



hydrometeorological
innovative solutions

ADMET

ADvanced
hydroMETeorological
processing system

ADMET is a complete and powerful weather radar data processing system designed to integrate data from sensors and data sources, additional to radar, to produce state of the art meteorological and hydrological products.

ADMET offers a complete solution for the management of radar data including data processing, data correction, product generation, combination with other sensors, and visualization. **ADMET** has been developed for operational use and has been highly optimized, specifically for real time applications.

Modular Architecture

ADMET is a highly modular system which makes it flexible and easily adaptable to existing operating systems. The main modules are the Data Manager, the Product Generator and a state of the art visual display suite. All processes and modules are controlled by the **ADMET** System Manager.

Data Management

ADMET data base solutions reduce the complexity of real time data storage and management and provide the framework for high performance product generation

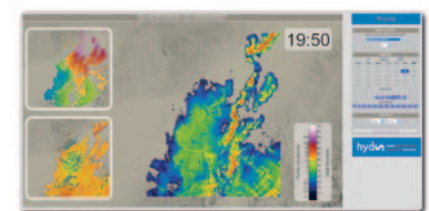
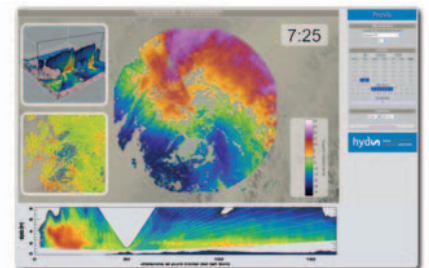
and real time visualization. **ADMET** is designed to easily integrate data from one or more radars and other meteorological observing systems. This flexibility allows **ADMET** to fully exploit the combined information content of different sensors and generate high quality products based on the best available information.

Product Generation

ADMET combines a suite of algorithms from leading research institutes (McGill University and CRAHI-UPC*) that provide the basis for a number of products related to applications in the fields of meteorology, hydrology, aviation, and research.

Visualization

ADMET comes alive with a state of the art visualization system based on vector web-technology. Customization and navigation are facilitated by well-designed, intuitive, visually pleasing and friendly graphical user interfaces.



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ADMET FEATURES



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ADMET key features

- Data management and data storage
- Multiple sensor support
- Wide variety of hydrometeorological products
- Platform independence
- Visualization of products and observations with customizable graphical user interfaces
- Google Earth integration
- Multi language/multi unit support

Radar data processing

- Lost azimuth treatment
- Monitoring of radar stability
- Advanced detection and correction for screening effects
- Ground clutter suppression and substitution
- Detection and correction of side lobe contamination
- Detection and correction of speckles
- Detection of anomalous propagation
- Detection of errors in orientation
- Warning of severe C-band attenuation
- Range and velocity decoupling
- Composite maps

Meteorological Products

- PPI- Plan Position Indicator
- RHI - Range Height Indicator
- CAPPI - Constant Altitude PPI
- Maximum column reflectivity
- Vertical cross sections
- Echo top maps
- VAD - Velocity Azimuth Display
- Doppler PPIs and Shear PPIs (Detection of low-level radial shear)
- Retrieval and display of wind vector field

Forecasting products

- Precipitation tracking and extrapolation
- Short term forecasts of precipitation intensity and accumulated precipitation

Hydrometeorological Products

- Bright band detection
- Optimum surface precipitation map
- Advanced radar-raingauge combination
- VIL - Vertically Integrated Liquid
- Precipitation accumulation maps for different time periods
- Precipitation accumulations for predefined river catchments

Forecasting

Warning products

Separation of convective and stratiform precipitation

Determination and correction for the VPR (Vertical Profile of Reflectivity)

Double Z-R

Hydrometeor classification from polarimetric measurements

Thunderstorm detection

Mesocyclone detection

Overhang (strong updraft) indicator

EVIL - Elevated Vertical Liquid water content

Gust front detection

Wind shear detection

Microburst detection

Dual polarization products

PPIs, RHIs and CAPPIs of polarimetric variables

Composites of polarimetric radar quantities

Rain-rate maps from polarimetric variables

Hydrometeor classification

Near-surface rain-snow boundary identification

*HYDS has exclusive technology license agreements with McGill University and CRAHI-UPC

hyds

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