Stanislaus - Lower San Joaquin River Water Temperature Modeling and Analysis

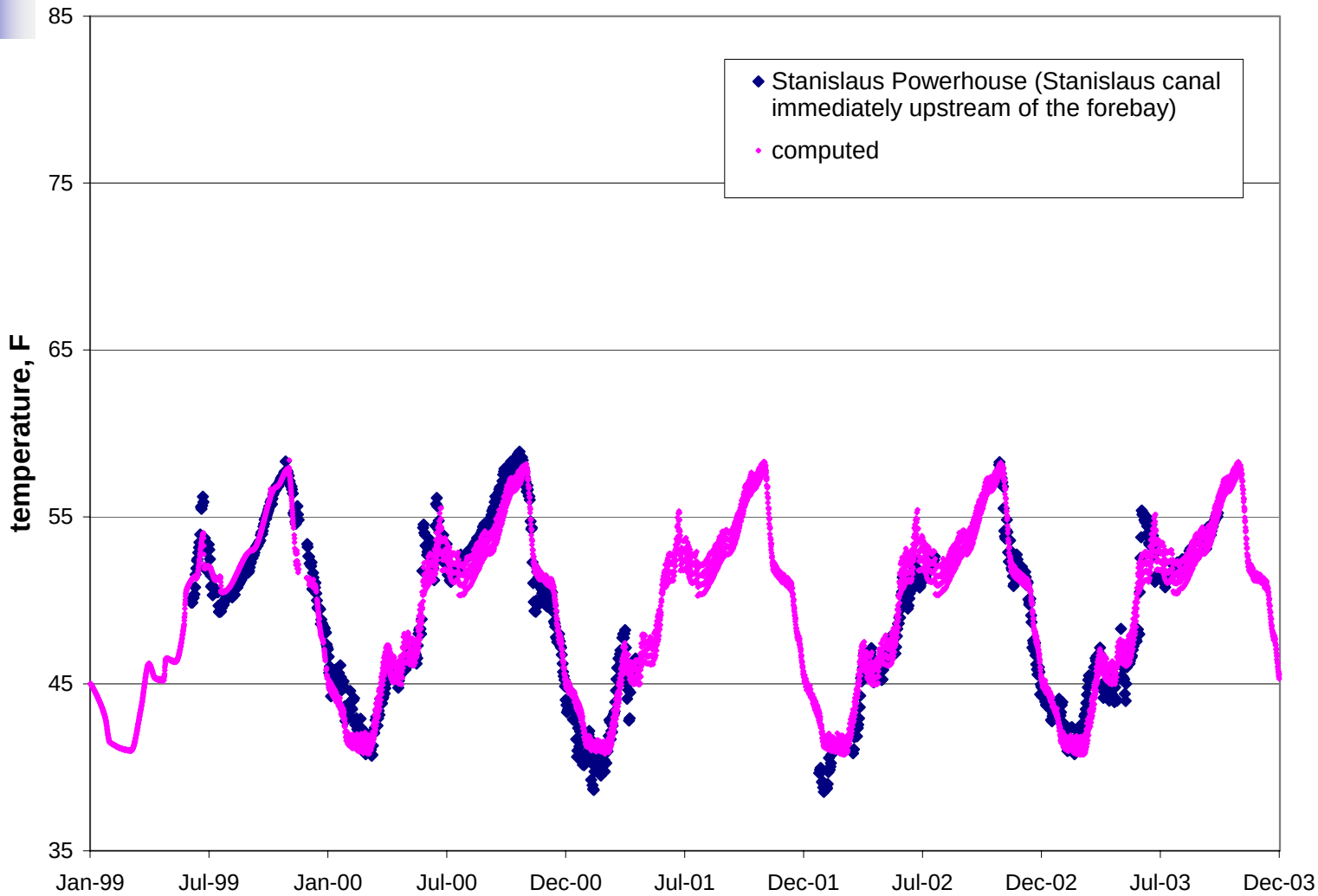
Agenda

- Background
- Objective - CALFED
- Project Tasks
- Model Description
- Calibration Results
- Demonstration of Model Run
- Temperature Criteria Peer Review
- Operational Studies
- Future Work

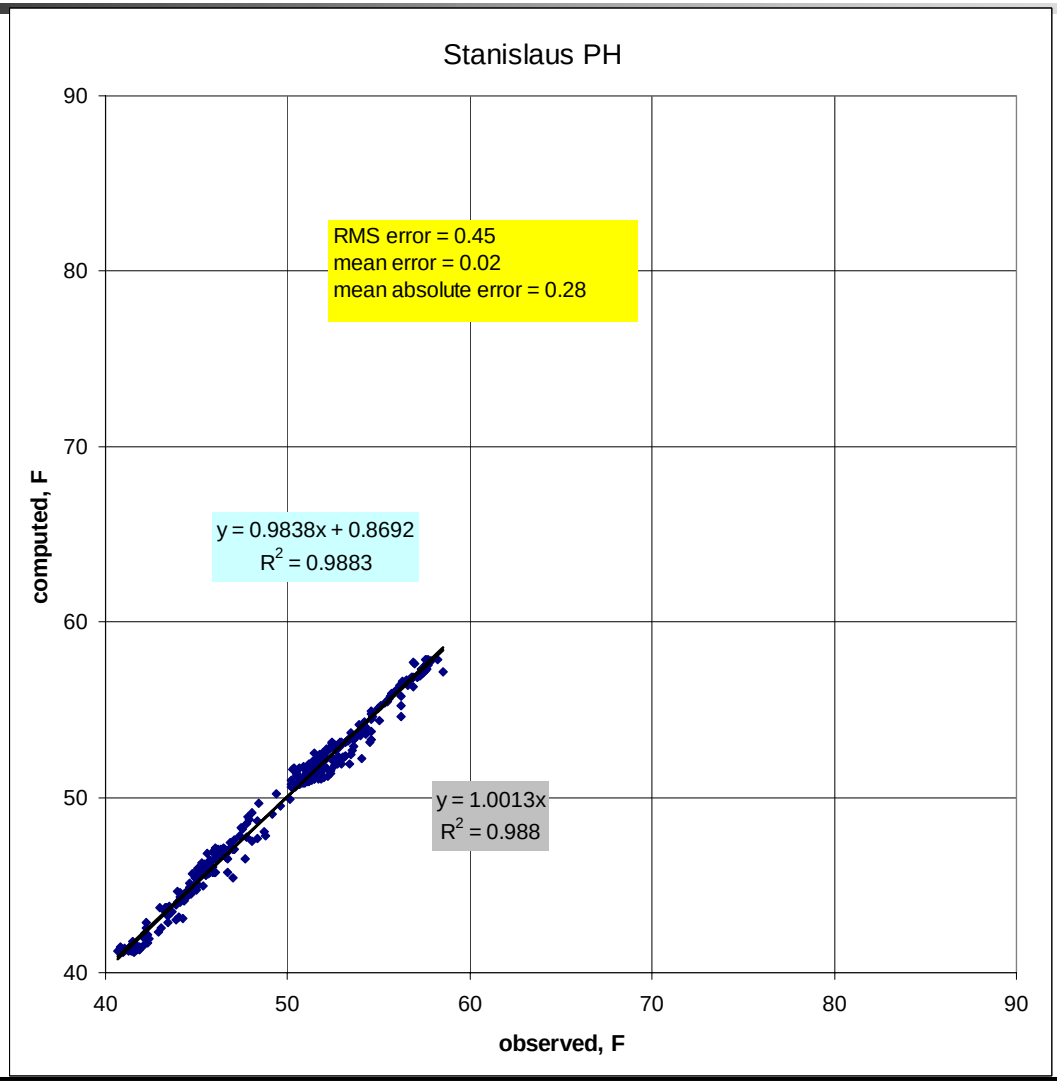
Model Calibration

- June 1999 - Dec. 2003 (Seasonal Temp. Variation)
- Dry Years: 1990-1994
- Normal & Wet Years: 1996-1999

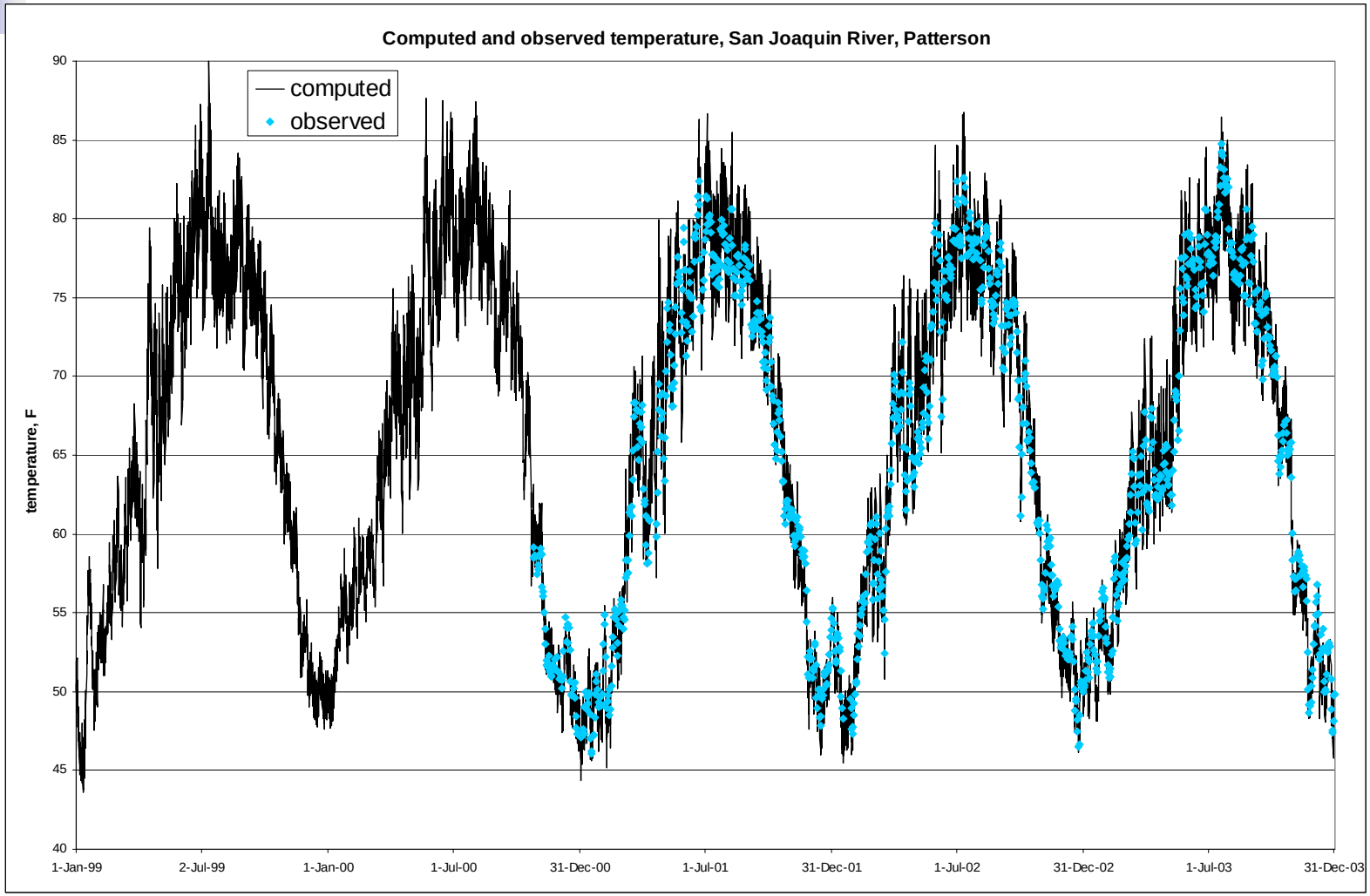
Computed and Observed Temperature in the Stanislaus Powerhouse Forebay Upstream of New Melones (temperature defined seasonally)



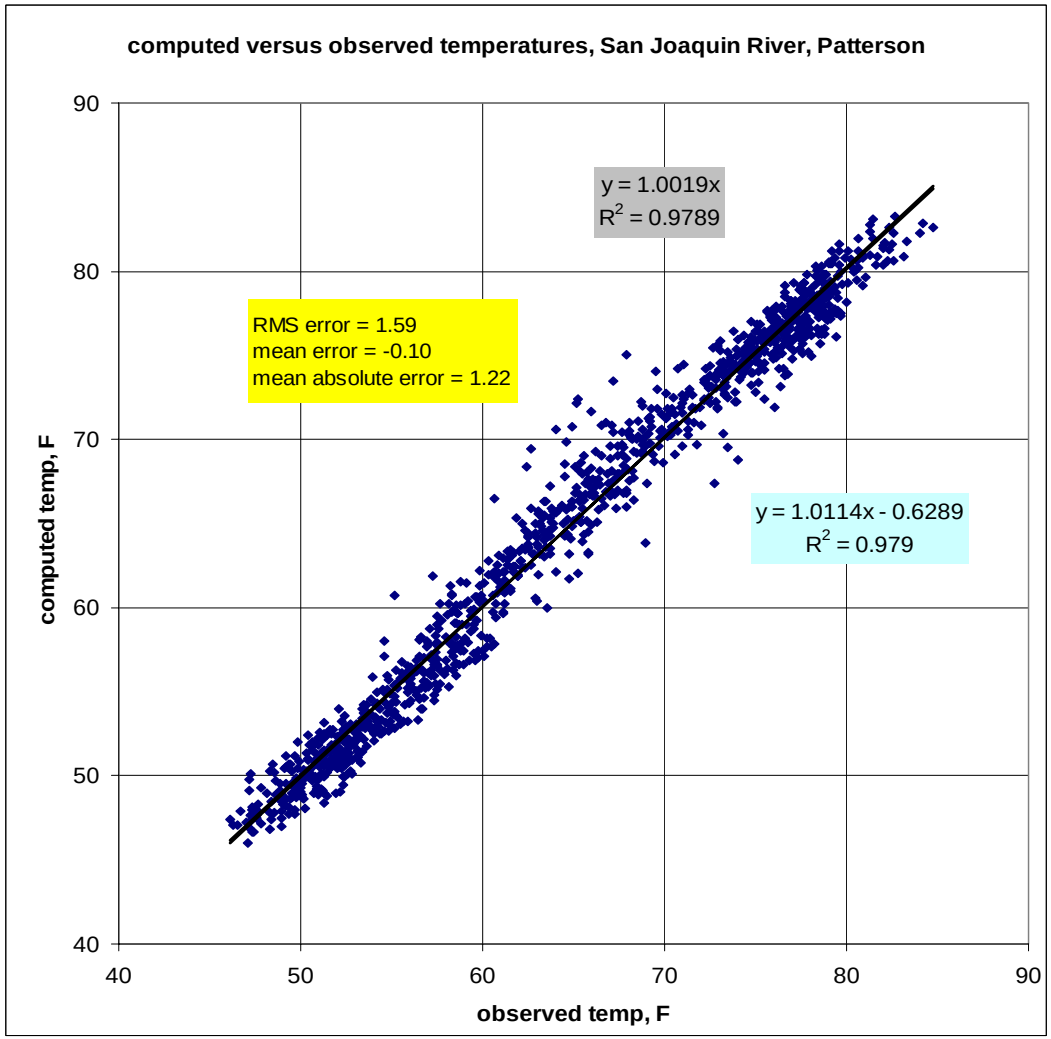
Computed versus Observed Temperature in the Stanislaus Powerhouse Forebay Upstream of New Melones (temperature defined seasonally)



Computed and Observed Temperature in the San Joaquin River Upstream of the Tuolumne River (temperature computed as a function of meteorology and flow)

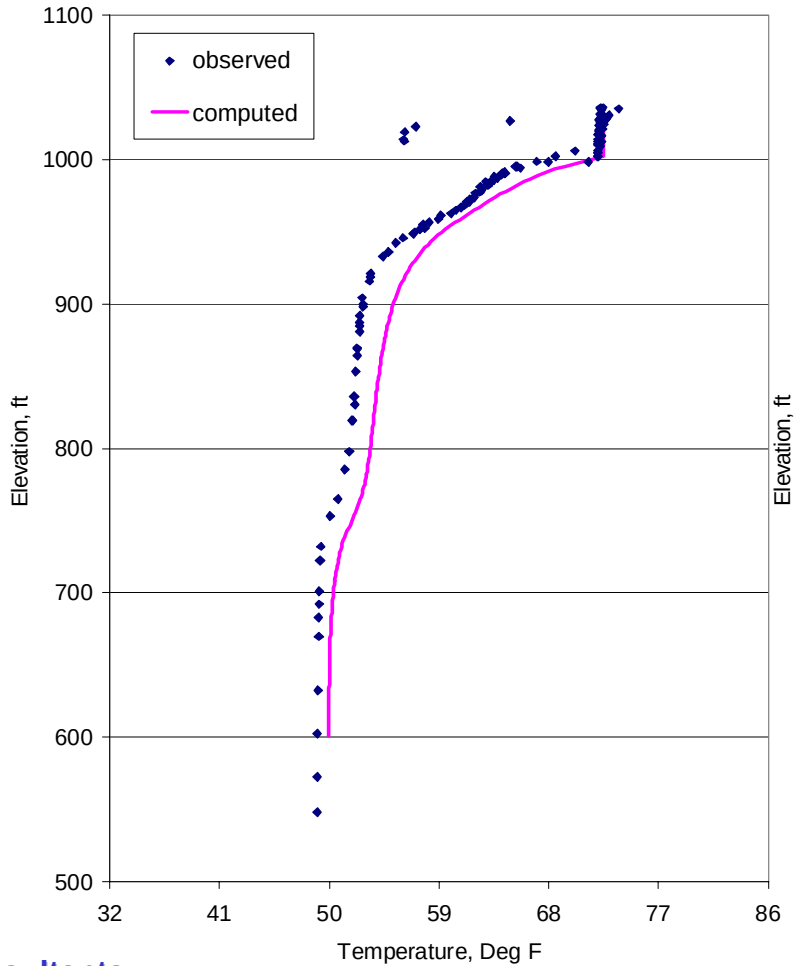


Computed versus Observed Temperature in the San Joaquin River Upstream of the Tuolumne River (temperature computed as a function of meteorology and flow)

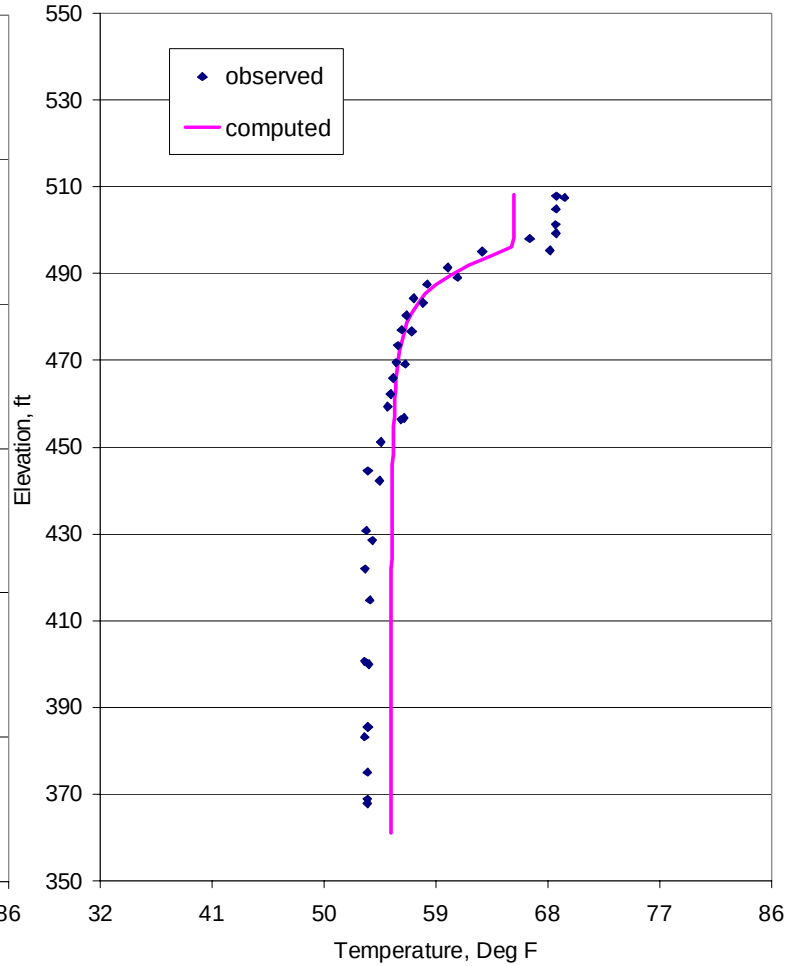


Computed and Observed Temperatures within New Melones and Tulloch Reservoirs

New Melones 05-SEP-2000 12:00

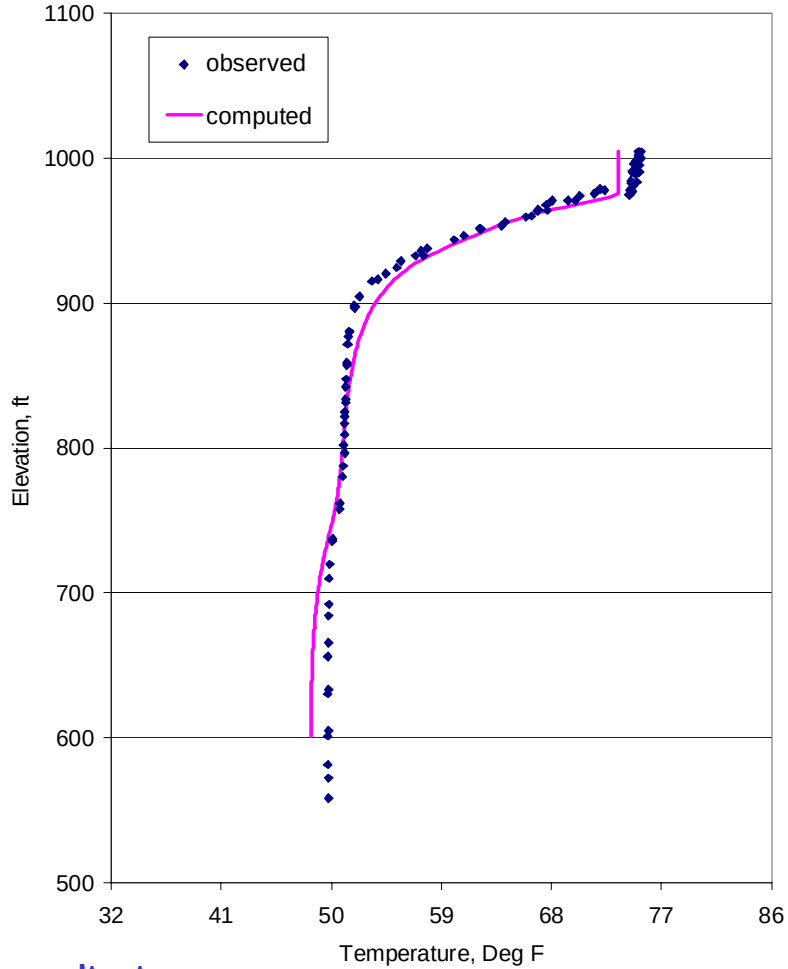


Tulloch 05-SEP-2000 12:00

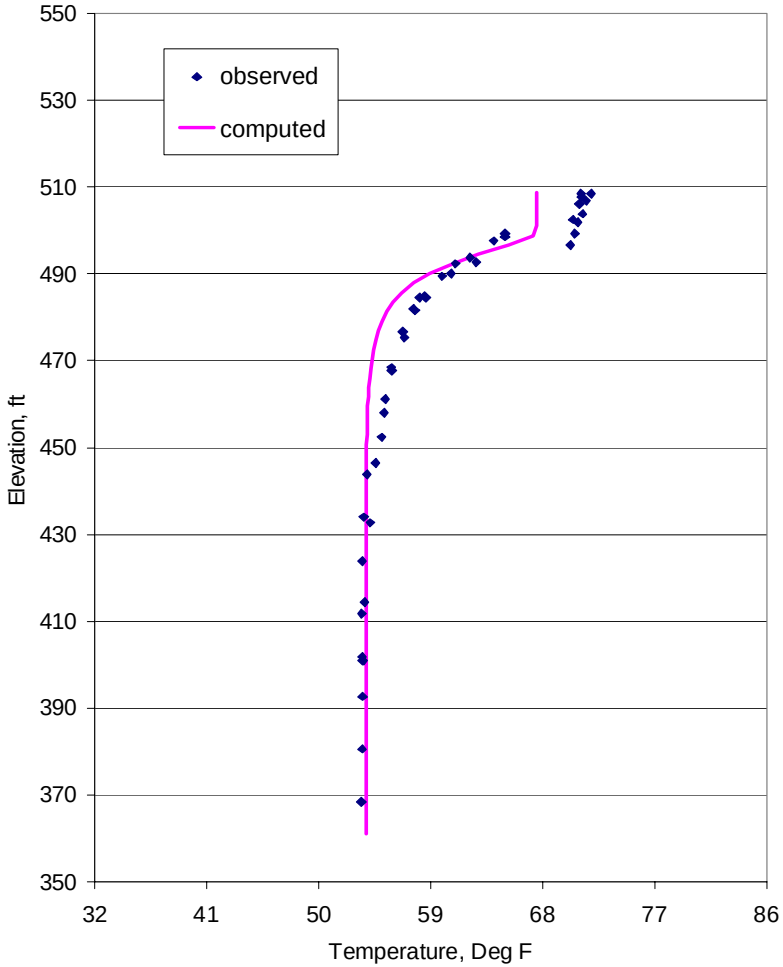


Computed and Observed Temperatures within New Melones and Tulloch Reservoirs

New Melones 12-SEP-2001 12:00

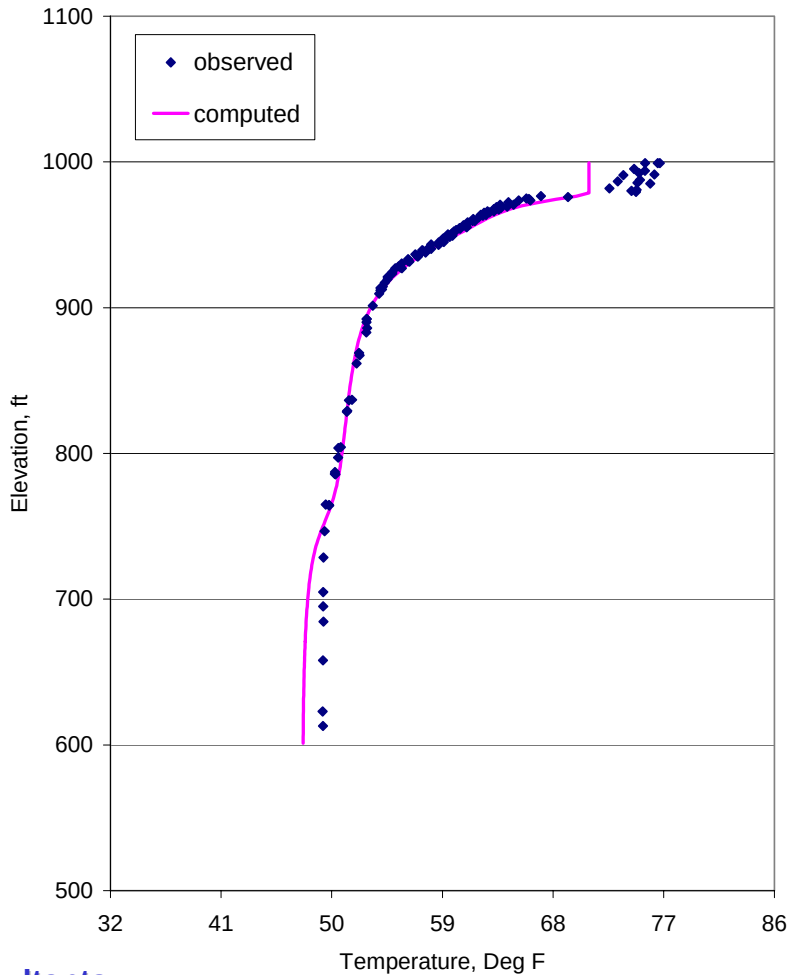


Tulloch 12-SEP-2001 12:00

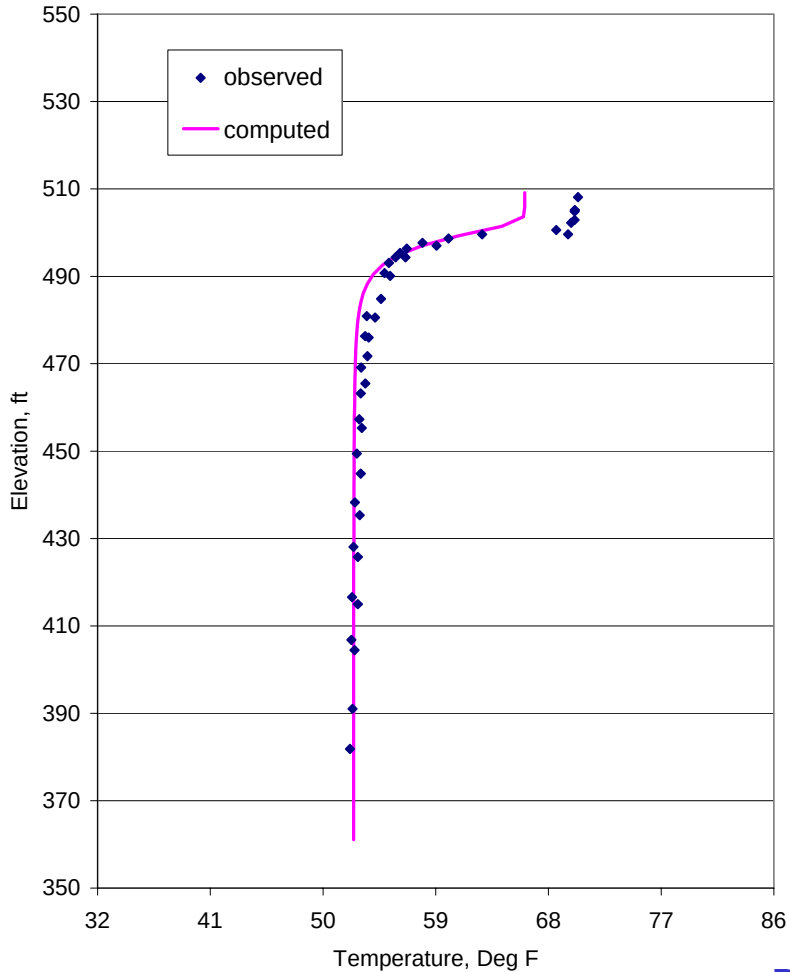


Computed and Observed Temperatures within New Melones and Tulloch Reservoirs

New Melones 25-JUN-2003 12:00

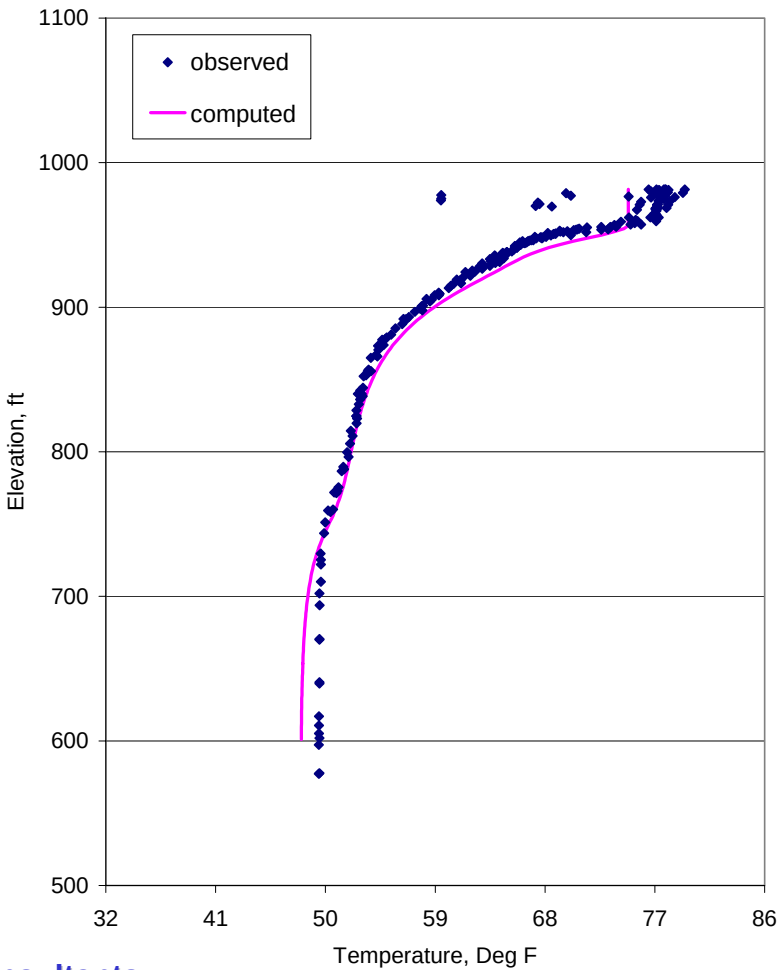


Tulloch 25-JUN-2003 12:00

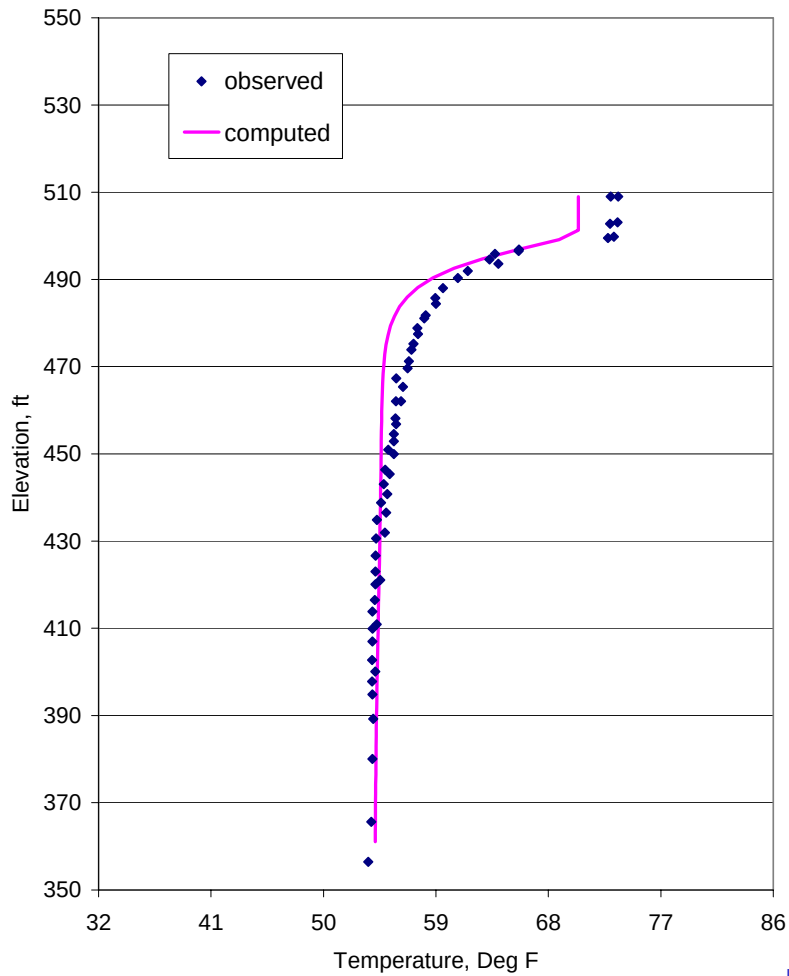


Computed and Observed Temperatures within New Melones and Tulloch Reservoirs

New Melones 29-AUG-2003 12:00

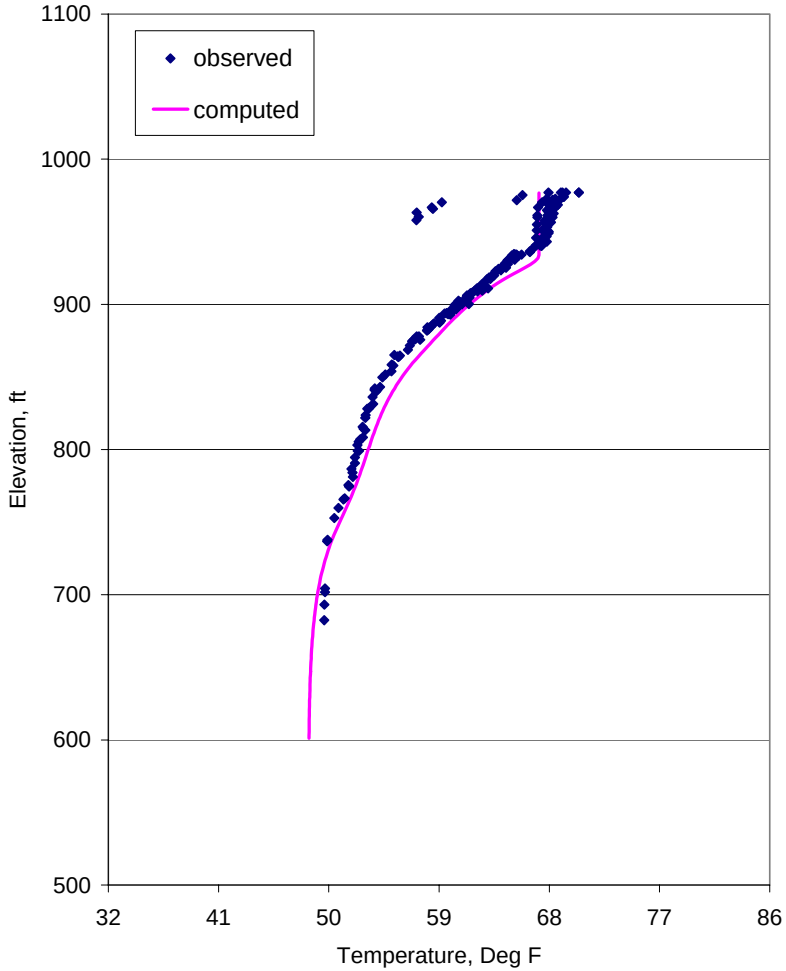


Tulloch 29-AUG-2003 12:00

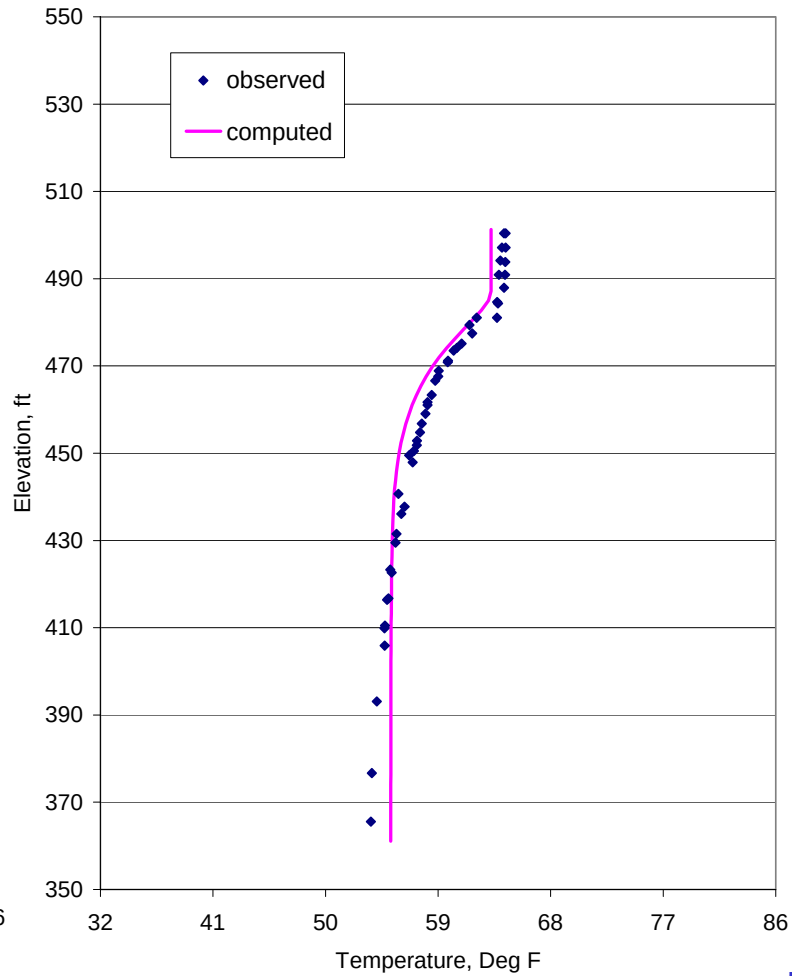


Computed and Observed Temperatures within New Melones and Tulloch Reservoirs

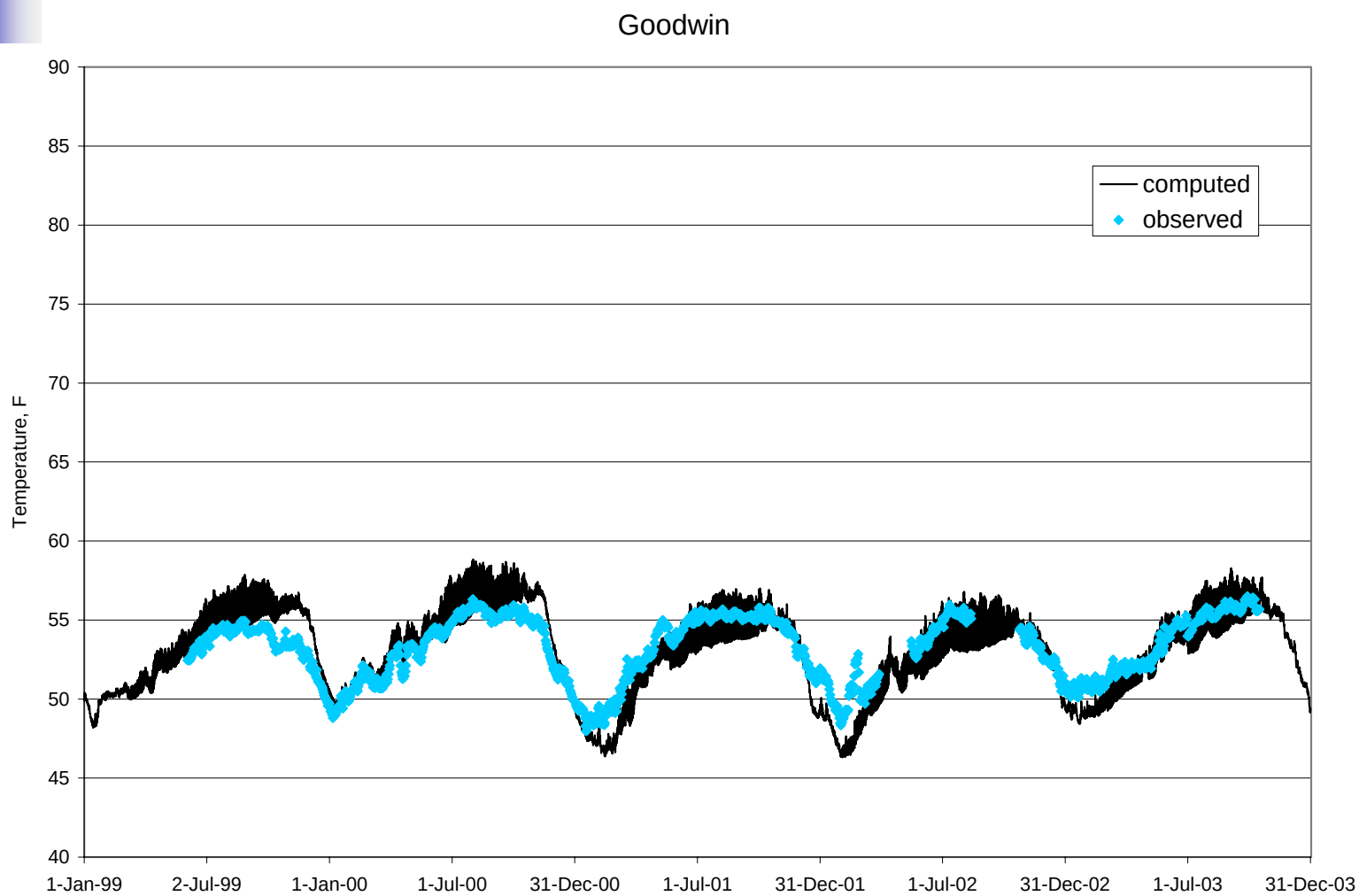
New Melones 27-OCT-2003 12:00



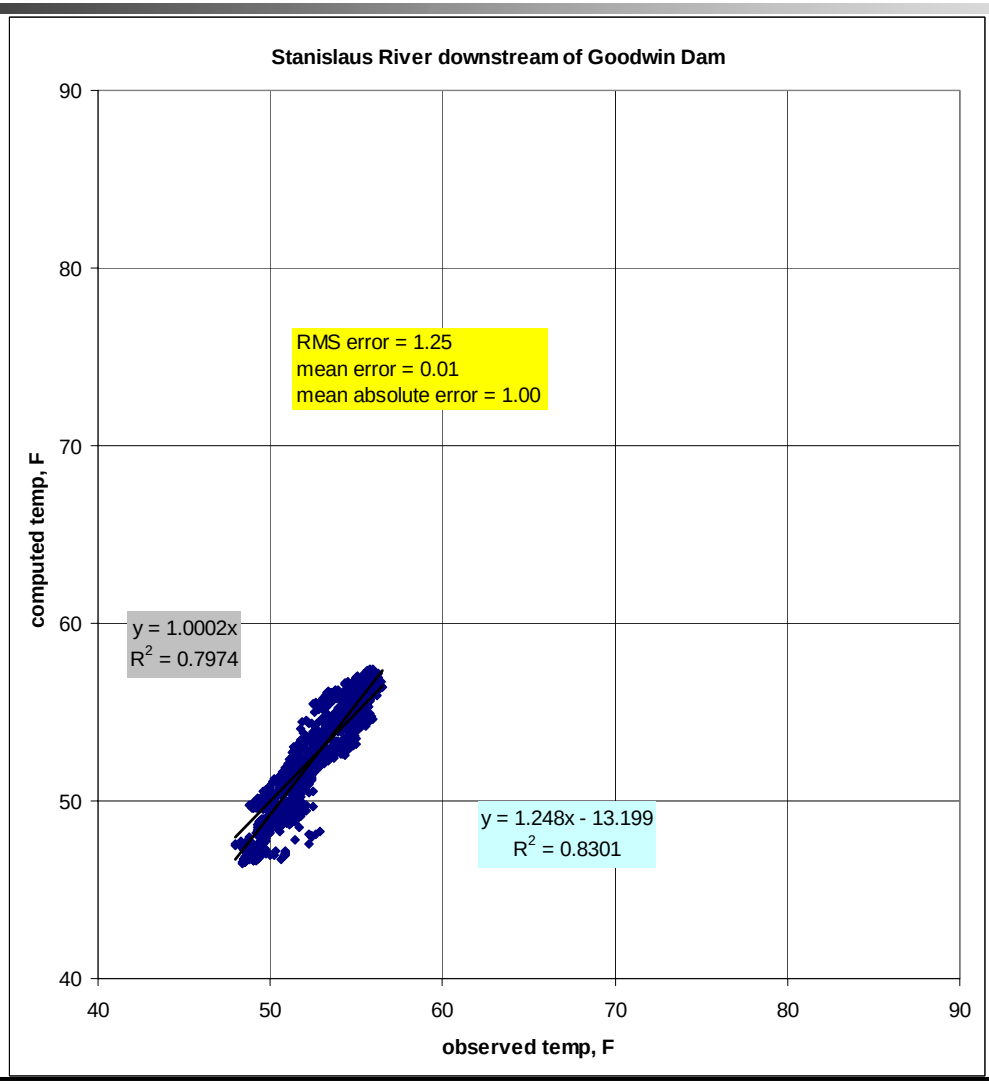
Tulloch 27-OCT-2003 12:00



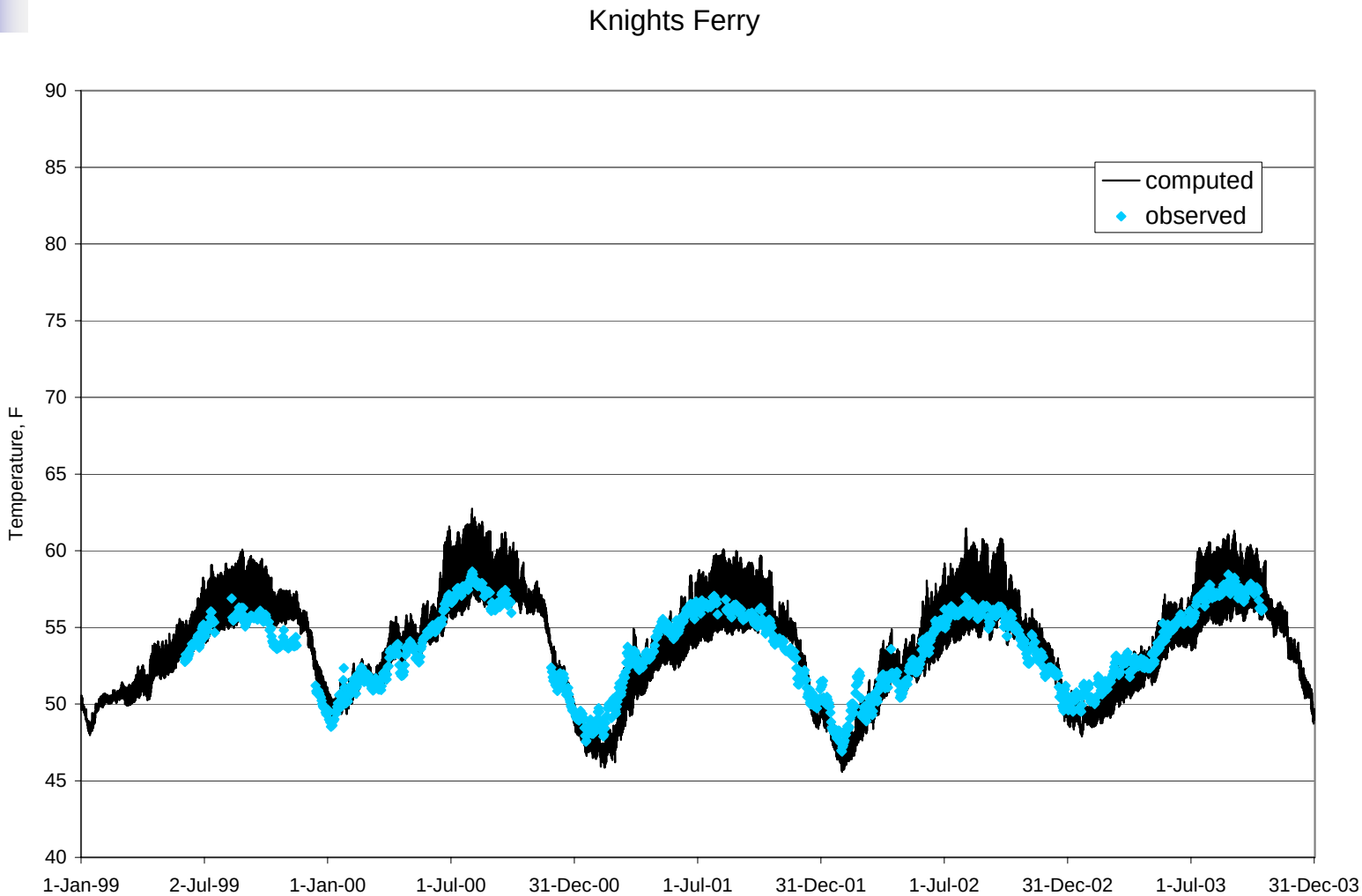
Computed and observed temperature in the Stanislaus River below Goodwin Dam



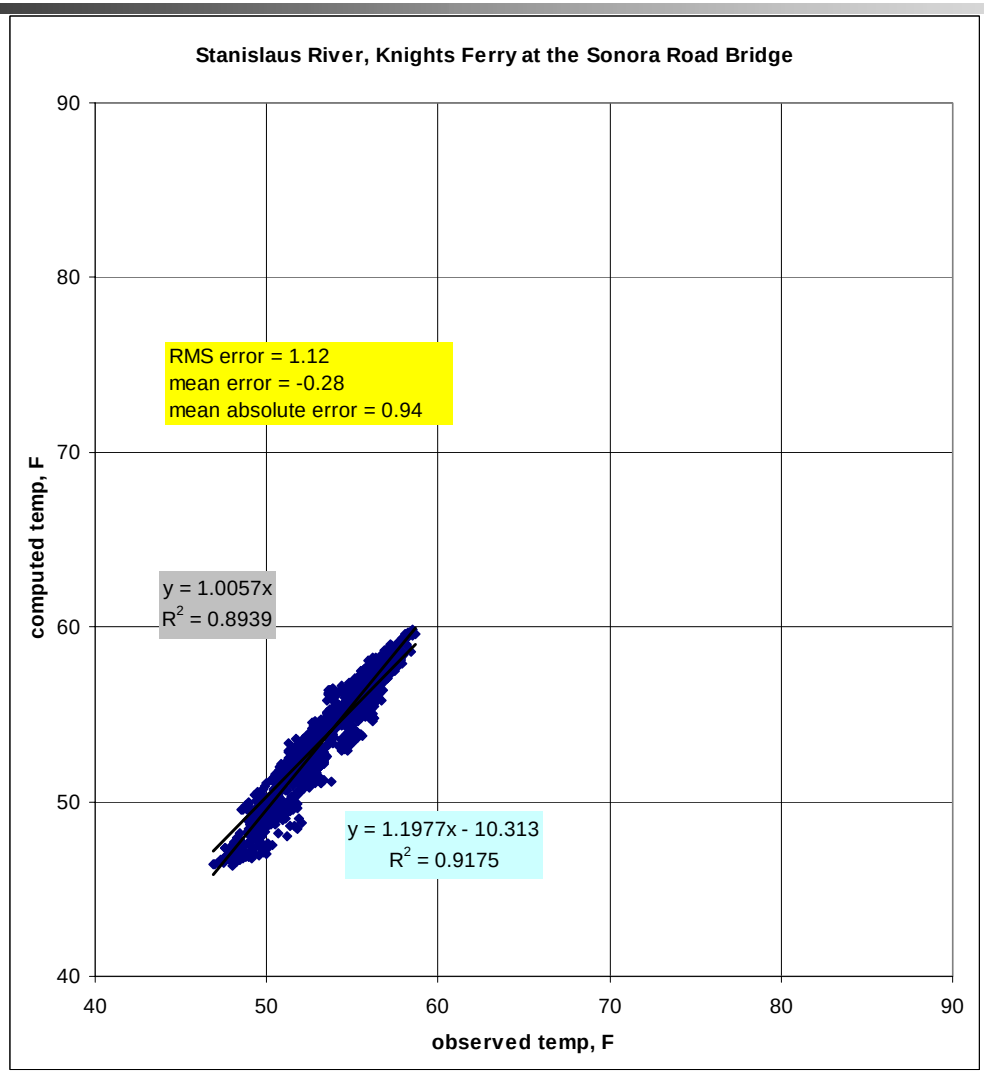
Computed versus observed temperature in the Stanislaus River below Goodwin Dam



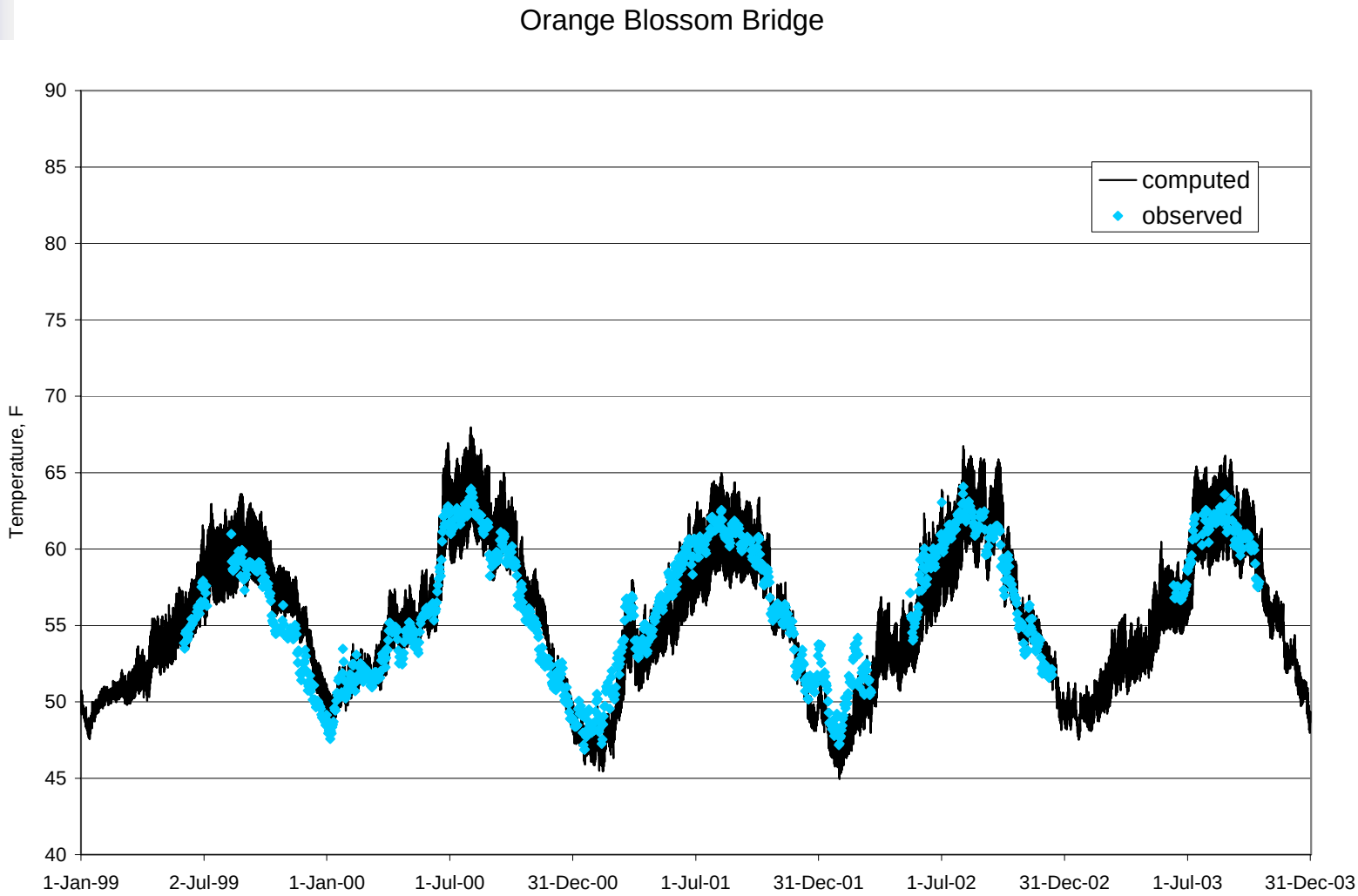
Computed and observed temperature in the Stanislaus River at Knights Ferry



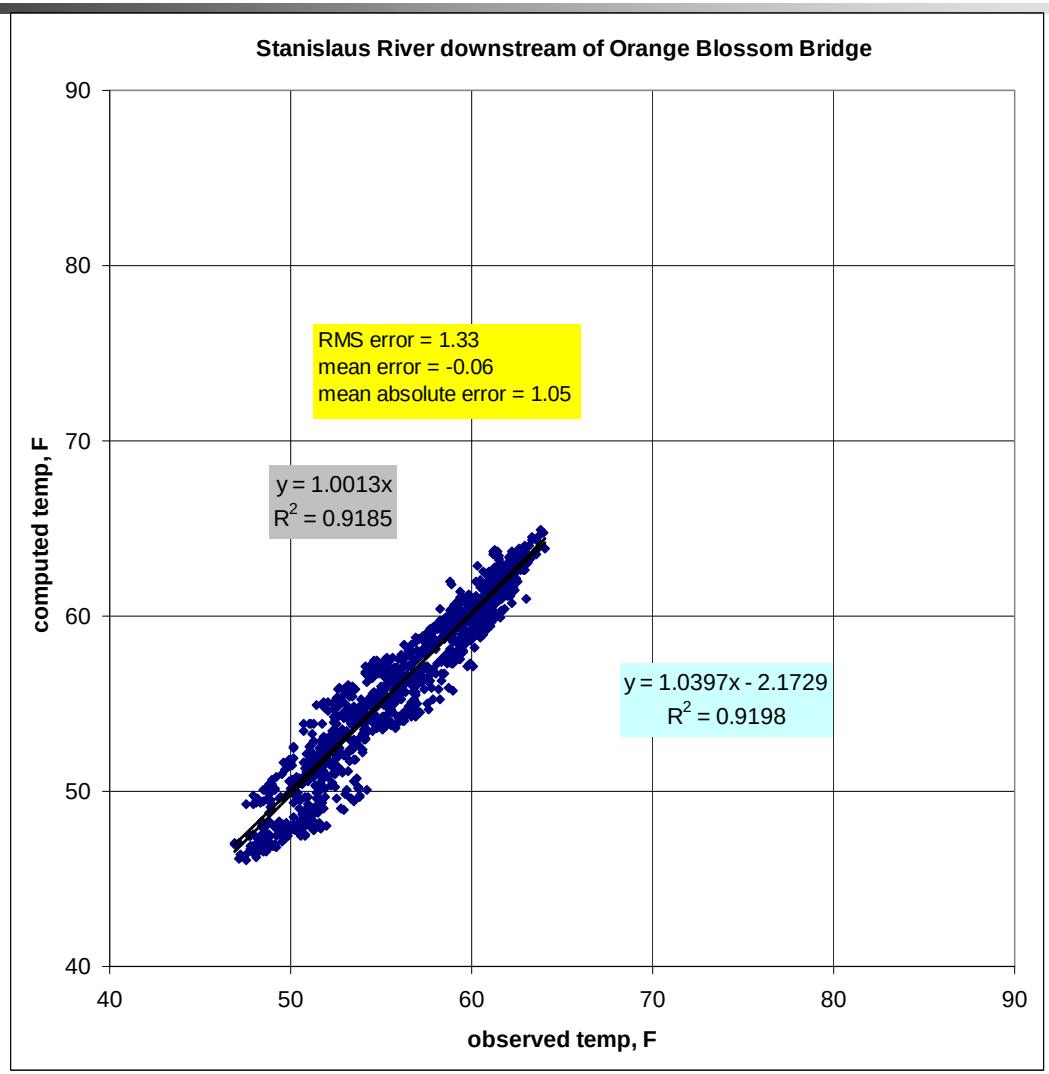
Computed versus observed temperature in the Stanislaus River at Knights Ferry



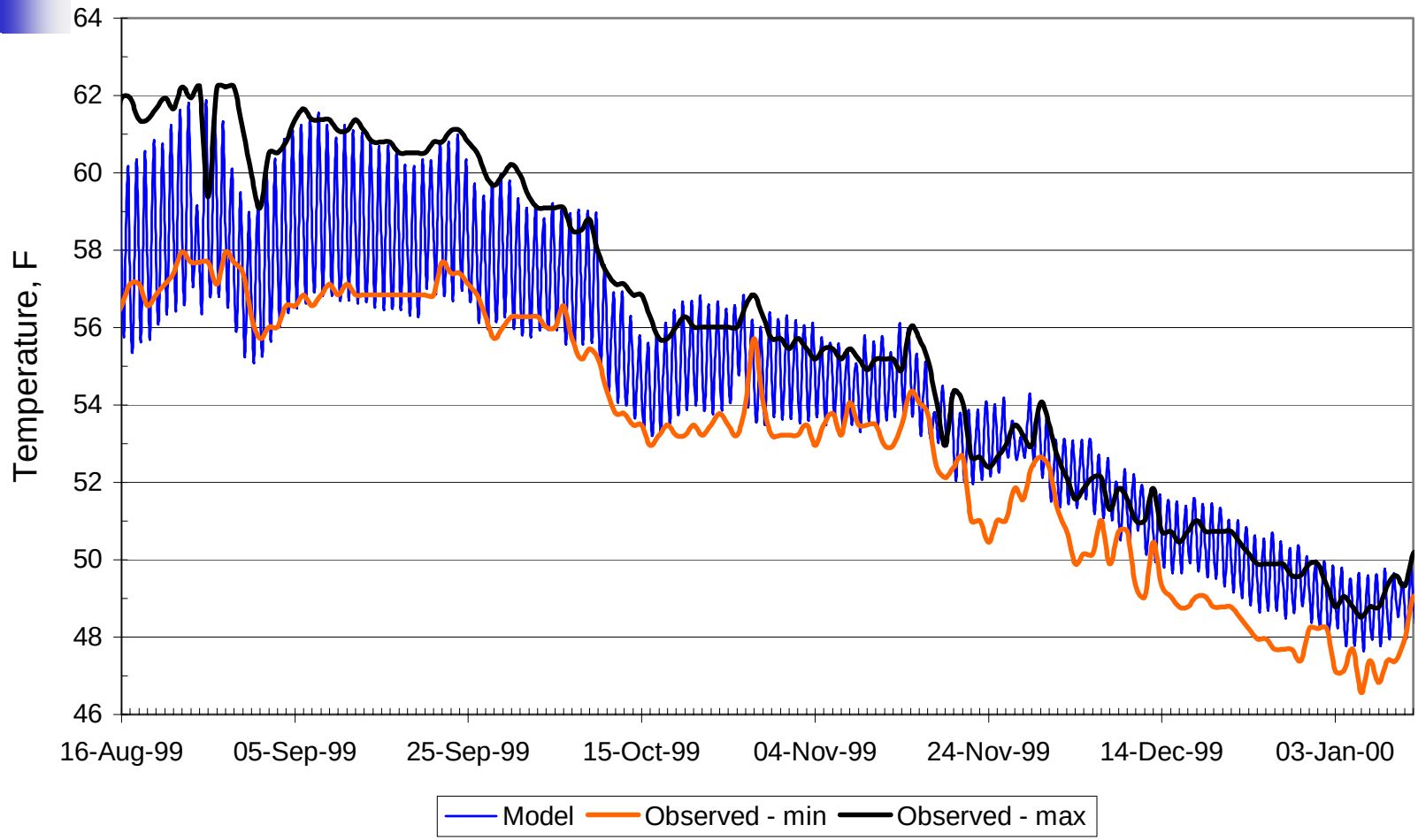
Computed and observed temperature in the Stanislaus River at Orange Blossom Bridge



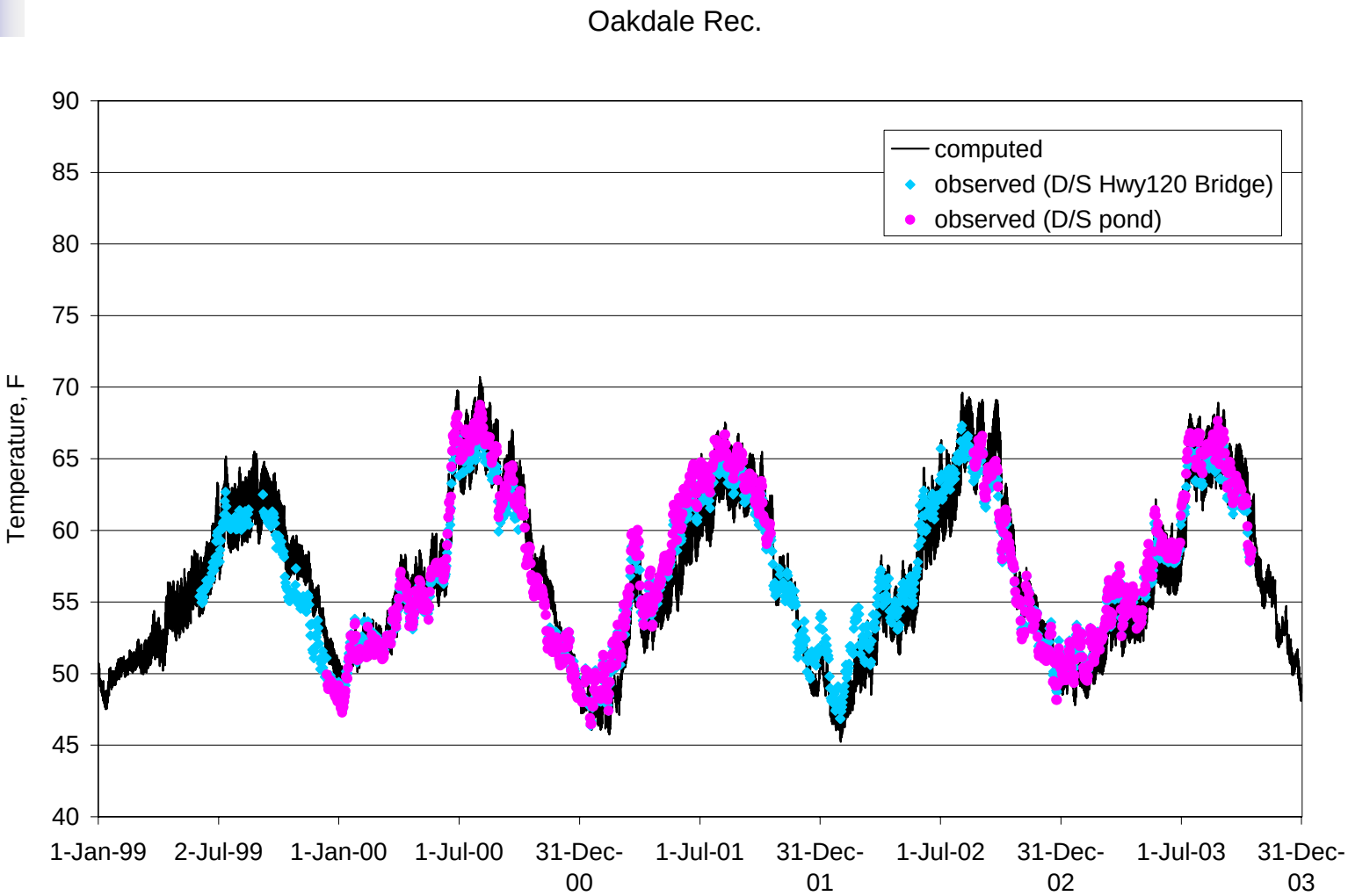
Computed and observed temperature in the Stanislaus River at Orange Blossom Bridge



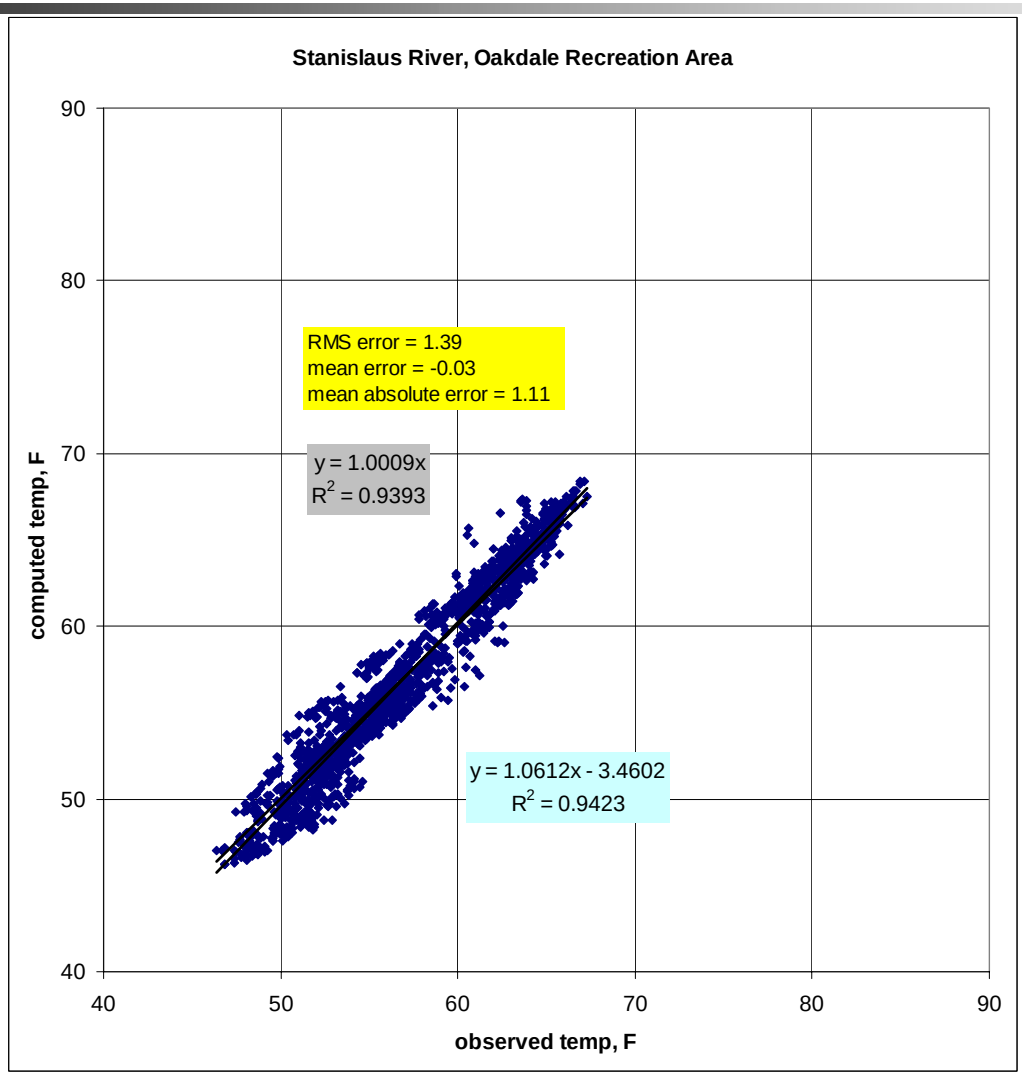
Computed and observed stream temperature at Orange Blossom Bridge, 1999



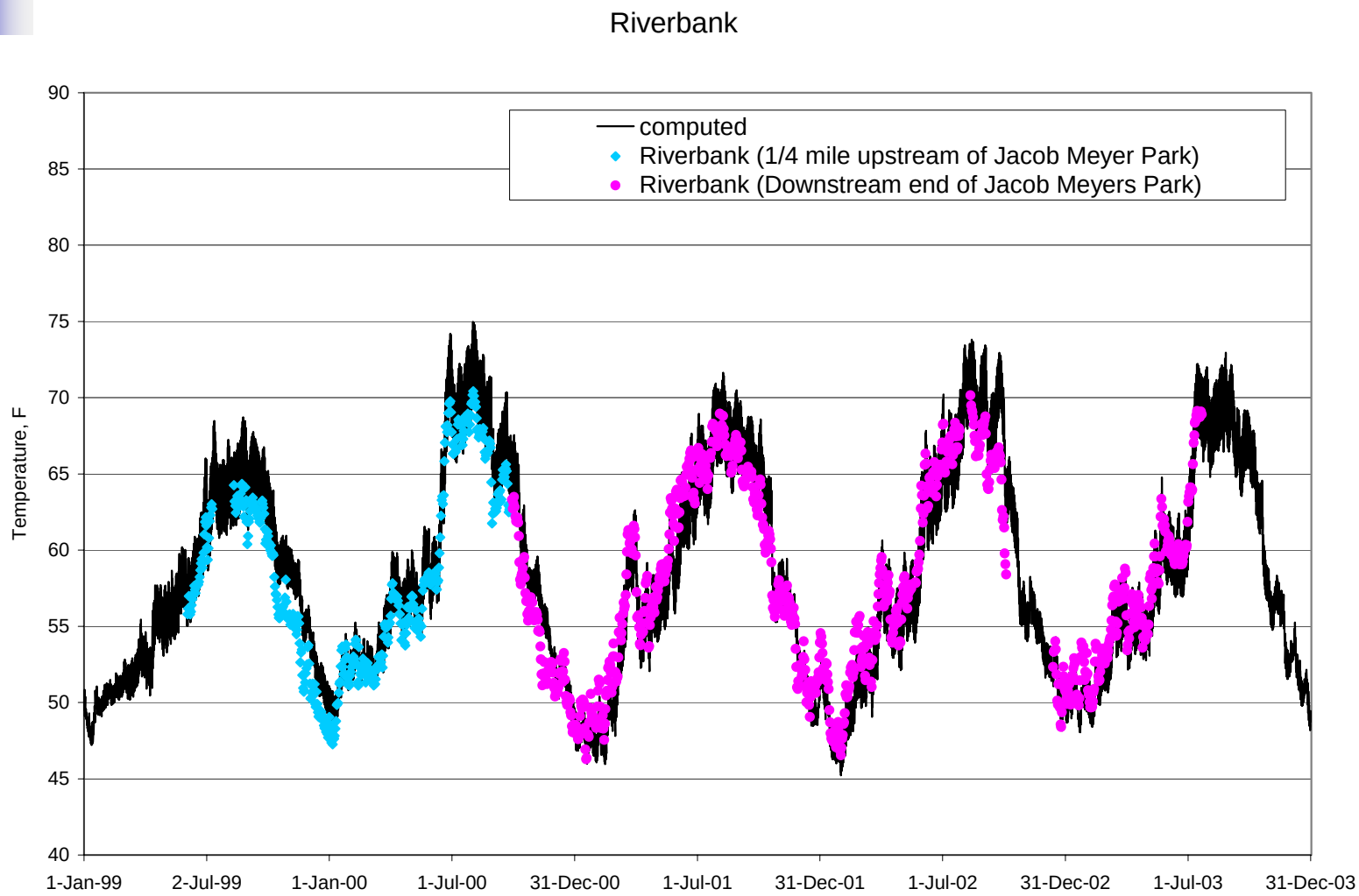
Computed and observed temperature in the Stanislaus River at Oakdale



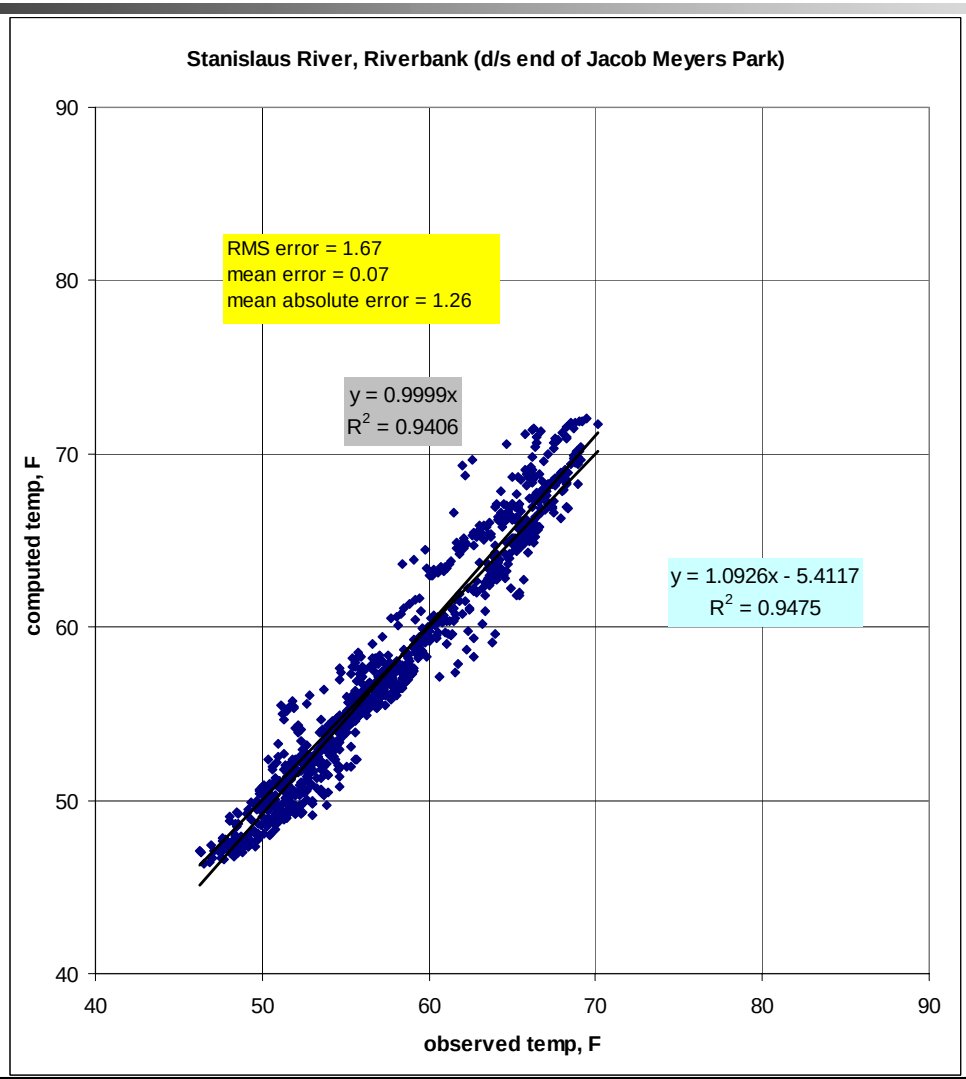
Computed versus observed temperature in the Stanislaus River at Oakdale



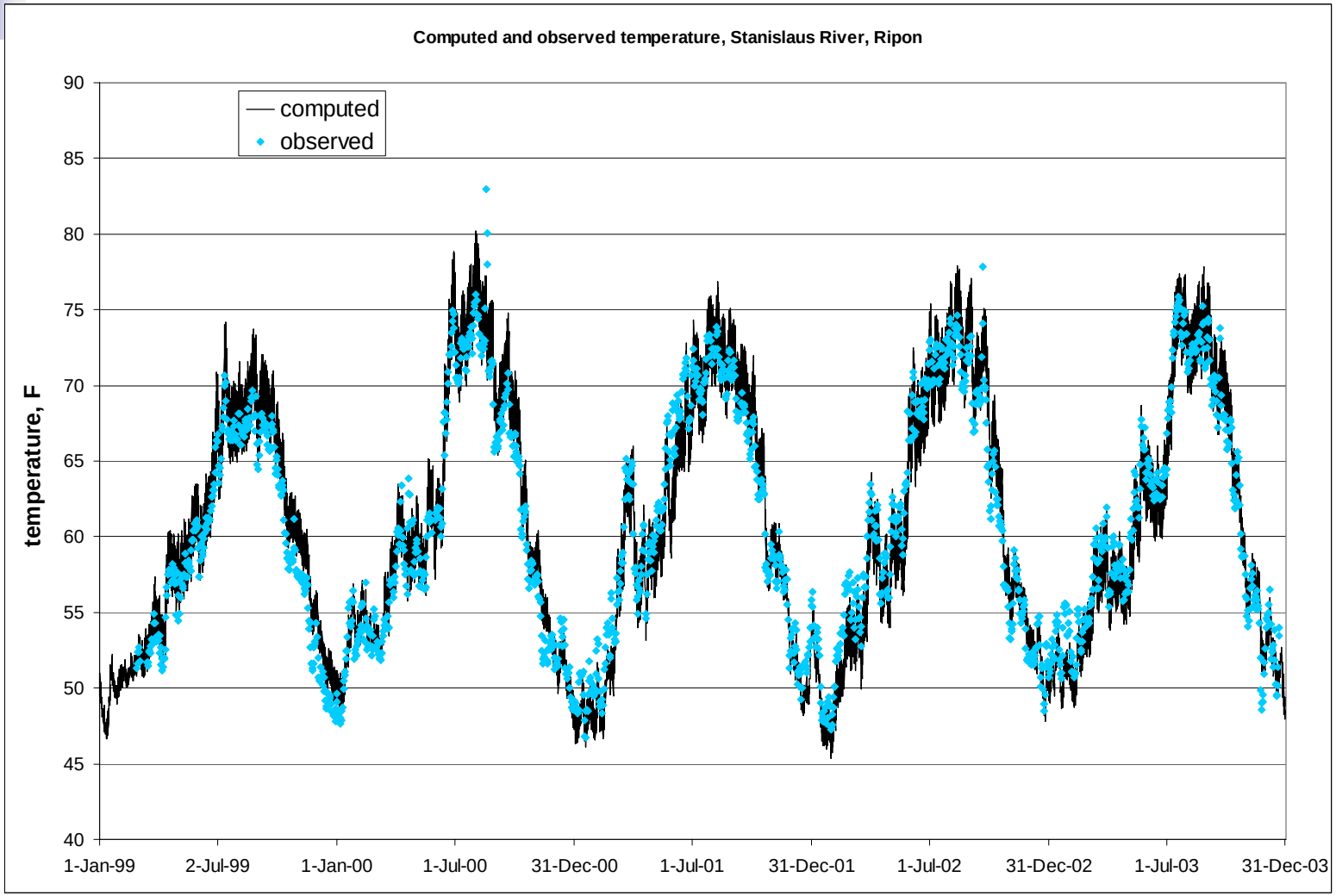
Computed and observed temperature in the Stanislaus River at Riverbank



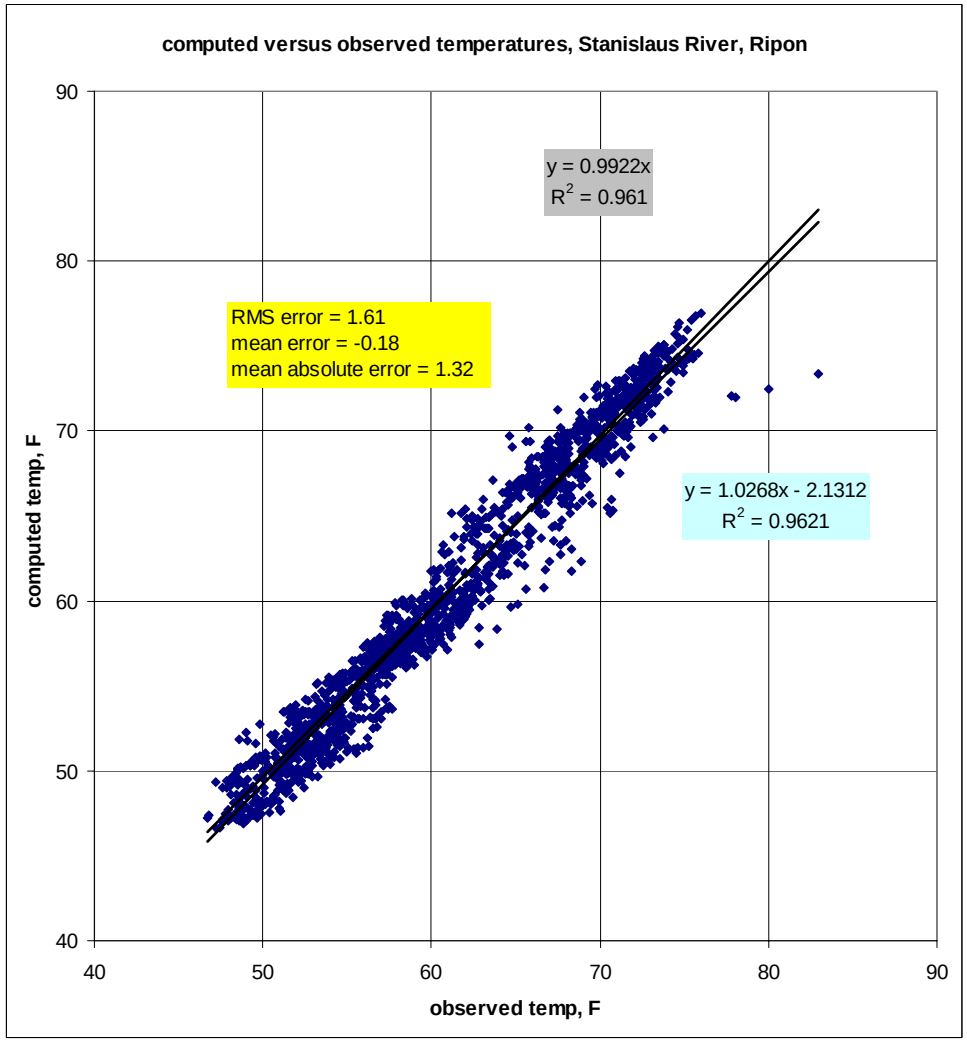
Computed versus observed temperature in the Stanislaus River at Riverbank



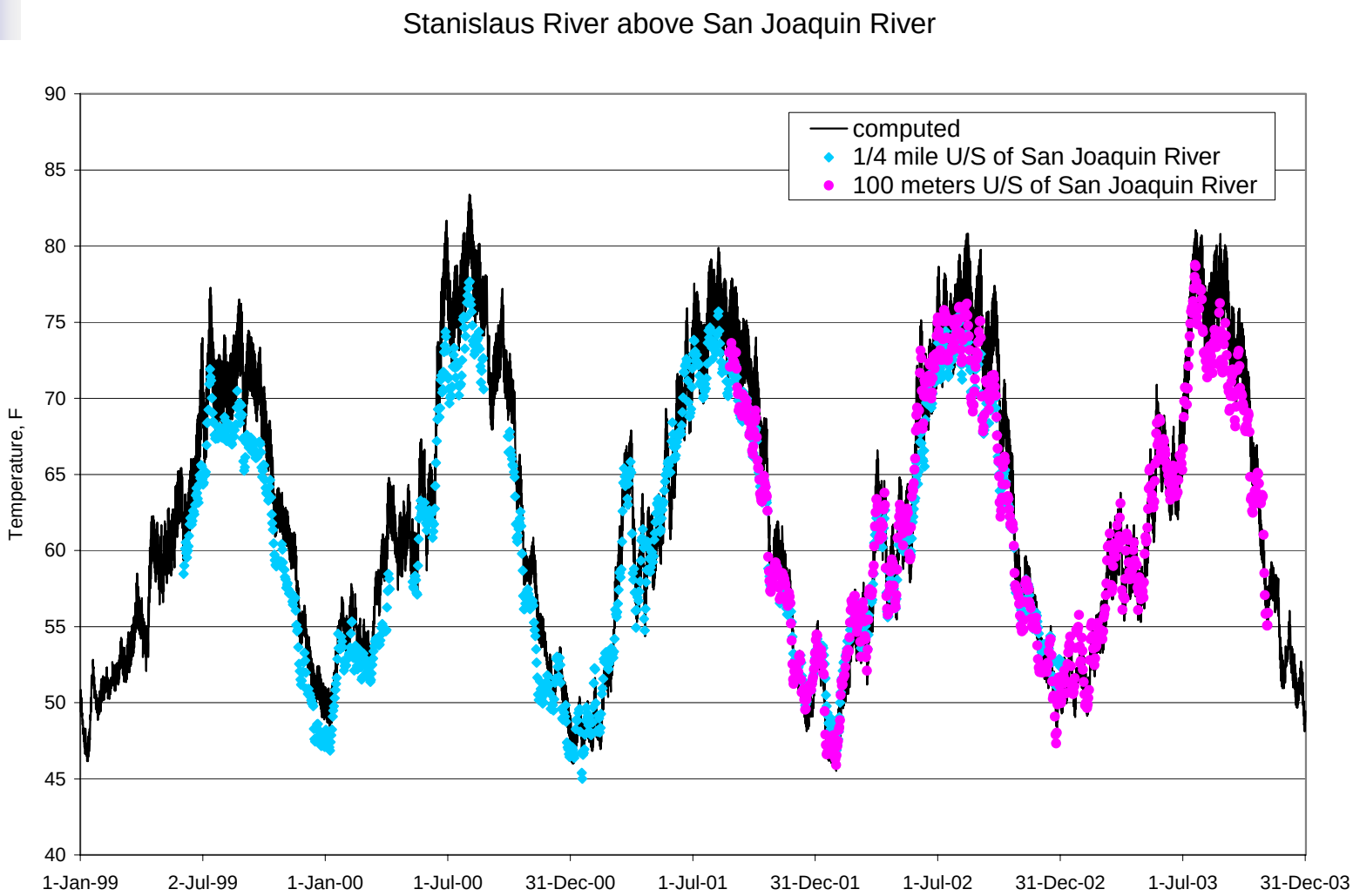
Computed and observed temperature in the Stanislaus River at Ripon



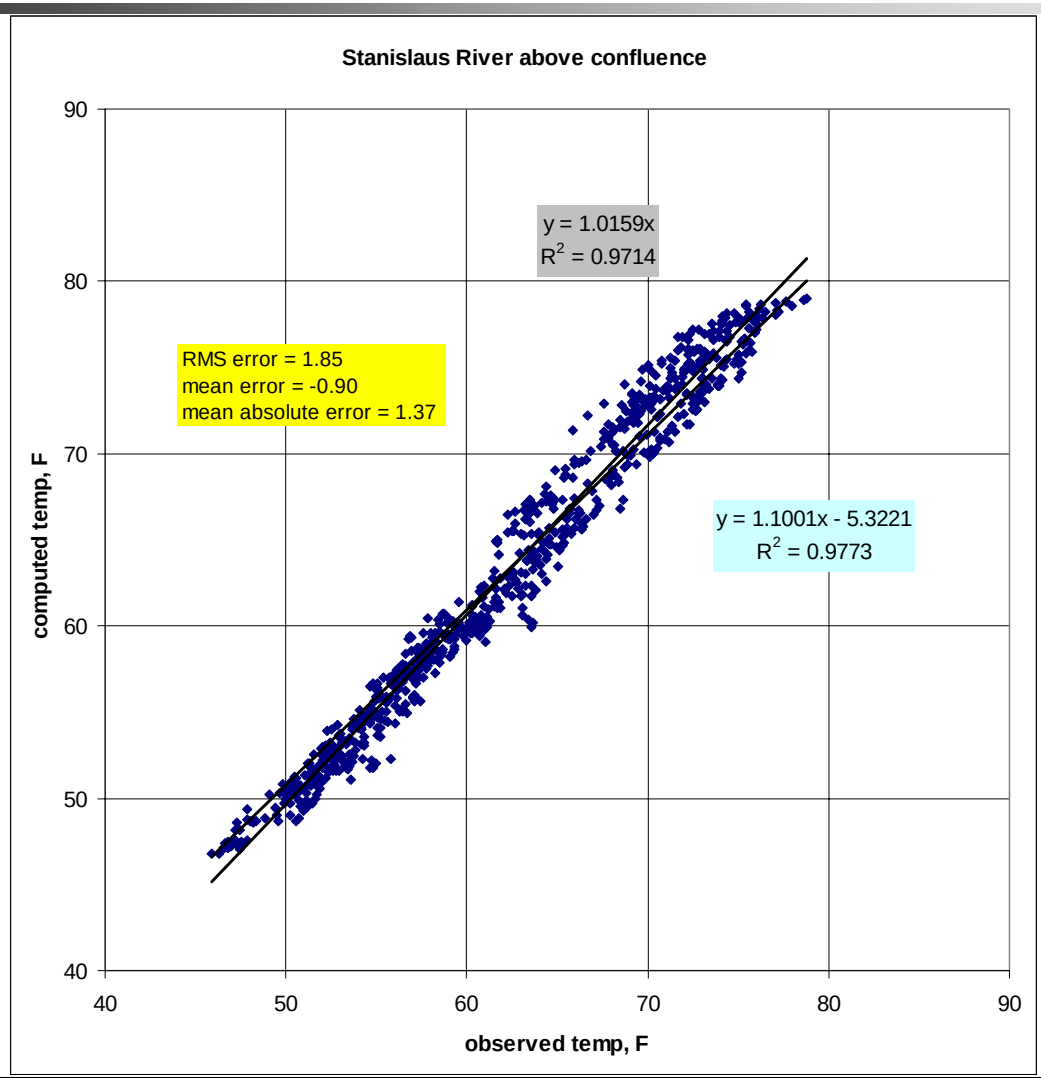
Computed versus observed temperature in the Stanislaus River at Ripon



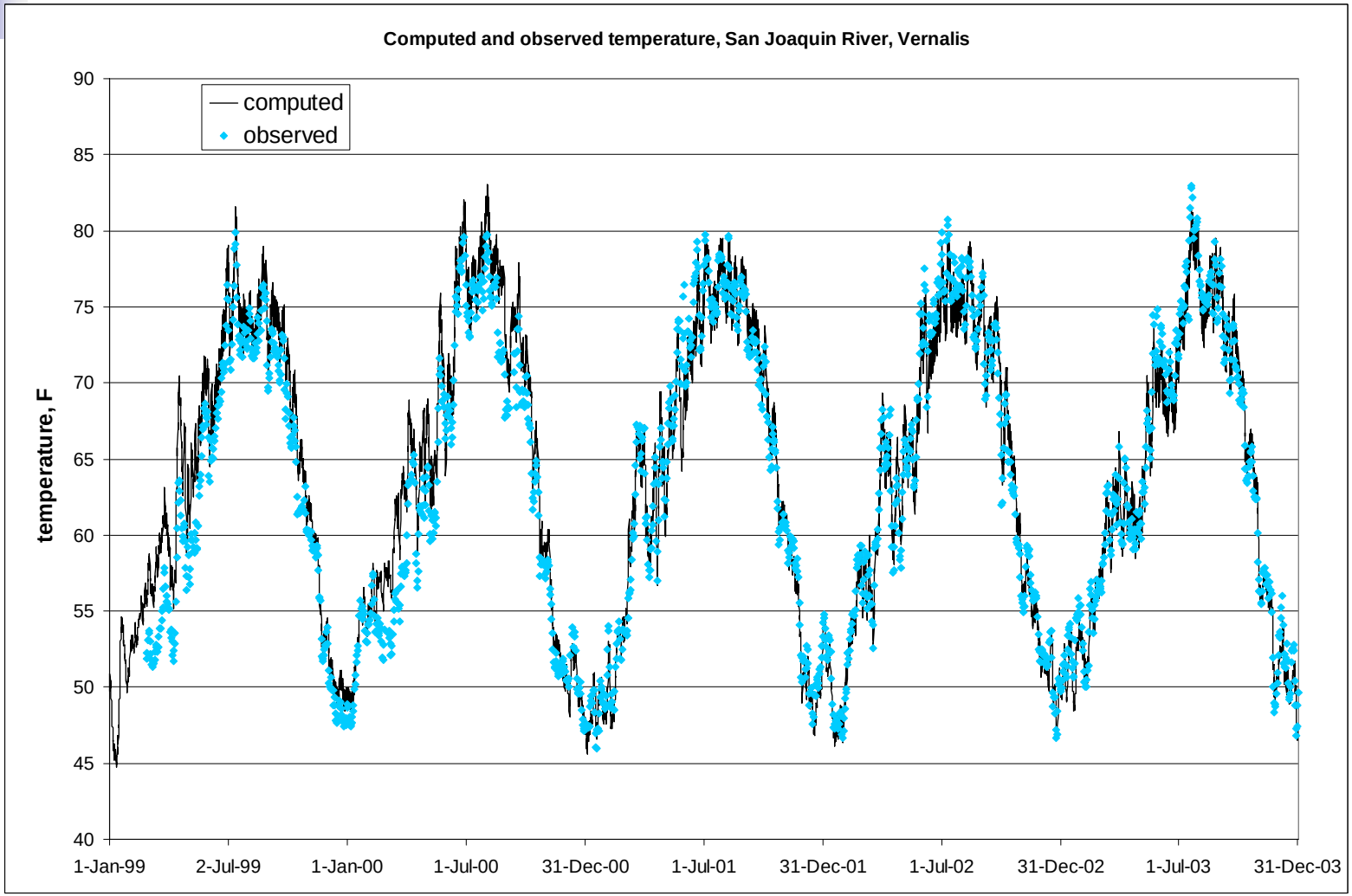
Computed and observed temperature in the Stanislaus River above the confluence with the San Joaquin River



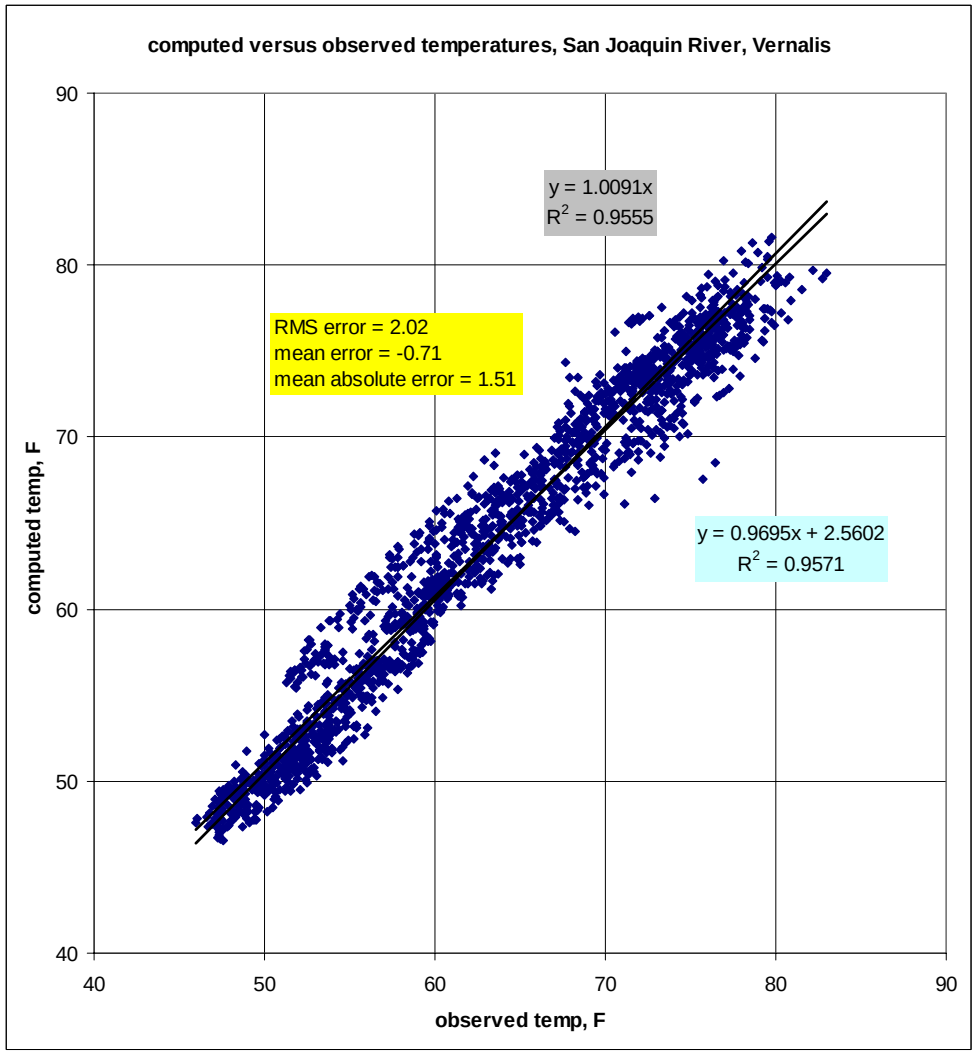
Computed versus observed temperature in the Stanislaus River above the confluence with the San Joaquin River



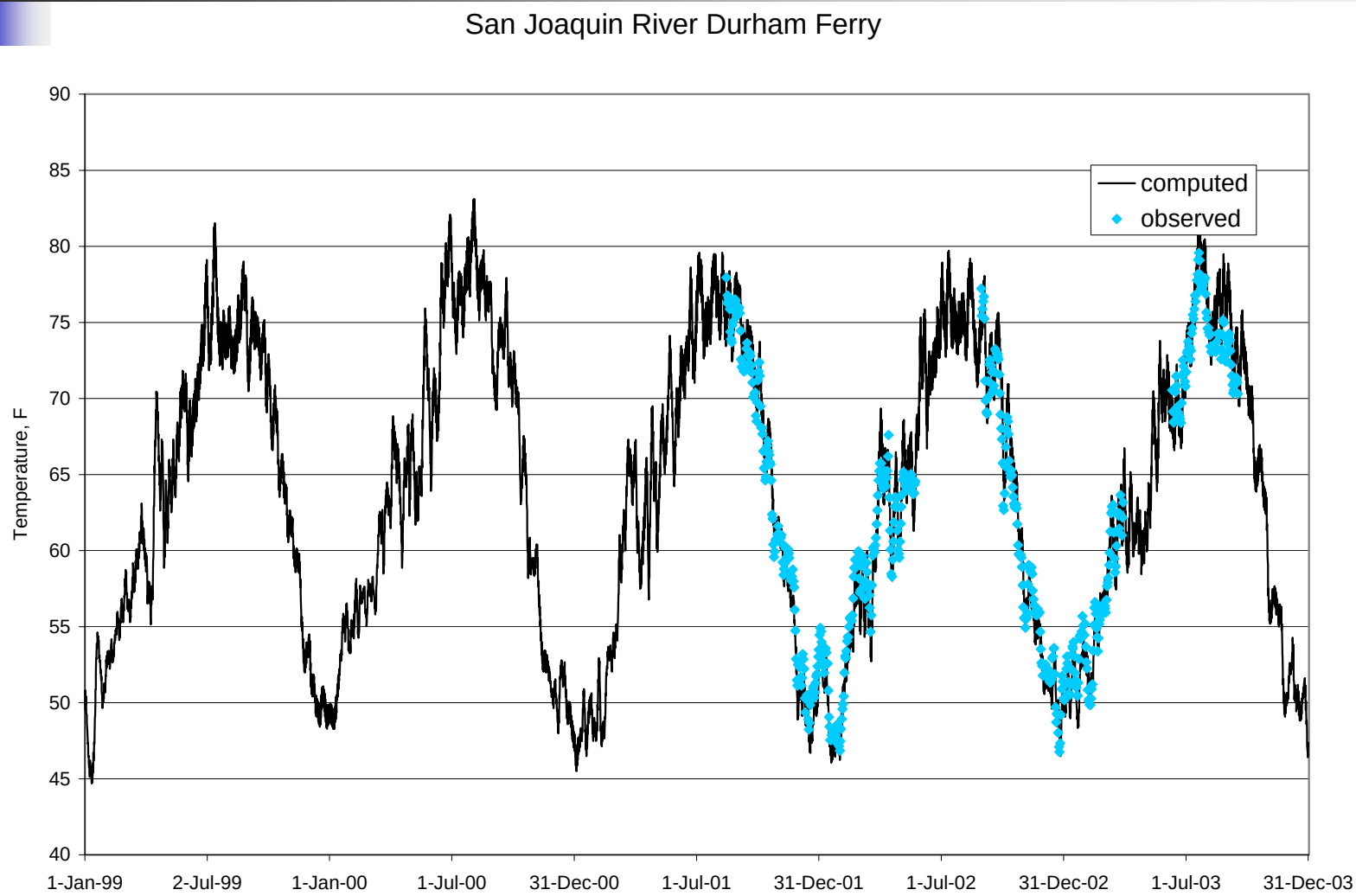
Computed and observed temperature in the San Joaquin River at Vernalis



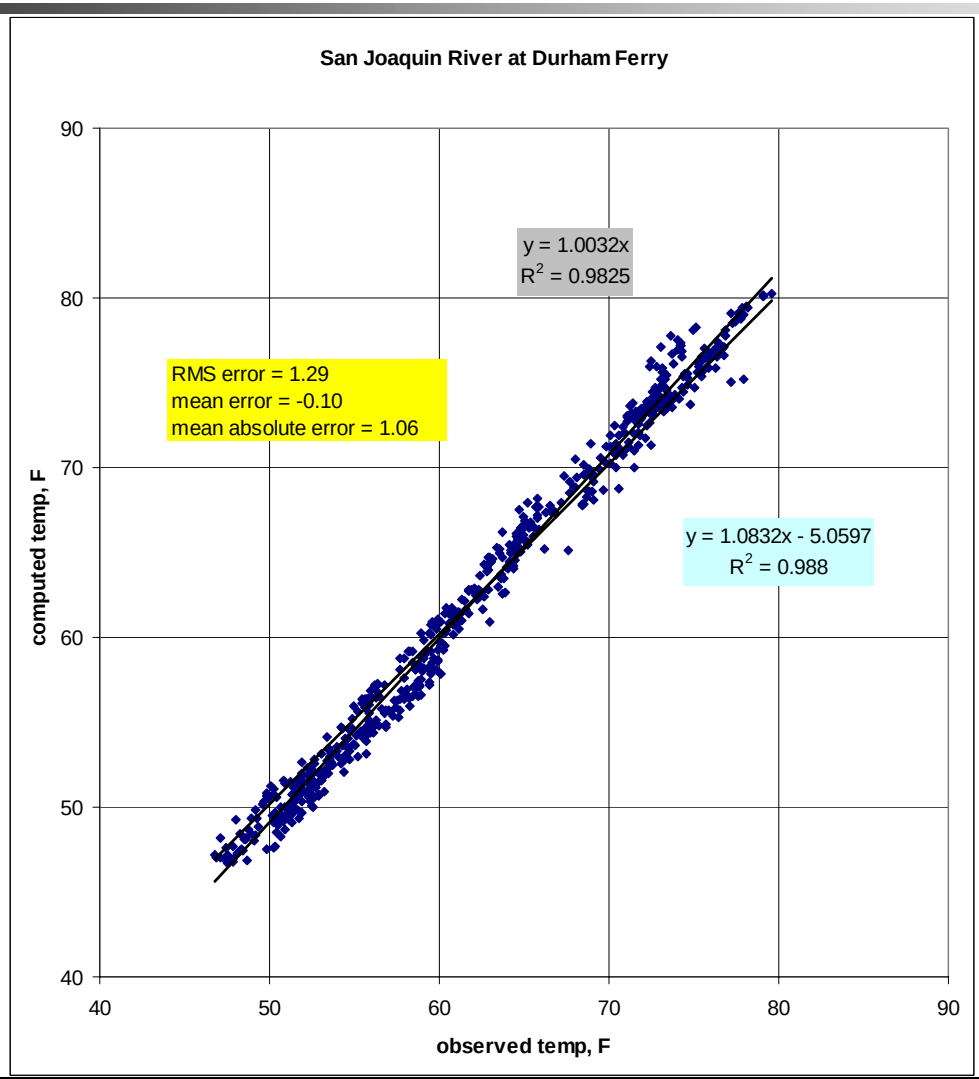
Computed versus observed temperature in the San Joaquin River at Vernalis



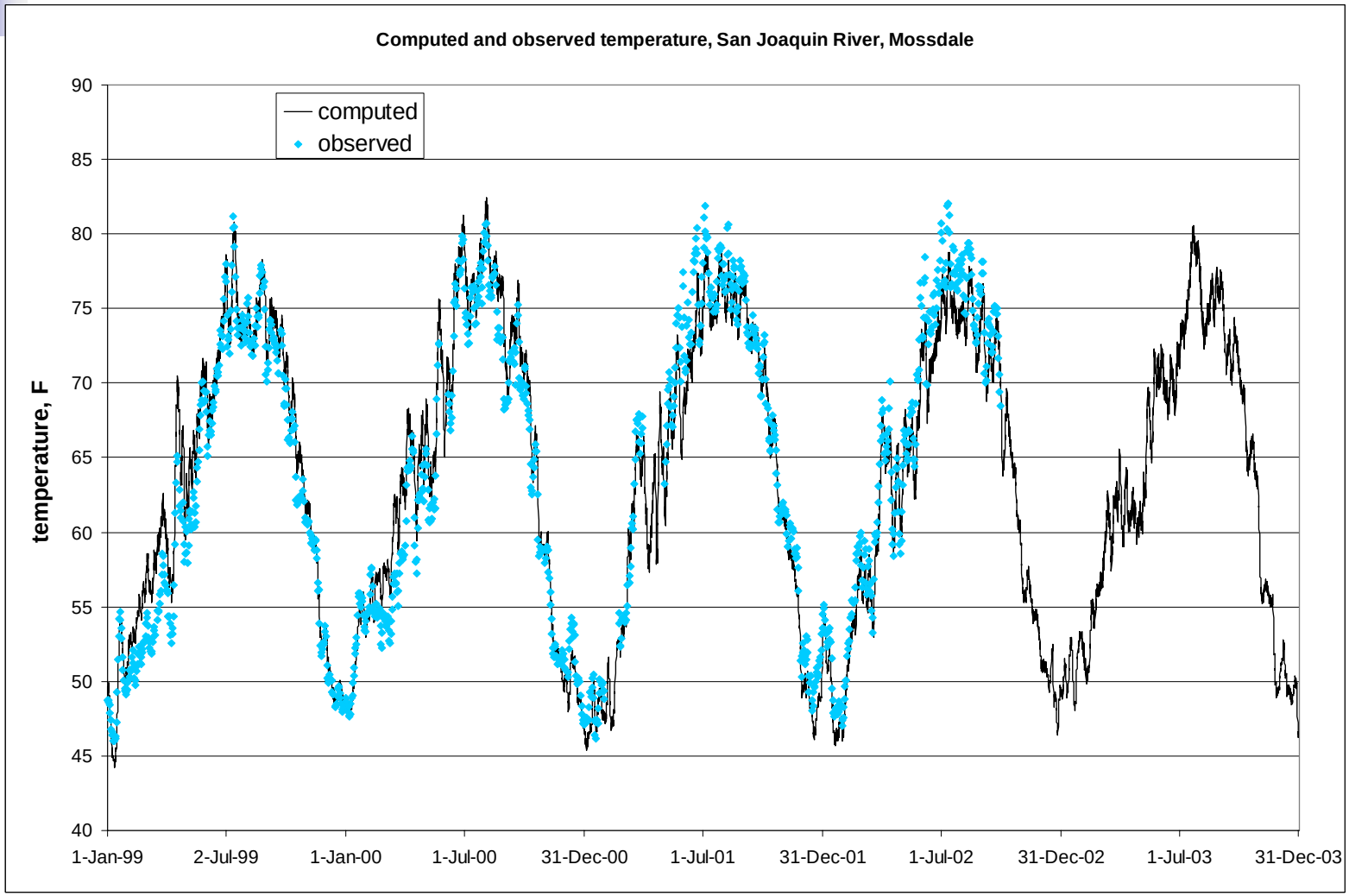
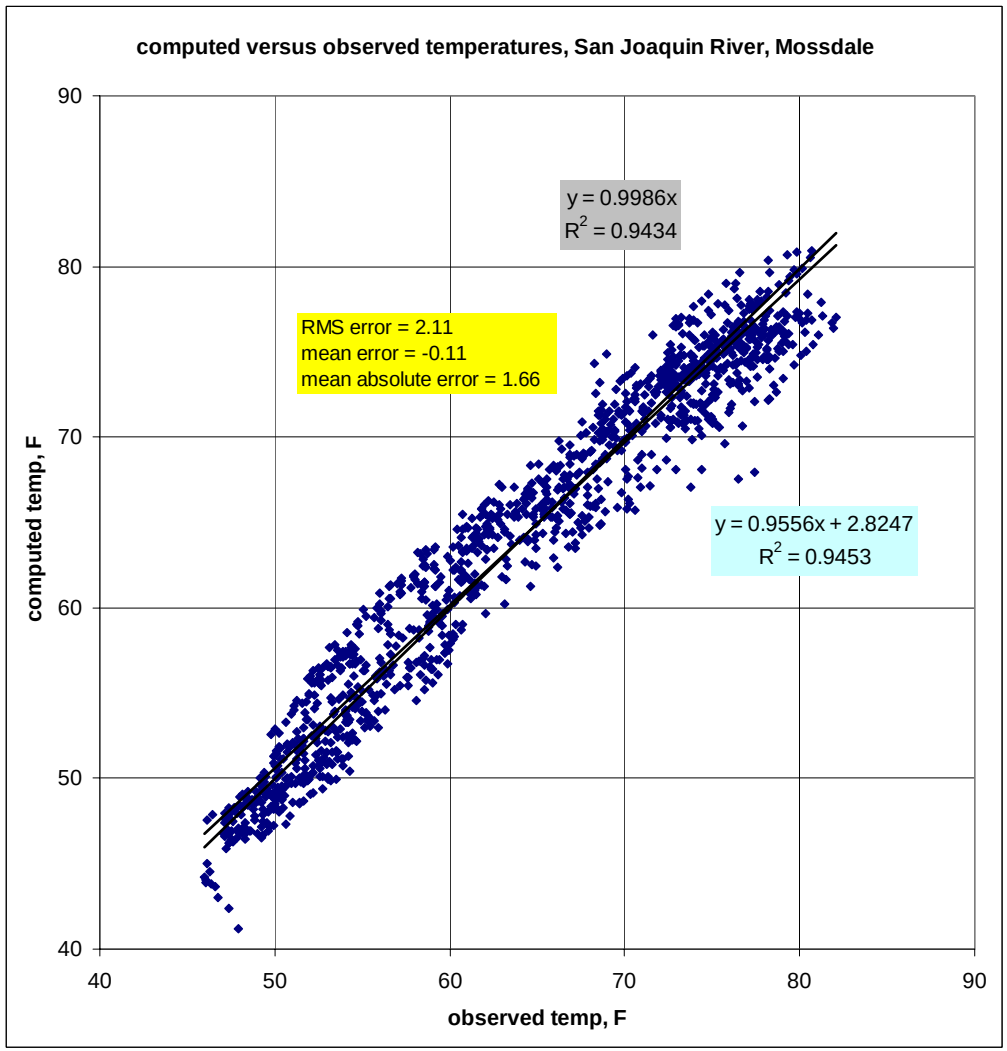
Computed and observed temperature in the San Joaquin River at Durham Ferry



Computed versus observed temperature in the San Joaquin River at Durham Ferry



Computed and observed temperature in the San Joaquin River at Mossdale



Computed versus observed temperature in the San Joaquin River at Mossdale