

***If you are using a printed copy of this procedure, and not the on-screen version, then you MUST make sure the dates at the bottom of the printed copy and the on-screen version match. The on-screen version of the Collider-Accelerator Department Procedure is the Official Version. Hard copies of all signed, official, C-A Operating Procedures are kept on file in the C-A ESHQ Training Office, Bldg. 911A.***

**C-A OPERATIONS PROCEDURES MANUAL**

**ATTACHMENT**

**4.120.62.f Booster Chipmunk Tests**

C-A-OPM Procedures in which this Attachment is used.		
4.120.62		

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

V. Castillo

**4.120.62.f Booster Chipmunk Tests**

**PASS ANNUAL ACCEPTANCE TEST PROTOCOL**

**Division A Software Filename and Checksum: Title:** \_\_\_\_\_ **Checksum:** \_\_\_\_\_

**Division B Software Filename and Checksum: Title:** \_\_\_\_\_ **Checksum:** \_\_\_\_\_

**Initial testing complete:**

**Test Team Leader's Name (Print):** \_\_\_\_\_ **Life Number:** \_\_\_\_\_

**Test Team Leader's Name (Sign):** \_\_\_\_\_ **Date:** \_\_\_\_/\_\_\_\_/\_\_\_\_

**Acceptance test procedure complete (following repairs and retesting if required):**

**Test Team Leader's Name (Print):** \_\_\_\_\_ **Life Number:** \_\_\_\_\_

**Test Team Leader's Name (Sign):** \_\_\_\_\_ **Date:** \_\_\_\_/\_\_\_\_/\_\_\_\_

**Test results reviewed by:**

**Safety Section Head's Name (Print):** \_\_\_\_\_ **Life Number:** \_\_\_\_\_

**Safety Section Head's Name (Sign):** \_\_\_\_\_ **Date:** \_\_\_\_/\_\_\_\_/\_\_\_\_

**Test results accepted by Radiation Safety Committee:**

**RSC Member's Name (Print):** \_\_\_\_\_ **Life Number:** \_\_\_\_\_

**RSC Member's Name (Sign):** \_\_\_\_\_ **Date:** \_\_\_\_/\_\_\_\_/\_\_\_\_

**1.1 Test of Chipmunk NMO 58 located over Septum F6**

- |                          |  |   |                 |
|--------------------------|--|---|-----------------|
| <input type="checkbox"/> | <b>VERIFY</b>  | Chipmunk calibration date [ ____/____/____ ] is             | <b>VALID</b>    |
| <input type="checkbox"/> | <b>VERIFY</b>  | Chipmunk is in good physical condition and is               | <b>CHIRPING</b> |
| <input type="checkbox"/> | <b>VERIFY</b>  | <b>MCR sees Opto monitor Chipmunk NMO 58</b>                | <b>O.K.</b>     |
| <input type="checkbox"/> | <b>VERIFY</b>  | At encl 4521 relay <b>FK6</b> is                            | <b>ON</b>       |
|                          | <b>DISCON</b>  | <b>NMO 58 from Security interface box for failsafe test</b> |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | At encl 4521 relay <b>FK6</b>                               | <b>OFF</b>      |
| <input type="checkbox"/> | <b>VERIFY</b>  | <b>MCR sees at Opto monitor NMO 58</b>                      | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>   | <b>NMO 58 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | <b>MCR sees NMO 58</b>                                      | <b>OK</b>       |
| <input type="checkbox"/> | <b>VERIFY</b>  | At encl 4521 relay <b>FK6</b> is                            | <b>ON</b>       |
|                          | <b>PRESS</b>   | <b>Trip button</b> on chipmunk NMO 58                       |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | At encl <b>4521 relay FK6</b>                               | <b>OFF</b>      |
| <input type="checkbox"/> | <b>VERIFY</b>  | <b>MCR sees at Opto monitor NMO 58</b>                      | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>   | <b>NMO 58 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | <b>MCR sees NMO 58</b>                                      | <b>OK</b>       |
| <input type="checkbox"/> | <b>VERIFY</b>  | At encl 4521 relay <b>FK6</b> is                            | <b>ON</b>       |
| <input type="checkbox"/> | <b>Check for acceptance of Test Chipmunk NMO 58 located over Septum F6</b> |   |                 |

**1.2 Test of Chipmunk NMO 59 located over DH2, 3**

- |                          |   |  |                 |
|--------------------------|---|--|-----------------|
| <input type="checkbox"/> | <b>VERIFY</b>   | Chipmunk <b>calibration</b> date [ ____/____/____ ] is | <b>VALID</b>    |
| <input type="checkbox"/> | <b>VERIFY</b>   | Chipmunk is in good physical condition and is          | <b>CHIRPING</b> |
| <input type="checkbox"/> | <b>VERIFY</b>   | <b>MCR sees at Opto monitor Chipmunk NMO 59</b>        | <b>O.K.</b>     |
| <input type="checkbox"/> | <b>VERIFY</b>   | At encl 4521 relay <b>FK5</b> is                       | <b>ON</b>       |
|                          | <b>DISCON</b>   | <b>NMO 68 FROM interface box for failsafe</b>          |                 |
| <input type="checkbox"/> | <b>VERIFY</b>   | At encl 4521 relay <b>FK5</b>                          | <b>OFF</b>      |
| <input type="checkbox"/> | <b>VERIFY</b>   | <b>MCR sees at Opto monitor NMO 68</b>                 | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>  | <b>NMO 68 from MCR Opto monitor</b>                    |                 |
| <input type="checkbox"/> | <b>VERIFY</b>   | <b>MCR sees NMO 59</b>                                 | <b>OK</b>       |
| <input type="checkbox"/> | <b>VERIFY</b>   | At encl 4521 relay <b>FK5</b> is                       | <b>ON</b>       |
|                          | <b>PRESS</b>  | <b>Trip button</b> on chipmunk NMO 68                  |                 |
| <input type="checkbox"/> | <b>VERIFY</b>   | At encl <b>4521 relay FK5</b>                          | <b>OFF</b>      |
| <input type="checkbox"/> | <b>VERIFY</b>   | <b>MCR sees at Opto monitor NMO 68</b>                 | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>  | <b>NMO 68 from MCR Opto monitor</b>                    |                 |
| <input type="checkbox"/> | <b>VERIFY</b>   | <b>MCR sees NMO 68</b>                                 | <b>OK</b>       |
| <input type="checkbox"/> | <b>VERIFY</b>   | At encl 4521 relay <b>FK5</b> is                       | <b>ON</b>       |
| <input type="checkbox"/> | <b>Check for acceptance of Test Chipmunk NMO 68 located over DH2, 3</b> |  |                 |

**1.3 Test of Chipmunk NMO 60 located at Plug Door**

- |                          |  |   |                 |
|--------------------------|--|---|-----------------|
| <input type="checkbox"/> | <b>VERIFY</b>  | Chipmunk calibration date [ ____/____/____ ] is             | <b>VALID</b>    |
| <input type="checkbox"/> | <b>VERIFY</b>  | Chipmunk is in good physical condition and is               | <b>CHIRPING</b> |
| <input type="checkbox"/> | <b>VERIFY</b>  | <b>MCR sees Opto monitor Chipmunk NMO 60</b>                | <b>O.K.</b>     |
| <input type="checkbox"/> | <b>VERIFY</b>  | At encl 4521 relay <b>FK10</b> is                           | <b>ON</b>       |
|                          |  |   |                 |
|                          | <b>DISCON</b>  | <b>NMO 60 from Security interface box for failsafe test</b> |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | At encl 4521 relay <b>FK10</b>                              | <b>OFF</b>      |
| <input type="checkbox"/> | <b>VERIFY</b>  | <b>MCR sees at Opto monitor NMO 60</b>                      | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>   | <b>NMO 60 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | <b>MCR sees NMO 60</b>                                      | <b>OK</b>       |
| <input type="checkbox"/> | <b>VERIFY</b>  | At encl 4521 relay <b>FK10</b> is                           | <b>ON</b>       |
|                          |  |   |                 |
|                          | <b>PRESS</b>   | <b>Trip button on chipmunk NMO 60</b>                       |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | At encl <b>4521 relay FK10</b>                              | <b>OFF</b>      |
| <input type="checkbox"/> | <b>VERIFY</b>  | <b>MCR sees at Opto monitor NMO 60</b>                      | <b>IN'LOCK</b>  |
|                          | <b>RESET</b>   | <b>NMO 60 from MCR Opto monitor</b>                         |                 |
| <input type="checkbox"/> | <b>VERIFY</b>  | <b>MCR sees NMO 60</b>                                      | <b>OK</b>       |
| <input type="checkbox"/> | <b>VERIFY</b>  | At encl 4521 relay <b>FK10</b> is                           | <b>ON</b>       |
|                          |  |   |                 |
| <input type="checkbox"/> | <b>Check for acceptance of Test Chipmunk NMO 60 located at Plug Door</b> |   |                 |

**END OF TEST PROCEDURE**

**TTL: Sign for completion of initial testing:** \_\_\_\_\_

**Date:** \_\_\_\_/\_\_\_\_/\_\_\_\_

**TTL: Sign for completion of final testing:** \_\_\_\_\_

**Date:** \_\_\_\_/\_\_\_\_/\_\_\_\_