

Progress report on shallow water modeling in the Chester River with FVCOM-ICM application

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UMCES/CBPO**

**Quarterly Review Meeting
Jan. 14 2015**

Outline

CMON data

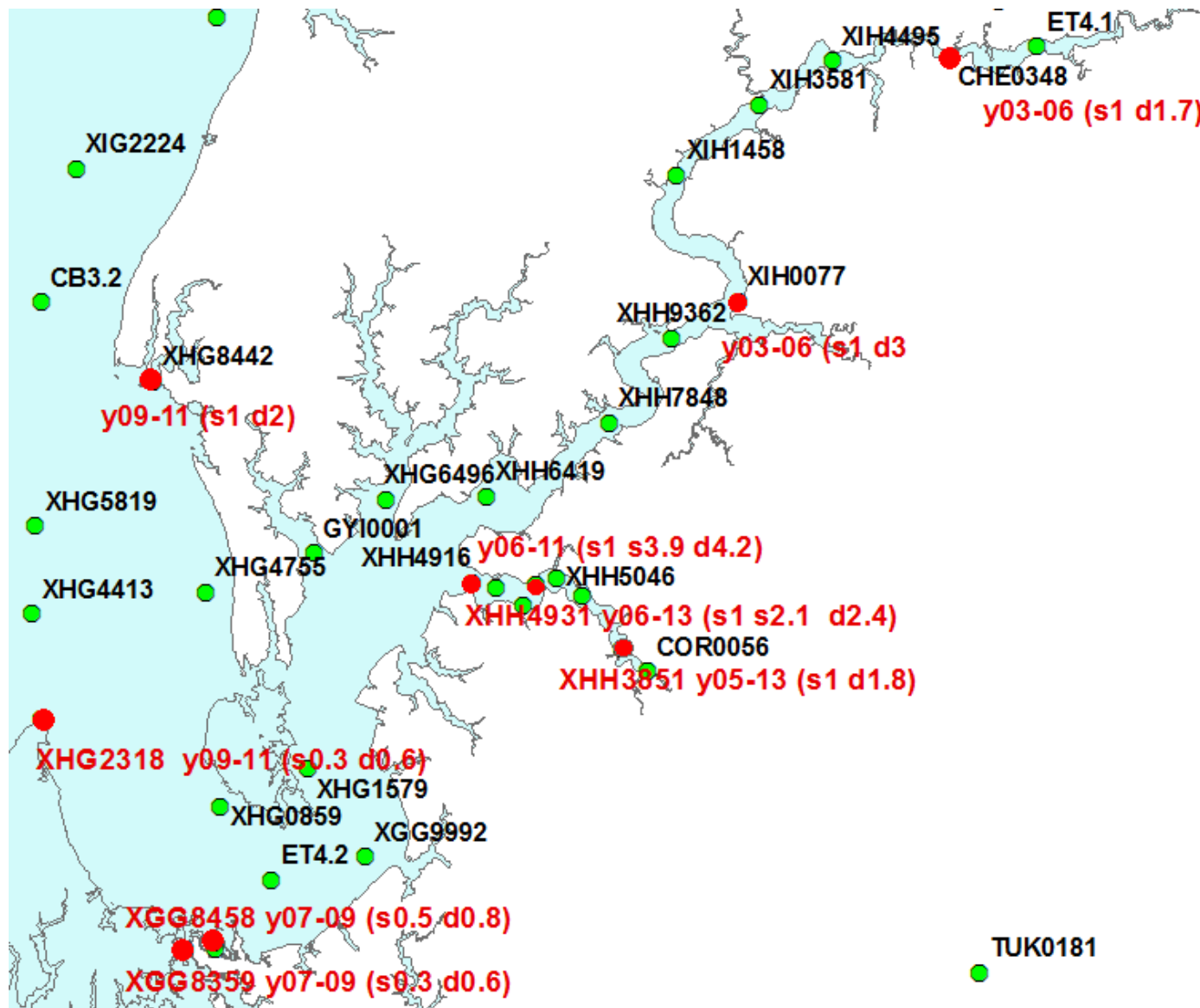
Cruise date

Forcing data

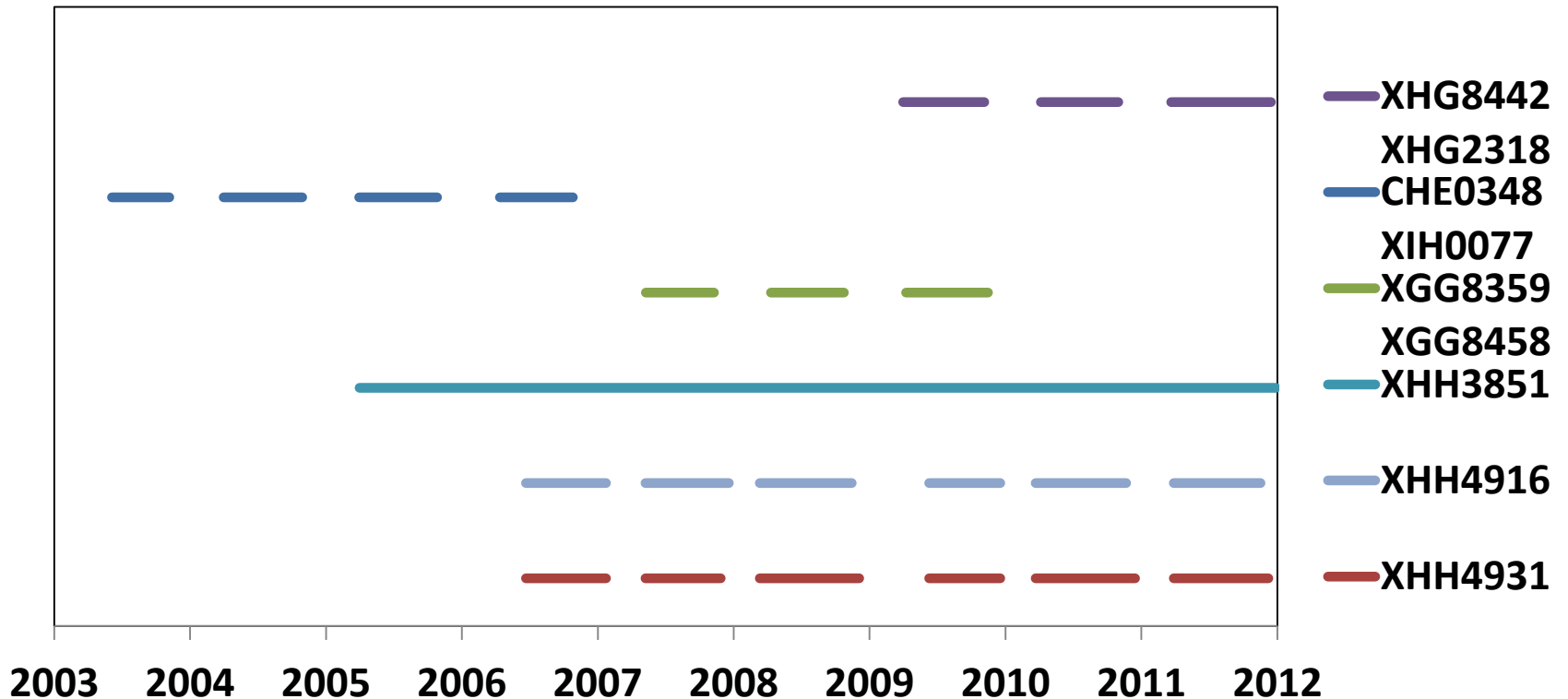
Model

Preliminary results

Chester Shallow Water Monitoring Stations



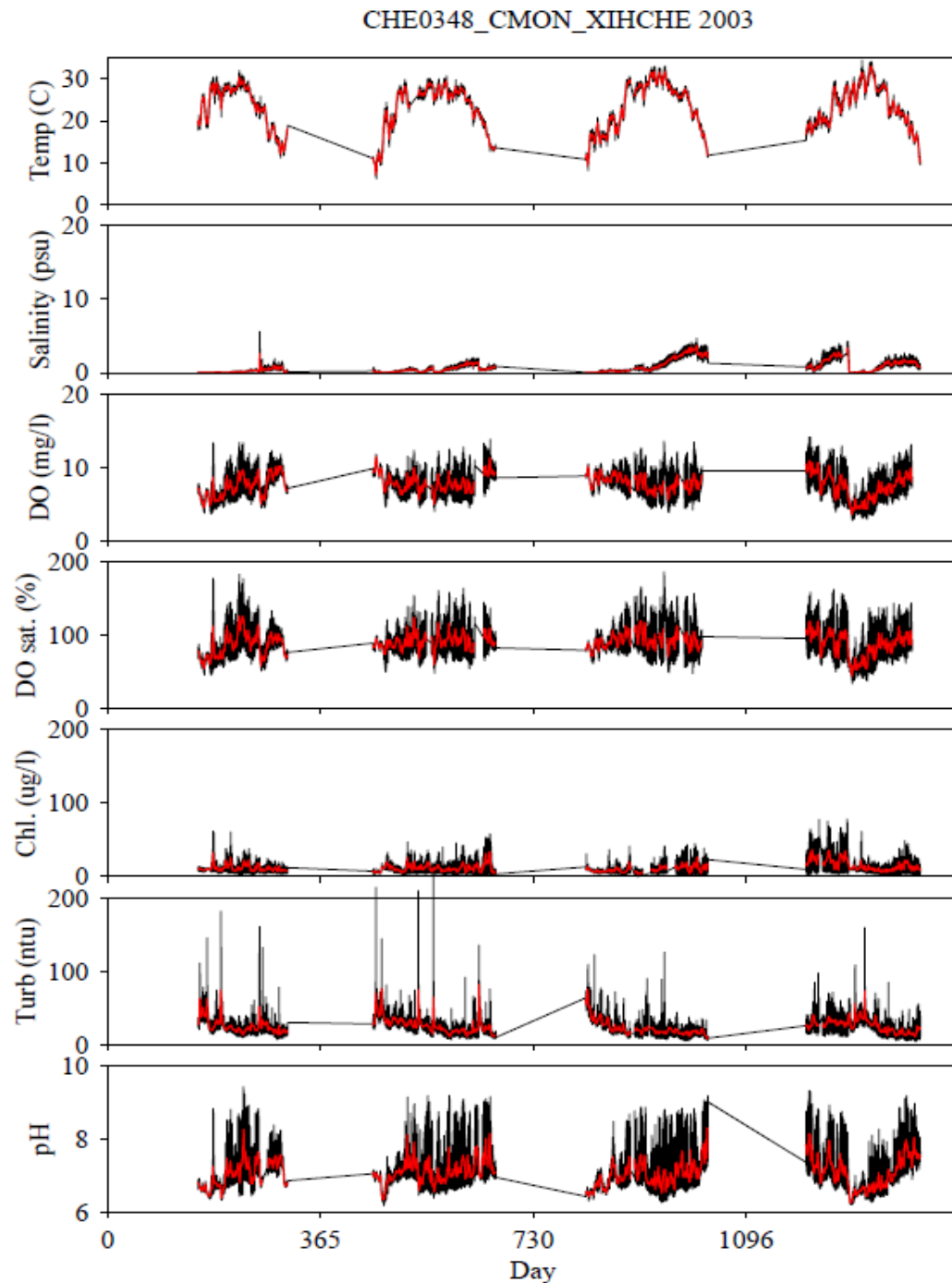
CMON data availability at different stations (T, S, Ph, DO, Chl, Turb)



CMON data availability at different stations (T, S, Ph, DO, Chl, Turb)

Station	Month	Year
CHE0348	Jun. 5 – Oct. 26	2003 – 2006
XIH0077	Jun. 5 – Oct. 26	2003 – 2006
XGG8359	May 10 – Nov 15	2007 – 2009
XGG8458	May 10 – Dec. 4	2007 – 2009
XHH3851	Apr. 1 – Dec. 31	2005 – 2013
XHH4916	Jun 22 – Nov. 17	2006 – 2011
XHH4931	Jun. 22 – Dec. 4	2006 – 2013
XHG8442	Apr. 1 – Oct. 31	2009 – 2011
XHG2318	Apr. 1 – Dec. 15	2009 – 2011

Surface CMON data at CHE0348 2003-2006

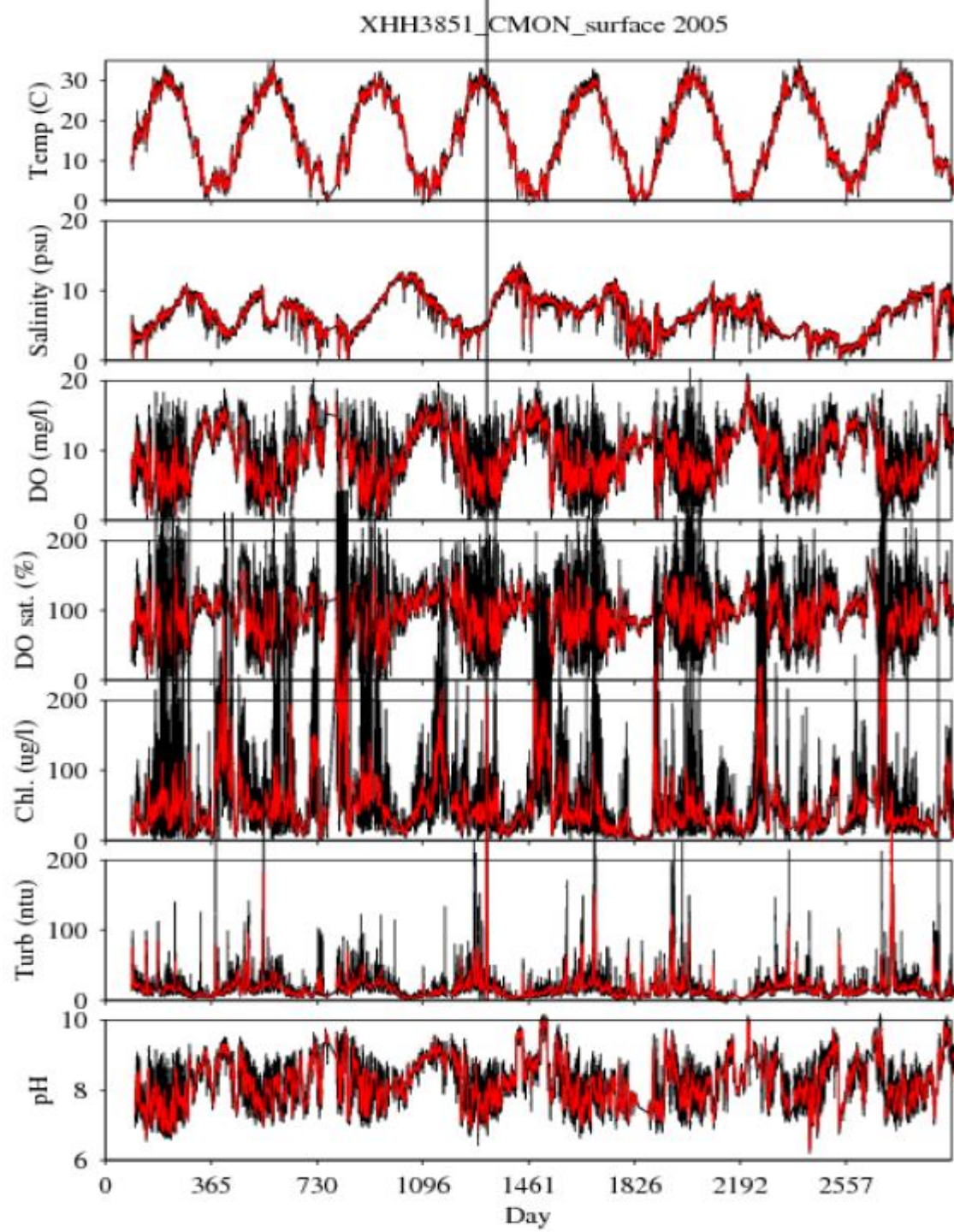


Grab data availability at different stations (Nutrient)

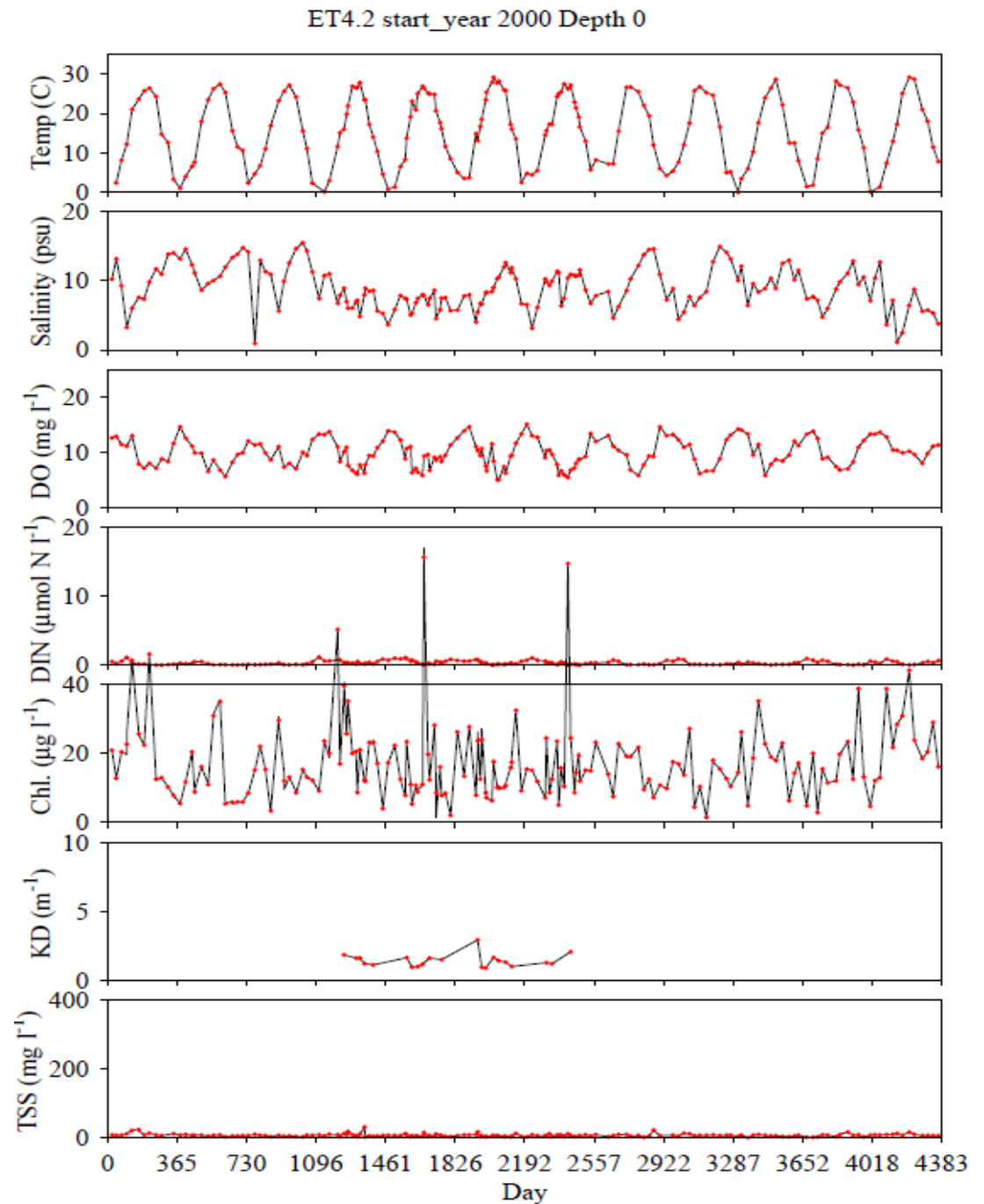
Station	Month	Year
ET4.2	Jan. 24 through Dec. 13	2000 - 2011
ET4.1	Jan. 18 through Dec. 13	2000 - 2011
CHE0348	May 29 – Oct. 26	2003 - 2006
XIH4495	May 29 – Oct. 30	2003
XIH3581	May 29 – Oct. 12	2003 - 2006
XIH0077	Jun. 5 – Oct. 26	2003 - 2006
XHH9362	May 29 – Oct. 30	2003
XHH7848	May 29 – Oct. 30	2003
XHH6419	May 27 – Oct. 12	2003 - 2006

Station	Month	Year
XHH4822	May 27 – Oct. 13	2003 - 2005
XHH5046	May 26 – Jun. 8	2005 - 2006
XHH3851	Apr. 1 - Dec. 8	2005 - 2011
XHG6496	May 27 – Oct. 12	2003 - 2006
GYI0001	May 27 – Oct. 12	2003 - 2006
XHG1579	May 27 – Oct. 12	2003 - 2006
XGG9992	May 27 – Oct. 12	2003 - 2006
XHG0859	May 27 – Oct. 12	2003 - 2006
XGG8359	May 10 – Oct. 22	2007 - 2009
XGG8251	Jan. 18 – Dec. 13	2000 - 2011
XGG8458	May 10 – Oct. 4	2007 - 2009

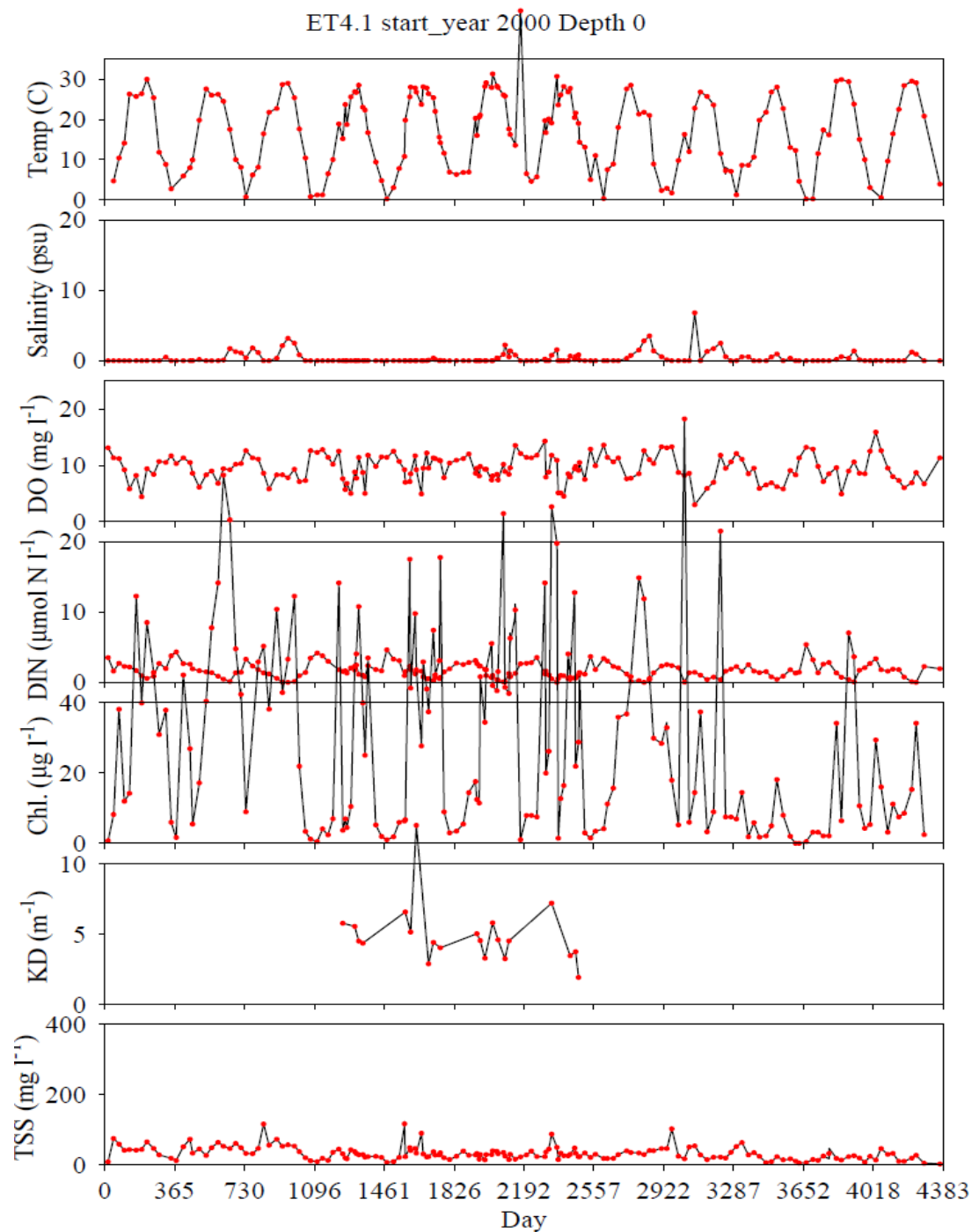
**Surface
CMON
data at
CHE3851
2005-2013**



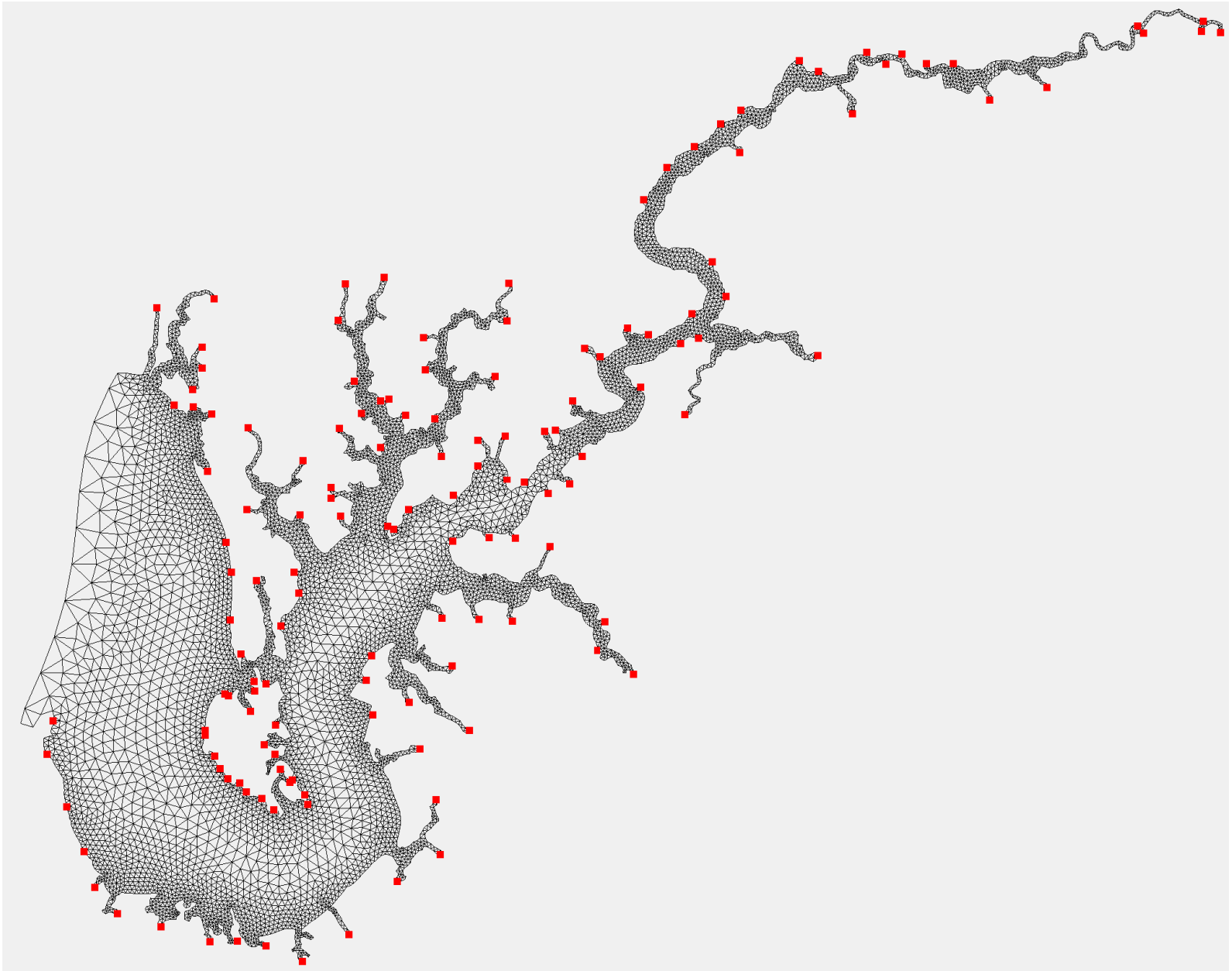
Surface Monitoring data at ET4.2 2000-2011



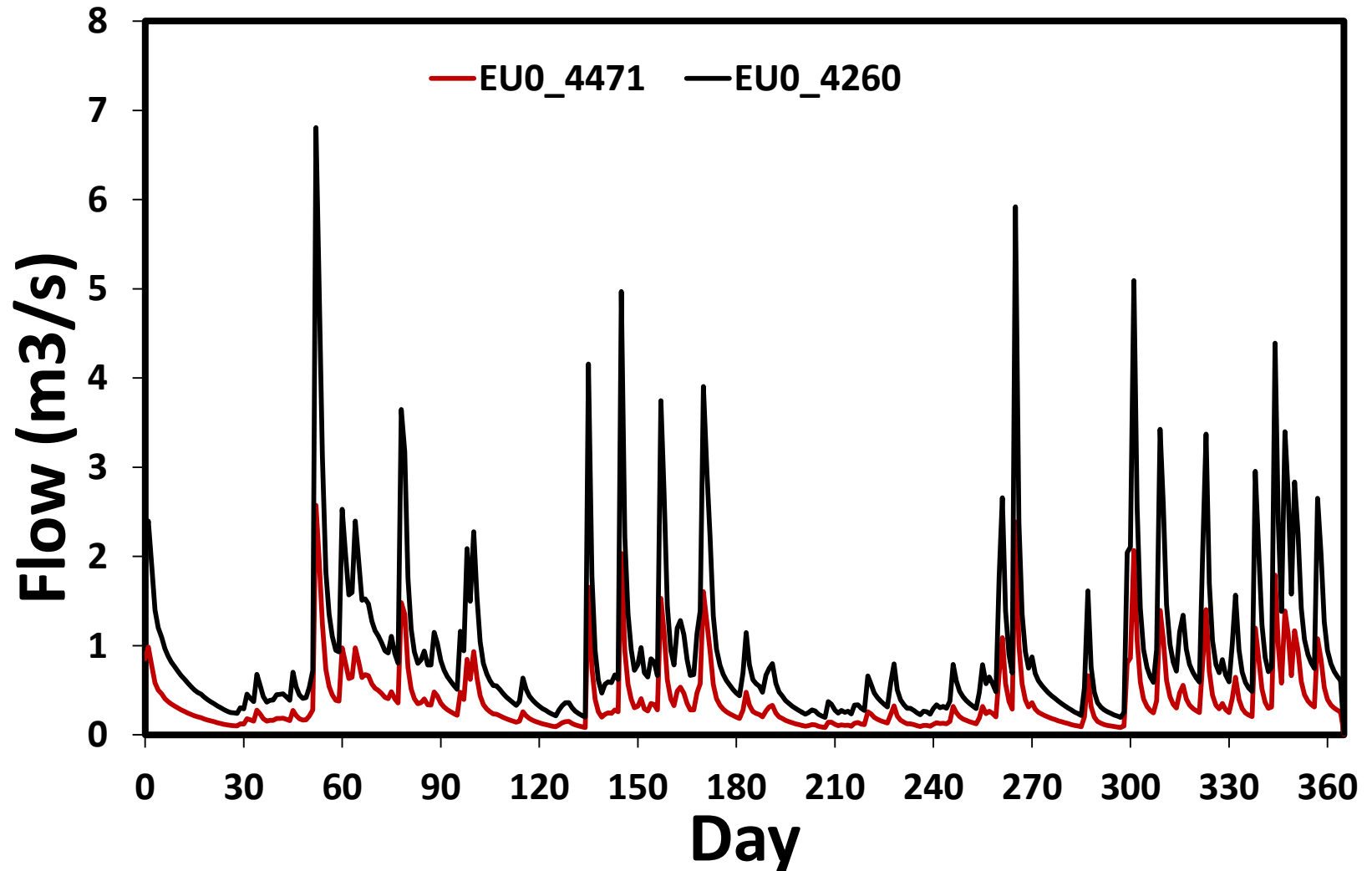
Surface Monitoring data at ET4.1 2000-2011



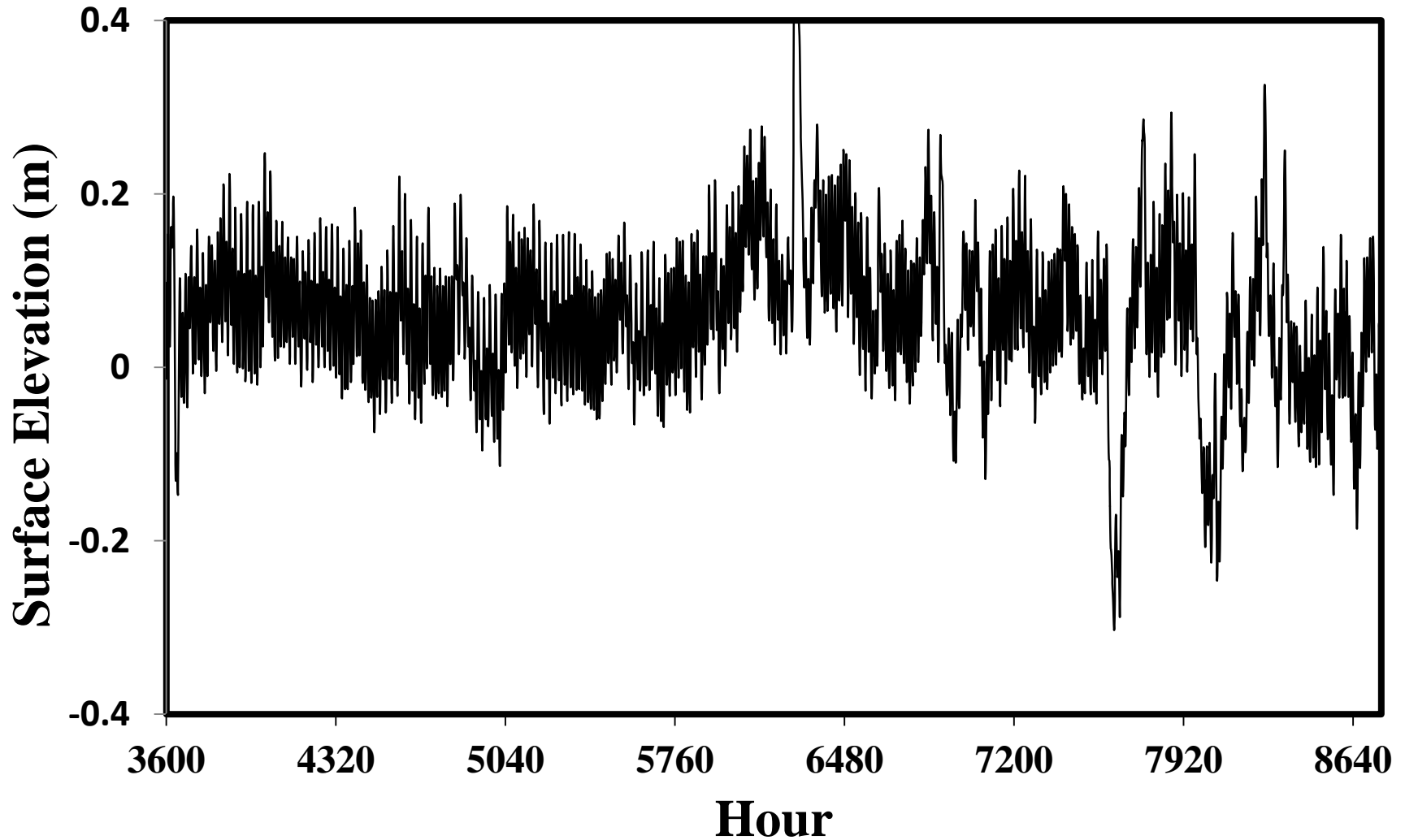
Grid and River input to the Chester domain



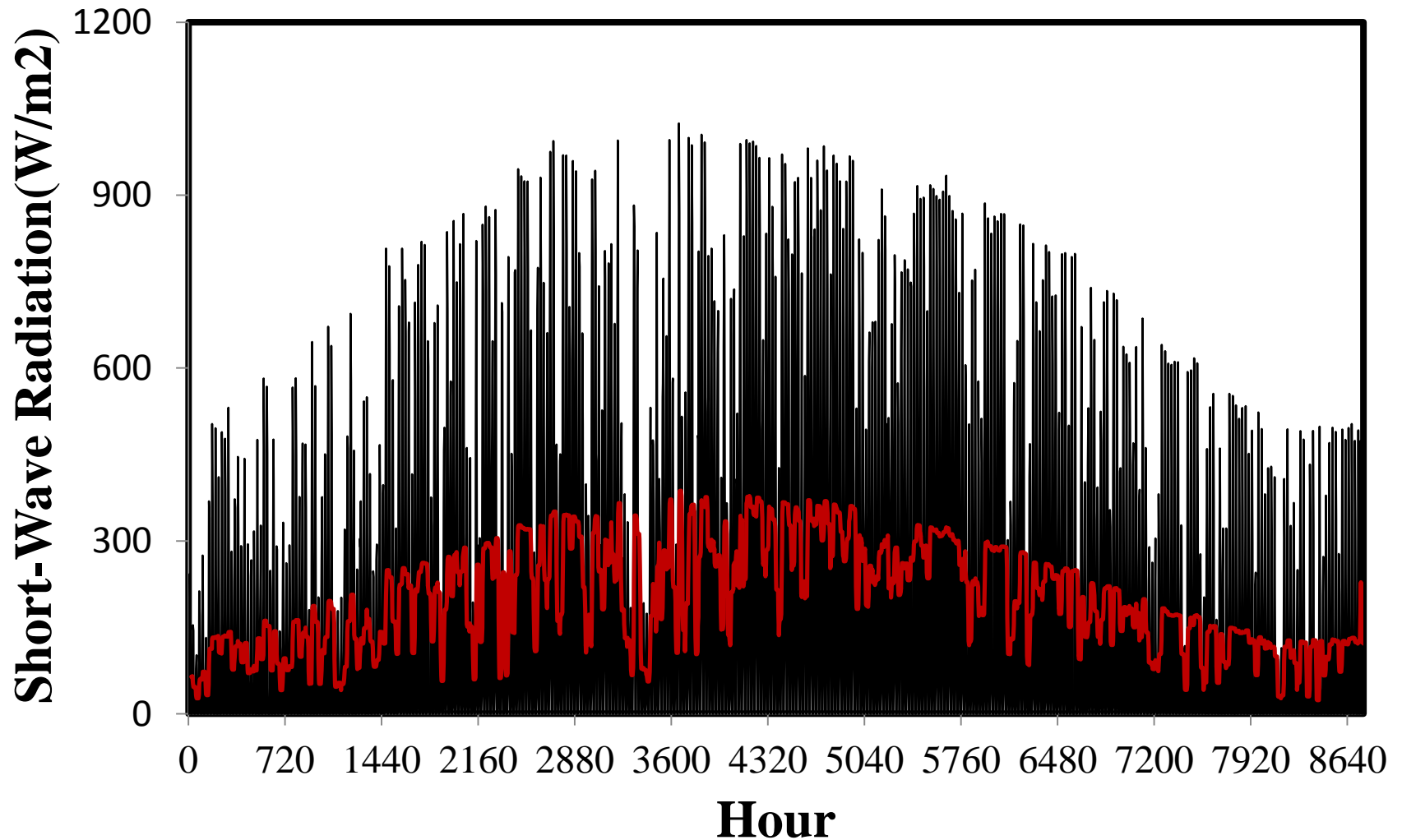
River Flow (2003)



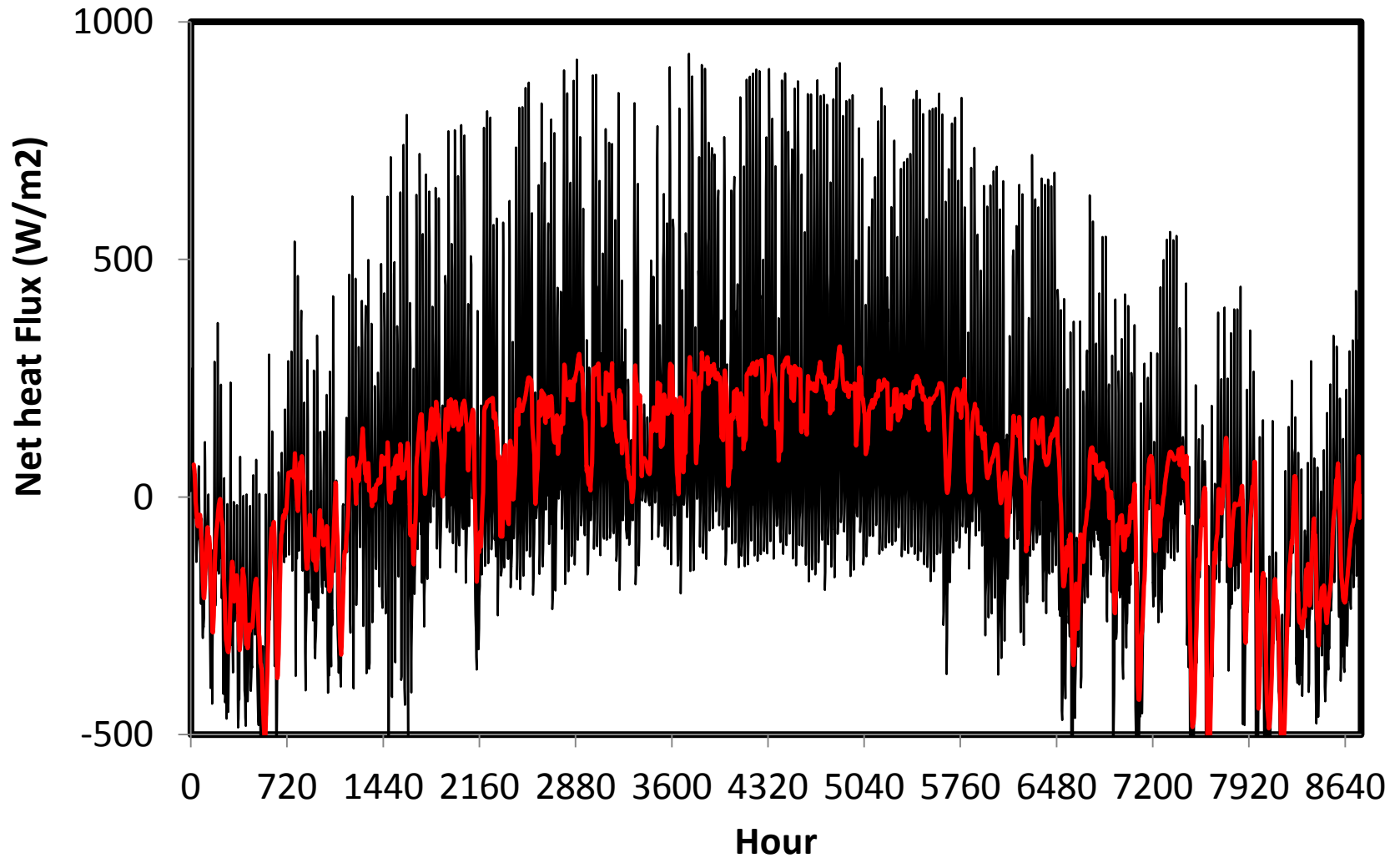
Hourly surface elevation (2003 cell 10013)



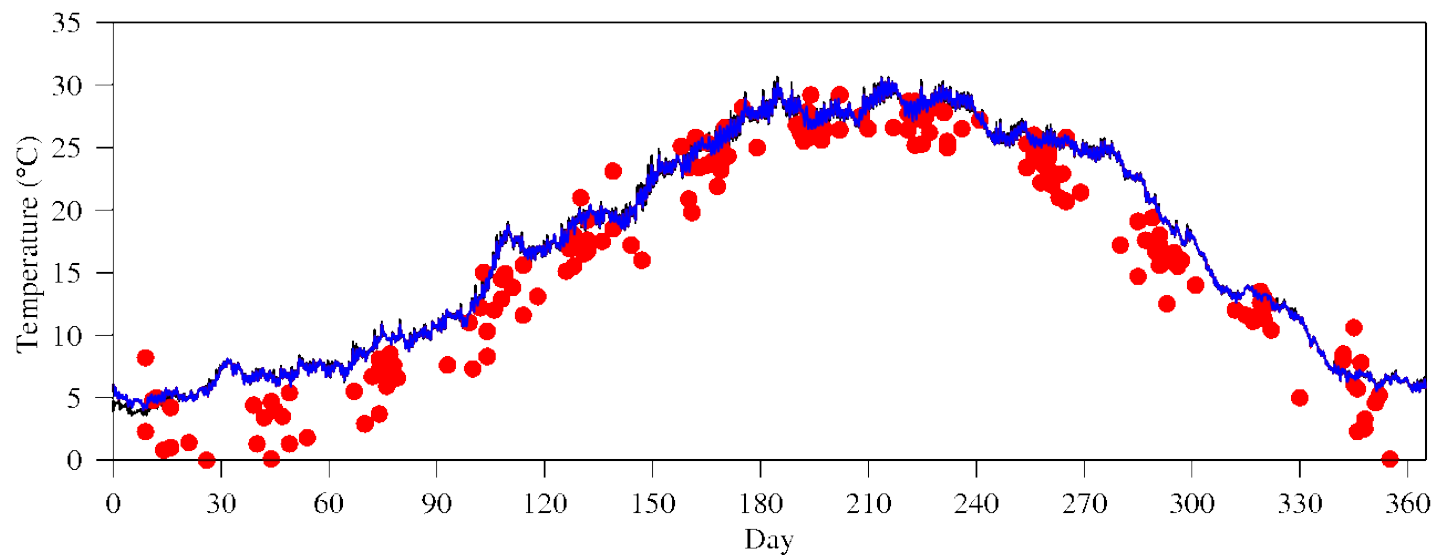
NARR Shortwave Radiation (2003)



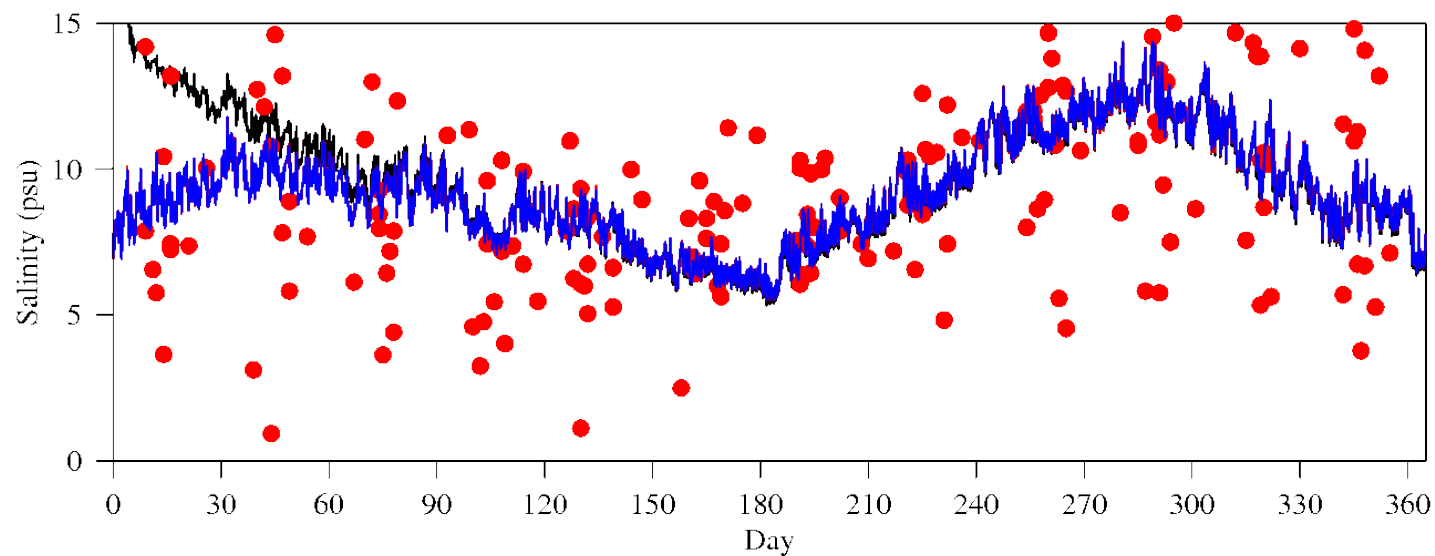
NARR Net Heat Flux (2003)



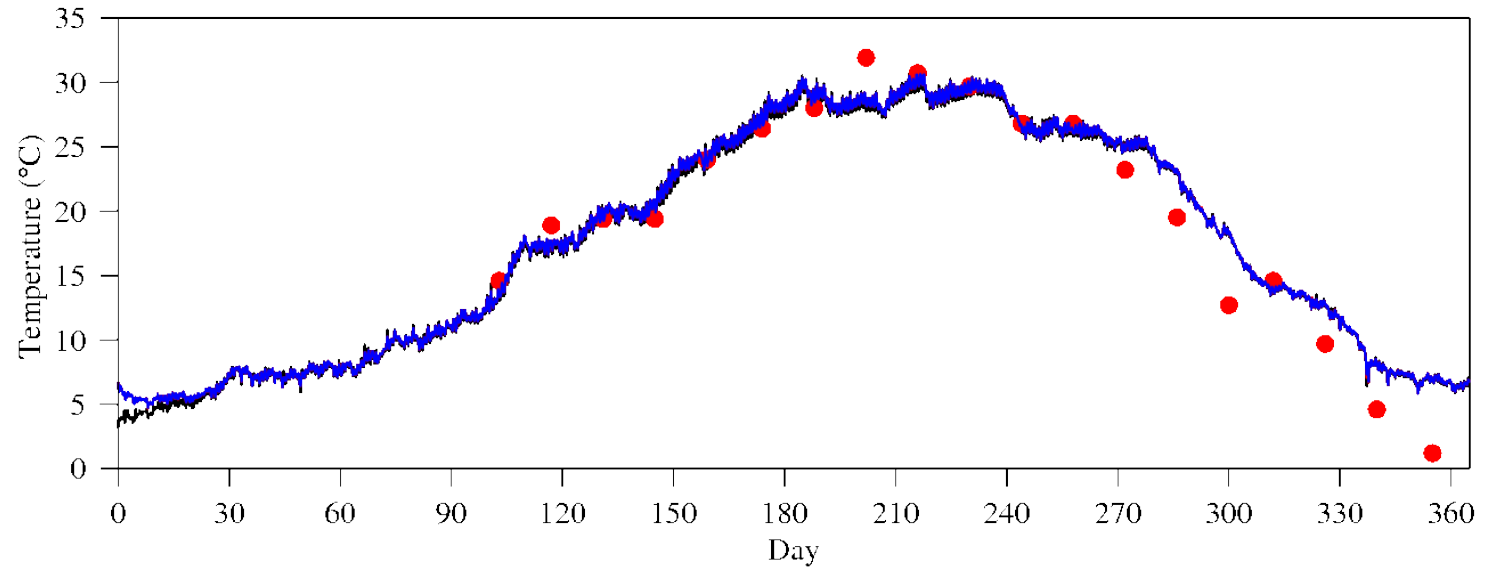
Spin runs at ET4.2



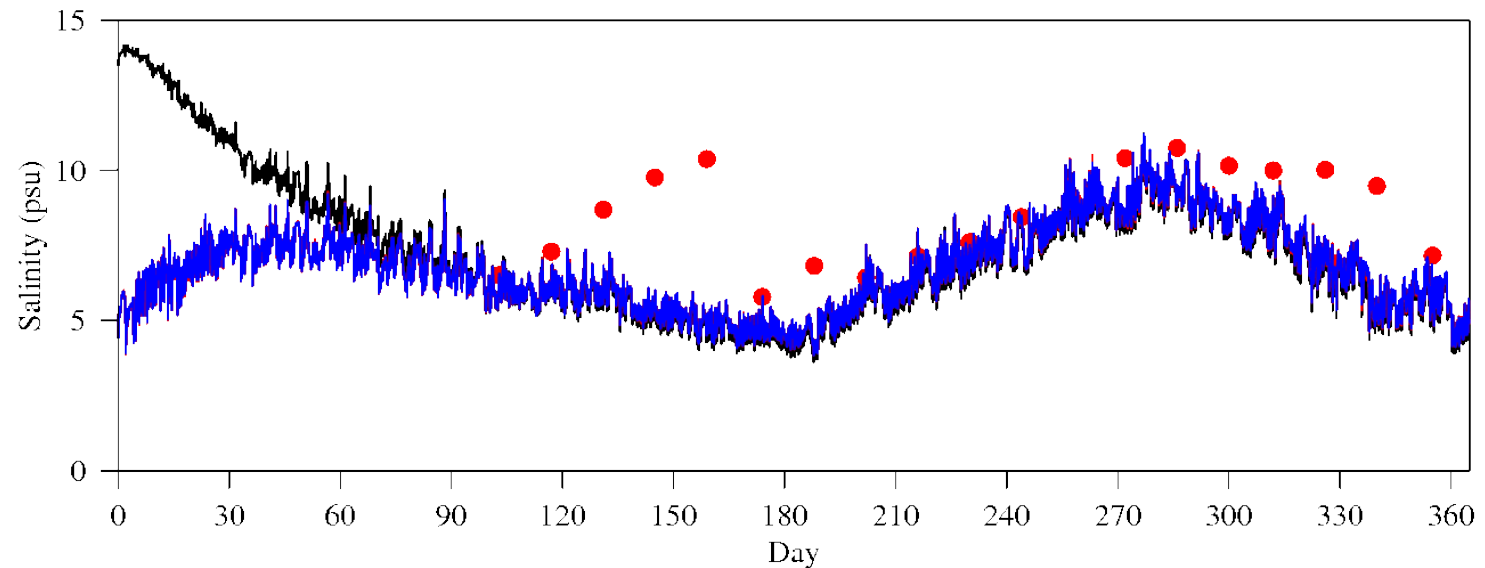
chest_spin1_ET4.2_351_1_0



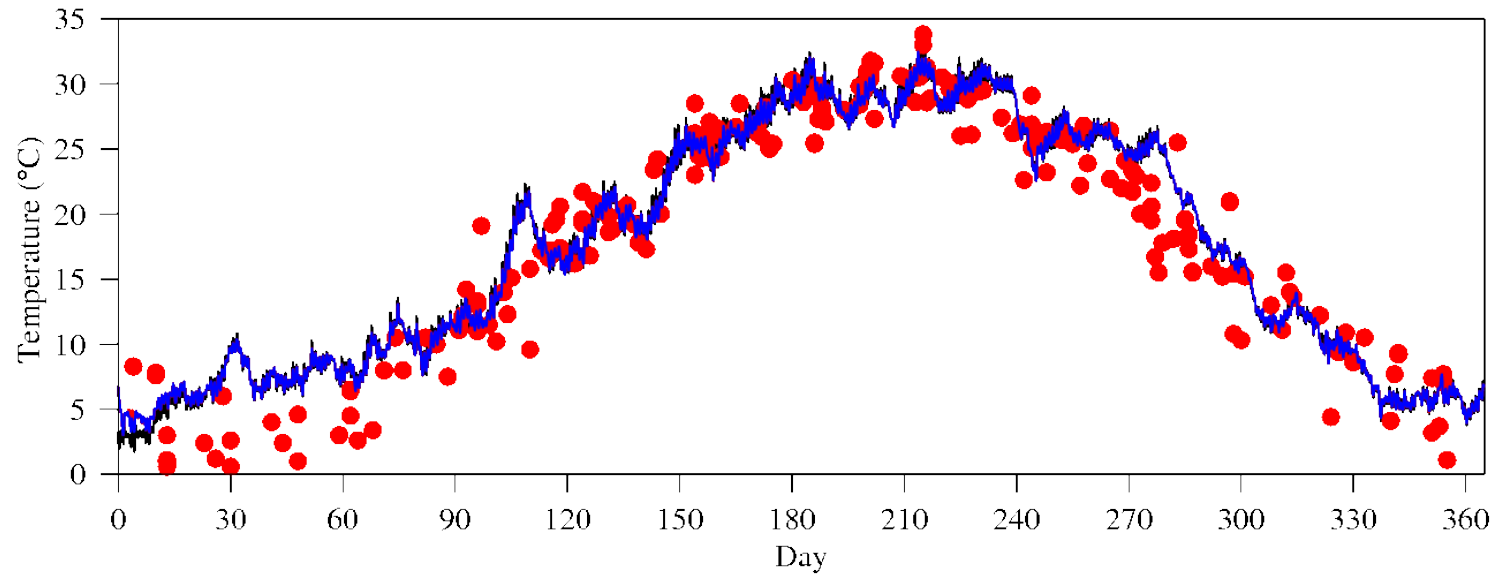
Spin runs at XHH5046 (Corsica)



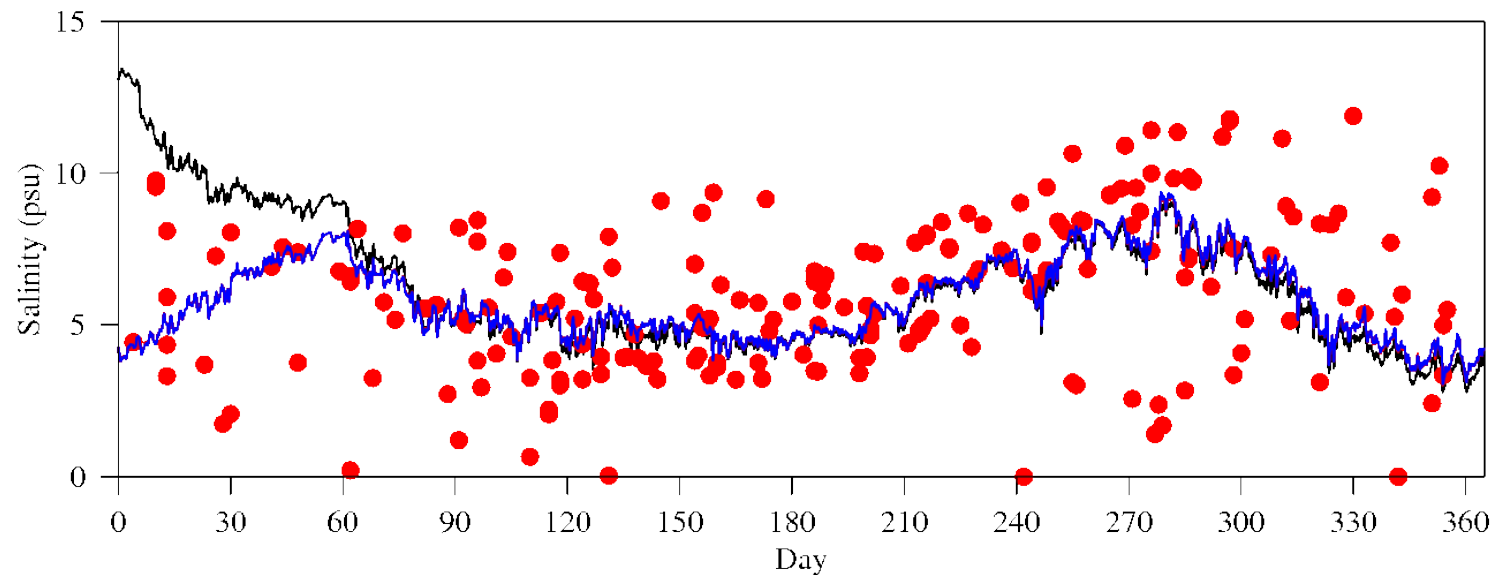
chest_spin1_XHH5046_877_1_0



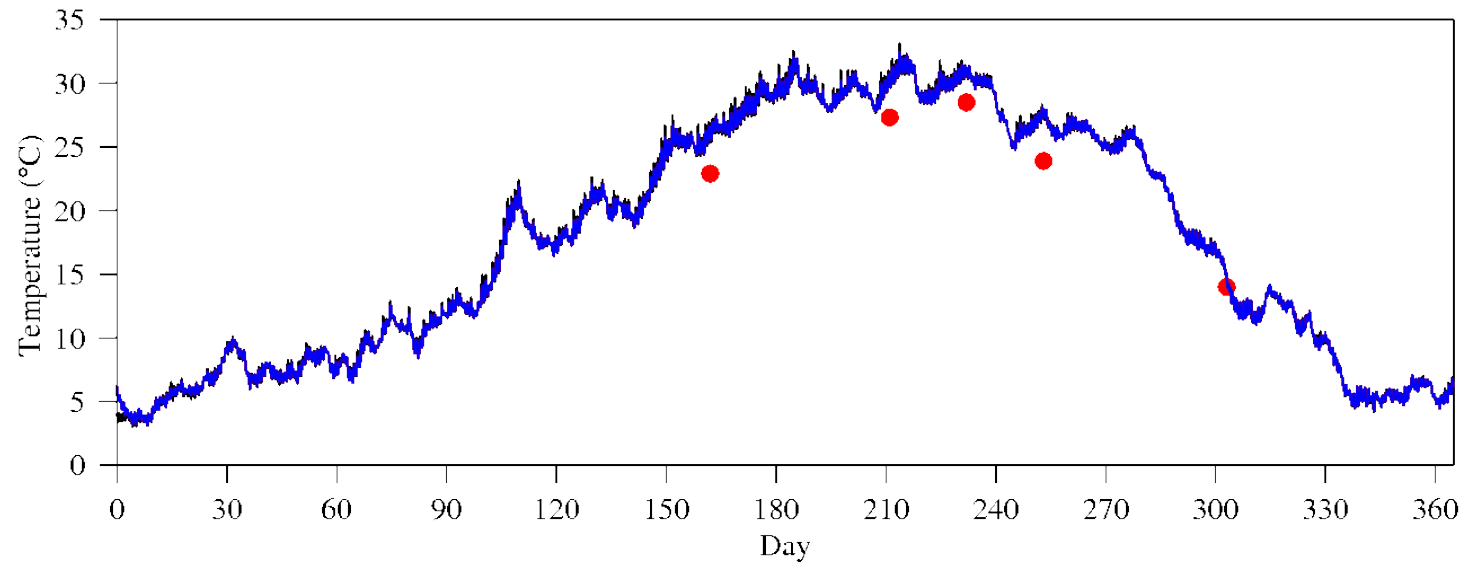
Spin runs at XHH3951 (Corsica)



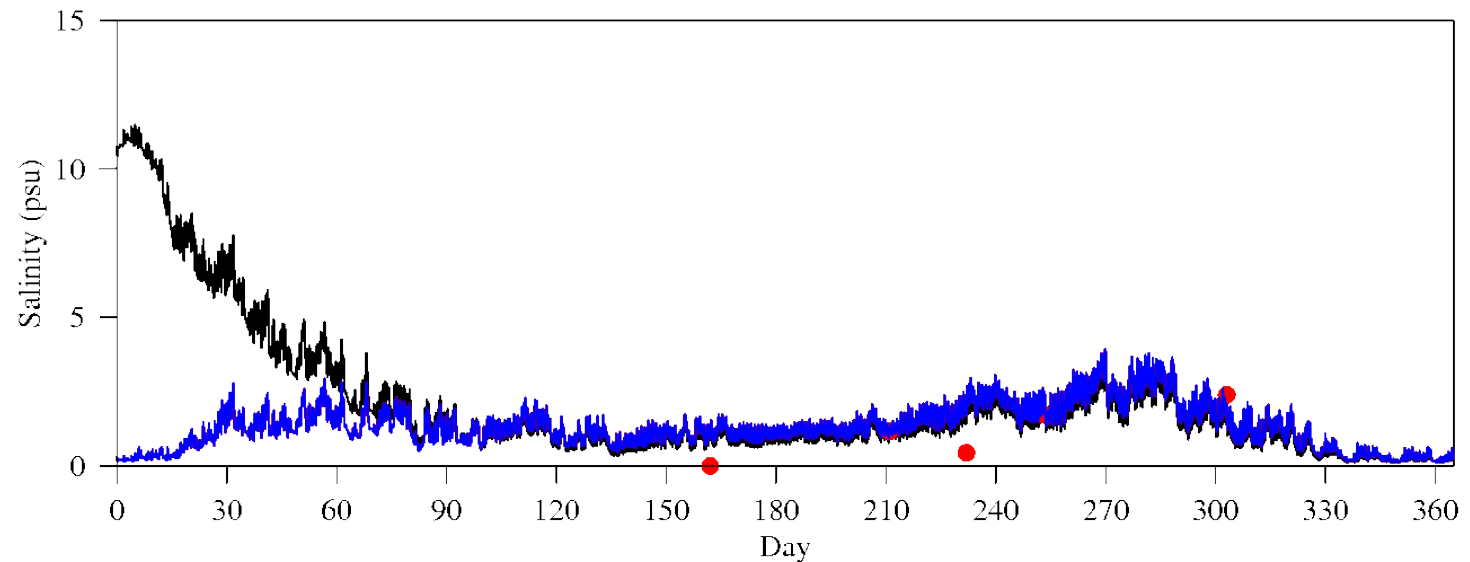
chest_spin1_XHH3851_1120_1_0



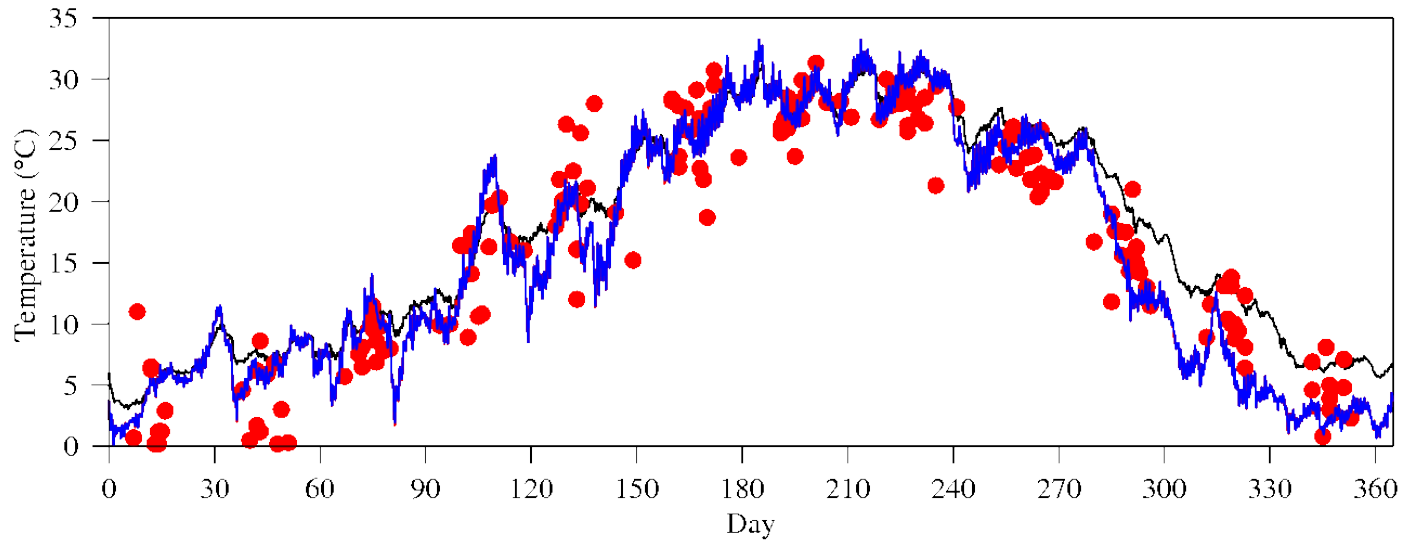
Spin runs at XIH1458 (Oligohaline)



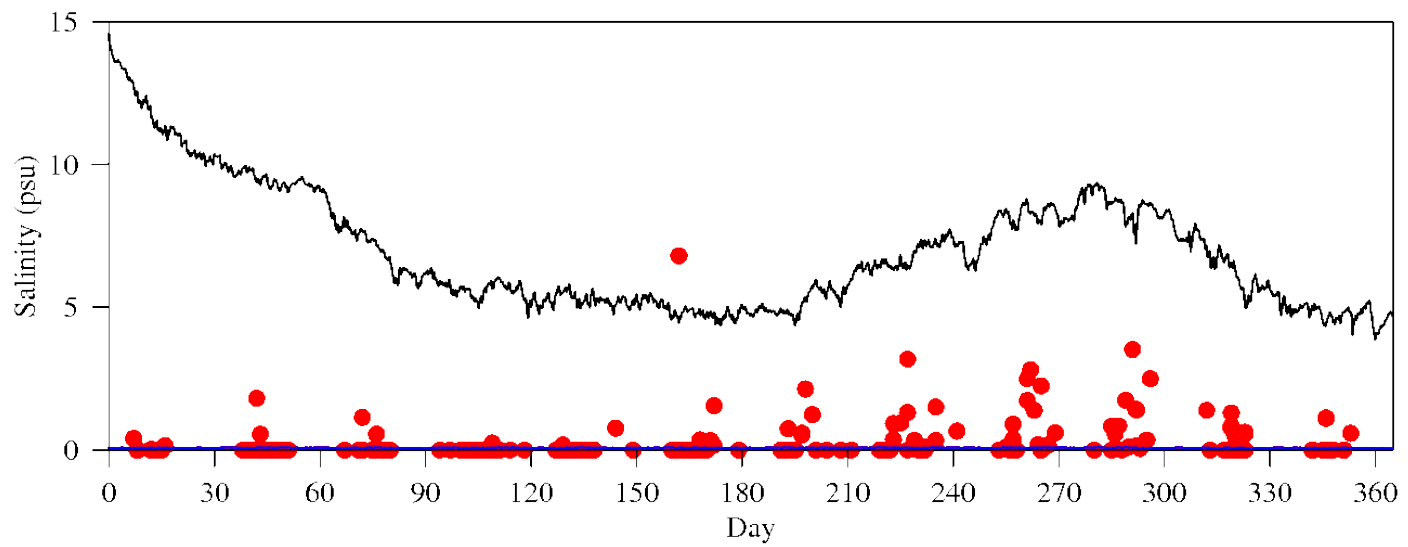
chest_spin1_XIH1458_1273_1_0



Spin runs at ET4.1 (Tidal fresh)

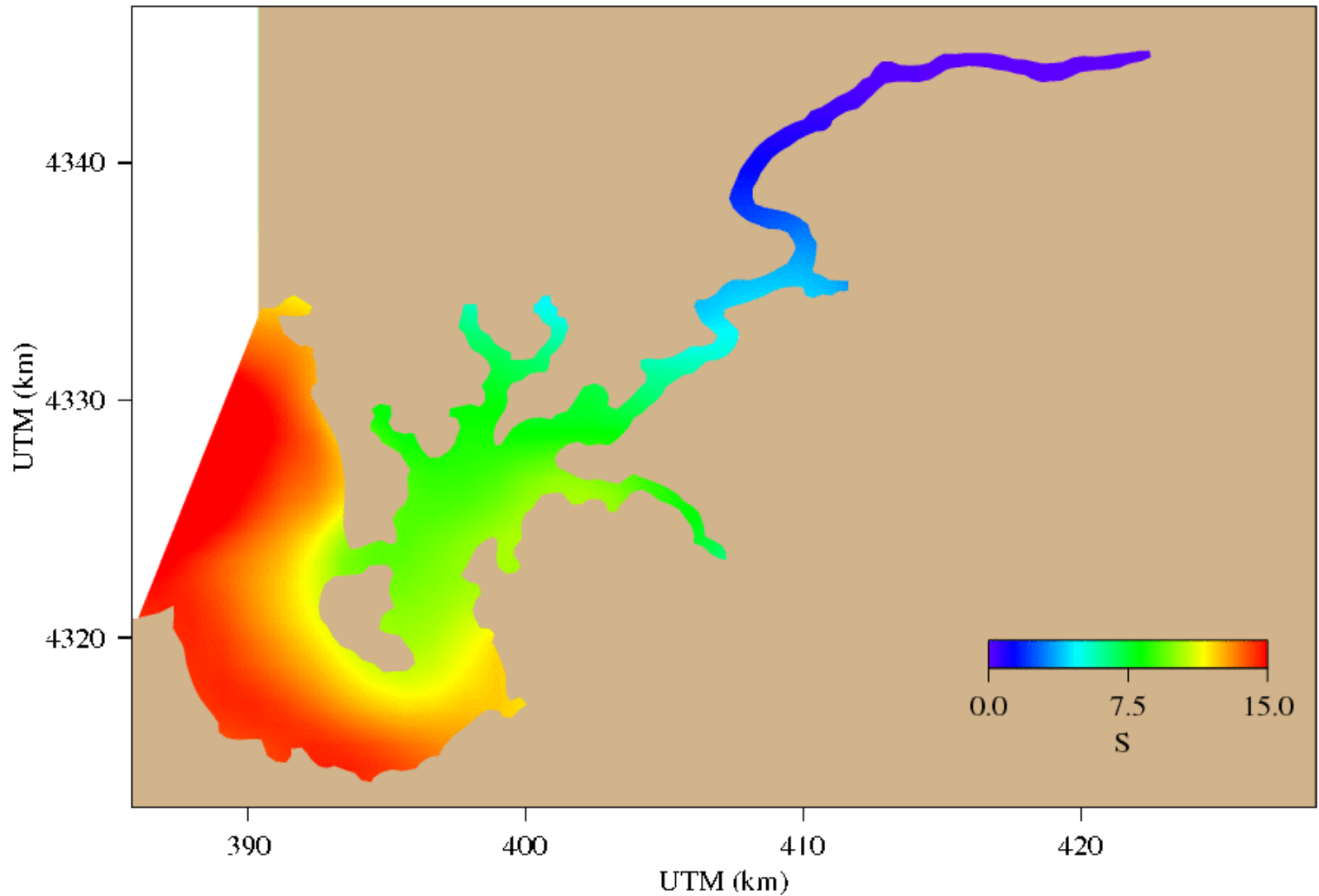


chest_spin1_ET4.1_1385_1_0



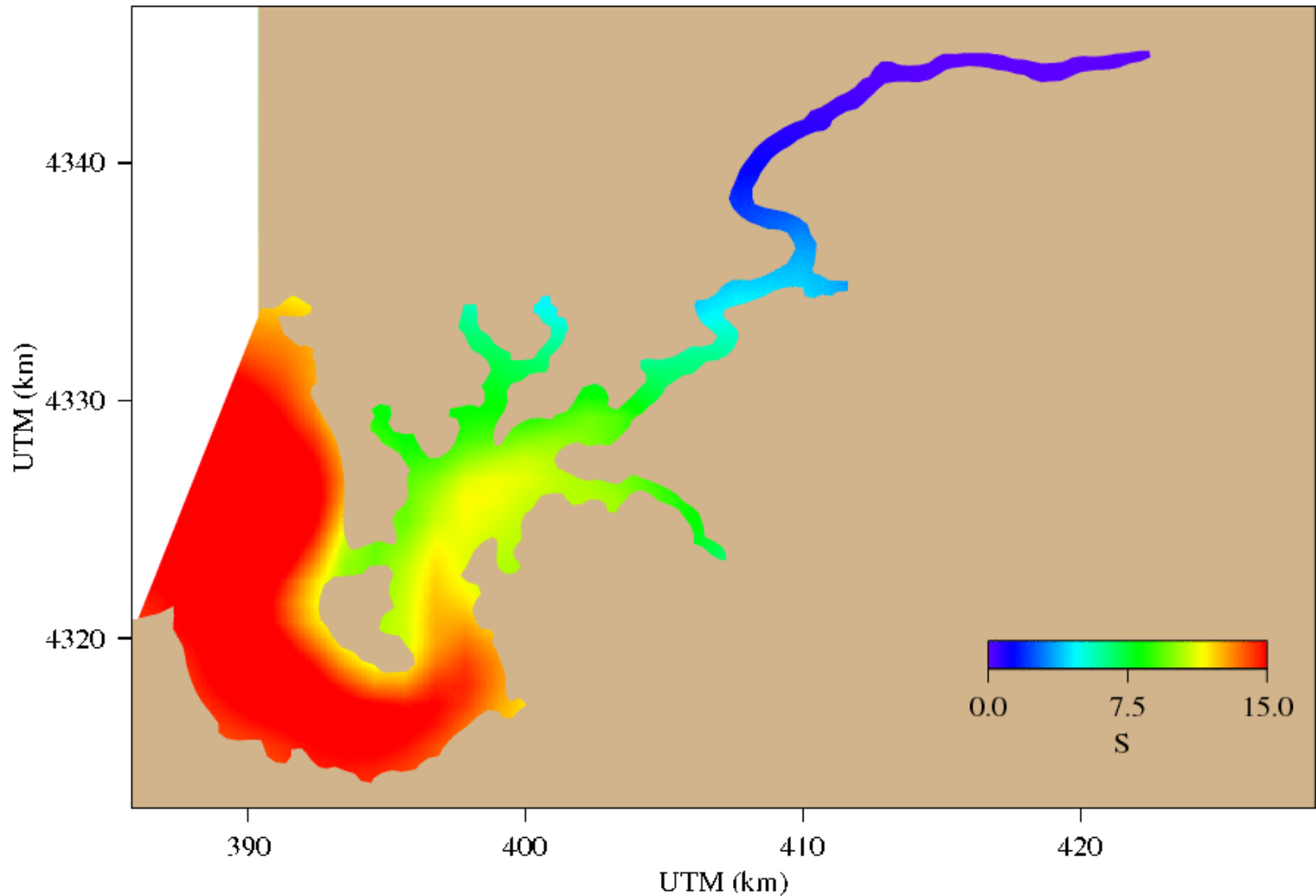
Movie of surface salinity in August

S Run chest_spin5 Layer 0 Hour 6100



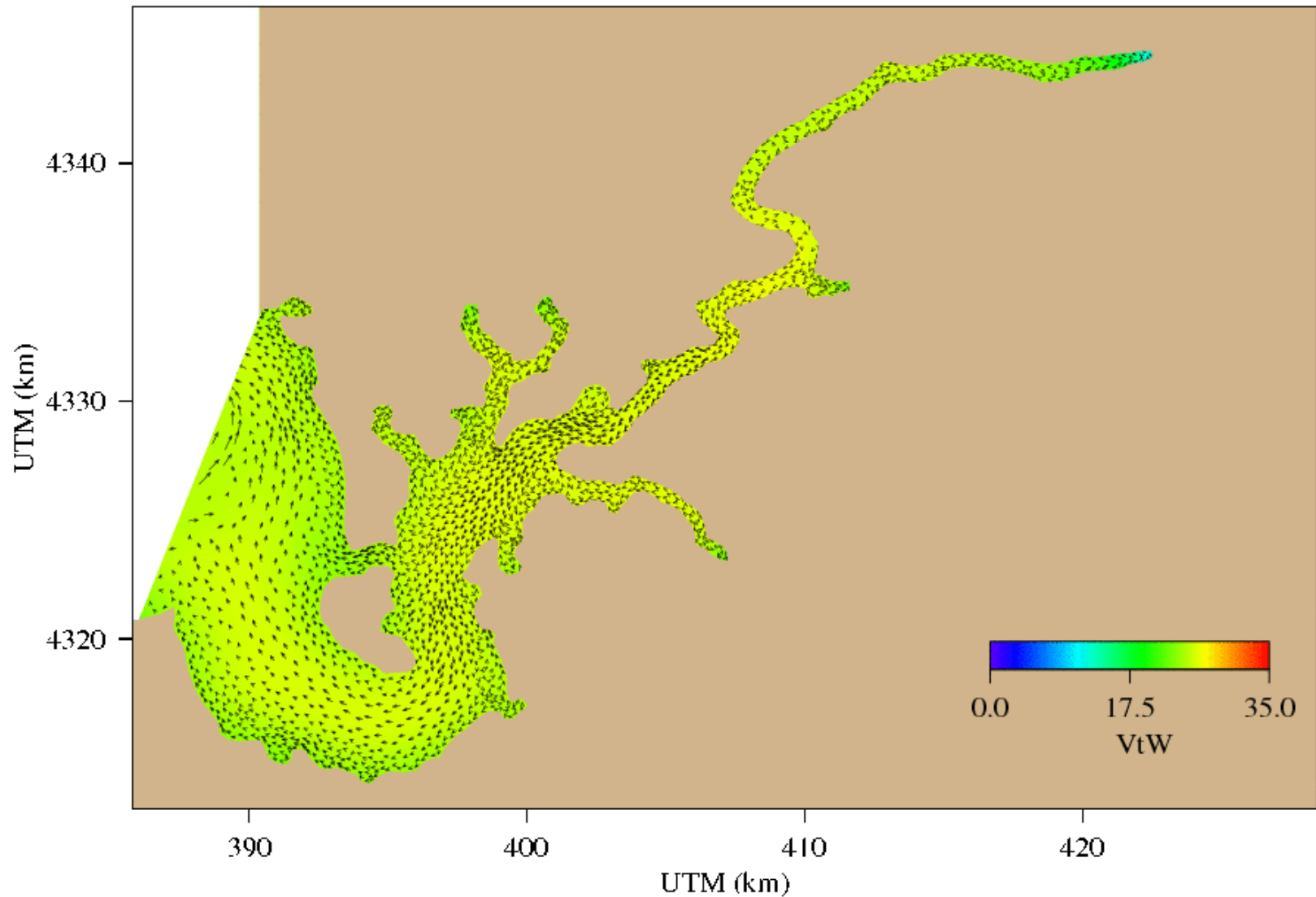
Movie of bottom salinity in August

S Run chest_spin5 Layer 9 Hour 6100



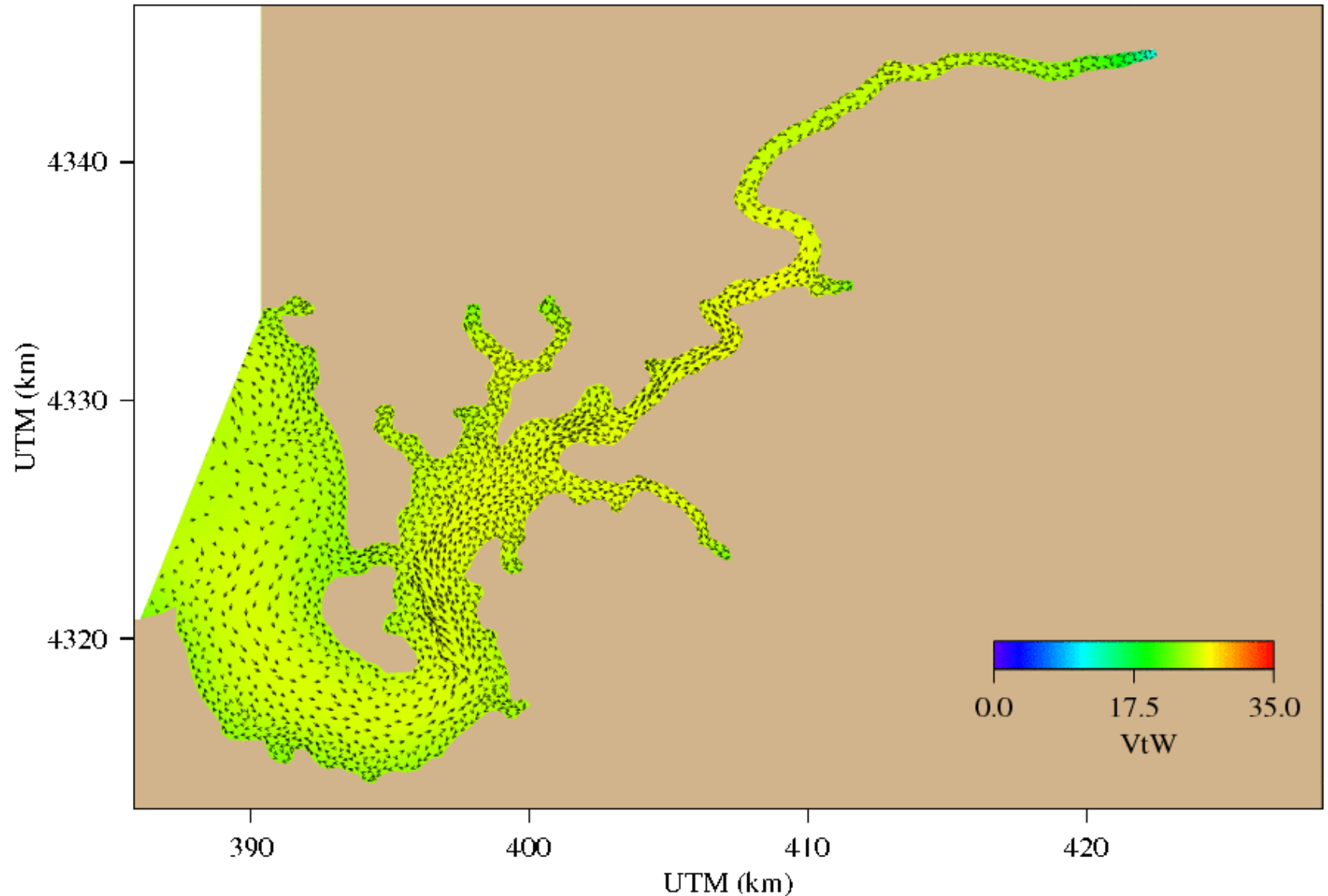
Movie of surface current in August

VtW Run chest_spin5 Layer 0 Hour 6100



Movie of bottom current in August

VtW Run chest_spin5 Layer 9 Hour 6100



Subtidal current in the surface (upper panel) and bottom layer (lower panel) in August

