# New ARM Intensive Operation Period (IOP) Browser

ARM

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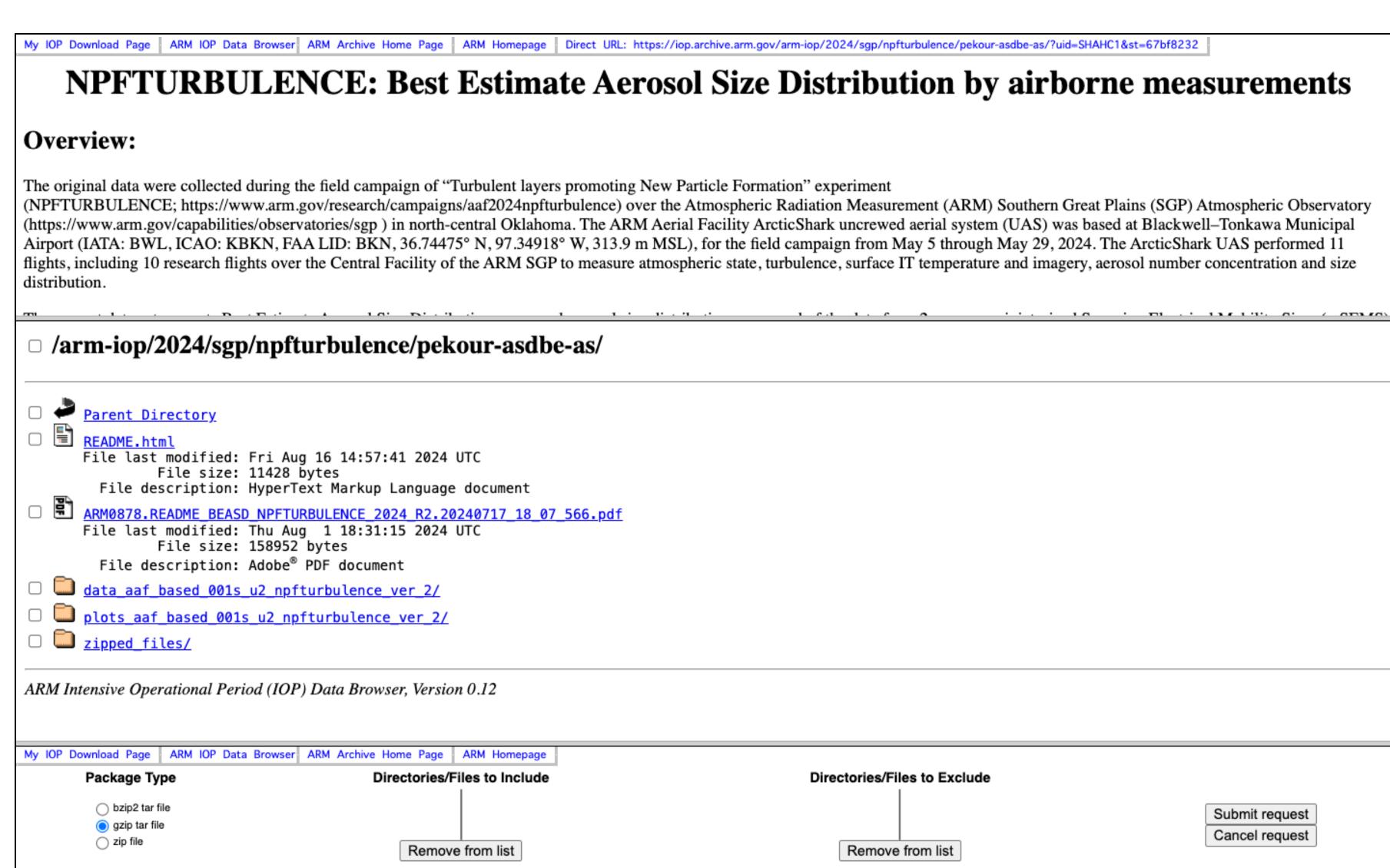


Fig 1: Existing Home Page Layout

### **Existing System Overview**

- Built on a legacy C codebase
- Outdated design
- Difficult to maintain due to inconsistencies with the existing application stack
- Lacks integration with modern technologies
- Requires manual deployments, with no automation in place
- No dedicated development environments

### Why Upgrade?

#### User Advantages

- Unified look and feel, ensuring consistency with other ARM Data Center (ADC) applications
- Modern, intuitive, and user-friendly interface
- Enhanced user experience through usability testing in collaboration with the University of Tennessee Knoxville User eXperience Lab

#### ARM Advantages

- Standardized tech stack aligned with modern ADC applications
- Kubernetes and CI/CD pipelines for automated deployments
- Robust error handling for improved reliability
- Strengthened security measures
- Improved metrics collection for order tracking and fulfillment
- Dedicated development environments for testing
- Comprehensive logging for better debugging





iop.arm.gov

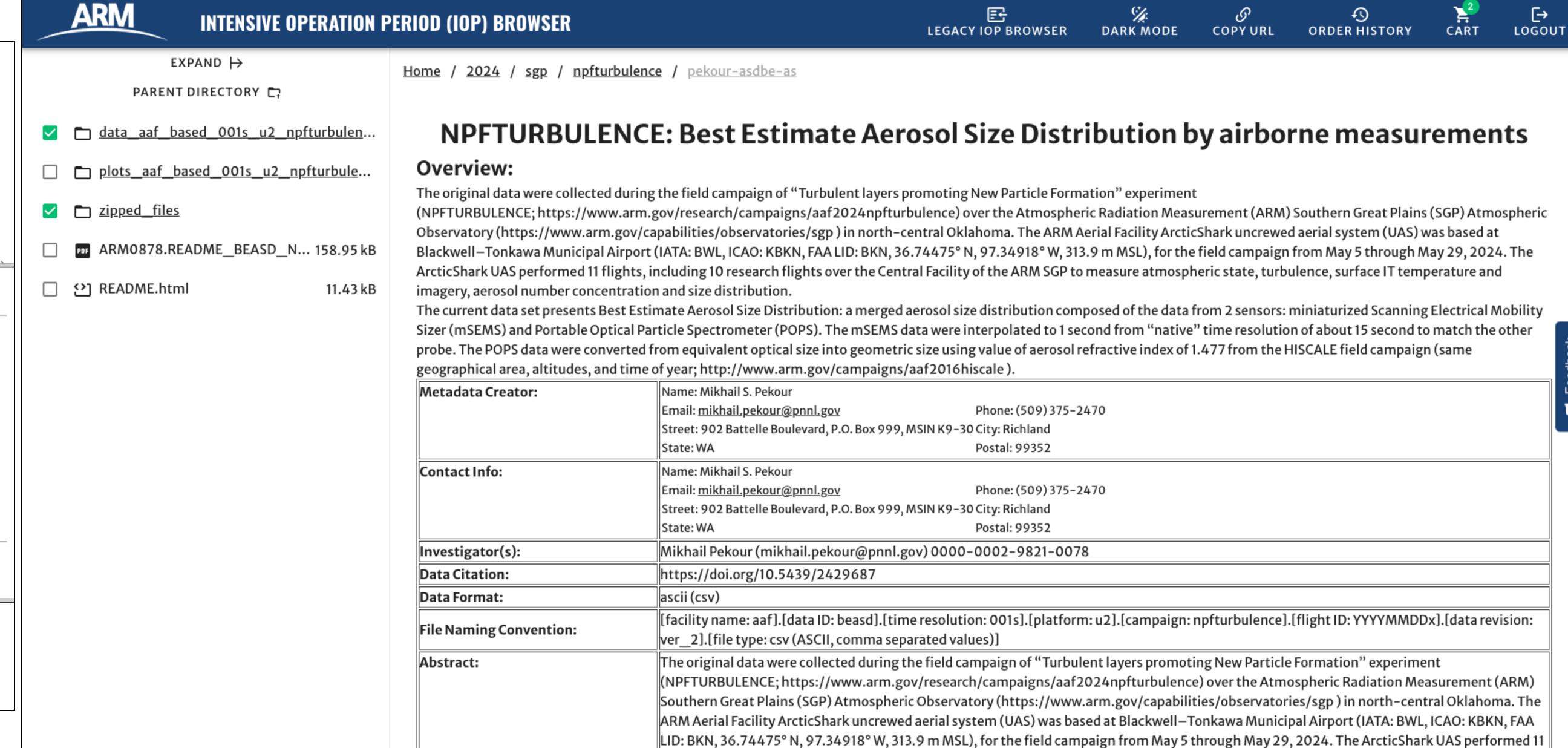


Fig 2: Redesigned Home Page – Modern, Intuitive, and Seamlessly Integrated!

/2018/oli/avpop/mei-pops/AVPOP/oli.tbs.20180517.213313.txt

6.41 MB / 1 TB

REMOVE

REMOVE

REMOVE

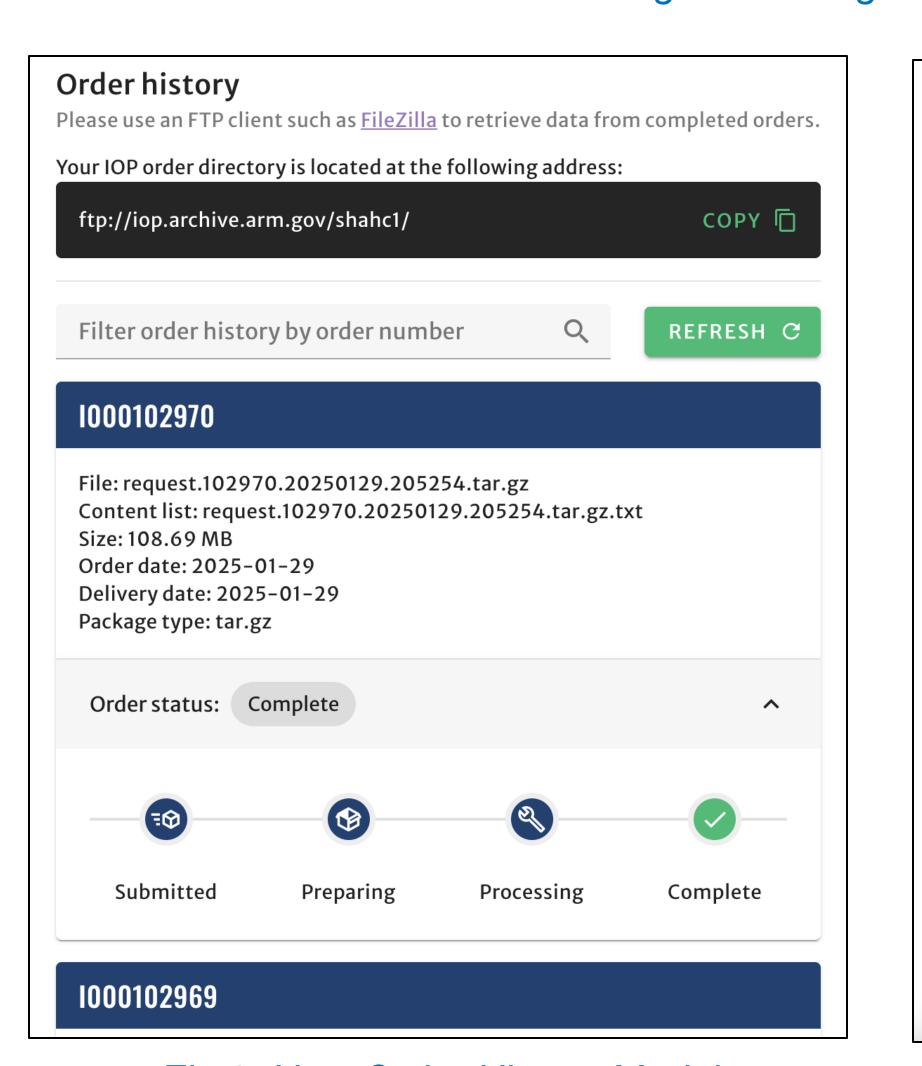


Fig 3: New Order History Modal

#### Order History

- Track real-time order status
- Effortlessly search past orders

#### Cart

Cart

Order size

Directories/files to include

Directories/files to exclude

Package type

O zip file

bzip2 tar file

gzip tar file

**Delivery methods** 

CLEAR CART

FTP (default, always enabled)

☐ Globus (coming soon)

☐ THREDDS (coming soon)

☐ Dropbox (coming soon)

/2018/oli/avpop/mei-pops/AVPOP

/2018/oli/avpop/mei-pops/README.html

/2018/oli/avpop/mei-pops/Size\_bin.txt

Effortlessly Include/Exclude directories/files

Stage data to Workbench JupyterHub (coming soon)

SUBMIT ORDER

Seamlessly choose packaging and delivery options

Fig 4: New Order Cart Modal

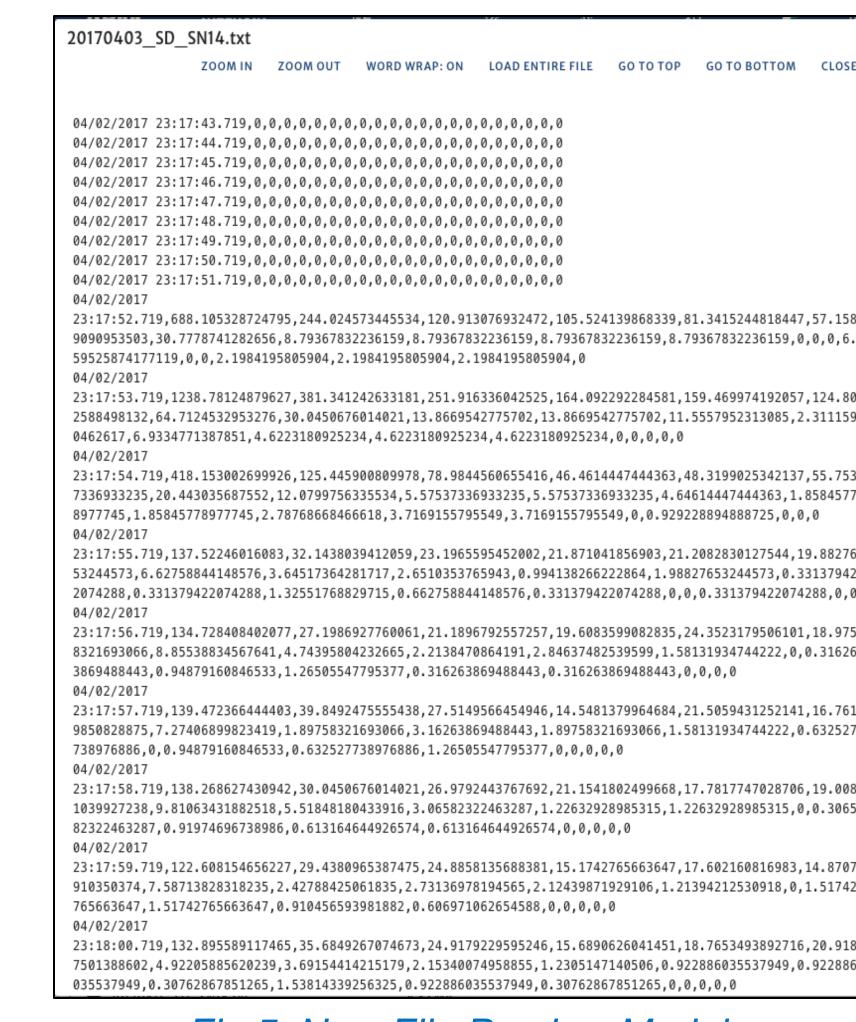


Fig 5: New File Preview Modal

#### File Preview

- Instantly preview selected files with a single click
- Currently limited to .txt, .rtf, .ict, and .csv extensions

## Acknowledgments

The authors thank the ADC Database, Metadata, and DevOps teams, Karen Gibson, and the ARM user community for their invaluable contributions. Their expertise in software and database development, automation of pipelines using Kubernetes and CI/CD, and rigorous testing and feedback have been instrumental in enhancing the new IOP Browser.

#### Upcoming Features

- Advanced File Search Implementing search functionality to efficiently locate file across different directories
- Expanded Data Delivery Options Beyond FTP, users will be able to receive orders via Globus, THREDDS, and Dropbox, providing greater flexibility
- Seamless Integration with ARM Workbench —
   Enable direct data staging for streamlined analysis and processing within the ARM ecosystem



















