

Criteria used to identify periods of Maintenance, Polluted, Marginally polluted, Marginally clean, and Pristine on a minute time resolution. The period covered is August 3 to September 9, 2008.

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Flag #	Criteria	Label
0	<ul style="list-style-type: none"> - Service: leak test defrosting the sampling manifold etc. - Rem 1: Do not publish 	Maintenance
1	<ul style="list-style-type: none"> - Toluene is violated (>175% of the running mean) - UCPC is high and variable - UCCP spikes (duration < than 5 min) as during helicopter and/or snow mobile activity - Rem 1: Usually both wind speed is low and variable and/or wind sector is from 90° to 270° relative to the bow - Rem 2: Number particles concentrations showing rapid increases over a wide size range 	Polluted
2	<ul style="list-style-type: none"> - Not Flag 1 - Frequently occurring “clean” periods in between pollution events under conditions of potential pollution - Rem 1: Dangerous to use this data 	Marginally polluted
3	<ul style="list-style-type: none"> - Wind speed is low (<2 ms⁻¹) or wind sector is from 90° to 270° relative to the bow. - Not Flag 1 or Flag 2 - Rem 1: Clean of Toluene and total particles number and number size distributions apparently not affected. - Rem 2: Be aware of interpretations of gas phase chemistry only, except for Toluene 	Marginally clean
4	<ul style="list-style-type: none"> - Not Flag 1, Flag 2 or Flag 3 - Relatively high total particle number - Rem 1: A consistent picture with the number size distribution is seen 	Nucleation
5	<ul style="list-style-type: none"> - Not Flag 0, Flag 1, Flag 2, Flag 3 or Flag 4 	Pristine

Note: For many purposes you can use Flag 2-5, For most purposes you should use Flag 3-5.