



# ABRFC Experiences with HL-DMS

## *Current Calibration Work*

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# ABRFC Work with DMS

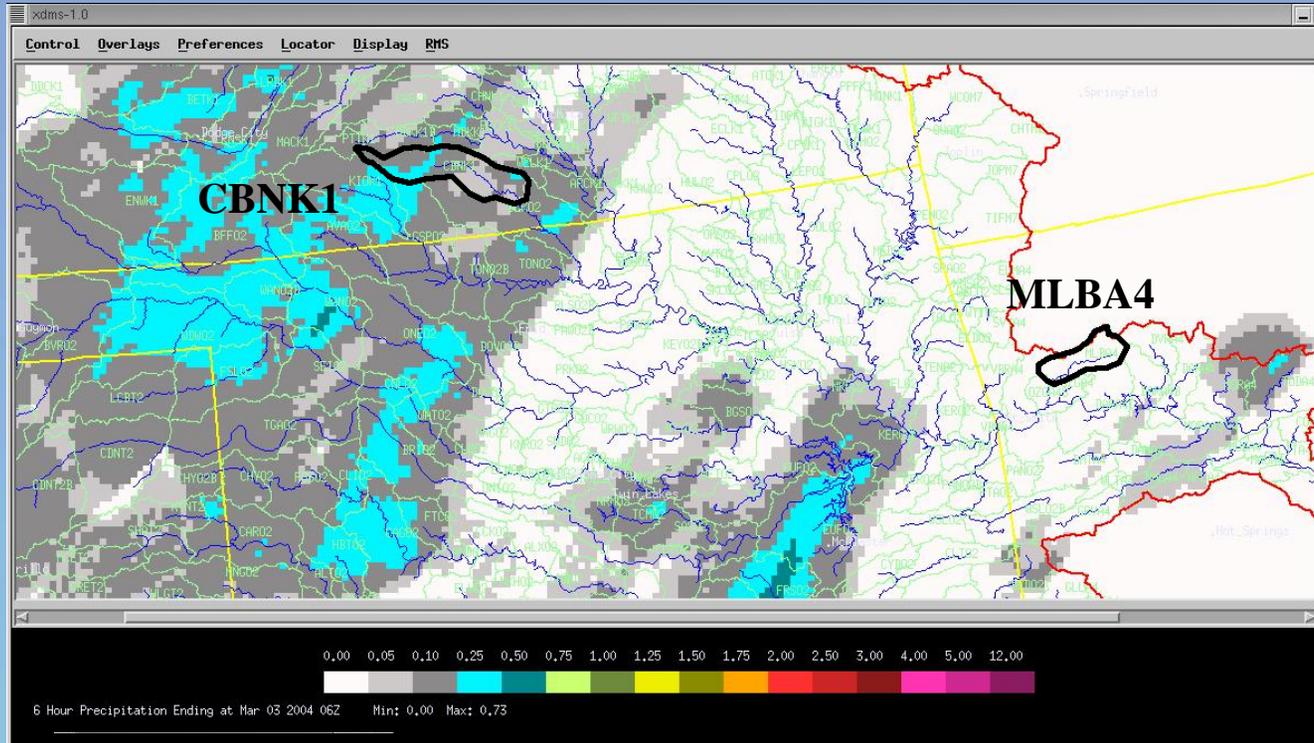


- Spent last 12 months setting up and preliminary testing.
- James Paul of ABRFC spent 2 months writing XDMS program
- 3-4 basins currently defined, and in calibration process
- Currently in testing and defining a calibration process.
- Learning curve appears steep, but hopefully good results are right around the corner.



# Precipitation Analysis

March 3 through March 5, 2004

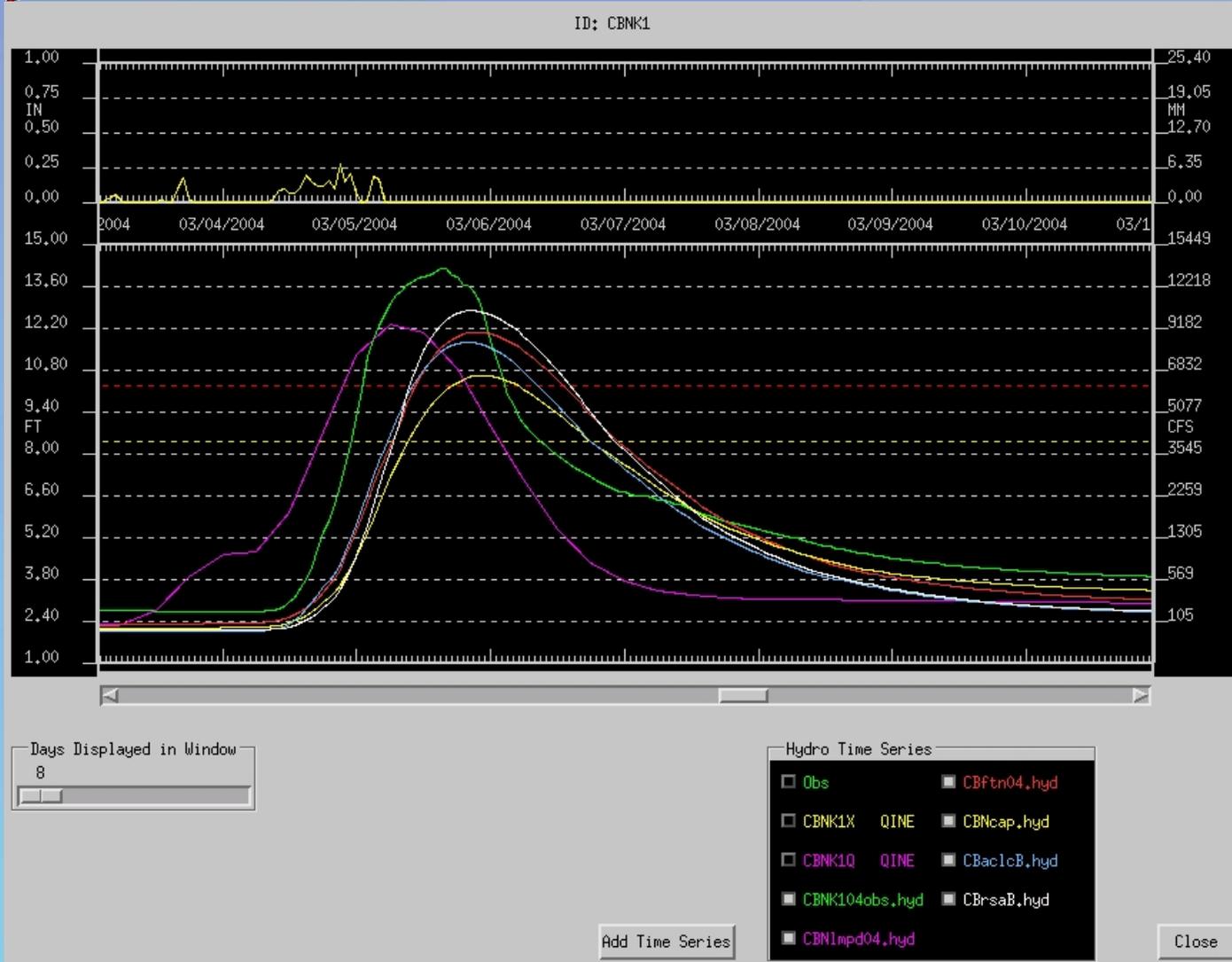


Six hour precipitation totals beginning at 00Z through 12Z  
Storm Total – 60 hours



# CBNK1 – Hydrograph Plot

March 4- 9, 2004





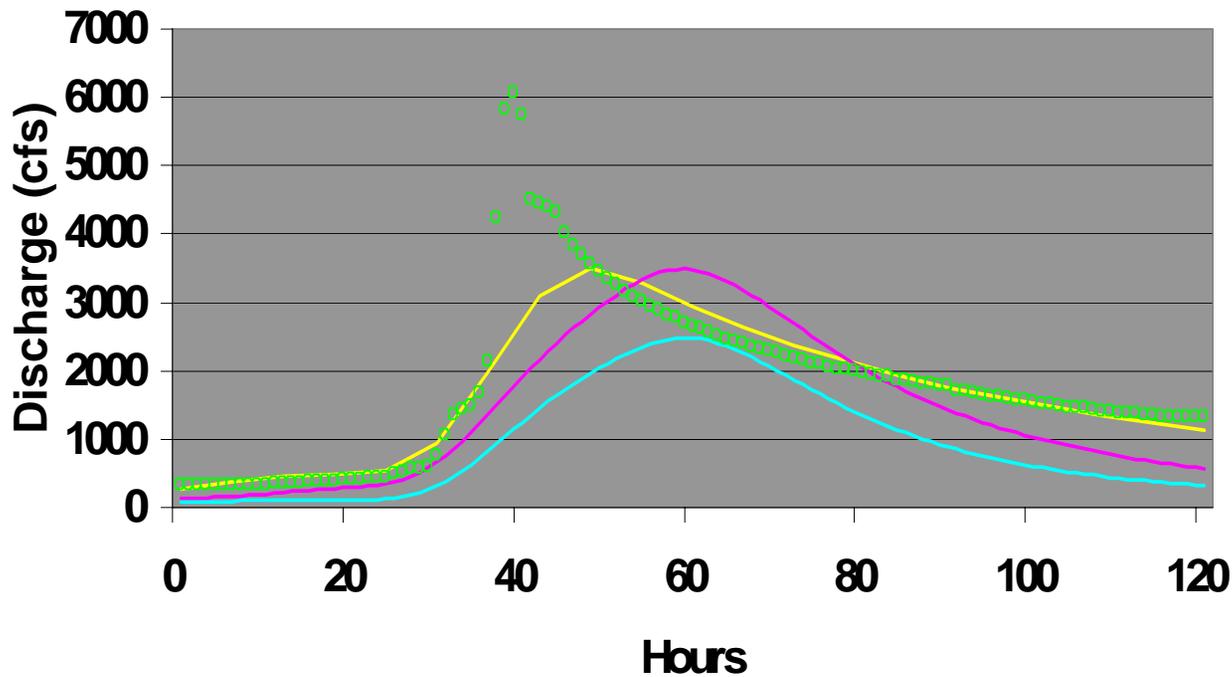
# Statistical Analysis

Period: 3/2/04 00Z through 3/9/04 12Z (180 hours)

Time series	Total Obs Flow (mm – depth)	Total Sim Flow (mm – depth)	Percent Error	Offset Peak time	Relative Peak Error (CMS)
CBNlmpd04 NWSRFS 6hr	22.3 (6 hr data)	15.4 (6 hr data)	-28.86 (6 hr data)	-9 hours	-119.09 (1 hr data)
CBftn04	23.0	19.0	-17.62	+ 6 hours	-133.56
CBNcap	23.0	15.0	-34.51	+ 8 hours	-200.45
CBaclcB	23.0	16.6	-27.67	+ 5 hours	-152.48
CBrsaB	23.0	19.4	-15.5	+6 hours	-91.26



**Mulberry River nr Mulberry, AR**  
**March 4, 2004 - March 9, 2004**



○ OBS — NWSRFS — DMS\* (a priori) — DMS\* (scaled)

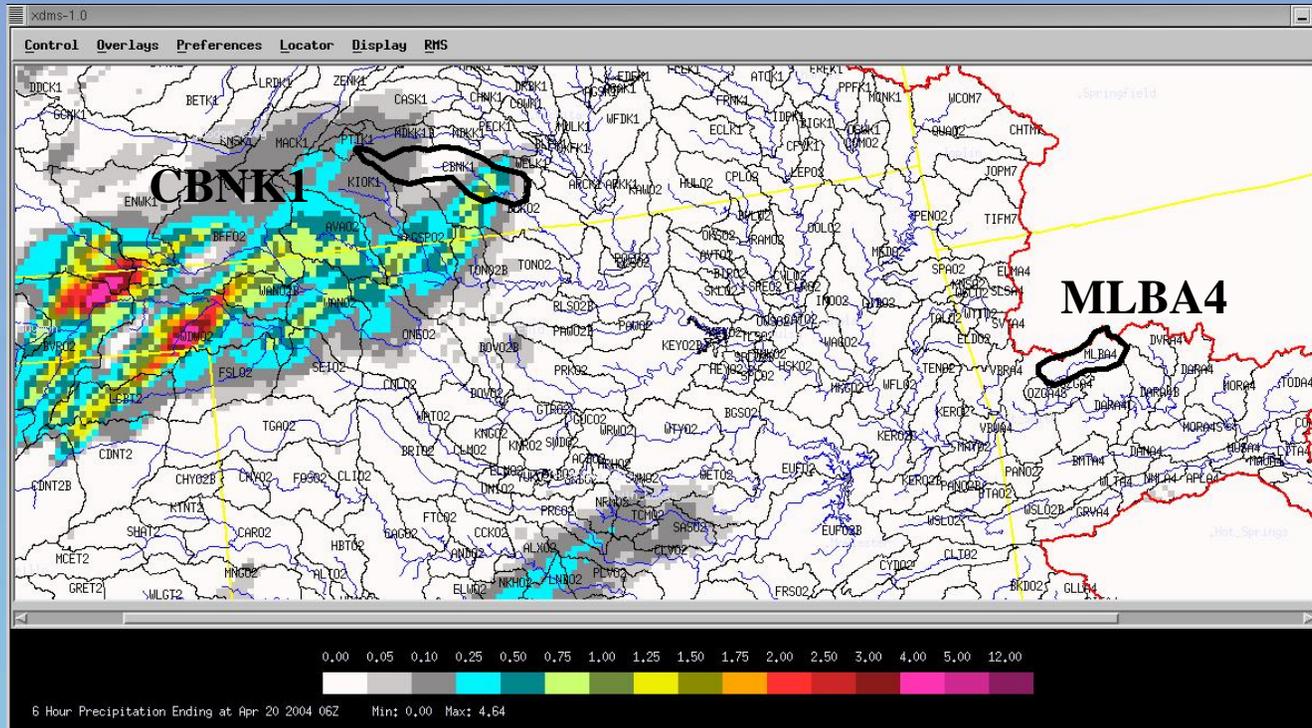
**Crest 1**

ERROR	NWSRFS	A PRIORI	SCALED
Volume (%)	-3	-18	-46
Crest Mag. (%)	-42.5	-42.4	-59.1
Crest Time (hr)	+9	+20	+20



# Precipitation Analysis

April 20 – 25, 2004



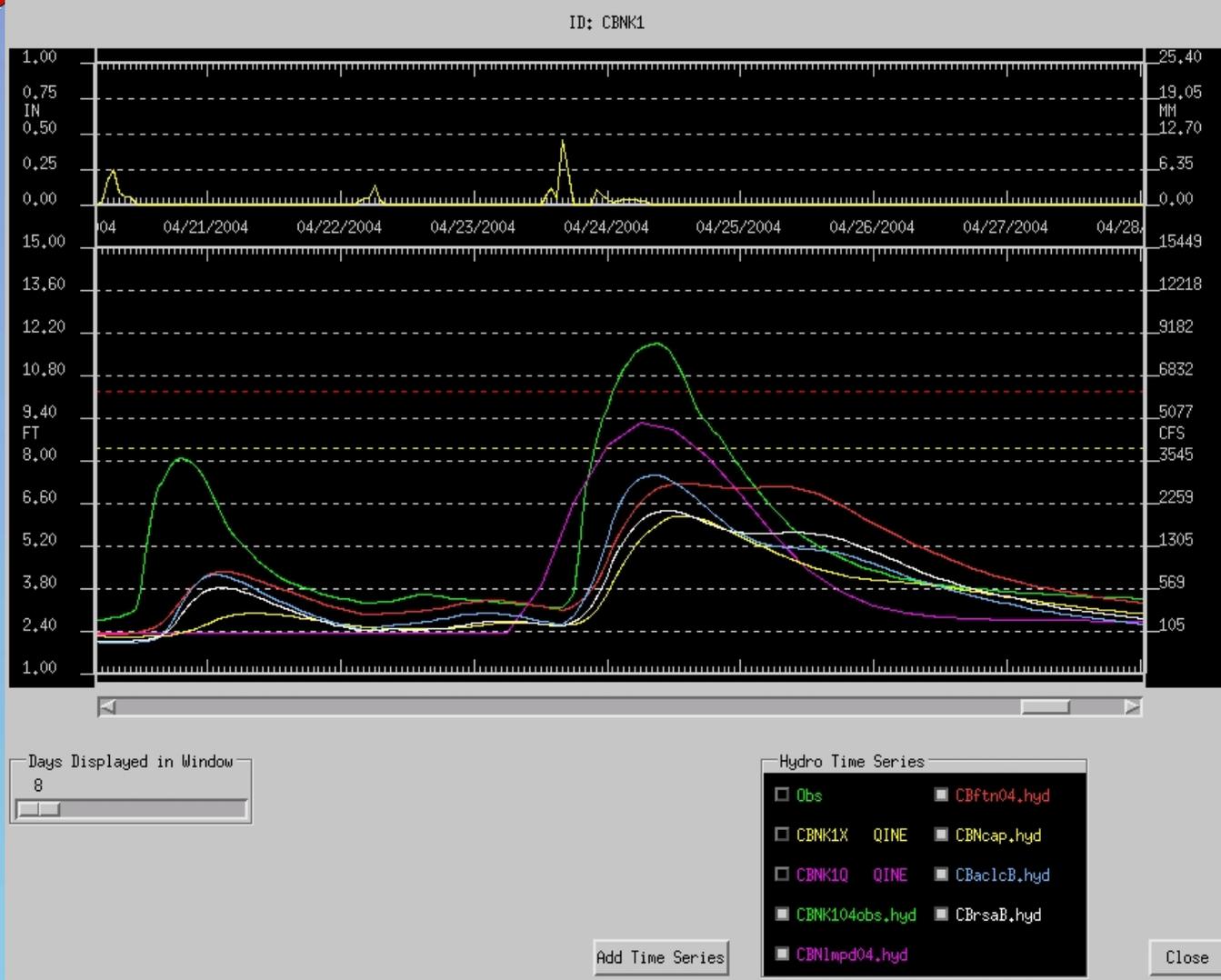
Six Hour Precipitation Totals from 00Z through 00Z

Storm Total – 120 hours



# CBNK1 - Hydrograph Plot

April 20 – 27, 2004





# Statistical Analysis

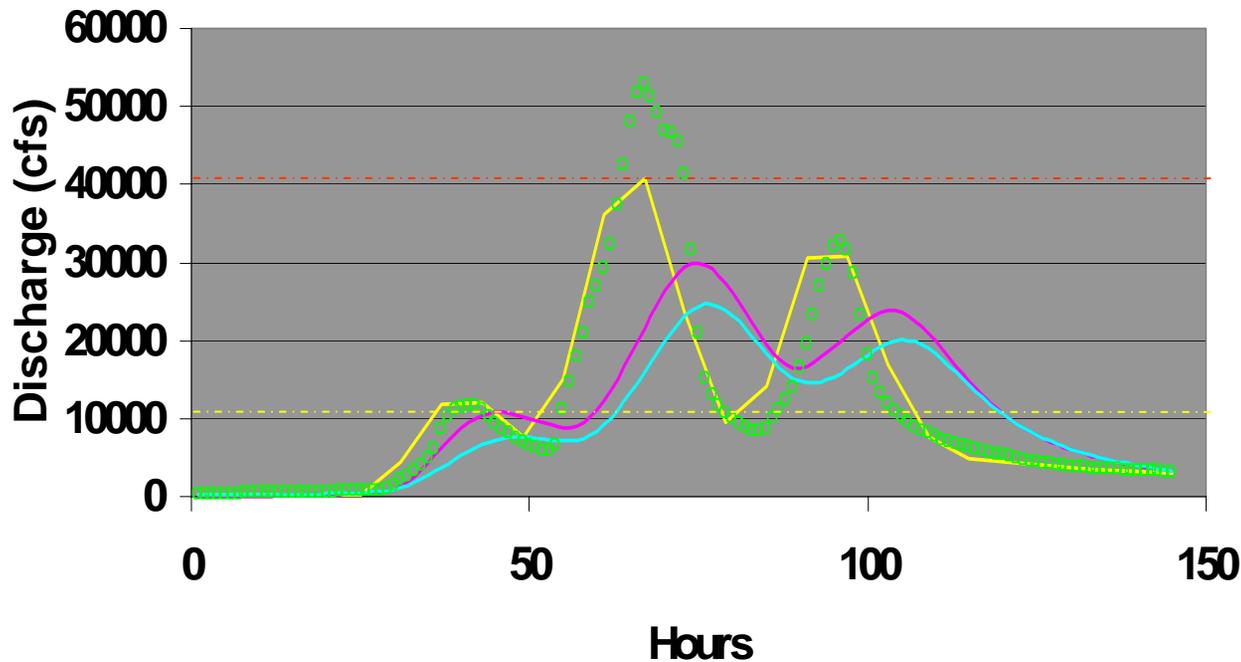


**Period: 4/20/04 00Z through 4/29/04 00Z (240 hours)**

Time series	Total Obs Flow (mm – depth)	Total Sim Flow (mm – depth)	Percent Error	Offset Peak time	Relative Peak Error (CMS)
CBNlmpd04 NWSRFS 6hr	15.4 (6 hr data)	8.64 (6 hr data)	-43.84	- 9 hours	-104.00 (1 hr data)
CBftn04	16.0	9.89	-38.18	+5 hours	-163.68
CBNcap	16.0	5.22	-67.36	+5 hours	-187.26
CBaclcB	16.0	6.77	-57.69	- 1 hour	-156.49
CBrsaB	16.0	6.28	-60.72	+ 2 hours	-183.83



## Mulberry River nr Mulberry, AR April 21, 2004 - April 27, 2004



○ OBS — NWSRFS — DMS\* (a priori) — DMS\* (scaled)

### Crest 1

ERROR	NWSRFS	A PRIORI	SCALED
Volume! (%)	+5	+1	-15
Crest Mag. (%)	+3.6	-7.5	-34.8
Crest Time (hr)	-2	+4	+7

Volume! = Total Volume

### Crest 2

ERROR	NWSRFS	A PRIORI	SCALED
Volume (%)	-	-	-
Crest Mag. (%)	-22.9	-43.3	-53.2
Crest Time (hr)	0	+8	+9

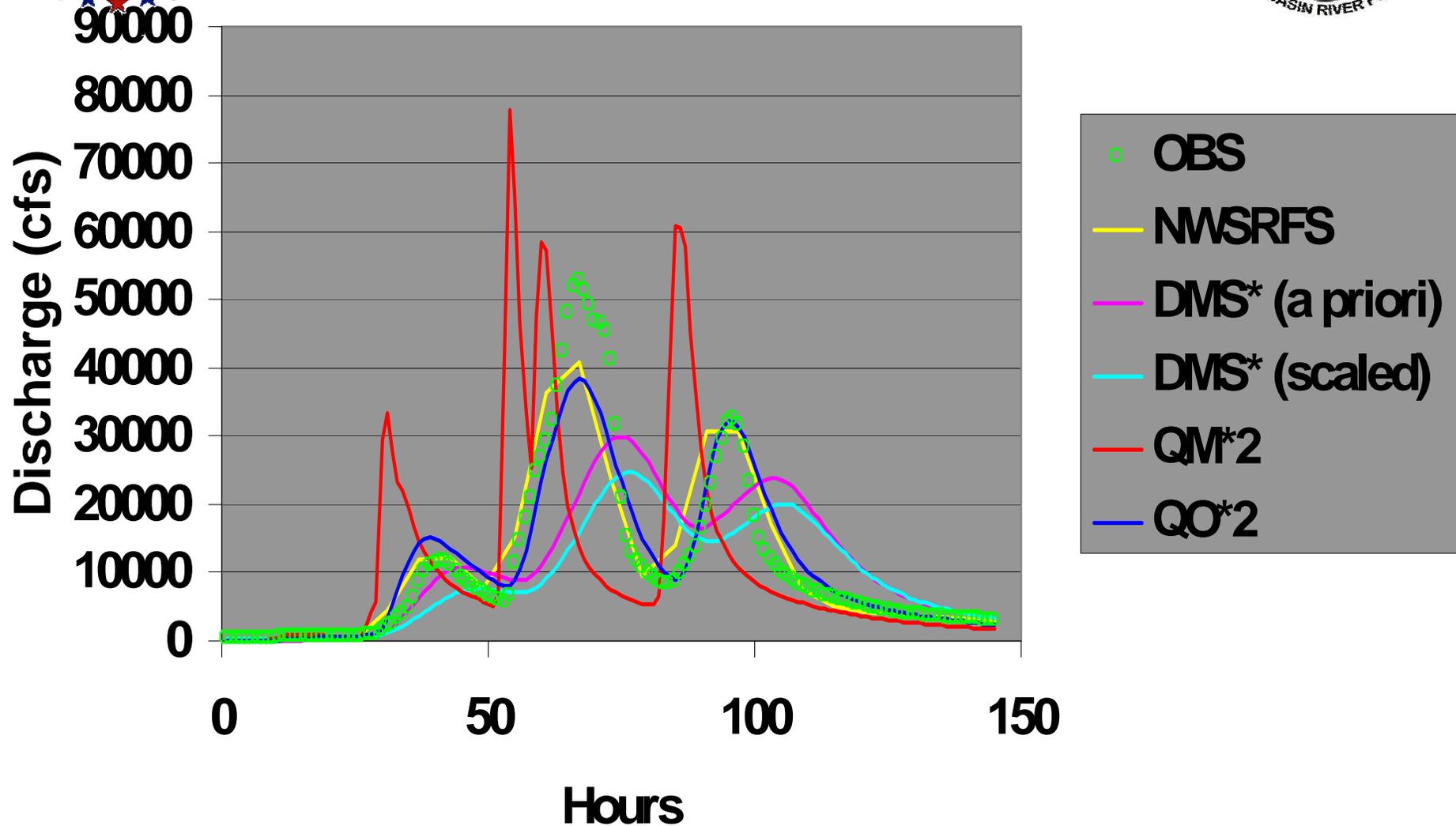
### Crest 3

ERROR	NWSRFS	A PRIORI	SCALED
Volume (%)	-	-	-
Crest Mag. (%)	-22.9	-27.0	-38.4
Crest Time (hr)	0	+8	+9



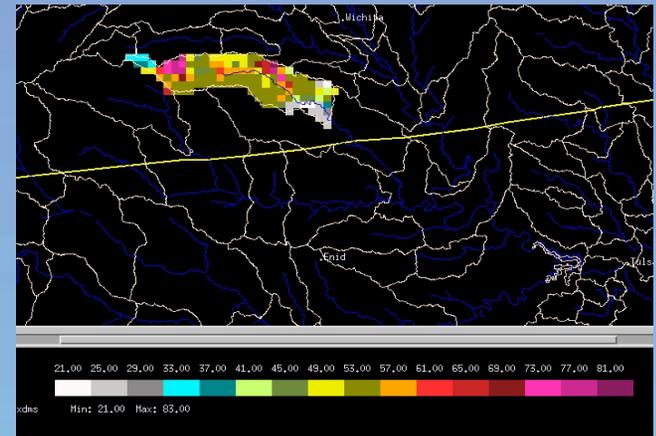
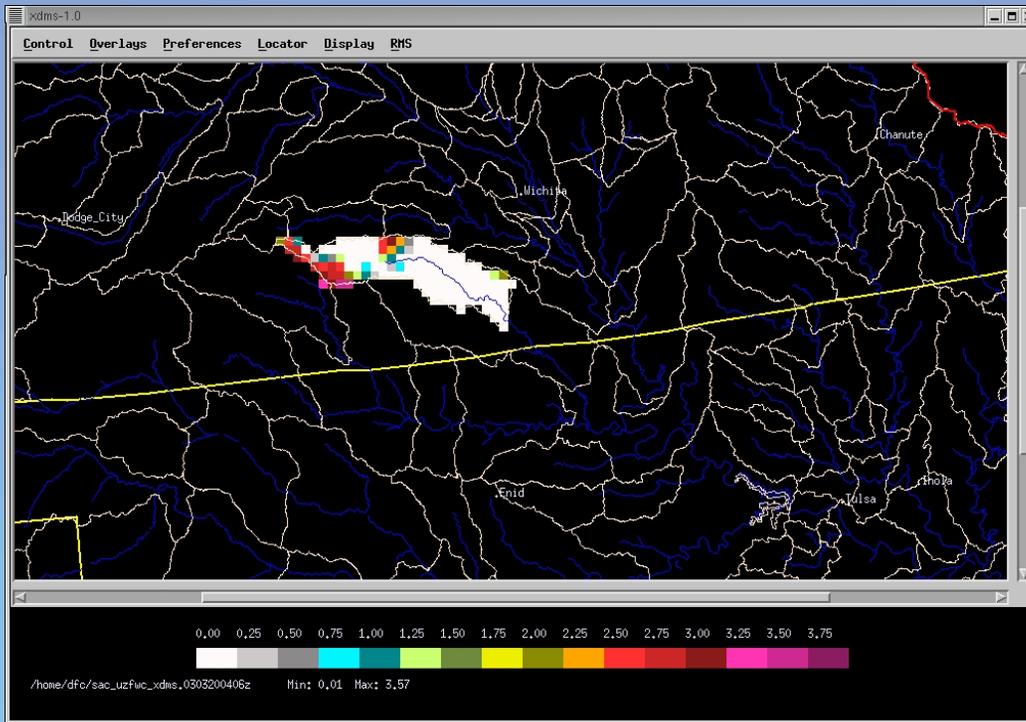
# Mulberry River nr Mulberry, AR

## April 21, 2004 - April 27, 2004





# Upper Zone Free Water Contents



**Upper Zone Free  
Water Maximum  
Gridded Values.**

**Synoptic hour capture of bucket contents  
from March 3, 2004 00Z through  
March 6, 2004 12Z**



# QOCHN after GENPAR

