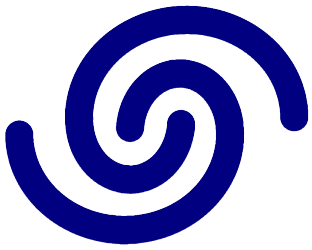

Astrel Instruments

AST-8300-B

AIR REMOVAL PROCEDURE

rev A

Air Removal Procedure

To correctly operate your AST8300 camera, you always have to be sure that the air has been removed from the sensor chamber before lowering the temperature below ambient.
The sensor chamber is tested to retain vacuum for minimum 3 days, but most of the time you will find out that vacuum is retained for much longer periods.

It is very important not to open the air valve on the camera and let the negative pressure inside suddenly fill the chamber with air, because the water vapor could condensate into liquid water and cause damages if the camera is powered. Moreover, if the sensor temperature is low enough, water will turn to ice on the sensor window possibly leaving it dirt when evaporating.

To eliminate the air from the sensor chamber, you need to pump it out using the included manual vacuum pump. The pump is connected to the air valve using the included tube: screw it on the air valve until the small o-ring is pressed (not so much to damage it) and insert the nose of the pump on the other side until the tube cover the full nose.

Before opening the air valve, you have to test the air tightness by pumping out the air from the tube with the air valve closed (that is with the lever parallel to the optical window): looking to the manometer, you should be able to reach at least -25 in/Hg and when you stop pumping, this value must be retained, that means the air is not entering from outside. If the value is not retained, try to press more the o-ring by screwing the tube a little more and try again.

Once done with this step, you can open the air valve on the camera: the manometer will show the internal vacuum: if needed, **pump out the air until you have -25 in/Hg vacuum**.

The air removal process is best done if the camera is in a warm environment.

When changing camera filters follow the related procedure for what concern proper camera opening and air removal.