Forecasting Advection Sea Fog with the Use of Classification and Regression Tree Analyses for Kunsan Air Base

Authors: Danielle M. Lewis, AIR FORCE INST OF TECH WRIGHT-PATTERSON AFB OH SCHOOL OF ENGINEERING AND MANAGEMENT

... no suitable methods developed for forecasting advective sea fog at Kunsan, primarily due to a lack of understanding of sea fog. This work explored the feasibility of predicting sea fog development with a 24-hour forecast lead time. Before... of fog formation, the physical properties of fog droplets, and its dissipation. Examined in this work were data sets of Kunsan surface observations, ... revealed weak relationships between the target variable (sea fog) and upper air predictors, with stronger relationships... to air forecasters in predicting the evolution of sea fog events and advection over the area.

Modern Methods for the Artificial Dissipation of Fog and Low Clouds and Experience in Using These Methods for Aviation Purposes

Authors: I. I. Gavronskiy, L. I. Krasnovskaya, A. D. Solovov, FOREIGN TECHNOLOGY DIV WRIGHT-PATTERSON AFB OH

The report contains reviews methods for the artificial dissipation of low-level clouds and fogs. A classification of dissipation methods is given. The classification was made on the basis of the physical processes capable of leading to an improvement of visibility in... provides the most characteristic methods listed in the table. It is proposed that the specific expenditures on energy (reagent) during a definite period be regarded as the principal criterion of method efficiency.

A Detailed Study of Advection Sea Fog Formation to Reduce the Operational Impacts Along the Northern Gulf of Mexico

Authors: Jason M. King, NAVAL POSTGRADUATE SCHOOL MONTEREY CA

This study creates rules of thumb for forecasting advection sea fog development and dissipation... the northern Gulf of Mexico for the months of December through March. Surface observations from Tyndall AFB, Destin-Fort Walton Beach... at the five locations listed above. Forecasting rules of thumb were created and... Destin-Fort Walton Beach analysis. Missing sea surface temperatures limited the amount of winter time advection sea fog events that could be examined.

Climatological Summaries, Visibilities Below 1/2 Mile and Ceilings Below 200 Feet, Volume 2, Atlanta Airport, Atlanta, Georgia

Authors: NATIONAL WEATHER RECORDS CENTER ASHEVILLE NC

This report consists of 41 volumes of climatological data for 41 different major airports. Ceiling, visibility, wind, and weather information are grouped by various periods of the day and by various temperature and wind categories. Various weather and landing system categories are tabulated, in most cases from 10 years of data, as aids for making decisions affecting landing systems and fog dissipation at these 41 air terminals.

Climatological Summaries, Visibilities Below 1/2 Mile and Ceilings Below 200 Feet, Volume 20, Los Angeles, California, International Airport

Authors: NATIONAL WEATHER RECORDS CENTER ASHEVILLE NC

The report consists of climatological data for Los Angeles International Airport, Los Angeles, California. Ceiling, visibility, wind, and weather information are grouped by various periods of the day and by various temperature and wind categories. Various weather and landing system categories are tabulated, in most cases from 10 years of data, as aids for making decisions affecting landing systems and fog dissipation.

Climatological Summaries, Visibilities Below 1/2 Mile and Ceilings Below 200 Feet, Volume 32, Pittsburgh, Pennsylvania, Greater Pittsburgh International Airport

Authors: NATIONAL WEATHER RECORDS CENTER ASHEVILLE NC

The report contains climatological data for the Greater Pittsburgh International Airport, Pittsburgh, Penn. Ceiling, visibility, wind, and weather information are grouped by various periods of the day and by various temperature...
and wind categories. Various weather and landing system categories are tabulated, in most cases from 10 years of data, as aids for making decisions affecting landing systems and fog dissipation at the Greater Pittsburgh International Airport, Pittsburgh, PA.

CLIMATOLOGICAL SUMMARIES: VISIBILITIES BELOW 1/2 MILE AND CEILINGS BELOW 200 FEET, VOLUME 31, PHILADELPHIA, PENNSYLVANIA, INTERNATIONAL AIRPORT

Authors: NATIONAL WEATHER RECORDS CENTER ASHEVILLE NC

The report consists of climatological data for Philadelphia, Pennsylvania International Airport. Ceiling, visibility, wind, and weather information are grouped by various periods of the day and by various temperature and wind categories. Various weather and landing system categories are tabulated, in most cases from 10 years of data, as aids for making decisions affecting landing systems and fog dissipation.

A Statistically-Based Method for Predicting Fog and Stratus Dissipation

Mar 2004 89 pages

Authors: Louis L. Lussier III; AIR FORCE INST OF TECH WRIGHT-PATTERSON AFB OH SCHOOL OF ENGINEERING AND MANAGEMENT

The method is a success in producing forecasts for ceiling and visibility criteria that had never previously been examined. It is suggested that the 15 OWS incorporate this methodology into their operational forecasting routine. Ceiling forecasts at Dover AFB and McGuire AFB show improvements over conditional climatology ranging from 1-51% with an average improvement of 19.2% when verified against an independent data set. McGuire AFB visibility forecasts show an average improvement over conditional climatology of 3%. These findings are of particular importance to the Air Force in general and ...