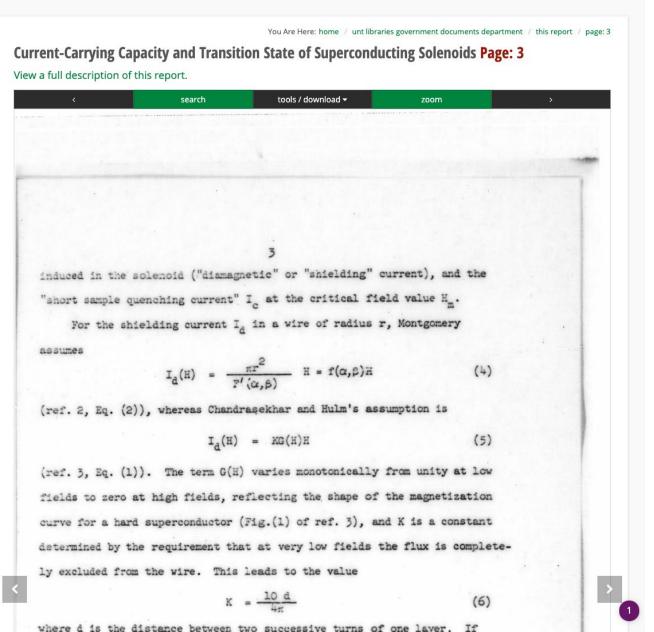


Q A



UNT Digital Library

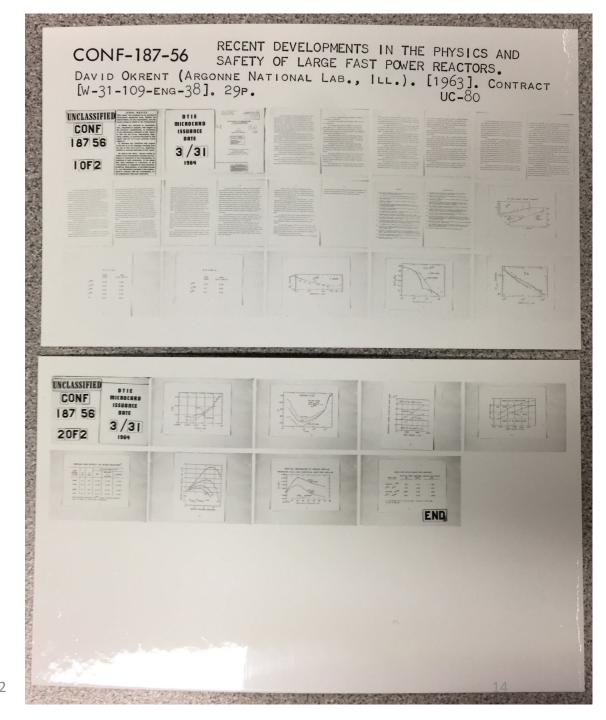




Here is what we are doing

- In May 2019, TRAIL agreed to allocate \$150,000 to the Microcard Scanning Project
- Arizona has sent > 50,000 Microcards (~36,000 reports) to UNT.
- UNT prepared an RFP because the cost of scanning would be over \$25,000 (based on pilot projects)
- Two steps
 - Digitization of cards

 Vendor
 - Local processing of digitized output UNT
 - Pagination
 - Cropping
 - OCR
 - Loading into UNT Digital Library



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Micorcard Pallet At UNT



Timeline:

- May 2019 TRAIL agreed to prioritize Microcard Project
- May 2020 UNT Received Pallet from Arizona
- May 2020 UNT Invoiced TRAIL/CRL for \$150,000 for project
- Aug 2021 UNT RFP process open
- Nov 2021 Contract with Image Retrieval signed
- Aug 2021 Vendor completed scanning step project
- May 2022 UNT has processed 48/140 boxes

Statistics and Costs

- 35 boxes on the pallet
- 140 batches (small boxes)
- 36,217 Reports
- 51,743 Cards
- \$1.75 per card
- \$0.10 per card software license
- \$95,725 for vendor scanning and software license



Split Process

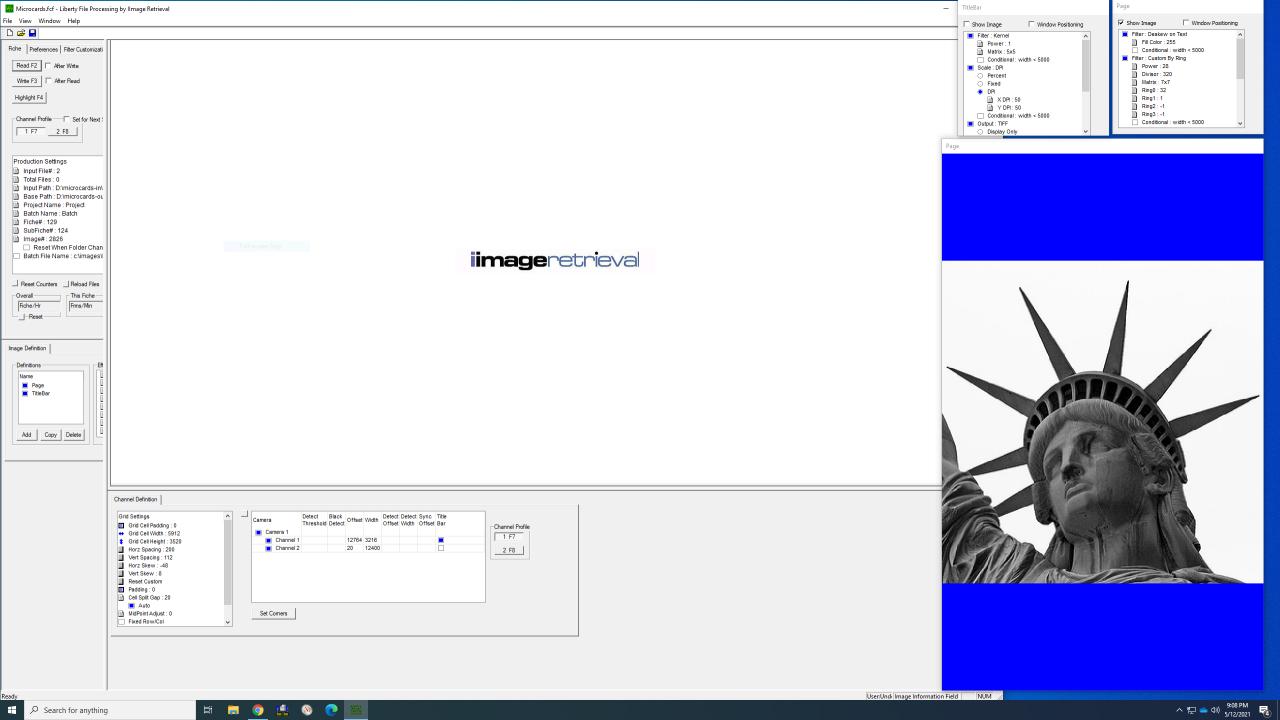
Image Retrieval

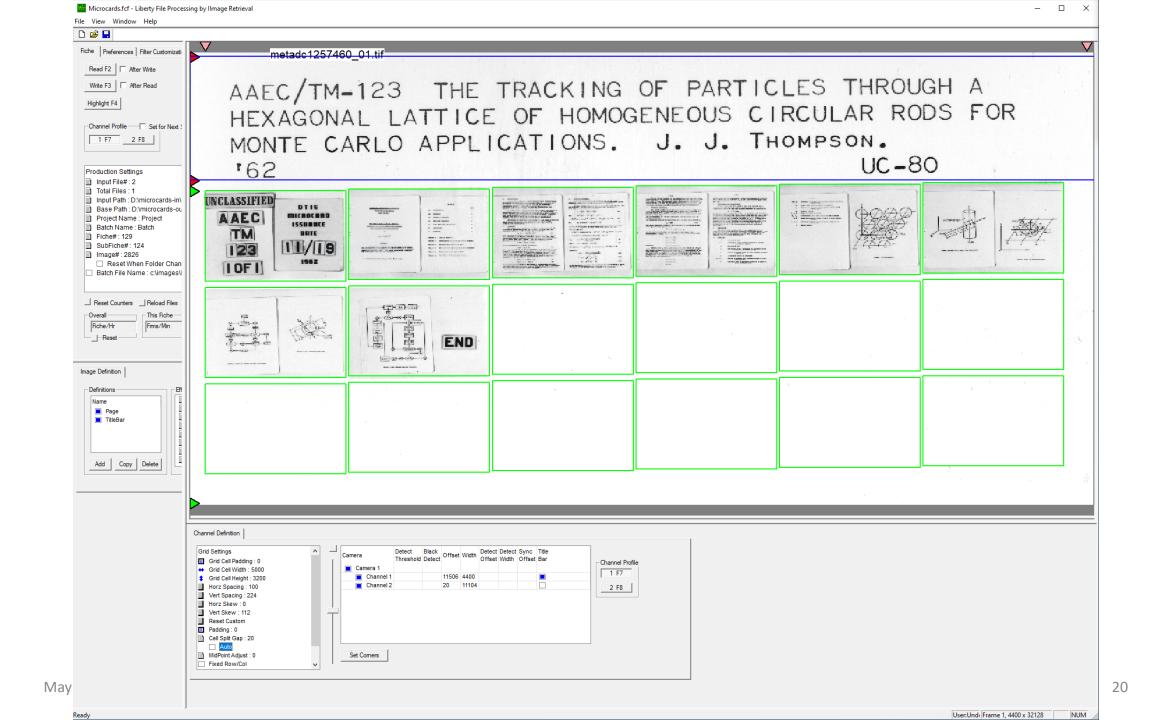
- Scan cards with in-house developed equipment
- Single scan 32192x16160 pixels (520 megapixel equivalent)
- 500 MB per card

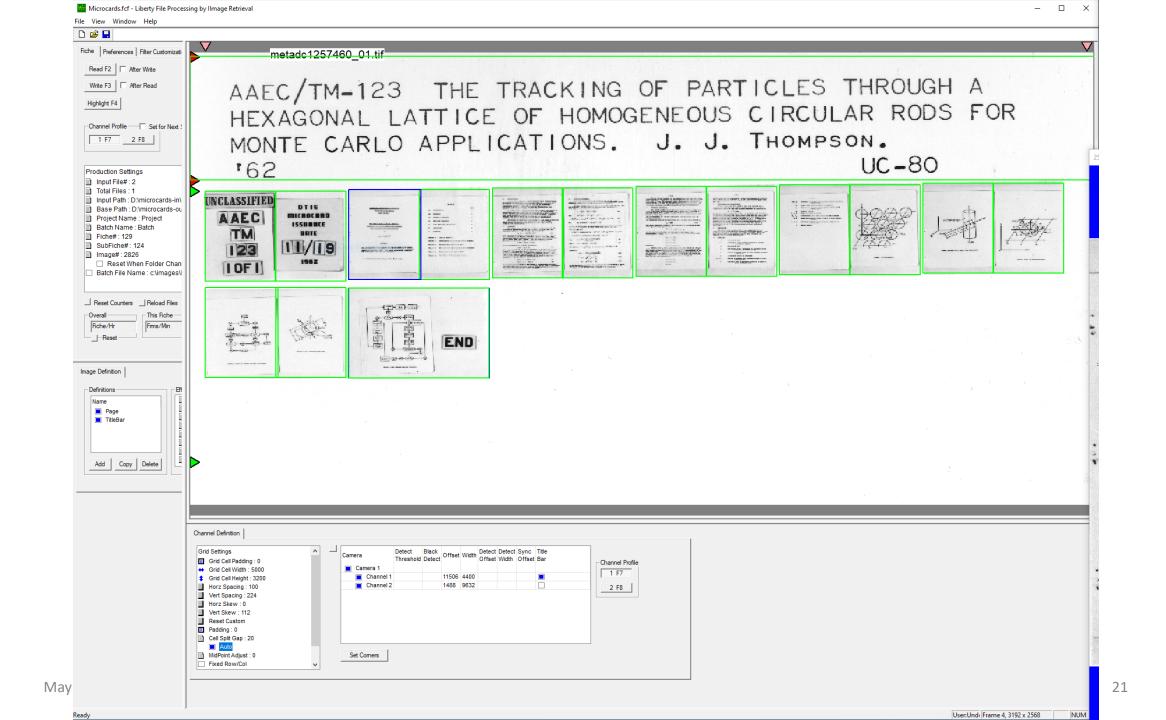
UNT

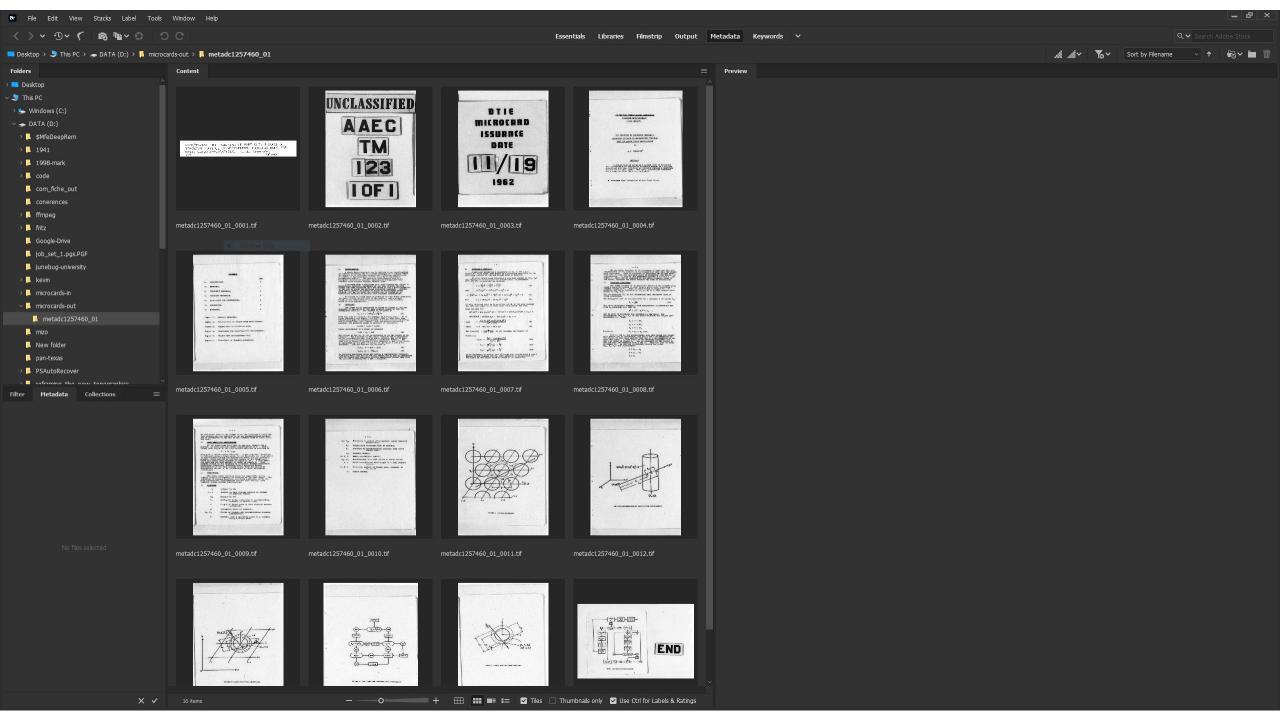
- Divide card into pages using Image Retrieval's proprietary software called Liberty.
- Identifying Targets
- Pagination
- Quality Control
- All the other stuff (described later)

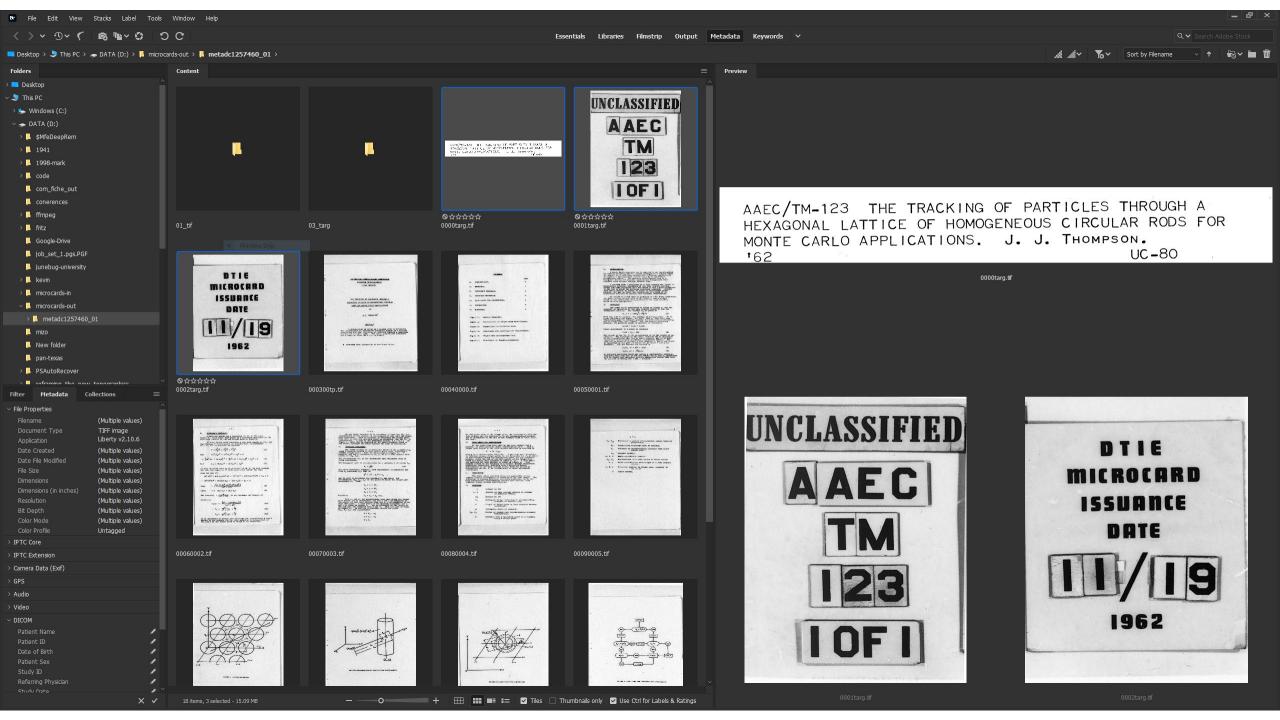


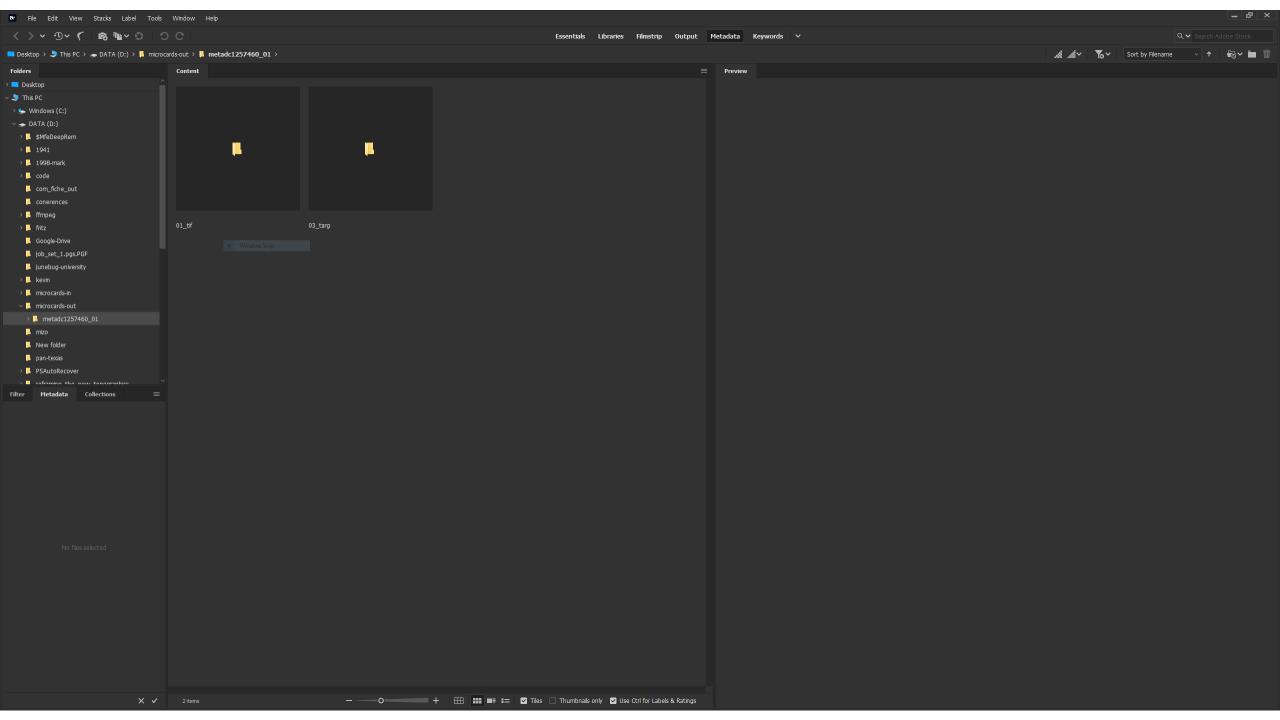










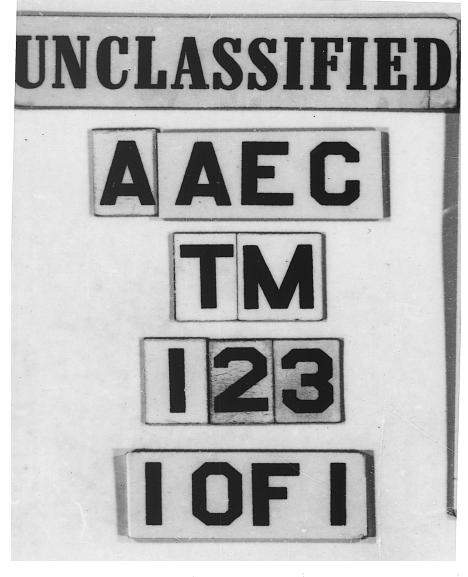


Structure of a complete microcard

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Quality Control Checks

- Verify that the metaid and report number match in spreadsheet
- Based on targets, are all cards present with no extras?
- Are all the pages cropped correctly?
- Update spreadsheet as passing or note any issues.



THE TRACKING OF PARTICLES THROUGH A MONTE CARLO APPLICATIONS. J. J. THOMPSON. 162

UC-80

MCARDBox065 ☆ 🗈 📀 File Edit View Insert Format Data Tools Add-ons Help Last edit was 13 days ago 応 ~ 春 〒 100% ▼ \$ % .0 .00 123▼ Default (Ca... ▼ 11 ▼ B I S A ဲ 田 冠 ▼ 三▼ 土 ▼ 片 ▼ 🌣 🗗 🖽 ▼ ▼ ∑ ▽ 31 A1 fx Box Number D Α В C E F G Box Number **UNTL Number** Number of Cards # of Cards Match Report # Matches QC Notes Series Report Number MCARDBox065 metadc1250176 1 Y CTSL 10 MCARDBox065 metadc1250177 1 Y CTSL 11 MCARDBox065 metadc1250178 1 Y CTSL 12 MCARDBox065 metadc1250179 2 Y CTSL 13 MCARDBox065 metadc1250180 1 Y 14 CTSL 1 Y 15 MCARDBox065 metadc1250181 CTSL + MCARDBox065 metadc1250182 1 Y CTSL 16 MCARDBox065 metadc1250183 2 Y CTSL 17 MCARDBox065 metadc1250184 1 Y CTSL 18 11 1 Y 21 MCARDBox065 metadc1250185 CTSL 1 Y 22 MCARDBox065 metadc1250186 CTSL 13 MCARDBox065 metadc1250187 2 Y CTSL 23 14 1 Y 24 MCARDBox065 metadc1250188 CTSL MCARDBox065 metadc1250189 1 Y CTSL 25 MCARDBox065 metadc1250190 1 Y CTSL 27 17 MCARDBox065 metadc1250191 2 Y CTSL 28 MCARDBox065 metadc1250192 1 Y CTSL 29 2 Y 30 MCARDBox065 metadc1250193 CTSL MCARDBox065 metadc1250194 1 Y CTSL 31 MCARDBox065 metadc1250195 1 Y CTSL 32 22 MCARDBox065 metadc1250196 2 Y CTSL 33 23 MCARDBox065 metadc1250197 1 Y CTSL 34 24 MCARDBox065 metadc1250198 1 Y CTSL 35 MCARDBox065 metadc1250199 1 Y CTSL 36 26 MCARDBox065 metadc1250200 2 Y CTSL 38 27 MCARDBox065 metadc1250201 2 Y CTSL 40 34

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MCARDBox065 metadc1250212

MCARDBox065 metadc1250213

2 Y

2 Y

2 Y

3 Y

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Things that can go wrong.

Card present but not scanned

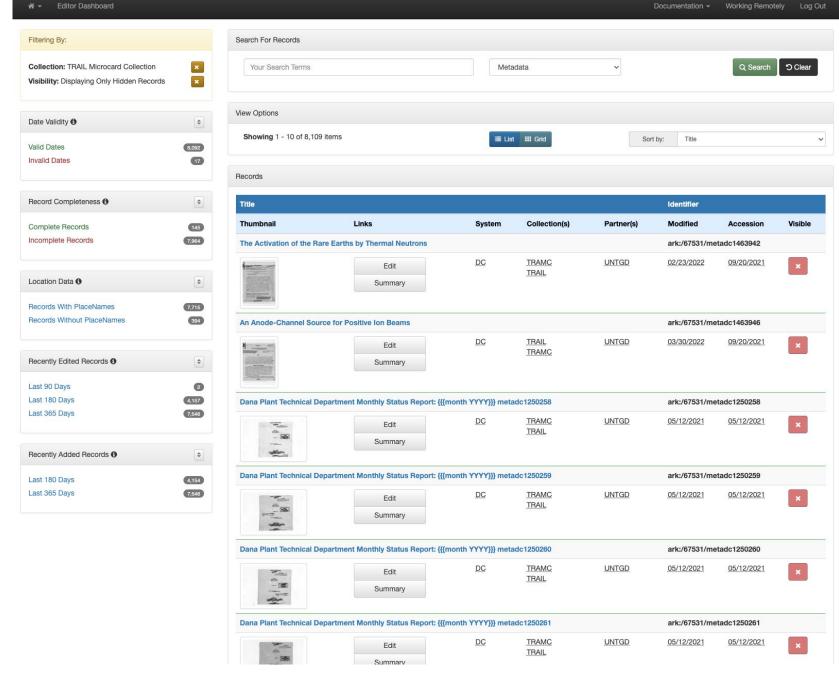
Card inserted into wrong envelope (at Arizona or vendor)

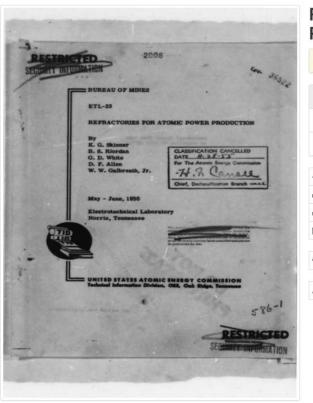
Scan of one card used for another card (duplicate scans)

Card missing (we haven't seen this yet)

Steps after QC

- Optical Character Recognition
 - Abbyy Finereader Server 14
- Metadata sorting and metadata templates
- Packaging for ingest
- Ingest into access and preservation system
- Microcards available for metadata creation in UNT Digital Libraries' Edit system.





Refractories for Atomic Power Production: {{{date/s}}} metadc1250401

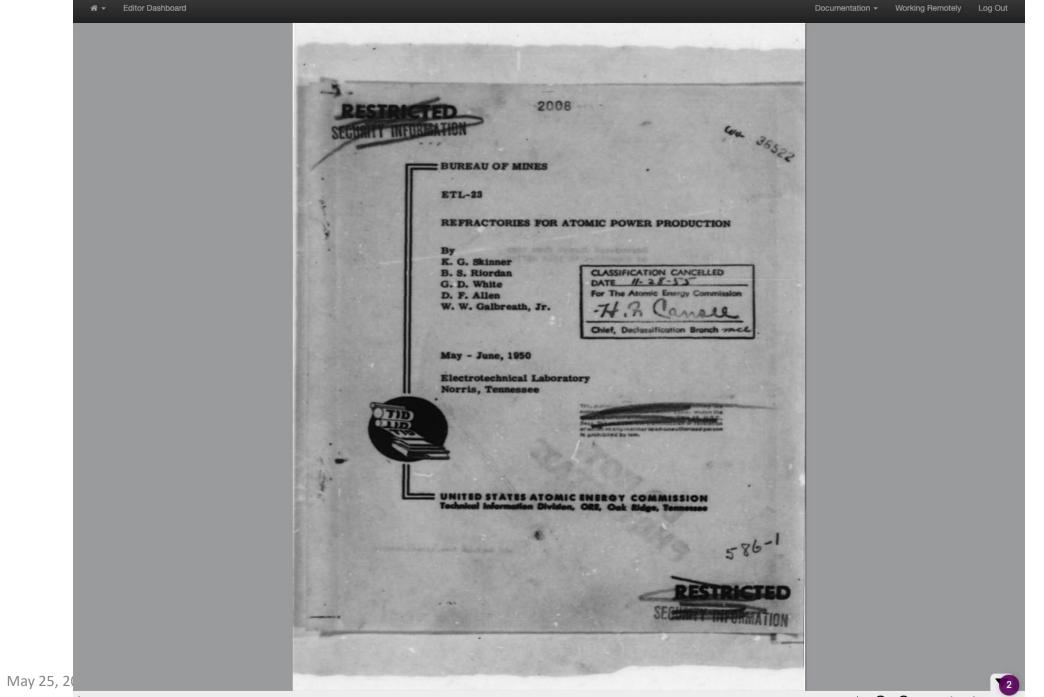
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Number of Editor	0	
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Edit Timeline Added 2021-05-12 Today 2021-05-12

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		Type:	org		
	spn	Name:	U.S. Atomic Energy Commission		
		Type:	org		
Publisher		Name:	U.S. Atomic Energy Commission. Division of Technical Information.		
		Location:	Oak Ridge, Tennessee		
Date			-		
Language		English			
Description	content				
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Coverage	placeName	United States			
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Collection		TRAIL Microcard C	Collection		
		Technical Report Archive and Image Library			



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Status of Project

- 140 of 140 boxes scanned by vendor
- 49 batches of 140 have been processed by UNT (35%)

Boxes	Reports	Cards	Total Tiff	Non-Targets	Targets
49	10,710	17,911	417,457	366,765	50,736

Final Project Costs

- 2 student workers, total of ~40 hours per week
- 2 student workers, total of ~60 hours per week during Summer 2022
- Fall 2022 moving to 3 student workers for ~60 hours per week

- UNT will be working through budgets to see how much of the original \$150,000 is remaining after taking out vendor costs and student hours on project so far.
- Shifted goal is Aug 2023 for completing processing.

Discussion