

PlaneWave CDK12.5

Mirror Cleaning Guide

Prepared for safe and effective cleaning of primary and secondary mirrors.

Updated Procedure – 2025

Date: October 1st, 2025
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Cleaning the Mirrors on a PlaneWave Telescope (Edited Procedure)

Proper cleaning of the mirrors is critical for maintaining optimal optical performance. This updated, conservative procedure is safe and effective for cleaning the primary mirror and is equally applicable to the secondary mirror.

Materials Needed:

1. Filtered air blower or alternatively compressed air (designed for optics use)
2. Camel hair brush (optional but useful for delicate dust removal) — ensure it is new and clean
3. Kimwipes (lint-free)
4. De-ionized water
5. Liquid dish soap (non-waxy, unscented, not antibacterial)
6. Paper towels (for soaking up excess water, not for direct use on mirrors)

Procedure:

1. Prepare the Telescope

- Position the telescope so the front end is angled slightly lower than the back (a few degrees past horizontal). This ensures water flows away from sensitive components.
- Place paper towels inside the carbon fiber light shroud to catch any excess water that may drip during cleaning.

2. Remove Loose Particles

- Use compressed air to blow off dust and loose debris. Do not shake the canister to avoid expelling liquid propellant. Perform a test spray before using it on the mirror.
- (Optional) Use a camel hair brush to gently remove any remaining particles.

3. Prepare the Cleaning Solution

- Mix $\leq 1/4$ teaspoon of non-waxy dish soap into 1/2 quart of de-ionized water (Container #1). Avoid over-soaping.
- Prepare a second container (Container #2) with 1/2 quart of clean de-ionized water for rinsing.
- Prepare a third container (Container #3) with 1 quart of clean de-ionized water for rinsing your hands.

4. Wash and Prepare

- Wash your hands thoroughly with the same soap. Do not use gloves — bare hands prevent contamination. Ensure nails are trimmed.
- Dry your hands using Kimwipes only.
- Ensure your telescope tube is well lit and all containers and Kimwipes are ready.

5. Clean the Mirror

- Fold two Kimwipes into a 2×2 inch square. Submerge completely in the soap solution (Container #1). Ensure no dry spots remain.
- Lay the wipe gently on the mirror surface at the top center. Do not apply pressure. Wait 2–3 seconds.
- Drag the wipe downward in a slow, straight line. Do not go back up. Overlap slightly with each new line.
- Stop at the center obstruction, then pull the wipe out gently and discard it immediately.
- Dip your soapy fingers in Container #3 to rinse any soap off your hands.
- Take fresh Kimwipes soaked in clean de-ionized water (Container #2). Drag them in the same downward motion across the soaped area to rinse. Discard after each pass.
- *If you notice that there is still some soap or that it needs another soap/rinse cycle, you can repeat the procedure on the same area.*
- The cleaned area should be wet with de-ionized water droplets that will flow down to the towel at the bottom.

6. Inspect and Dry

- Allow the mirror to dry naturally. De-ionized water will evaporate without leaving spots.
- **IMPORTANT:** You can start by testing a small section for effectiveness and wait for that section to dry before proceeding with the entire mirror. If there are slight water spots left, test your scope before cleaning it again. LESS IS MORE HERE. Please control the impulse to make it spotless — it is almost impossible to achieve a perfectly clean mirror.

7. Finalize Cleaning

- Let the mirror air dry completely. Any remaining solution will collect at the bottom and be absorbed by the paper towels.
- Remove and discard the paper towels carefully.

Cleaning the Secondary Mirror

The same cleaning procedure applies to the secondary mirror. Due to its smaller size and elevated position, take extra care to stabilize the telescope. Use the same materials, techniques, and precautions.

Notes:

- Avoid applying pressure or reusing cleaning materials to prevent scratches.
- Clean mirrors only when necessary, as excessive cleaning increases the risk of damage.
- This procedure ensures safe and effective cleaning of both the primary and secondary mirrors of all PlaneWave telescopes.

By following these steps, you can maintain the cleanliness and performance of your PlaneWave telescope's optics safely and efficiently.

Illustration: Cleaning Pattern

