

The successful Stardust Tray-Separation Team



The first, relatively unobstructed look at the Stardust collector following opening of the canister; the deployment arm carrying the diverse contamination witness plates is still in place. The aerogel visible is actually the exposed front side of the Interstellar Collector, while the Cometary Collector is facing down on the SRC deck.



Close up inspection of Stardust Collector immediately after SRC Opening



Tray separation device in ready position. Note that the collector sandwich can be seen in the background resting on SRC lid (on the stainless steel bench below the window) as per Canister Opening Procedures; refer to step 6.2 in Tray Separation Procedure (TSP).



Removal of collector sandwich from the SRC Deck following completion of the Canister Opening operations by Lockheed-Martin, Denver. This step marked the contractual end of the “Recovery Phase” and the beginning of the Preliminary Examination (PE). The collector responsibility has been formally transferred to the PE Team; see Step 6.3 in TSP.



The collector assembly is being mounted onto the Tray Separation Device; refer to Step 6.4 in TSP.



Collector was mated and bolted to the Tray Separation Post slides and the actual table is being moved to the center of the workspace; refer to Step 6.4.7 in TSP.



Rotation of collector about the hinged Tray Separation Post; refer to Step 6.6.2 in TSP.



Fully rotated tray assembly; refer to Step 6.6.2 in TSP. This was the first opportunity to view the exposed surface of the cometary collector. The Interstellar side is facing towards the rear and was extensively photographed in this position (see Level 1 Photodocumentation)



Horizontal translation of the collector sandwich along a piece of slotted Al-struts to the other end of the table enabling close-up photography of the cometary side (see Level 1 photography; also refer to Step 6.6.4 in TSP).



Removal of the four (4) Tray Assembly Bolts that held the cometary and interstellar collector grids together; refer to step 6.7 in TSP. Note that the tray assembly has been rotated into the horizontal position and the Interstellar Tray is facing “up” once again.



After removal of the four (4) assembly bolts, the Cometary Tray is being lowered gradually to the base of the Tray Separation Post; refer to Step 6.8 in TSP.



First close up view of the back side of the cometary collector



Both trays are completely separated and a protective Lexan shield has been installed to protect the cometary collector from any inadvertent damage while working on the Interstellar Tray above; refer to Step 6.9 in TSP.



Installation of the Vertical Clamp Post that accommodates a clamping mechanism that is mounted on a slide. The purpose of this device is to steady the “tray holder”, which is a frame-like device that was mounted to each tray; refer to Step 6.10.1 in TSP.



Mating of a Tray Holder (TH) with the Interstellar Tray. The team member on the right is moving the clamping device vertically, while the member on the left is moving it horizontally to align the TH with the four (4) holes that were used to hold the Interstellar and Cometary Trays together during the mission. The TH has a protrusion (ear) that is inserted into the clamp on the right; refer to Steps 6.10.3 through 6.10.4 in TSP.



Insertion and tightening of assembly screws that will permanently attach the Interstellar Tray to the Tray Holder; refer to Step 6.10.5 in TSP.



Installation of the Front Lid, a frame like device that protects the exposed front side of the Interstellar Tray. The lid is held in place by four (4) thumb screws, one in each corner of the Front Lid / Tray Holder; refer to Step 6.11 in TSP



Installation of the Rear Cover on the Interstellar Tray; refer to Step 6.12 in TSP.



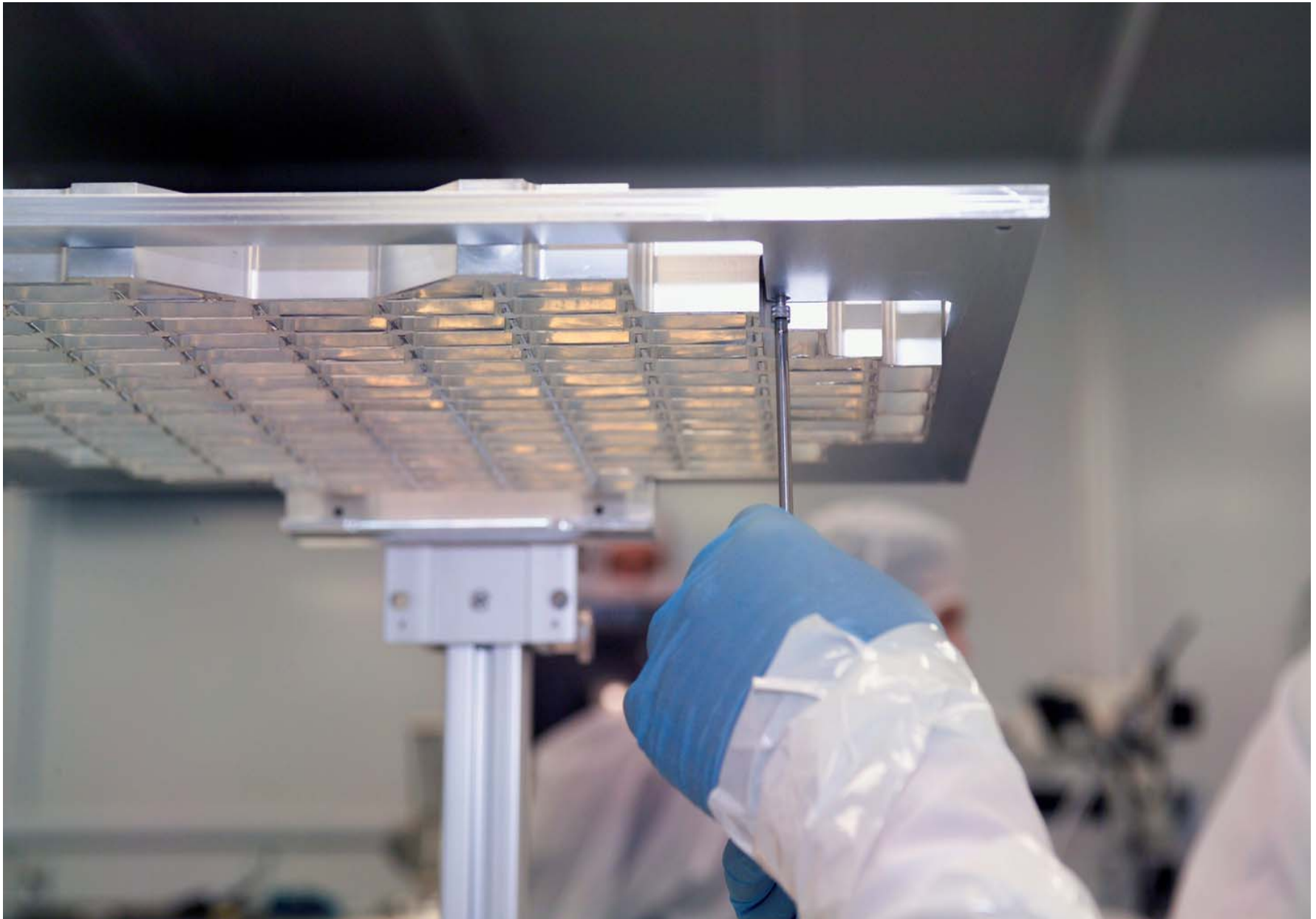
The fully assembled Interstellar Tray Holder & Cover being removed from the Tray Separation device; refer to Step 6.13 in TSP.



Raising of the Tray Holder to mate with the Cometary Tray; refer to Step 6.15 in TSP.



Attaching the Tray Holder to the Cometary Tray; refer to Step 6.15.6 in TSP.



Installation of Rear Cover on to the back of the Tray Holder of the Cometary Tray; refer to Step 6.16 in TSP.



Installation of Front Cover on to the Cometary Tray holder; refer to Step 6.17 in TSP.



Removal of Cometary Tray from the Tray Separation device. From here, the collector now in its protective case was transferred to an N₂-purged storage cabinet; see Step 6.17.3 in TSP.



Placement of the Cometary Tray in to the N₂-purged storage cabinet.

