



### HyperStar Conversion Instructions:

The conversion of a Schmidt-Cassegrain telescope requires 16 steps:

1. Check the Conversion Kit components



2. Set the telescope in a 45° angle and remove the secondary cap



3. Removing the Corrector Plate Retaining Ring
  - o Removing the screws



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- Careful removal of the retaining ring without touching the corrector plate



#### 4. Making Index Marks

- Set the Secondary Mirror Mounting Plate from the Conversion Kit on the Secondary Mirror Holder of the telescope and align the three screw holes.



- Use a marker and mark the position of the set screw from the Secondary Mirror Mounting Plate on the edge of the original Secondary Mirror Holder.



- Now make a Mark on the edge of the corrector plate at the same angle as the mark made on the Secondary Mirror Holder.



These marks allow returning the optical elements to exactly the same orientation where they were removed.

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5. Removing the Corrector Plate



6. Temporarily storing the telescope to keep the secondary mirror clean



7. Removing Secondary Housing from the Corrector Plate

- o Set the Secondary Housing with Corrector Plate on a clean magazine



- o Compress the Secondary Mirror Baffle Tube at 90° angles until it begins to break loose.



- o The Baffle Tube can begin to be unthreaded



- o Set the loose Secondary Housing with Corrector Plate on a clean magazine

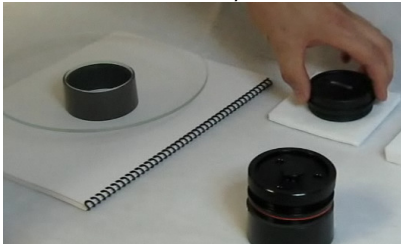


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- Remove the Secondary Assembly from the Corrector Plate without touching the Corrector Plate itself



#### 8. Replacing the Baffle Tube from the Conversion Kit

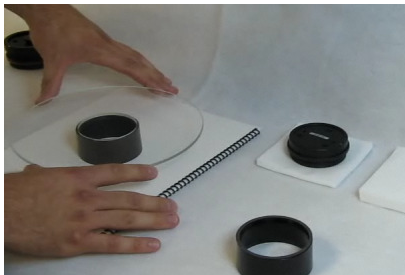
- Set the Secondary Mirror Assembly on clean soft cloths



- Take the Baffle Tube from the Conversion Kit and make sure that the gray gasket is still on the top of the Baffle Tube



- Set the Corrector Plate on the new Baffle Tube



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9. Installing the Secondary Holder

- Set the Secondary Mirror Holder from the Conversion Kit in the Baffle Tube



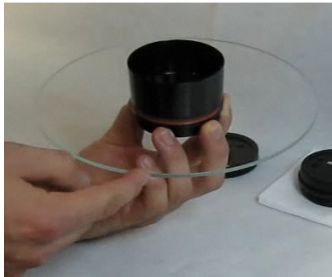
- Align the Index Mark on the Corrector Plate with the notch in the Secondary Mirror Holder and begin to tighten the assembly



- Flip over the Corrector Plate



- Check the position of the Index Mark and the notch in the Secondary Mirror Holder



- Tighten the Corrector Plate in the Baffle Tube (it should be very tight)



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- Double check that the position of the Index Mark is aligned with the notch



#### 10. Replacing the Secondary Mirror

- Align the set screw of the Secondary Mirror Mounting Plate with the Index Mark of the old Secondary Mirror Holder to make sure that the collimation screws holes are correctly aligned



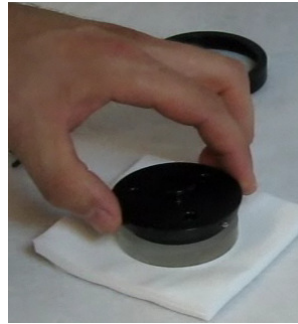
- Check that the three screws are in the right position



- Remove the screws



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- Set on the new Mirror Mounting Plate with the Index Mark in the correct position



- Set the original screws in the new Mounting Plate and tighten them equally. This will make collimation easier.



#### 11. Replacing the Corrector Plate

- Set the Telescope back to a 45° angle



- Set the Corrector Plate back in the Telescope and align the Plate with the Index Marks



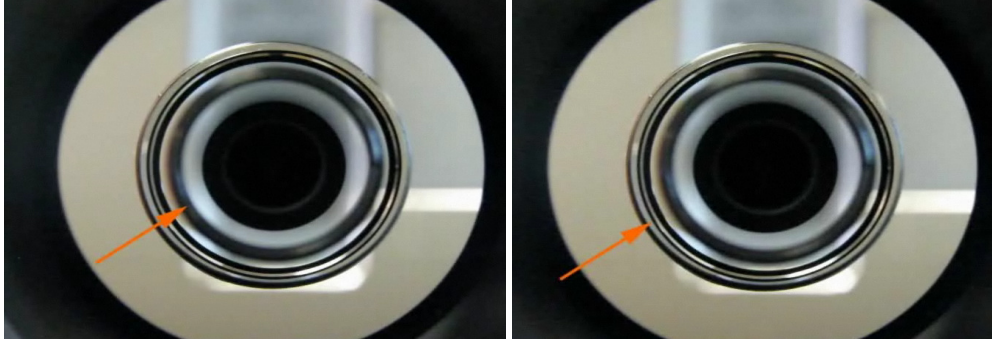
- Check that all Index Marks are aligned



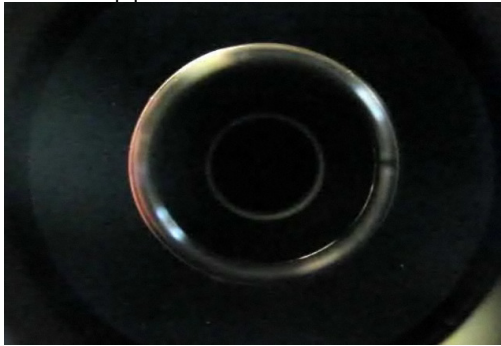
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## 12. Checking the Corrector Alignment

- Look straight into the front of the telescope. The reflection of the Secondary Mirror Holder (inner ring below) should be concentric with the Secondary Mirror Holder itself (outer ring below).



- Move closer to or farther from the telescope until the two rings appear to touch. The Primary Mirror Baffle Tube (inner ring below) should appear concentric to the Secondary Mirror Holder.



- ## 13. If necessary, adjust the Corrector Alignment with shims until the Baffle Tube and Secondary Mirror Holder are concentric





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#### 14. Replacing the Corrector Plate Retaining Ring

- o Carefully replace the Corrector Plate Retaining Ring



- o Replace the screws but do not over-tighten them



#### 15. Replacing the Secondary Mirror

- o Set the set screw of the Secondary Mirror Mounting Plate in the notch of the Secondary Mirror Holder



- o Set the Secondary Mirror into the telescope at an angle to prevent scratching the mirror



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- Replace the Secondary Mirror Retaining Ring but do not over-tighten it



16. The telescope is now ready for HyperStar

