



# High Ice Water Content Forecasts



## Protect People and Assets with High Ice Water Content Forecasts

Power loss, engine blade damage, and unplanned maintenance caused by High Ice Water Content are significant safety and financial risks. High Ice Water Content can occur even when conditions appear benign, with no considerable radar echoes, no airframe icing, and only light turbulence. Knowing your potential risks for this type of atmospheric phenomena — both before and during a flight — can minimize its impact.

## Three reasons you need High Ice Water Content forecasts

During flights, pilots must increase the aircraft's distance from the phenomena or fly at a different altitude, increasing fuel burn, potential payload reductions, and late arrivals.

International regulations prohibit operations in moderate to severe conditions. Knowing the High Ice Water Content forecast can minimize flight delays and cancellations.

Aircraft engine inspections are required after any High Ice Water Content event is detected. Unplanned inspections increase downtime and the cost of unplanned maintenance can reach upwards of \$30,000 USD.

The DTN High Ice Water Content forecast available with AviationSentry<sup>®</sup> weather solution can help you can reduce these risks and costs.

## Why the aviation industry relies on this forecast data

### Ensure safety

DTN High Ice Water Content forecast datasets provide actionable insights to help reduce the risk of ice crystals forming on aircraft's engines and accumulating on air data probes, which can generate anomalies that impact your flight management system.

### Better information = better decisions

DTN High Ice Water Content forecasts leverage state-of-the-art numerical weather prediction models with flight-level specifics in their algorithms. This is important as many other High Ice Water Content solutions on the market are not forecasts, but rather estimated observations lacking flight-level specific content. Our data forecasts both liquid and ice water content in convective storms. Produced in high-resolution GRIB format, our forecasts can be used in your flight planning systems to help optimize flight routes for specific aircraft types.

**Better anticipate  
High Ice Water  
Content to protect  
people and assets,  
as well as reduce  
expenses.**



## Get the complete picture

DTN High Ice Water Content forecasts are available in our industry-leading AviationSentry® solution. It allows you to display forecasted ice crystal risk within its layered maps for enhanced visualization. You can select from North American or global domains, as well as 11 different flight levels using a simple slider. Our data includes 36-hour forecasts for light, moderate, and severe ice crystal potential, allowing you to quickly identify potential operational impacts.

## Flexibility – get the format that’s best for you

Our forecasts are available in multiple data formats to work with your existing aviation technology. It’s offered via both Shapefiles and our Web Mapping Services API, which allows it to be overlaid in flight following tools to help you quickly identify weather issues that could impact active or planned flights.

## How we help

DTN High Ice Water Content Forecasts are fully operational, with 24/7 support. They enable better decisions across multiple roles.

- Pilots can quickly visualize the data in the cockpit, using electronic flight bag applications to better understand High Ice Water Content potential for their altitude and position.
- Dispatchers and flight followers can view DTN High Ice Water Content Forecasts in either AviationSentry or their flight tracking application to better understand which flights will likely be impacted.
- Pilots and dispatchers can receive alerts in our flight route alerting tool when their planned route will intersect with an area of High Ice Water Content. Flight planners can then use this information to make decisions about specific flight routes and make any necessary fuel load adjustments.

## Get the full picture

- Global, 36-hour forecast of light, moderate, severe ice crystal potential
- 11 unique flight-level specific forecast outputs
- Multiple data formats available for third-party industry consumption
- Leverage state-of-the-art numerical weather prediction models as input into the DTN forecast algorithm
- DTN IP for cloud ice computations - one of the unique aspects of DTN icing forecasts is its ability to forecast both liquid and ice water content in convective storms

## The DTN advantage

We can help you improve your operational confidence, communications, and decision-making in potential engine icing situations. DTN High Ice Water Content forecasts give you the actionable insights you need to make smart, informed decisions. You'll be able to anticipate potential areas of impact and plan to reduce excessive fuel burn and scenarios that result in expensive, unplanned maintenance.

[Find out more](#)

The DTN logo consists of the letters "DTN" in a bold, black, sans-serif font. To the upper right of the "N" is a small degree symbol (°). The degree symbol is composed of a blue circle on the left and a green circle on the right, with a white dot in the center.