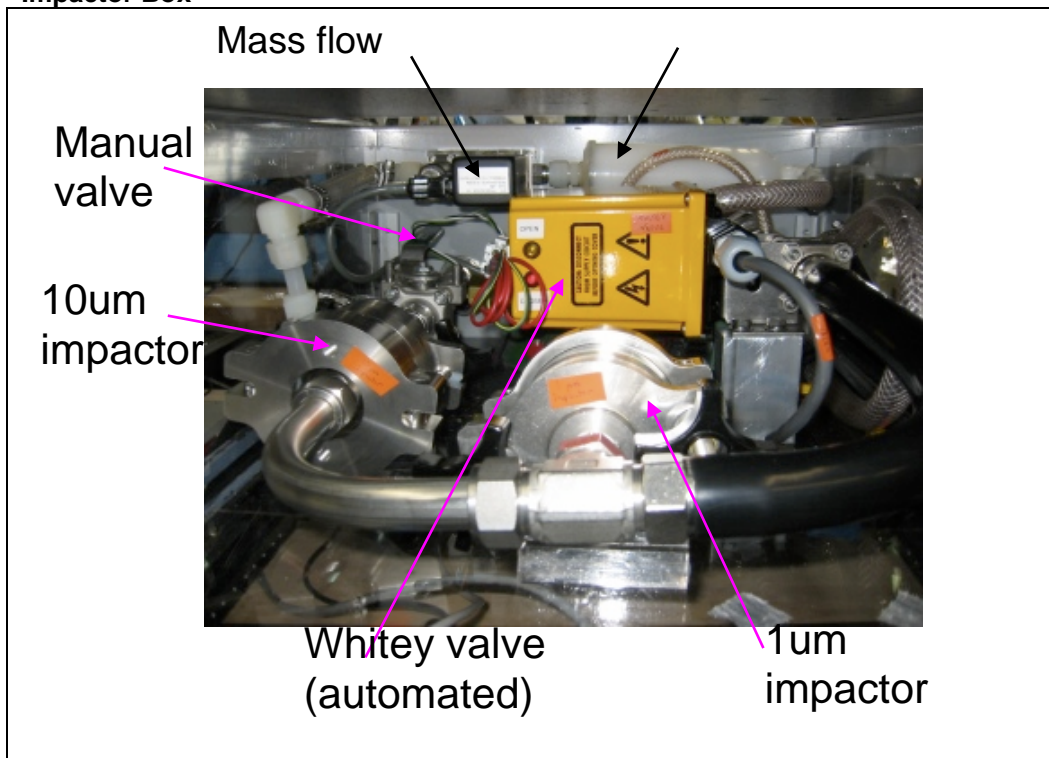


Impactor Box



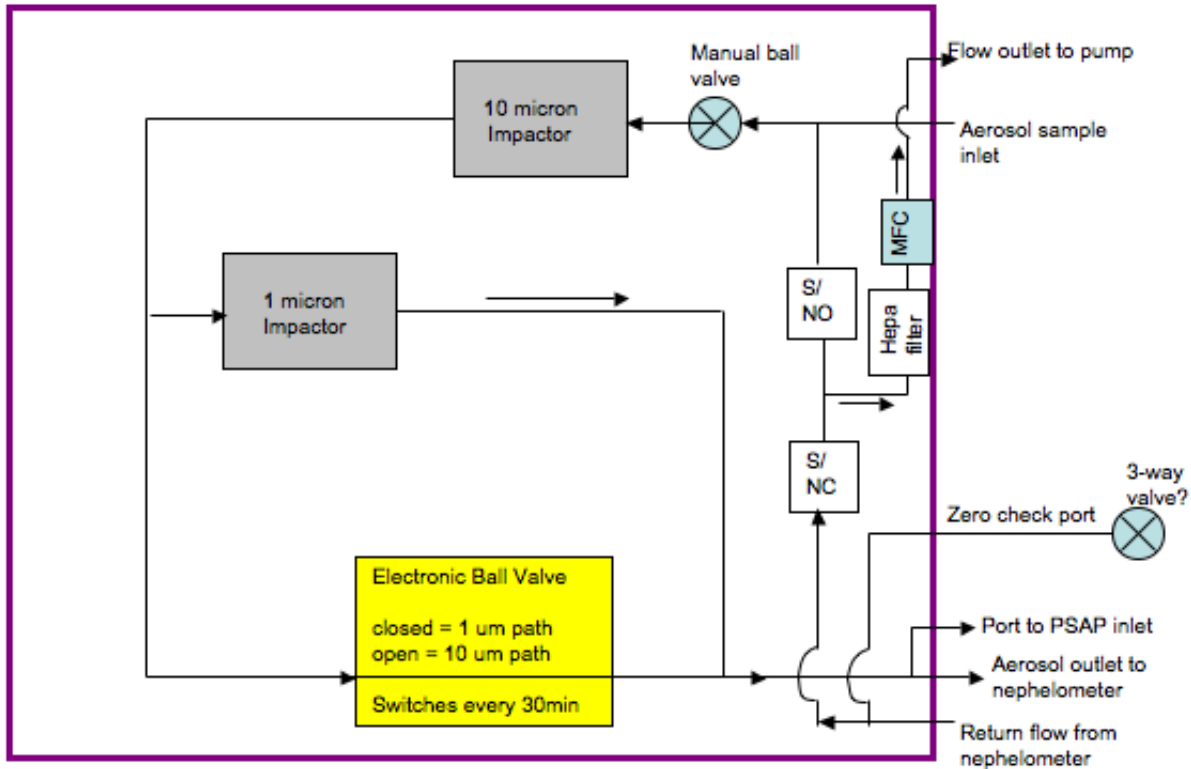
This is a front view of the impactor box. The 10 um impactor is on the left and the 1um impactor is in the center. The big yellow Whitey valve switches flow between 10 and 1um impactors. The impactors should be cleaned every 2 months at Barrow.

In the top center of the picture (inside the pink rectangle) is the mass flow controller (MFC) with a white hepa filter attached to the right side of it.



This is the back of the impactor box. This is where the sample for the nephelometers and PSAP come in from the pumpbox. After going through the impactors the airflow is split to go (a) to the ref neph and (b) to the PSAP.

Flow through impactor box



This schematic shows one way (the normal way) air can flow through the impactor box. If a span check is happening or the system is bypassed then different there are different flow paths.

CPDlive controls the switching of the electronic ball valve and also what solenoid is open or closed.

The zero check port is connected to a 3-way valve. After one cleans the impactors one can use the leak test procedure described in the manual to see whether changing the impactors induced a leak in the system.