



## Aventus SIGMA Ground

Dear PPS customer!

AVTECH Sweden AB ([www.avtech.aero](http://www.avtech.aero)) is a company specializing in bringing sophisticated weather information directly to the decision maker – YOU!

We have been in business and have worked with weather up-linking over the last 20 years. Our products are already in service with Southwest Airlines, easyJet and Lufthansa Cargo, and it is a pleasure to welcome you and your colleagues to the Aventus user family.

This information leaflet is intended to give you an introduction to the Aventus SIGMA service along with a description of the functionality.

Flight crews around the world mostly use the SWC charts to determine hazardous flight conditions. These charts are made by hand and cover large areas and time periods. SIGMETS are also usually large areas defined by coordinates, not always very easy to relate to the flight at hand.

The Aventus SIGMA Ground service does 2 main things:

1. Gives a high-resolution forecast relating to hazards on your route based on the flights actual trajectory (route) and time.
2. Relates any SIGMETS published to the flights actual route and time in a more easily read format.

The information from the SIGMA service is supplementary to the official publications of SWC and SIGMETS. That means you always have to check those too and they are the sources approved by the authorities. But the SIGMA service can help give more information and also a clearer picture on what is going on. The source is the same, just more in detail and related to your flight.

The underlying data for the SIGMA service comes from the high resolution global weather model at Met Office (UK) in Exeter. Route information from PPS is retrieved and matched for hazardous weather. The results are then added to the PPS briefing pack as a SIGMA SIGMET REPORT along with the actual SIGMET or a SIGMA HAZARDOUS WXR REPORT. It can look like this:

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SIGMA REPORT 27164022
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SIGMA SIGMET REPORT (Here related to the flight)

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**FROM ESILA/-46 TO CASPE/-75**

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WSSP31 LEMM 020752 LECM SIGMET 4 VALID
020800/021200 LEVA- LECM MADRID FIR/UIR
SEV TURB FCST E OF LINE N4310 W00120 -
N36 W004 FL240/360 MOV E 10KT WKN=
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SIGMETS (Here in raw format)



WSSP31 LEMM 020752 LECM SIGMET 4 VALID  
020800/021200 LEVA- LECM MADRID FIR/UIR  
SEV TURB FCST E OF LINE N4310 W00120 -  
N36 W004 FL240/360 MOV E 10KT WKN=

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SIGMA HAZARDOUS WXR REPORT (Turbulence forecasted based on high-res data)  
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TURBULENCE  
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	FL300	FL320	FL340	FL360	FL380
-50				LGT12	
ESILA			LGT12		
-100	LGT12	LGT12	LGT12	LGT12	
-50	LGT12	LGT12	MOD19	SEV48	
MINGU	LGT12	LGT12	MOD19	SEV48	
-100	LGT12	MOD19	MOD19	SEV48	
-50	LGT12	SEV48	MOD19	SEV48	
CASPE	LGT12	SEV48	MOD19	MOD19	
-200	LGT12	SEV48	MOD19	LGT12	
-150	LGT12	SEV48	MOD19	MOD19	
-100	LGT12	SEV48	LGT12	MOD19	
-50		SEV48	LGT12	LGT12	
DEGOL		LGT12	LGT12	LGT12	
-50		LGT12	LGT12	LGT12	
ARDEG		LGT12	LGT12		
NEDRU		LGT12	LGT12		
LAPRI		LGT12			
TUPUP					
TONDA					
-50		LGT12			
BOTAL		LGT12			
PIKOT					
-100		LGT12			
LIPE		LGT12			

The "LGT12" means "Light" and the number representing a turbulence level from the weather model on a scale as follows. This gives crew of various airframes the ability to judge the level depending on equipment. A A380 might accept a higher level versus a CRJ. LGT=8 - 15 MOD 15 - 30 SEV > 30