



A megacryometeor is a giant hailstone. See Xmas 2007 issue of New Scientist.

Question
Where do blue-sky megacryometeors come from?

Hypothesis
Airplanes

Hypothesis
Cool tropopause

Evidence
most events happen in winter and early spring

assumption
aircraft most often have icing problems in winter/spring

Counter-evidence
there were megacryometeors before the age of aviation.

Sub-hypothesis
Airplane toilets

Sub-hypothesis
Other places on planes

Evidence
most events happen in winter and early spring

Evidence
unique atmospheric conditions coincide with (some) falls

Evidence
the # of megacryometeors reported in the last few decades is growing

Objection
only thunderstorms could generate the huge vertical thrusts required

Explanation
A cool tropopause can create very turbulent wind conditions which can keep ice in the air while it builds up

An explanation of how the hypothesis could be true seems different to (strongly) supporting evidence, i.e. independent information suggesting that the hypothesis is true.

This Con counts against "any" airplane-related hypothesis

Counter-evidence
megacryometeors are generally not blue

assumption
falling ice from toilets is blue

Objection
it is hard to find other places on an airplane that could support such a large buildup of ice

Sub-hypothesis
Wheel well

Sub-hypothesis
faulty water heater leaking

But not all falls?

Explanation
Global warming may be making the tropopause cooler, moister and more turbulent

Objection
Growth to mega size would take weeks or more

This Con counts against any non-toilets hypothesis

Objection
heat from braking after takeoff would melt the ice

Objection
would not explain the megacryometeor at Tampa

Evidence
None of the 15 planes in the vicinity of Tampa at the time reported problems with water heaters

This is a piece of basic/low-level evidence. Pros/Cons or Supporting/Opposing Arguments should be pitched at the highest appropriate level of generality. Then a piece of evidence, at a lower level of generality, can come in to back it up.