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C-A OPERATIONS PROCEDURES MANUAL

1.18 Iris Enrollment

Text Pages 2 through 5

Attachments

Hand Processed Changes

<u>HPC No.</u>	<u>Date</u>	<u>Page Nos.</u>	<u>Initials</u>
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Approved: \_\_\_\_\_ *Signature on File* \_\_\_\_\_  
Collider-Accelerator Department Chairman Date

J. Maraviglia

## 1.18 Iris Enrollment

### 1. Purpose

To describe the steps for enrolling an individual's irises for access to the experimental areas at RHIC, NSRL and the NASA A3 Line during Controlled Access mode.

### 2. Responsibilities

- 2.1 C-AD ESHQ Division and MCR personnel perform iris enrollment.
- 2.2 The C-AD Training Office is responsible for receiving IrisCode Record Removal Request Forms (Attachment 8.3, [C-A-OPM-ATT 1.18.a](#)) and forwarding them to the Access Controls Group at the end of run.
- 2.3 The C-AD Access Controls Group is responsible for removing iris scan data for individuals who request that their data be removed.

### 3. Prerequisites

- 3.1 Individuals performing iris enrollment are given permission to access the iris enroller by the C-AD Access Controls Group. Access is given either by issuing an individual a logon password or by registering an individual's iris (your iris is then used in lieu of a password to log on to the enroller).
- 3.2 Enrollers are given a walk-through on how to use the enroller software. The walk-through may be given by anyone already experienced with its use.

### 4. Precautions

None

### 5. Procedure

- 5.1 To Enroll an Individual's Irises (both right and left are enrolled)

- 5.1.1 Check that the individual's training is current.

For RHIC: The individual must be current in either Collider User Training or Collider-Accelerator Access Training.

For NSRL: The individual must be current in either Radiobiology User Training or Collider-Accelerator Access Training; AND Radiation Worker-1 Training.

For NASA A3 Line: The individual must be current in either Radiobiology User Training or Collider-Accelerator Access Training; AND Radiation Worker-1 Training.

**Note 1:**

To check an individual's training, go to the BNL Training & Qualification home page: <http://training.bnl.gov/>. Click on "Training Records", then click on "See Your Training History". Enter the individual's Name or Life Number (or Guest Number) and click Submit. Scan the data for the required training course(s), look at the completion date and determine if the training is current according to the following:

Collider User Training:	valid for 1 year
Radiobiology User Training:	valid for 2 years
Fixed Target User Training:	valid for 1 year
Collider-Accelerator Access Training:	valid for 2 years
Radiation Worker-1 Training:	valid for 2 years

**Note 2:**

If the individual does not show up in the training database contact the C-AD Training Manager.

- 5.1.2 Check that the individual has a current BNL I.D. badge showing name and life number (or guest number). Check the expiration date on the badge.

**Note 1:**

If a Guest (i.e.: User) does not yet have a BNL I.D. badge, a Guest Orientation Form issued from the RHIC/AGS Users' Center is acceptable in lieu of the badge. The form should look similar to that shown in Attachment 1. It must show the individual's name, BNL guest number, and a signature indicating that the individual has checked in to the Users' Center. New Users typically check in to the Users' Center in the morning. Their I.D. badge is usually ready that same day, but in the late afternoon, so the individual may not yet have their badge at the time they ask to have their irises enrolled. The orientation form is acceptable in these cases.

5.1.3 Enrollment is performed with an iris scanner as follows:

**Note 1:**

Further details are provided in Reference 7.1, [C-A-OPM 4.70](#).  
Enrollers are also given a walk-through.

1. From the Windows screen, double click on the icon "IrisWin2000".
2. Log on to the scanner using either your password or your iris.
3. After logging on, the "Iridian™ Technologies" page appears.
4. Position the individual in front of the scanner.
5. From the icons at the top left of the screen, click on the icon for "Enroll".
6. Follow the prompts for enrollment.

**Note 2:**

If you encounter problems with the enrollment, contact the Access Control Group.

- 5.2 Inform the individual that they have the option of submitting the IrisCode Removal Request Form (Attachment 8.3, [C-A-OPM-ATT 1.18.a](#)). This would remove their iris data at the end of the run. However, inform them that they will have to have their irises enrolled again if they need access for the next run. Forward completed forms to the C-AD Training Office.
- 5.3 If an individual has questions regarding safety of the scanning process, whether or not it is mandatory, or confidentiality questions, refer to Attachment 8.2. If they have further questions on safety, they can contact the C-AD ESH Coordinator during working hours.
- 5.4 Using the iris readers for Controlled Access at the experiments

**Note 1:**

Iris scan readers are located at RHIC, NSRL and the NASA A3 Line experimental areas. Once enrolled, the individual may use the local iris scanner at the experiment to obtain a key to enter the experimental areas (e.g.: Intersection regions at RHIC, NSRL Target Room, NASA A3 Line Target Cave) during Controlled Access mode. Controlled Access is further explained in the C-A Department-specific training.

5.4.1 The steps described in Attachment 8.2, under “Abbreviated Entry Procedure for Controlled Access”, are incorporated into User Training.

**6. Documentation**

6.1 IrisCode Record Removal Request Forms should be forwarded to the C-AD Training Office.

6.2 Following the end of run, the Training Office shall forward IrisCode Record Removal Request Forms to the Access Controls Group for data removal.

**7. References**

7.1 [C-A-OPM 4.70 “Procedure to Perform Enrollment and Removal of Personnel in the Iridian EOU 2200 Iris Imager”](#).

**8. Attachments**

8.1 RHIC & AGS Guest Orientation Form.

8.2 Information Regarding Iris Scanning at C-AD.

8.3 [C-A-OPM-ATT 1.18.a “IrisCode Record Removal Request Form”](#).

**Attachment 8.1 - RHIC & AGS Guest Orientation Form**

Guest Name:		ID #:
Experiment:		BNL Supervisor:
TYPE OF CHECK IN	Req'd	NAMES OF REPRESENTATIVES
User Center Check In:	X	Angela Melocoton or Susan White-DePace (Bldg. 355A, x5975) <span style="float:right">date</span>
Experimental Office Check In:		Cora Feliciano (Bldg. 510A, Room 1-172, x3908) Liz Mogavero (Bldg. 510A, Room 1-187, x3940) <span style="float:right">date</span>
Job Training Assessment		Bill Christie (Bldg. 510A, Room 1-172, x7137) <span style="float:right">date</span>
Department ES&H Coordinator		Mike Zarcone (Bldg. 510A, Room 1-43, x5890) or Ron Gill (Bldg. 510A, Room 1-171, x3987/3908) <span style="float:right">date</span>
Department Training Coordinator		Mike Zarcone (Bldg. 510A, Room 1-43, x5890) Christine Greenberg (Bldg. 510A, Room 1-41, x 2585) <span style="float:right">date</span>
Facility Support Representative		Joe Vignola (Bldg. 510A, Room 1-134, x3846) <span style="float:right">date</span>
Collider Accelerator ES&H Coordinator		Asher Etkin (Bldg. 911A, Room A-133, x7200) OR Lori Stiegler (Bldg. 911A, Room A-133, x4617) <span style="float:right">date</span>
OTHER		<span style="float:right">date</span>

Shift Taker	Shift Leader	Required Training (see <a href="http://www.bnl.gov/userscenter">http://www.bnl.gov/userscenter</a> )	Instructor's Initials/Date
		Collider Users' Training (AD-CA_COLLIDER_USER)	
		General Employee Training Video (V001)	
		General Employee Training (V001)	Included in C-A Users' Training
		General Employee Radiological Training (RWT-001)	Included in C-A Users' Training
		Stop Work (GE-STOPWORK)	Included in C-A Users' Training
		Emergency Planning & Response for General Employees (GE-EMERGPLAN)	Included in C-A Users' Training
		Cyber Security (GE-CYBERSEC)	
		STAR Skill of the Craft for Physicist	
		Hazard Communication (HP-IND-200)	
		RADWorker I (RWT002)	
		C-A OPM 2.5.2	
		C-A OPM 3.17	
		C-A OPM 11.1	
		C-A OPM 11.4.4	
		Read & Acknowledge Memo	
<b>RHIC ACCESS CARD REQUIRED</b>			

Radiation Dosimetry required+	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Trainer initial _____	Account # to charge dosimetry to _____
Additional Training Required (see back of page for courses)	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Trainer initial _____	

+Radiation badges can be picked up at the RHIC & AGS Users' Center, Bldg. 355A, Physics Department, Bldg. 510A, Room 1-43, or the Collider-Accelerator Department, Bldg. 911, Room, A-128.

++Access cards can be picked up at the RHIC & AGS Users' Center, Bldg. 355A or at Collider-Accelerator Department, Bldg. 911, Room. A-128.

**RETURN COMPLETED FORM TO THE RHIC & AGS USERS' CENTER, Bldg. 355A**

5/29/02

## Attachment 8.2

### IRIS SCANNING AT C-AD

#### ***What is Iris Scanning?***

An iris scanner is a camera that takes a picture of the surface of the eye.

#### ***How Does Iris Scanning Work?***

The eye is illuminated by light-emitting diodes that surround the camera. The diodes emit in the visible light spectrum. The scanner is NOT a laser-retinal scanner so there are no laser eye hazards. Iris identification uses standard video cameras — the same kind you would use to videotape your family — to take a picture of the iris of your eye. It does not use lasers and, therefore, has none of the inherent risks associated with lasers.

#### ***Where is Iris Scanning Done?***

Initial enrollment is performed with an iris scanner. As of the time of this writing, the enrollment scanner is located in the Main Control Room. Iris readers located at the experimental areas (RHIC, NSRL and the NASA A3 Line) are then used to obtain a key during Controlled Access mode to enter a RHIC intersection region (IR), the NSRL target room, or the NASA A3 Line target cave. (Note: Controlled Access mode is further explained in Collider-Accelerator User Training).

#### ***Why was Iris Scanning Installed?***

Iris scanning was requested by the user community. In prior years, when access to a RHIC intersection region (IR) during Controlled Access mode was required, users would have to travel to the Collider Accelerator Department's Main Control Room (MCR) --about a mile away-- be verified as trained and qualified, obtain an access key, go back to RHIC, enter the IR, and then return with the key back to the MCR. This new method saves time.

#### ***How Does Iris Scanning at RHIC Work?***

With the iris scanner, the MCR operators use the technology remotely to determine if a person is qualified to enter under Controlled Access mode and to release a key locally. A local eye scanner releases a Controlled Access key to any trained and qualified individual locally at the entrance to a specific experimental area placed under Controlled Access mode. That key opens the gate. Until that key is returned and the eye re-checked outside the gate, the access controls system automatically prevents the injection of beam.

### ***Benefit to Iris Scanning***

Controlled Access mode is sometimes requested several times a week during RHIC runs for tuning/repair of detector equipment or accelerator components. The use of an iris scanner will save hours of MCR operator time and increase overall machine running time, and is convenient for the User.

### ***Is Iris Scanning Mandatory?***

The requirement to use the iris scanner is voluntary. Any user/employee not wishing to participate in this may still go to MCR and obtain a key for Controlled Access mode. Alternatively, a user may request the iris scanning records be deleted from the database at the end of a running period. Forms for this request are available at enrollment. However, you must re-enroll prior to the next running period.

### ***Confidentiality Issues***

No video image of the iris is retained. Instead the eye pattern is converted into a 512 byte IrisCode® record. The IrisCode is hashed and encrypted as a security measure. The IrisCode and IrisCode® records are under the control of a single individual in the Collider-Accelerator Department's Access Controls Group and are behind the firewall. Backup CD-R copies are locked in a safe. There are no paper records. An IrisCode® record is based on 247 independent variables that are measured for each iris. Once the iris variables are measured, they are converted to a 512-byte template, which is the patented IrisCode® record. The IrisCode® record is immediately encrypted, and cannot be reverse-engineered into an image of the iris.

Since an IrisScan Record cannot be used to re-construct an image of an iris, the only personal information being stored by BNL is a person's name and guest/life number.

### ***Legal Questions***

If the Laboratory causes any injury, guests have full legal recourse. The Laboratory will not release IrisCode® records to any government agency if requested to do so.

### ***Safety Review of Iris Scanning***

Brookhaven National Laboratory is concerned about health and safety of its employees and guests. The C-AD Radiation Safety Committee reviewed the eye scanner several years ago. That Committee has wide representation from BNL. The Committee's Chairman is Dana Beavis who is a member of the BRAHMS experiment at RHIC and a member of the Physics Department. The BNL Radiological Controls Division also has a Health Physicist on the Committee who is an expert in radiation protection.

### ***Information About the Product***

The Collider-Accelerator Department uses Iridian Technologies™ product lines such as the Authenticam™, and products that appear in physical access systems and automatic teller machines (ATMs). These Iridian products are in compliance with all applicable international illumination safety standards including, American National Standard ANSI/IESNA RP-27.1-96 and International Standard IEC 60825-1, Class 1 LED. These are the latest worldwide standards for eye safety.

#### **Abbreviated Entry Procedure for Controlled Access Using the Iris Reader**

1. Stand in front of the iris reader, approximately 3 to 9 inches away, and look into the camera with either eye. The camera will speak instruction back to you. Center your eye in the box outline on the mirror.
2. When accepted, the camera voice will say “identification completed.”
3. Remove the key from the key tree. You have about 2 seconds to remove the key and keys must be removed in sequential order.
4. To remove the key, turn it to the left and pull.
5. With the key in hand, proceed to the gate.
6. Contact MCR by phone when you arrive at the gate.
7. Identify yourself at the gate to the operator by giving your name.
8. Place key in gate switch and turn key with simultaneous release from MCR.
9. Remove key and take it with you into the experimental area.

**Note:**

If you need to leave the area because of an emergency, just open the gate using the doorknob.

10. When you are about to leave the experimental area, contact the MCR on the phone and ask for release.
11. Wait for buzzer, open gate and leave.
12. Return key to the key tree.
13. Stand in front of the iris reader, look into the camera with the eye and log out. Camera voice will say “Identification Completed.”