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Instructions for Use of LISST-100X Path Reduction Module (PRM)

1. The glass faces of the PRM glass were cleaned before shipping, a wipe with a clean towel or blow with clean air will remove any dust. For future deployments, ensure the surfaces of the PRM glass are clean before mounting the assembly on to the LISST-100X. The glass surfaces are not coated. Also ensure that the instrument windows are clean.
2. Please see sketch. Use the supplied Mounting Screws and PRM Spacers to install the PRM (not too tight- the clamp is plastic) in the LISST-100X's optical path so that the assembly is closer to the small window than the larger window of the LISST-100X, without the PRM glass touching the Small Window. If necessary, loosen the PRM clamping screw (#4 size) and slide the PRM glass (and Bushing, if installed) such that there is clearance with the Small Window. Hold the glass/ bushing so that it cannot slide out of the Clamp when the screw is loosened. Please see sketch. Use a water dropper to wet the Small Window and the end of the PRM Glass that will press against that window. With enough water on those surfaces, loosen the PRM clamping screw (#4 size) and gently slide the PRM glass against the small window, then re-clamp the screw. This configuration optimizes the performance of the PRM, **but care must be taken to ensure that a film of clean water always remains between the Small Window and the PRM glass.** Any fouling of that film with air or particles will degrade the Background Scatter File quality and should be readily apparent when evaluating the file.
3. **After installation, in clean water, a new Background Scatter File will need to be taken for this new configuration and the file labeled as such.**
4. Because the sample volume of the LISST-100X with the X% PRM installed is ((100-X)/100) times what is standard, the data that are PROCESSED with the LISST-SOP version 4.65 or 5.00 will NOT have the correct volume distribution in columns 1-32 of the .ASC file, or the correct beam attenuation in column 42 of the .ASC file. After processing, you must multiply

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columns 1-32 and 42 with 2, 5, or 10, depending on whether you have used a 50, 80 or 90% PRM.

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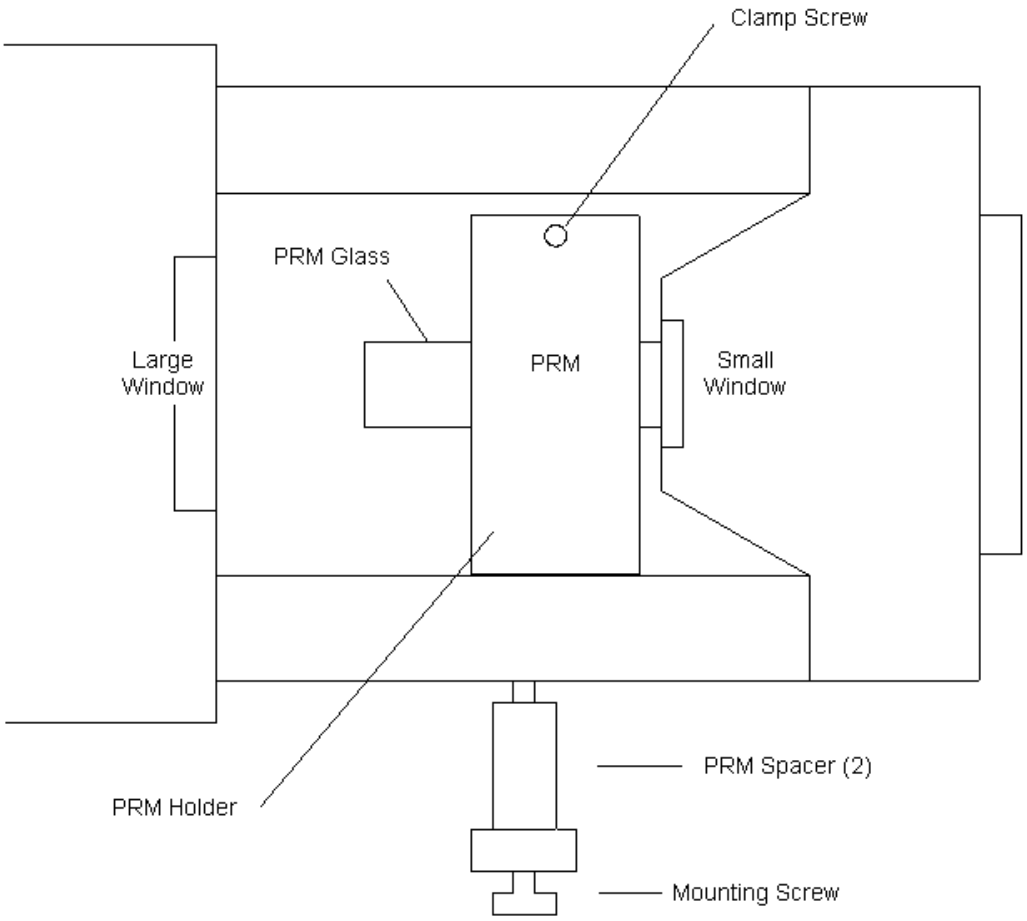
Install PRM in LISST-100/ LISST-100X



Notes:

PRM holder installs closer to Small Window than Large Window.

Do not over tighten Mounting Screws.

With the PRM Glass positioned as received and the PRM Clamp installed, holding the PRM Glass with one finger so that it cannot slip and fall out or bang against the small window, loosen the Clamp Screw, place a drop of water on the face of the PRM Glass closest to the Small Window, then gently push the PRM Glass against the Small Window, then tighten the Clamp Screw.