



WDTB Dual-Polarization Training News

WDTB Dual-Pol Training for FY13 and Beyond

Working closely with the NWS Regions and Training Division, WDTB plans for Dual-Pol Training in FY13 and beyond are shaping up. Here are snapshots of each of the Dual-Pol training courses, starting with the Operations Course.

Dual Pol Operations Course

The Operations Course reaches the largest NWS audience and there are changes planned for FY13.

PUBLISHED BY:

Warning Decision
Training Branch (WDTB)
120 David L. Boren Blvd.
Norman, OK 73072

VISIT US:

WDTB Web Site:
<http://www.wdtb.noaa.gov/>
Facebook:
<http://www.facebook.com/nswsdtb>



E-MAIL QUESTIONS TO:

dualpol_list@wdtb.noaa.gov

WDTB DUAL-POL TEAM:

Jami Boettcher (Lead)
Clark Payne
Andy Wood
Mark Sessing
Don Rinderknecht
Chris Spannagle
Les Lemon
Veronica Holtz

o	Dual-Polarization Radar Operations Course Overview
cc	Dual-Pol Radar Products: Correlation Coefficient
zdr	Dual-Pol Radar Products: Differential Reflectivity
kdp	Dual-Pol Radar Products: Specific Differential Phase
hc	Dual-Pol Radar Products: Hydrometeor Classification
ml	Dual-Pol Radar Products: Melting Layer
qpe	Dual-pol Quantitative Precipitation Estimation (QPE) Products
ww	Dual-Pol Radar Applications: Winter Weather
h	Dual-Pol Radar Applications: Hail Detection
r	Dual-Pol Radar Applications: Heavy Rain Detection
tor	Dual-Pol Radar Applications: Tornadoic Debris Signatures
zdr	Dual-Pol Radar Applications: ZDR Columns
npe	Dual-Pol Applications: Non-Precipitation Echoes
Ww	Dual-Pol Ops Course WES Exercise - Winter Weather (ILT)
Wt	Dual-Pol Ops Course WES Exercise - Tornadoes and Hail (ILT)
Wr	Dual-Pol Ops Course WES Exercise - Heavy Rain (ILT)
Wb	Dual-Pol Ops Course WES Exercise - Bow Echo (ILT)
Wn	Dual-Pol Ops Course WES Exercise - Non-Precipitation Echoes (ILT)
WL	Dual-Pol Ops Course WES Exercise - WDTB-Approved Locally-Developed (ILT)

Forecasters who take this course must complete at least 2 of the 6 available WES exercises (highlighted in red). The first four WES Exercises (Winter Weather*, Tornadoes and Hail*, Heavy Rain*, and Bow Echo*) will be updated with new content. The specific cases have not yet been identified, but the learning style will remain the same. We will have the recorded answer keys and job sheets which provide you with a virtual Subject Matter Expert.

Dual-Pol Radar Operations Course for RFC Hydrologists

The Operations Course for RFC Hydrologists includes the Heavy Rain WES Exercise, which will be updated in FY13.

Must Complete 1 of 2 Available

o	Dual-Polarization Radar Operations Course Overview
cc	Dual-Pol Radar Products: Correlation Coefficient
zdr	Dual-Pol Radar Products: Differential Reflectivity
kdp	Dual-Pol Radar Products: Specific Differential Phase
hc	Dual-Pol Radar Products: Hydrometeor Classification
ml	Dual-Pol Radar Products: Melting Layer
qpe	Dual-pol Quantitative Precipitation Estimation (QPE) Products
r	Dual-Pol Radar Applications: Heavy Rain Detection
Wr	Dual-Pol Ops Course WES Exercise - Heavy Rain (ILT)
WL	Dual-Pol Ops Course WES Exercise - WDTB-Approved Locally-Developed (ILT)

Dual-Pol Radar Principles and System Operations Course

Here is a snapshot of the Dual-Pol Radar Principles and System Operations Course.

rda1	Dual-Pol RDA Lesson1: Generation of Dual-Pol Base Data
rda2	Dual-Pol RDA Lesson 2: Sensitivity, Calibration, Attenuation, and Non-Uniform Beam Filling
rpg1	Dual-Pol RPG Lesson 1: Life without CMD, Dual-Pol Preprocessing
rpg2	Dual-Pol RPG Lesson 2: MLDA and HCA
rpg3	Dual-Pol RPG Lesson 3: QPE

Through April 2012, we've awarded over 650 completion certificates for this optional Dual-Pol course. If you have staff that have already completed the Dual-Pol Ops course and are looking to provide additional Dual-Pol training for them, consider leveraging this 3-hour web-module-based course. It provides your staff with the foundation of how Dual-Pol data are produced.

The Future of Dual-Pol Training

This table summarizes the future of Dual-Pol Training for FY13 and beyond. The Dual-Pol training materials will be integrated into WDTB’s existing courses. Dual-Pol changes are now included in WSR-88D Performance Improvements (builds), and these updates will continue for the foreseeable future. The popular WDTB Storm of the Month series will continue through the deployment and beyond, as WDTB has been asked to maintain this monthly opportunity for NWS staff to share and learn Dual-Pol Best Practices. Finally, the four original Dual-Pol WES exercises were built from cases from the testbed radar. The updates to these exercises scheduled for FY13 will utilize cases from operational radars.

When	What
Fall 2012 – Spring 2013	Dual Pol integrated into the Distance Learning Operations Course
Summer 2013	Dual Pol integrated into the Advanced Warning Operations Course
Ongoing	Dual-Pol updates part of WSR-88D Performance Improvements (builds)
Post-Deployment	WDTB has been asked to continue Storm of the Month to share Best Practices
FY13	*WES Exercise updates from testbed cases to operational system cases

Status of Dual-Pol Webinars

WDTB has been providing two kinds of monthly webinars:

Storm of the Month webinars are designed for those who have completed or are nearing completion of the Dual-Pol training. The live sessions are presented at noon central time on the last Wednesday of every month. Subject to available resources, some of these sessions will be recorded and repackaged as a “Best Practices” module that can be assigned to your staff through the NWS Learning Center. WFO participation has been tremendous, and the variety of cases and geographic locations is growing. The live portion of the Storm of the Month webinar series is expected to continue at least through FY13, while the archived sessions will be produced by WDTB as resources allow.


Dual-Pol Storm of the Month Webinar!

Welcome to the Dual-Pol Storm of the Month page! The Storm of the Month webinars are short and focused on significant events. They are designed for those who have completed (or are nearing completion of) the Dual-Pol Radar Operations Course. The purpose of these informal webinars is to provide NWS decision makers access to operational Dual-Pol subject matter experts, so that we may all share lessons learned and best practices with applying Dual-Pol products to NWS operations.

When: Wednesday, May 30, 2012 12:00pm-12:30pm CDT or 1700-1730 UTC.

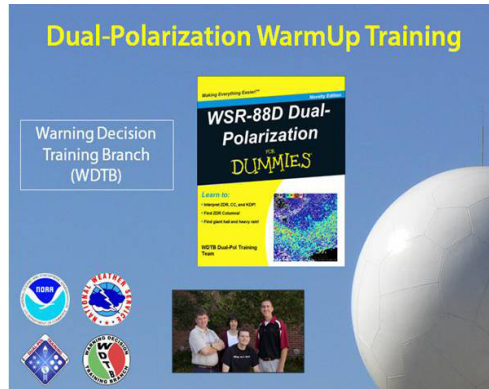
Title: *An Evolution of Recognizing and Communicating the TDS during Warning Operations*

Topic: During the March 2-3 tornado outbreak, valid TDSs were seen by the staff at the Birmingham WFO in real time. Beyond the challenge of recognizing this new signature is how best to communicate this heightened confidence of tornado damage. Kevin will talk about his decision to use “confirmed tornado” in his warnings and statements both during this event and since this event. He will also present how the Birmingham staff have been modifying WarnGen templates for future events. During severe storm interrogation, Kevin and other NWS meteorologists have noticed low CC signatures that are not a TDS, but may be of value to our future understanding. This webinar will include a short “research status” message of this intriguing feature.



Sign Up! Click the link to sign up for the webinar: [Dual-Pol Storm of the Month \(May 2012\)](#)

Warmup webinars – If your staff is just beginning the Dual-Pol training process and you would like WDTB to host a session to provide some motivation and incentive, please contact Jami Boettcher at jami.b.boettcher@noaa.gov.



To register for the WDTB Dual-Pol Storm of the Month webinars, see our web site: <http://www.wdtb.noaa.gov/courses/dualpol/index.htm>

Frequently Asked Questions

WDTB has generated Dual-Pol FAQs and they are available on our website. You can access these as a pdf or in a Flash format. The FAQs are the result of e-mail and NWSchat questions that have come to us in the last several months.

Dual-Polarization Radar Training

Recent News

- WDTB has compiled a list of frequently asked questions about the dual-polarization WSR-88D and data applications
 - [Flash version](#)
 - [PDF version](#)

WDTB's Dual-Polarization Radar FAQ Page

Search

Introduction

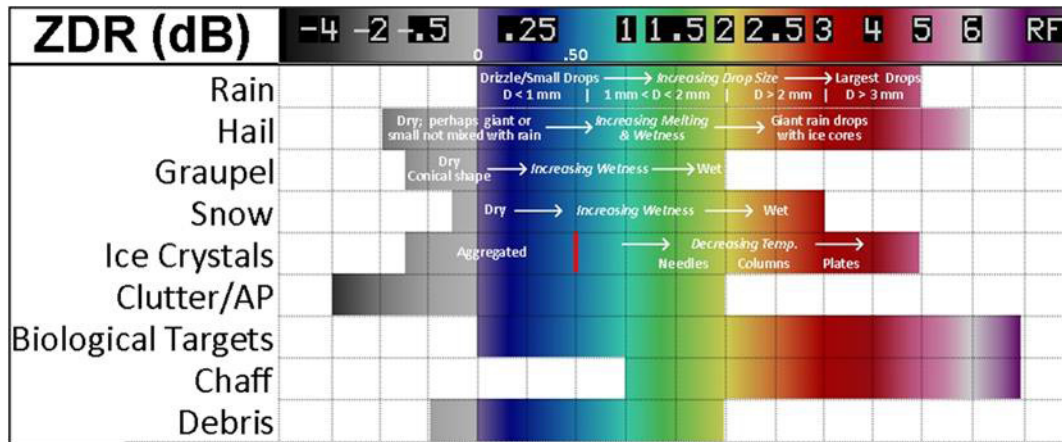
The Warning Decision Training Branch (WDTB) often receives a variety of questions about the dual-polarization upgrade to the WSR-88D network. We have assembled this list of frequently asked questions (FAQs) based on these questions from National Weather Service forecasters. As we receive more comments and questions during the WSR-88D dual-polarization upgrade, we will continue to update this document. If you have a comment or question about any of these FAQs, or have a question about a different dual-polarization radar topic, please e-mail us at dualpol_list@wdtb.noaa.gov.

- Appearance of Chaff in Dual-Polarization Radar Data
- Build 13 Timeline
- Cause of Radial Spikes in New Dual-Polarization Products
- Dual-Polarization Product Color Curves
- Dual-Polarization Radar Products Available to the Media
- Dual-Polarization WSR-88D Sensitivity Loss
- Eight-Hour Calibration Check
- Formula for Zdr

Dual-Pol Reference Sheets

WDTB has provided job aids to support the Dual-Pol training process. We are now interested in “one-pager” quick reference guides and would like to know if any of you have developed one for your staff. If you have and would be willing to share, please send us a copy.

Contact us: dualpol_list@wdtb.noaa.gov



Big Drops

Big drops describe areas typically located near thunderstorms that contain a small number of very large, liquid drops. Very light rain rates define the area of big drops. Big Drop regions are characterized by values of low to midrange Reflectivity and medium-to-high Correlation Coefficient. Differential Reflectivity will vary, but be weighted towards the largest drops in the volume. Specific Differential Phase should be relatively low since the number of drops is few.

