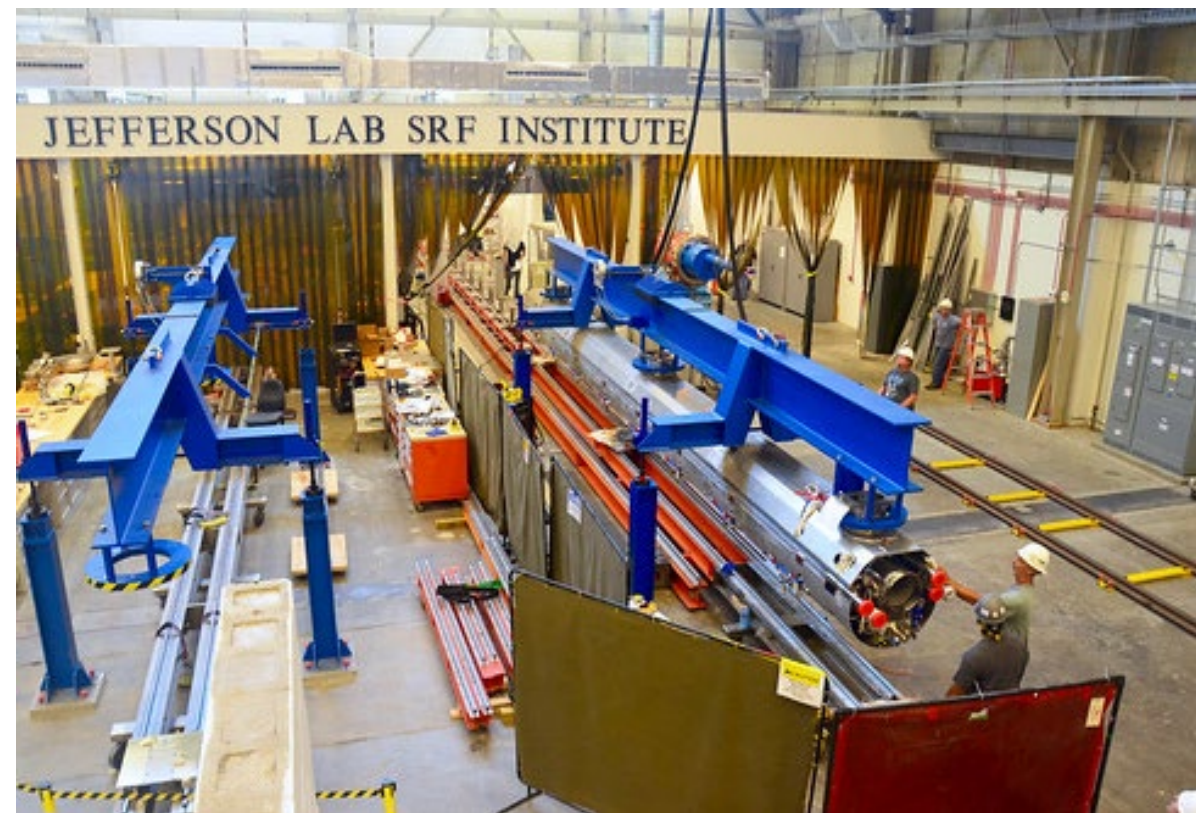


# SRF Operations All Hands Meeting

- ❑ Safety Topic
- ❑ Quality Policy
- ❑ SRF Ops Business Update
- ❑ ISO Certification Update
- ❑ ISO Processes Introduction
- ❑ Summary and Q&A

## SRF Ops QMS Steering Team

- Tony Reilly
- Anne McEwen
- Jacob Harris
- Dan Gautier



# Safety Topic: Hurricane/Storm Preparation

## Highest Winds Reported in Virginia from Hurricanes

<u>Gust</u>	<u>Dates</u>	<u>Location</u>
150 mph	9/14/1944	Cape Henry
138 mph	9/12/1960	Chesapeake Light Ship
130 mph	10/15/1954	Hampton
110 mph	7/12/1996	South Island CBBT
104 mph	9/27/1985	South Island CBBT
104 mph	8/27/1998	Cape Henry
104 mph	8/17/1986	South Island CBBT
100 mph	8/18/1879	Cape Henry
100 mph	4/6-7/1889	Cape Henry
100 mph	10/15/1954	Norfolk
100 mph	9/19/1999	James River Bridge

[https://www.evms.edu/media/evms\\_public/departments/environmental\\_health\\_safety/HurricaneGuide15\\_ALTmap.pdf](https://www.evms.edu/media/evms_public/departments/environmental_health_safety/HurricaneGuide15_ALTmap.pdf)

## PREPARE YOUR HOME FOR A HURRICANE

- + Board up windows and close all storm shutters. Secure and reinforce the roof, doors and garage door.
- + Bring loose, lightweight objects such as patio furniture, garbage cans and bicycles inside.
- + Anchor objects that would be unsafe to bring inside (e.g., gas grills and propane tanks).
- + Trim or remove damaged trees and limbs close enough to fall on structures.
- + Secure loose rain gutters and downspouts and clear any clogged areas or debris to prevent water damage to your property.
- + Purchase a portable generator or install a whole-house generator for use during power outages.
- + Keep alternative power sources, such as a portable generator, outside, at least 20 feet away from the house, and protected from moisture.
- + Document the condition of your home prior to the storm for insurance purposes: photos, video.



[WWW.VAEMERGENCY.GOV/HURRICANES](http://WWW.VAEMERGENCY.GOV/HURRICANES)

# SRF Operations Quality Policy

*Quality is our commitment to deliver world-class SRF products and services that are worthy of our customers trust by*

- *Enabling and empowering our people to build safety, reliability, quality, and compliance into our products, technologies, and services*
- *Delivering products to plan that support system reliability, availability, and that yield a great customer experience*
- *Measuring our quality objectives and driving systemic continual improvement*
- *Proactively and transparently engaging our customers*

***The Quality Policy is the most foundational statement for how we do business.***

# SRF Operations Projects – Strategic, Energy Reach and MLP

## Energy Reach

- Delivered C75-01 and P1 to CEBAF
- Currently working on C50-01R, C100-09R and C75-02, all are scheduled to be installed in FY22 SAD
- Plan for (3-4) more to be completed for FY23 SAD

## SNS Proton Power Upgrade - Multi-lab partnership (MLP) project with ORNL

- Added an 8<sup>th</sup> cryomodule onto the end of the project

## LCLS II High Energy Upgrade Project – MLP project with SLAC

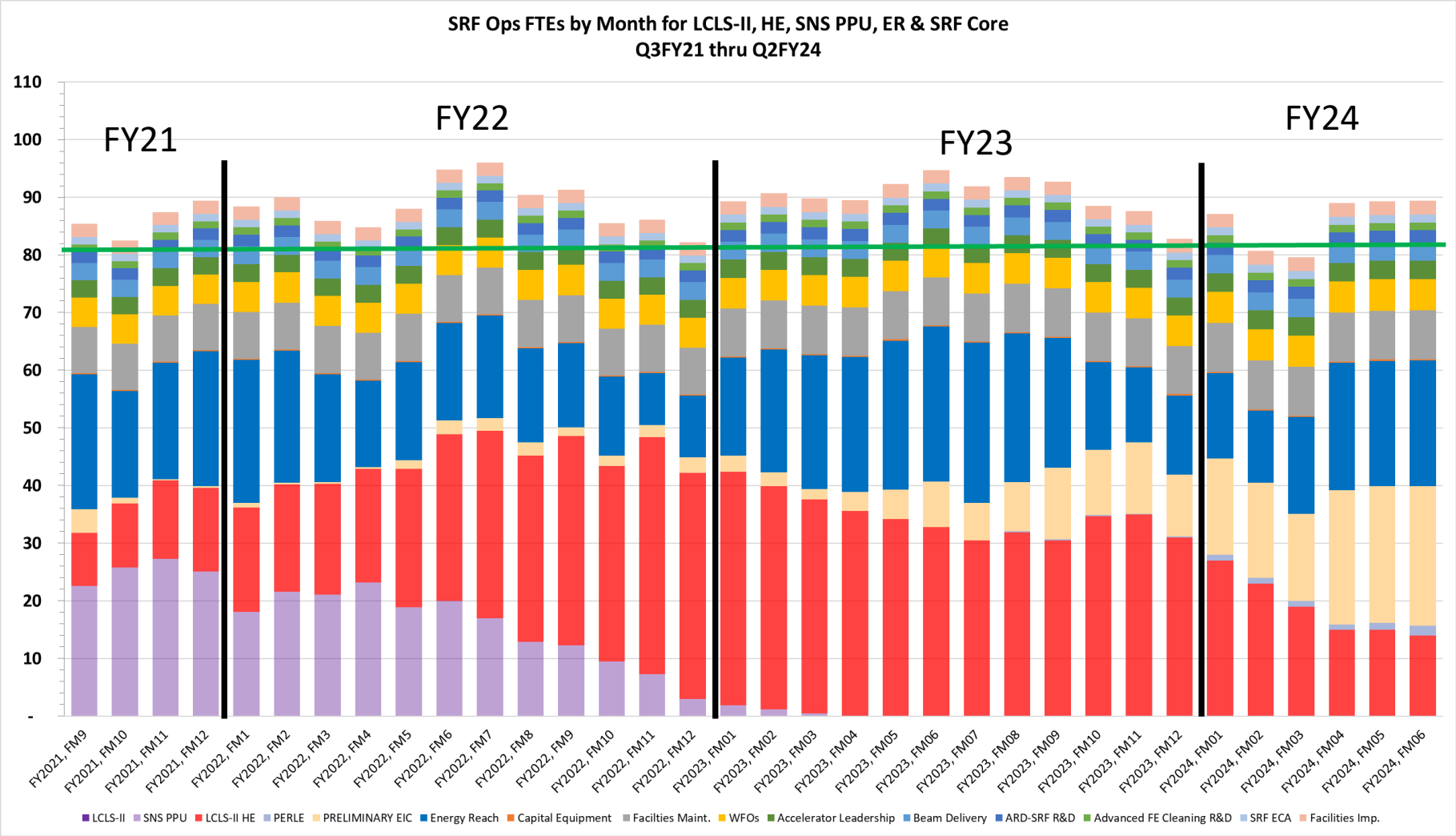
- Added an 11<sup>th</sup> cryomodule to the end of the project, cavities arrive in September

## BNL Electron Ion Collider – MLP project with BNL

- R&D is underway, engineering to start soon for cryomodule design



Fiscal Year	2021		2022		2023		2024		2025		2026		2027		2028		2029			
	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2		
Task Name																				
Energy Reach Project - JLab	~ 15 - 17 Cryomodules (Planned - Not Funded)																			
SNS PPU Project - ORNL	8 Cryomodules																			
LCLS II HE Project - SLAC		11 Cryomodules																		
Electron Ion Collider - BNL					# of Cryomodules is TBD															
SRF Strategic Projects - JLab	SRF Strategic Project - Lifetime of Lab																			

# SRF Ops Staffing Forecast for Q3FY21 through Q2FY24



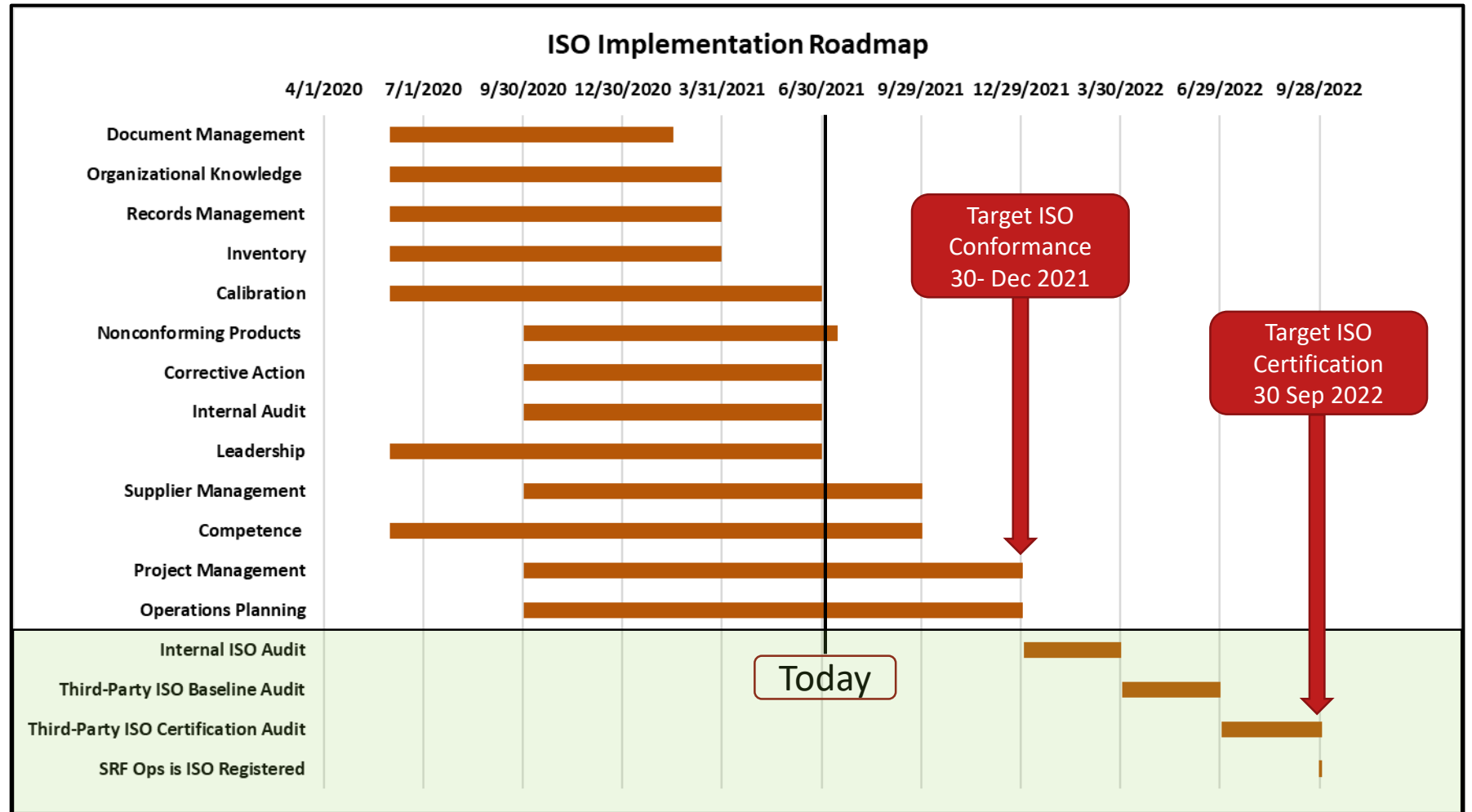


# SRF Ops Open Positions

<a href="#">Search</a>	<a href="#">Save as Search Agent</a>	<a href="#">View Job Cart (0)</a>	<a href="#">View My Account</a>
Now showing jobs 1 - 9 of 9 (0 jobs selected)   <a href="#">How to use this page.</a> Sorted by Relevance			
<input type="checkbox"/> <a href="#">Title</a>	Job ID	<a href="#">Location</a>	<a href="#">Date Posted</a>
<input type="checkbox"/> <a href="#">Senior SRF Accelerator Physicist</a>	12240	Newport News, VA	Apr 8, 2021
<input type="checkbox"/> <a href="#">SRF Electronic Fabrication Technician</a>	12238	Newport News, VA	Mar 3, 2021
<input type="checkbox"/> <a href="#">SRF Cavity Assembly Technician</a>	12235	Newport News, VA	Mar 3, 2021
<input type="checkbox"/> <a href="#">SRF Cavity Assembly Technician</a>	12236	Newport News, VA	Mar 3, 2021
<input type="checkbox"/> <a href="#">SRF Test Engineer</a>	12276	Newport News, VA	Jun 21, 2021
<input type="checkbox"/> <a href="#">SRF Cryomodule Assembly Technician</a>	12228	Newport News, VA	Apr 16, 2021
<input type="checkbox"/> <a href="#">SRF Cryomodule Assembly Technician</a>	12226	Newport News, VA	Apr 27, 2021
<input type="checkbox"/> <a href="#">SRF Accelerator and RF Test Engineer</a>	12234	Newport News, VA	Mar 3, 2021
<input type="checkbox"/> <a href="#">R&amp;D Technologist</a>	12216	Newport News, VA	Mar 3, 2021
 Add selected jobs to cart		 Apply to selected jobs	

- 7 open posted positions
- Offer accepted for a Technical Facilities Technician
- Interviewing for Cryomodule Welder/Assembly Technician
- Recently extended Q4FY21 Terms for 2 years
- Looking to continue to extend additional terms by 2 years
- Continuing to look for opportunities to add regular staff
- Looking to open a few more term positions to support ER and MLP projects

# ISO 9001 Certification Update




***“Say what you do. Do what you say.”***

# SRF Ops Processes and their Owners

SRF Ops Process	Process Owner
Leadership	Tony Reilly
Document Management	Jacob Harris
Records Management	Valerie Bookwalter
Organizational Knowledge	Megan McDonald
Competence	John Fischer
<b>Calibration</b>	<b>Larry King</b>
Supplier Management	Naeem Huque
Project Management	Ed Daly
Operational Planning	Kirk Davis
<b>Inventory</b>	<b>Phil Denny</b>
<b>Nonconforming Product</b>	<b>Jacob Harris</b>
<b>Internal Audit</b>	<b>Jacob Harris</b>
<b>Corrective Action</b>	<b>Jacob Harris</b>

**Introductions to...**  
Calibration  
Inventory  
Nonconforming Product  
Internal Audit  
Corrective Action





# Calibration – Larry

## Introduction of SRF Ops Calibration Program

- The Calibration Program is designed to ensure that equipment relied upon by SRF Ops to provide critical-to-quality measurements are maintained in a calibrated state, and provide reliable and accurate results.
- **Why do we need it?**
  - EHS&Q has a 2010 procedure for sending out MTE to an accredited calibration vendor, and a lab-wide contract to cover the costs (no change here.)
  - Pansophy has a Calibration module to allow custodians to track their equipment (little change here.)
  - For ISO compliance, improvements are needed in:
    - Differentiating between critical and routine measurements
    - Making sure that calibrated MTE is available for those measurements
    - Making sure that all critical measurements are made with calibrated MTE
    - Record keeping and auditability

***“...to build safety, reliability, quality, and compliance into our products.”***

# Calibration – Larry


## Integration of Calibration into SRF Processes

ISO Quality Management Systems are based on a **process approach**.

The authors of Travelers and Procedures, with input from Work Center Leads, identify measurements that are “Critical to Quality.”



Work Center Leads identify the “Critical MTE” needed for the critical measurements made by or within their Work Center.



Calibration Custodians use the Pansophy database to track MTE in their Work Center.



All SRF Ops staff takes care to use only calibrated MTE when required by a Traveler, Procedure or other WCD.

# Inventory – Phil

## Purpose

- Ensures parts and components, used to produce SRF cavities & cryomodules are received, documented, and stored prior to release to production.

## Scope

- Program applies to all projects requiring inventory control as deemed by SRF Operations.
- Program does not apply to projects controlled by or work conducted for R&D, unless specified and approved.
- Program does not apply to Nb Inventory or Cavity Storage

## Documents related to Inventory

- SRF-09-PD-001 Inventory Program Description
- SRF-09-PR-001 Inventory Control
- SRF-09-PR-002 Serialization

## Inventory Systems, Tools, Facilities

- Primes Database
  - Database Search
  - PRIMeS Reports
  - Audits & Metrics
- Serialization Process
  - *JLabDrawingNumber-Revision-SerialNumber*
  - *CRM9007070-0000-B-026*
- North Annex, BlueCrab Warehouse, Satellite TL locations

***“Enabling and empowering our people ...”***



# Inventory – Phil

File Edit View History Bookmarks Tools Help

Front Page PRIME5 View Purchase Requisition

https://pansophy.jlab.org/pansophy/PRIME5/dInventory.cfm

Most Visited Getting Started Document Repository Shipping and Receiv... Shipping & Loan Auth... Requisition System Ho...

Pansophy A System of Universal Knowledge

you have been authenticated who are! click here to logout

MAIN MENU PRIME5 MENU -> Inventory Data Mining Inventory Management Production Kits Admin Tools Management Reports

Current Inventory History Receipt History Drawings Parts Purchase Orders Unit Costs Project Names Locations Status Codes Transaction Types TID Search

PRIME5 Apr 27, 2020 1:11:51 PM

Inventory Search Search in Part Number for

partnumber	partname	serialnumber	cpname	buildingname	locationname	statusname
#10 - 32 HEX NUT SS	#10 - 32		SRFRD	TEST LAB	2F2	NO INSPECTION REQ
#10 - 32 X 1/2 SHCS A286 SS	#10 - 32		SRFRD	TEST LAB	2F2	NO INSPECTION REQ
#10 BELLEVILLE WASHER SS	#10 BELLE		SRFRD	TEST LAB	2F2	NO INSPECTION REQ
#10 WASHER BRONZE	#10 WASHER		SRFRD	TEST LAB	2F2	NO INSPECTION REQ
#4 - 40 HEX NUT SS300	#4 - 40		SNSPPU	TEST LAB	2G	NO INSPECTION REQ
#4 - 40 X .19 PHIS S18R	#4 - 40		SNSPPU	TEST LAB	2G	NO INSPECTION REQ
#4 - 40 X .25 PHIS SS300	#4 - 40		SNSPPU	TEST LAB	2G	NO INSPECTION REQ
#4 - 40 X .30 PHIS S18R	#4 - 40		SNSPPU	TEST LAB	2G	NO INSPECTION REQ
#4 - 40 X .75 STUD SS300	#4 - 40 X .75 STUD SS300		SNSPPU	TEST LAB	2G	NO INSPECTION REQ
#4 WASHER SS300	#4 WASHER SS300		SNSPPU	TEST LAB	2G	NO INSPECTION REQ
#6 - 32 X .31 PHIS SS300	#6 - 32 X .31 PHIS SS300		SNSPPU	TEST LAB	2G	NO INSPECTION REQ
#8 - 32 X 3/8 PHIS BRASS	#8 - 32 X 3/8 PHIS BRASS		SRFRD	TEST LAB	2F2	NO INSPECTION REQ
03151-0024	INNER ADAPTER FINAL ASSEMBLY	001FEL	C100	TEST LAB	RH 1012 - CPM / RF TUNING	HOLD - INSPECTION
03151-0030	H.O.M. ABSORBER ASSEMBLY	HM0L233F	C100	TEST LAB	RH 1012 - CPM / RF TUNING	HOLD - INSPECTION
03151-0038	H.O.M. ABSORBER ASSEMBLY	HM0L234F	C100	TEST LAB	RH 1012 - CPM / RF TUNING	HOLD - INSPECTION
1/2 - 20 HEX NUT S8	1/2 - 20 HEX NUT SILICON BRONZE		C100	TEST LAB	112	NO INSPECTION REQ
1/4 - 20 HEX NUT S8	1/4 - 20 HEX NUT SILICON BRONZE		C100	TEST LAB	01N 170	NO INSPECTION REQ
1/4 - 20 X 1-1/4 12PT 316SS...	1/4 - 20 X 1-1/4 12PT BOLT 316SS		C100	TEST LAB	01N 170	NO INSPECTION REQ
1/4 - 20 X 1-1/4 316SS SP	PULL THREADED STUD SILVER 316SS		C100	TEST LAB	01N 170	NO INSPECTION REQ
1/4 - 20 X 1-3/4 316SS SP	1/4 - 20 X 1-3/4 316SS PULL THREADED STUD		C100	TEST LAB	01N 170	NO INSPECTION REQ
1/4 - 20 X 2 SHCS 304 SP	1/4 - 20 X 2 L0 SHCS 304 STUDER PLATED		C100	TEST LAB	112	NO INSPECTION REQ
1/4 X 100 10.055	1/4 X 100 10.055 FENDER MOUNT		C100	TEST LAB	01N 170	NO INSPECTION REQ
10019645	STEPPER MOTOR 200S/R 1.2A 15300	100419453	L2PRD	TEST LAB	7E	NO INSPECTION REQ
100222	ELECTRIC VALVE ACTUATOR	140100	C100	TEST LAB	Cryo ASSEMBLY	REJECTED
1031700245H	BAKEABLE PIRANZ GAUGE	11701000	L2PRD	TEST LAB	1F2	NO INSPECTION REQ
104110000-A262	SNS PPU CH FPC TOPHATS					HOLD - INSPECTION
104110000-A262	SNS PPU CH FPC TOPHATS	000	SNSPPU	TEST LAB	RH 2131 - FLOOR	HOLD - INSPECTION
104110000-A262	SNS PPU CH FPC TOPHATS		SNSPPU	TEST LAB	RH 2131 - FLOOR	HOLD - INSPECTION
104110000-A262	SNS PPU CH FPC TOPHATS	004	SNSPPU	TEST LAB	RH 2131 - FLOOR	HOLD - INSPECTION

Page 1 of 1

- Part name & number
- Drawing Number (including rev level)
- Unique Identifier (Serial Number)
- Quantity
- Status (i.e. Hold, Rejected, Inspection required, etc..)
- PO # & PO Info
- Location

# Nonconforming Product - Jacob

## Purpose

- Protects the customer from receiving defective parts.
- Provides information for us to improve production processes.

## Criteria for Nonconforming Outputs

- Customer Requirements – cavity and cryomodule performance specification
- Internal Requirements – dimensional, physical damage, part performance... etc.

## NCR Form

- Existing Pansophy System.
- Rev 12 of the NCR Form will be released soon. Biggest changes are...
  - Final dispositions (Use-As-Is, Reject, Return to Vendor) are moved to the Final Disposition column/field (Page 4).
  - Only Modify and Remeasure are available in the Initial Disposition column/field (Page 2).
  - New final disposition of “Conforming” is added.
  - Use-As-Is is only for non-conforming items that are used with justification.



***“Delivering product to plan...” “Proactively and transparently engaging our customers.”***



# Corrective Action - Jacob

## Purpose

- Address systemic/programmatic issues to improve processes.

## Sources of Systemic Issues

-Collection of similar NCRs	-Management Review
-Audit findings – Internal and External	-Customer Survey

## CAPA Report

- Extent of condition – *How many, how often?*
- Investigation of cause – *Why, Why, Why?*
- Corrective action – *Fix the identified conditions.*
- Preventative action – *Prevent the cause of the condition.*
- Verification – *Ensure effectiveness.*

***“...driving systemic continual improvement.”***

Jefferson Lab		SRF Institute at Jefferson Lab
<b>CAPA Report</b>		
CAPA Number	<CAPA-00x>	
Source	<Audit #, Management Review, Process Deviation, NCR Trend...etc>	
Assignee		
Initiator		
Initiated Date		
<b>1 Description</b>		
<Initiator describes the condition. Include the requirement not met, if known.>		
<b>2 Extent of Condition</b>		
<Assignee investigates and describes the extent of the condition, e.g. how many or how often.>		
<b>3 Cause</b>		
<Assignee describes the cause of the condition. Include Root Cause Analysis, if required.>		

# Internal Audit - Jacob

## Purpose

- Provide assurance that our internal processes are operating effectively, e.g. are we doing what we said we were supposed to be doing?
- Identify areas where our internal processes can be improved.

## Scope and Frequency

- All processes of our QMS annually.
- Projects or specific processes on request.

## Internal Audit Report

- Scope of the Internal Audit – *Process or project.*
- Criteria – *Requirements or documents.*
- Nonconformities/Findings – *Major vs Minor.*
- CAPA Reports - *Assigned to address nonconformities/findings.*

Jefferson Lab		SRF Institute at Jefferson Lab
<b>Internal Audit Report</b>		
Audit Number	<Audit-00x>	
Process or Project		
Principal Auditee		
Date of Audit		
<b>1 Objectives and Scope</b>		
<The objective of this audit is to...>		
<The scope of this audit is...>		
<b>2 Criteria</b>		
<List external and internal documents used to support the audit scope, e.g. ISO Standard, SRF Procedures, Project Procedures, Customer documents...etc.>		
<b>3 Team Members</b>		
Name	Role	
	Lead Auditor	
	Auditor	
	Subject Expert - <subject>	

**“Enabling and empowering our people...” “...driving systemic continual improvement.”**

# Summary and Questions

---

- ISO Certification target date: 30 Sep 2022
- Process Owners hard at work implementing
- Next All-Hands in 3 months.

# QUESTIONS?