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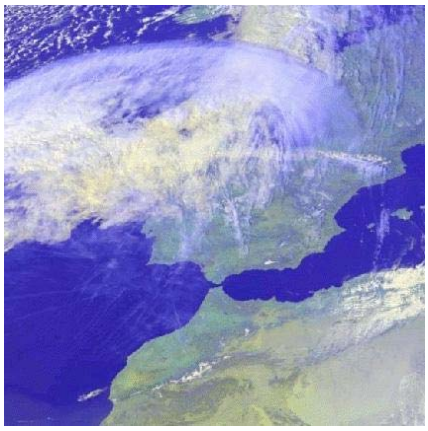
ESA CONTRAILS

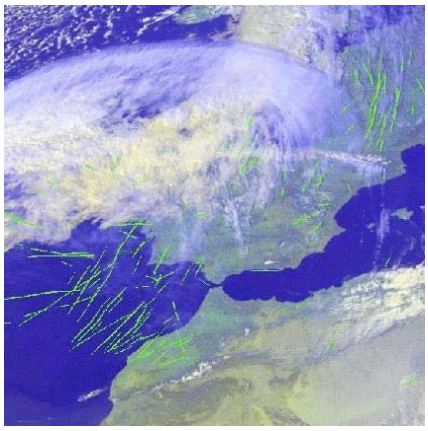
NEODAAS partnered the German Aerospace Agency (DLR) and Royal Netherlands Meteorological Institute (KNMI) in a two year ESA project entitled CONTRAILS. The project was part of ESA's Data User Element (DUE) programme, which aims to help establish relationships between client communities and Earth Observation services. The project demonstrated an Earth Observation satellite based service to detect and monitor aircraft condensation trails and resulting cirrus cloud coverage and investigated the environmental effects of these. The project client, EUROCONTROL, is responsible for air navigation safety across European and provided air traffic data.

NEODAAS was ideally suited to CONTRAILS in terms of geographical coverage and extent of its AVHRR data archive. The region of interest extended across Europe and the North Atlantic to the US east coast and data as far back as 1985 were required for historical context. A DLR contrail detection algorithm was implemented at NEODAAS and an automated processing chain set up to process several thousand recordings from the on-line AVHRR archive. Resulting contrail detection maps were delivered to the partners for analysis.

CONTRAILS demonstrated the importance of long-term strategic data acquisition and archiving and showed how on-line data access and automated processing can be used to produce decadal time scale analyses. It also illustrated how users might provide algorithms to NEODAAS for implementation, eliminating the need for processing by the user.

Visit the Contrails Website





Satellite imagery can be used to identify aircraft condensation trails as in ESA CONTRAILS project. Detected contrails are highlighted in green in the image on the right.