

Establishing a flux tower at Warra



Let the journey begin

July 2009	Warra accepted into the folds of Ozflux!
Apr 2010	Potential sites for locating flux tower chosen and inspected
May 2010	Ray Leuning visit - Blakes 1A selected as most suitable site for flux tower
Aug 2010	FT Executive approved proposal to establish flux site in Blakes 1A
Nov 2010	Warra Policy Committee endorsed plan for Warra Flux Site
Feb 2011	Forest Practices Plan for access to tower and guy pads
Mar-Apr 2011	Access road and guy line access tracking
Apr-May 2011	Soil survey done and geo-tech report written Engineering specifications completed and drawings prepared.
Oct - Dec 2011	Council planning approval and building approval granted
Feb 2012	Modifications to design plan to allow gin pole erection and provide work platform
Sept 2012	Fabricated components delivered to site
Dec 2012	Tower erected
Mar 2013	Instruments installed and site commissioned
Jul 2013	First 4 months of data processed to L3 ready to put on portal!

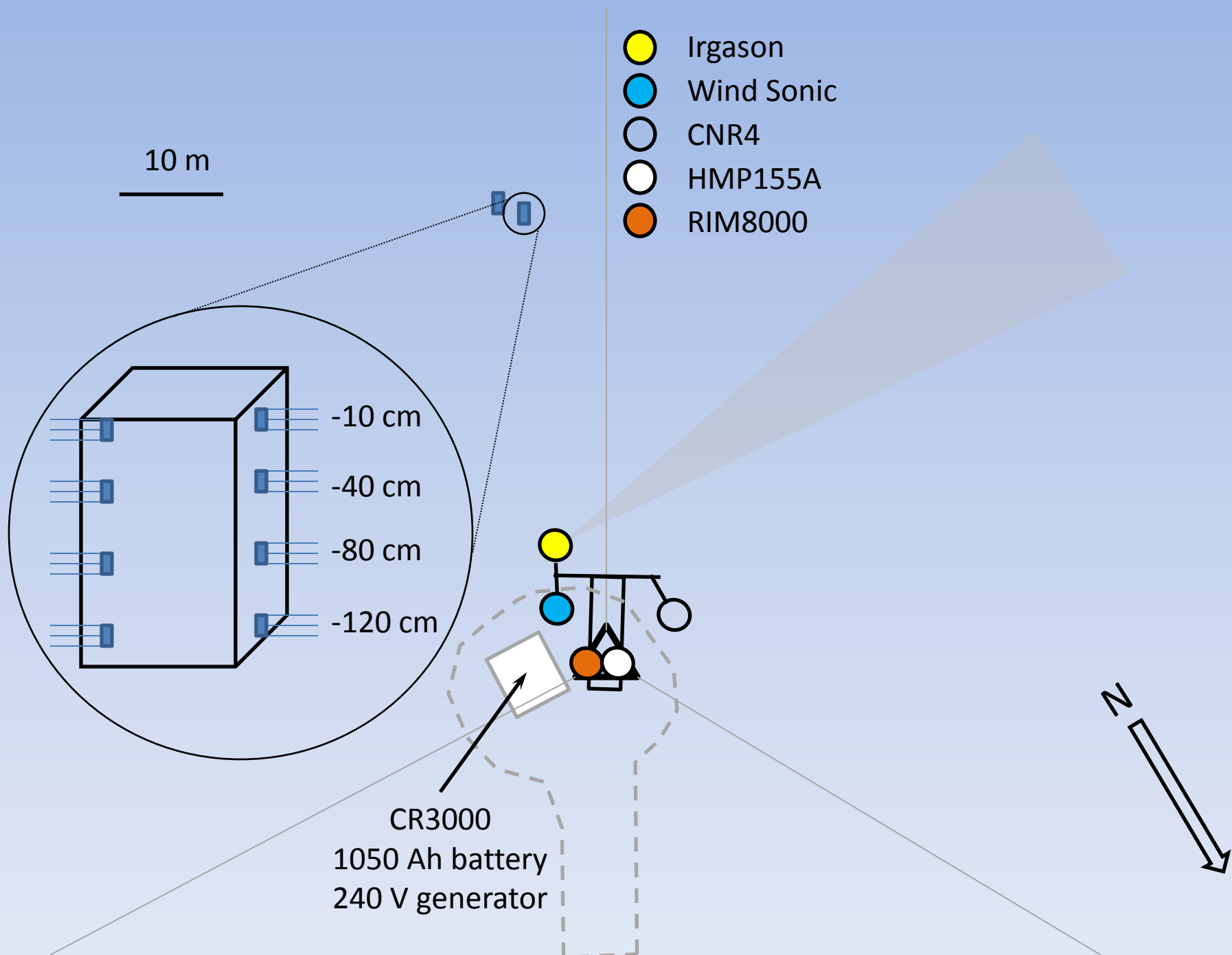
A lot can happen in 4 years!



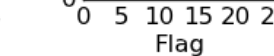
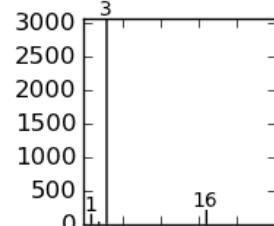
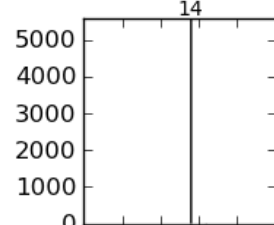
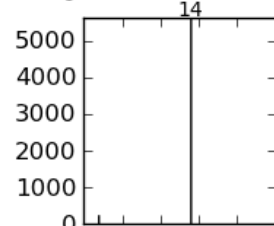
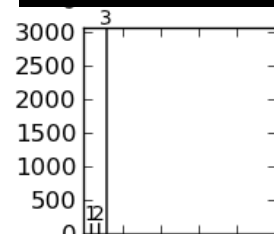
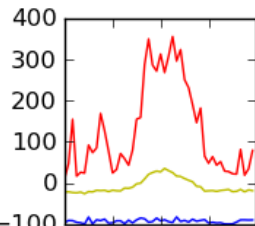
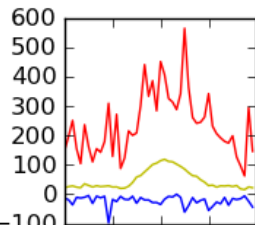
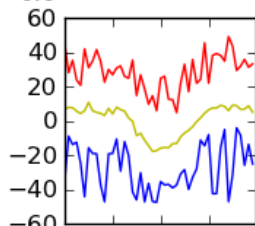
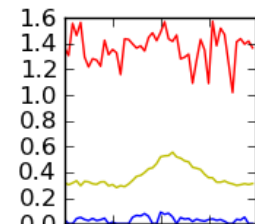
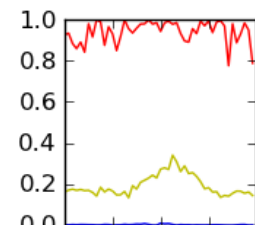
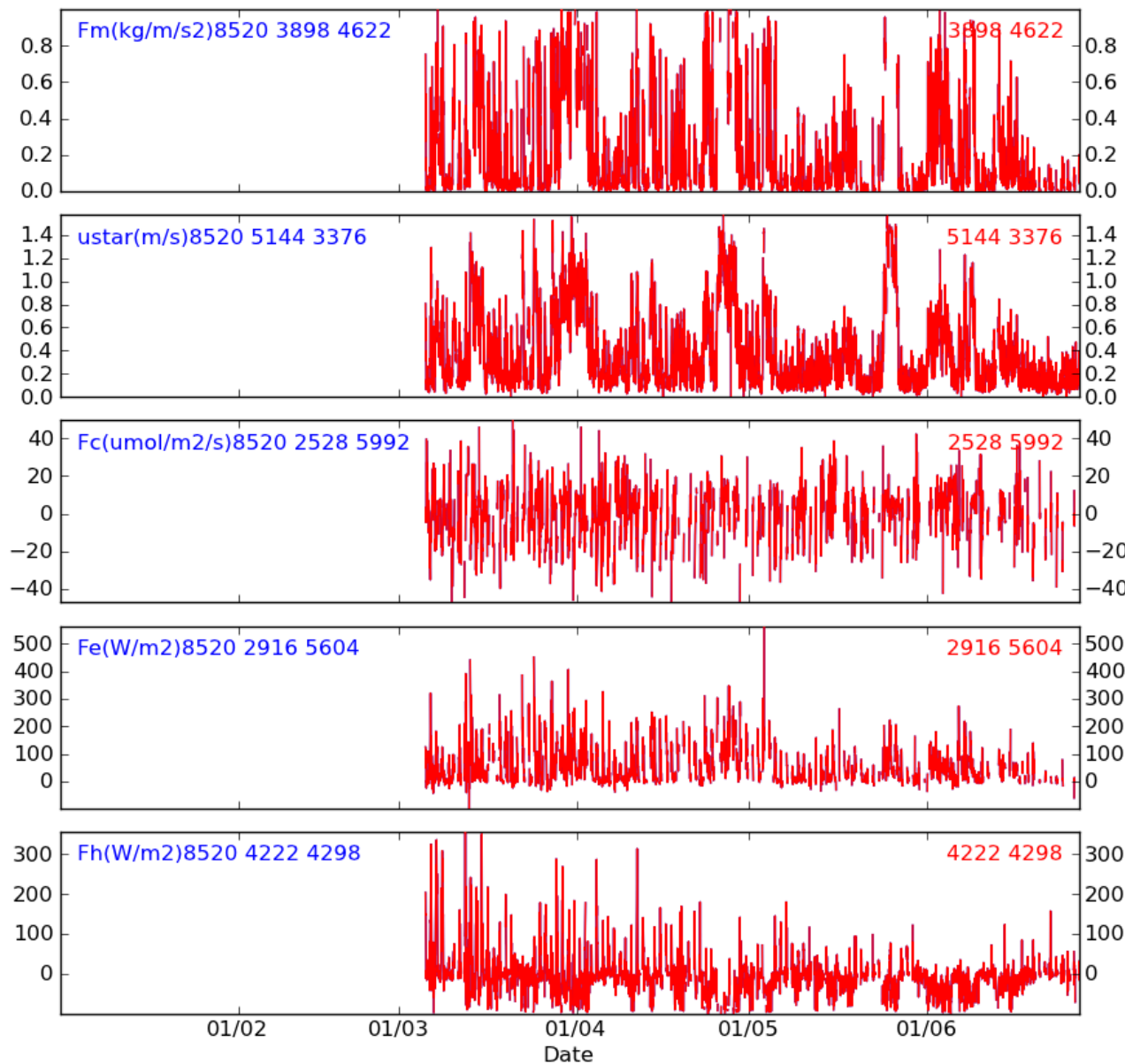
July 2009	July 2013
Tim had a mum and dad	Tim is an orphan
Tim and Jules are empty nesters!!!!; in-laws still independent	Tim and Jules now host Jules' mum in a granny flat; her dad in a nursing home
Tim had his original left hip	Tim had hip replaced – Three times
Karl Abetz our Ozflux Technician (in Jan 2010)	Alison Phillips is our Ozflux Technician
Tim had a Conservation Biologist, an Entomologist and a Senior Technician on team	No longer - Tim now also responsible for Conservation & Entomology research
Tim heads Biology & Conservation Branch in Division of Forest Research & Development	Tim heads Ecosystem Services twig in Research & Development Branch
Tasmanian Forest Agreement not even conceived	TFA done and dusted
Bob Gordon is our MD; Adrian Kloeden is Chairman of our Board	Currently without an MD; Bob Annels is Chairman of (all new) Board
Blakes 1A flux site on State forest in Warra	Blakes 1A flux site in proposed extension to WHA (but we are still fighting)



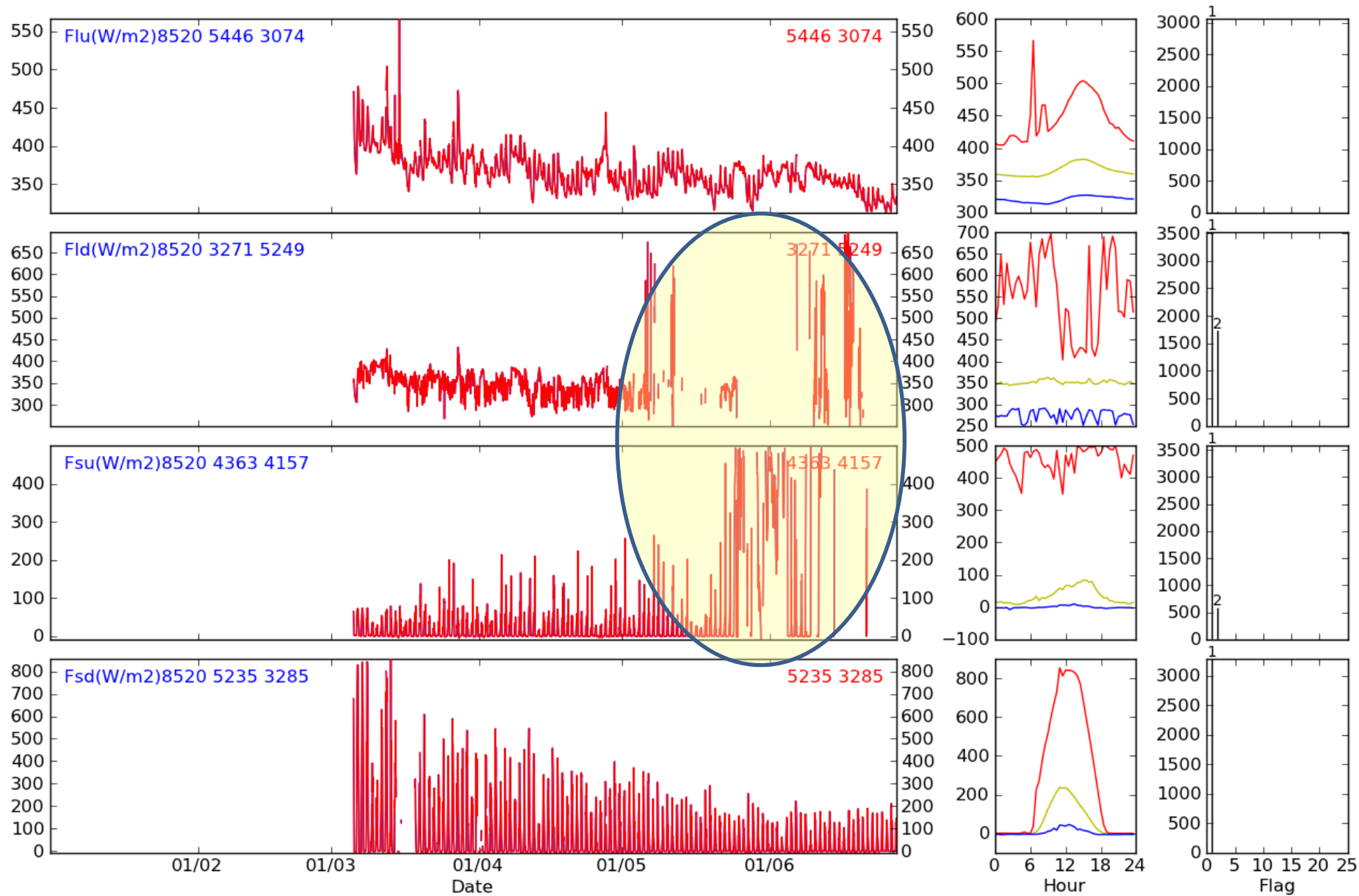




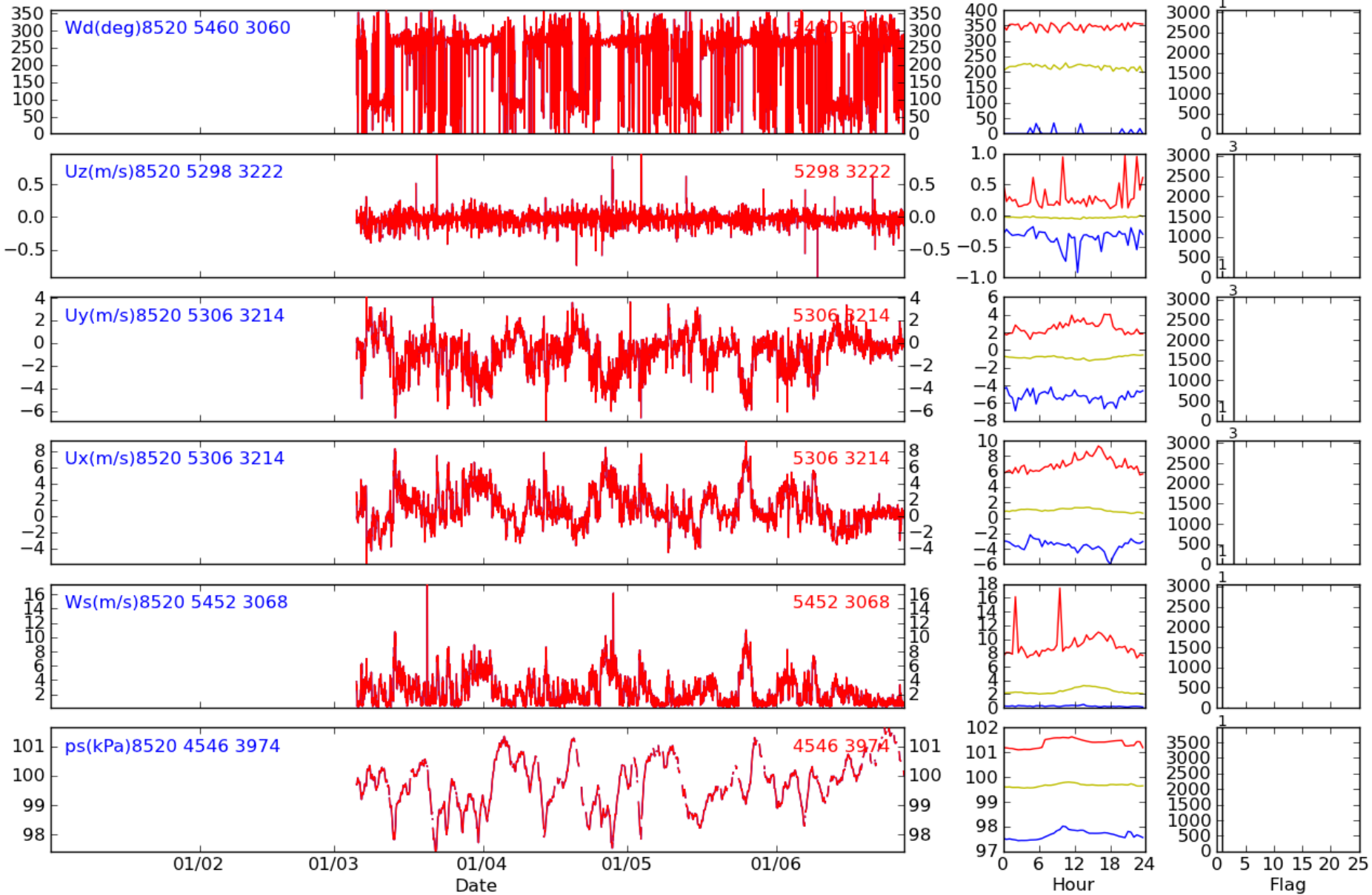
Warra: Turbulent fluxes



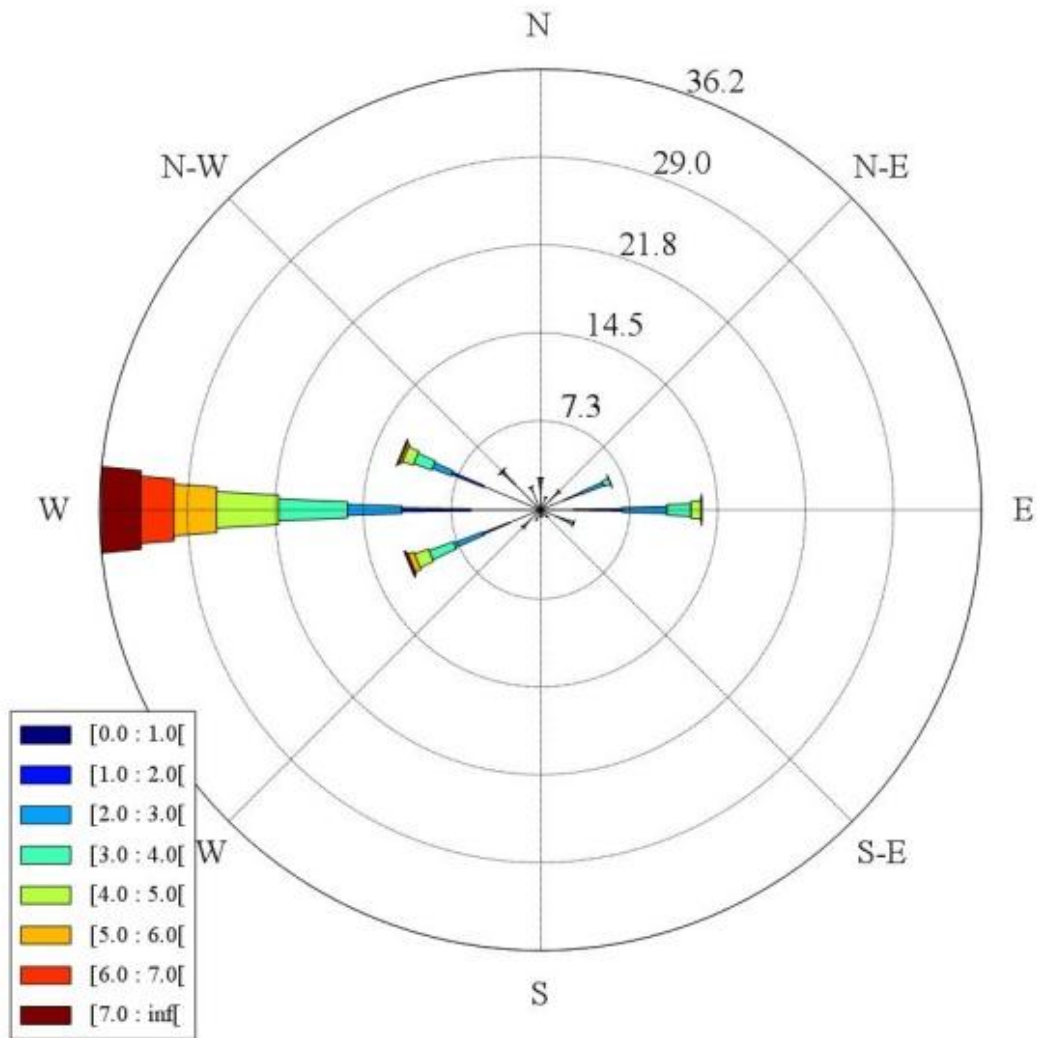
Warra: Radiative fluxes

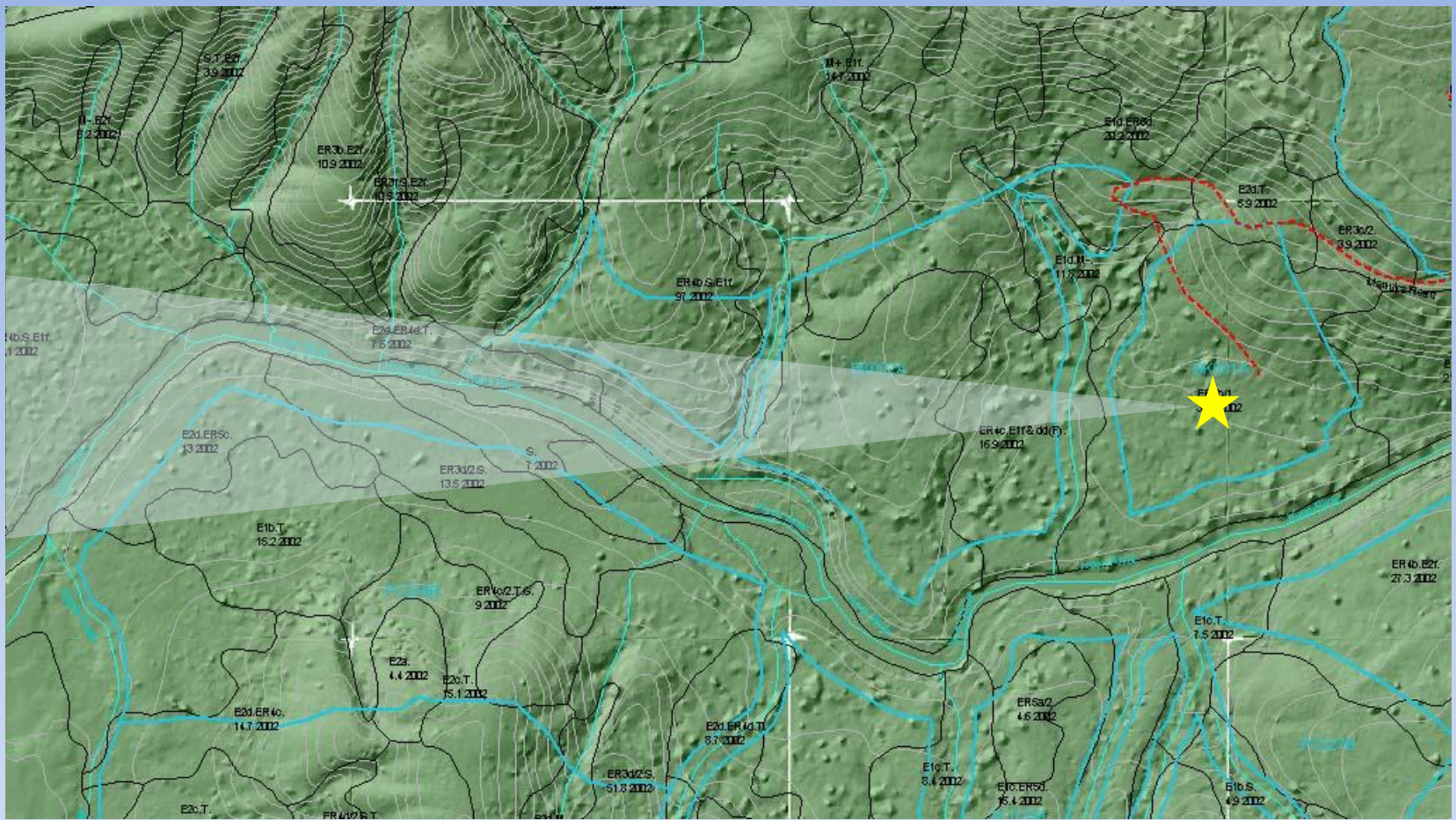


Warra: Pressure, wind speed and direction



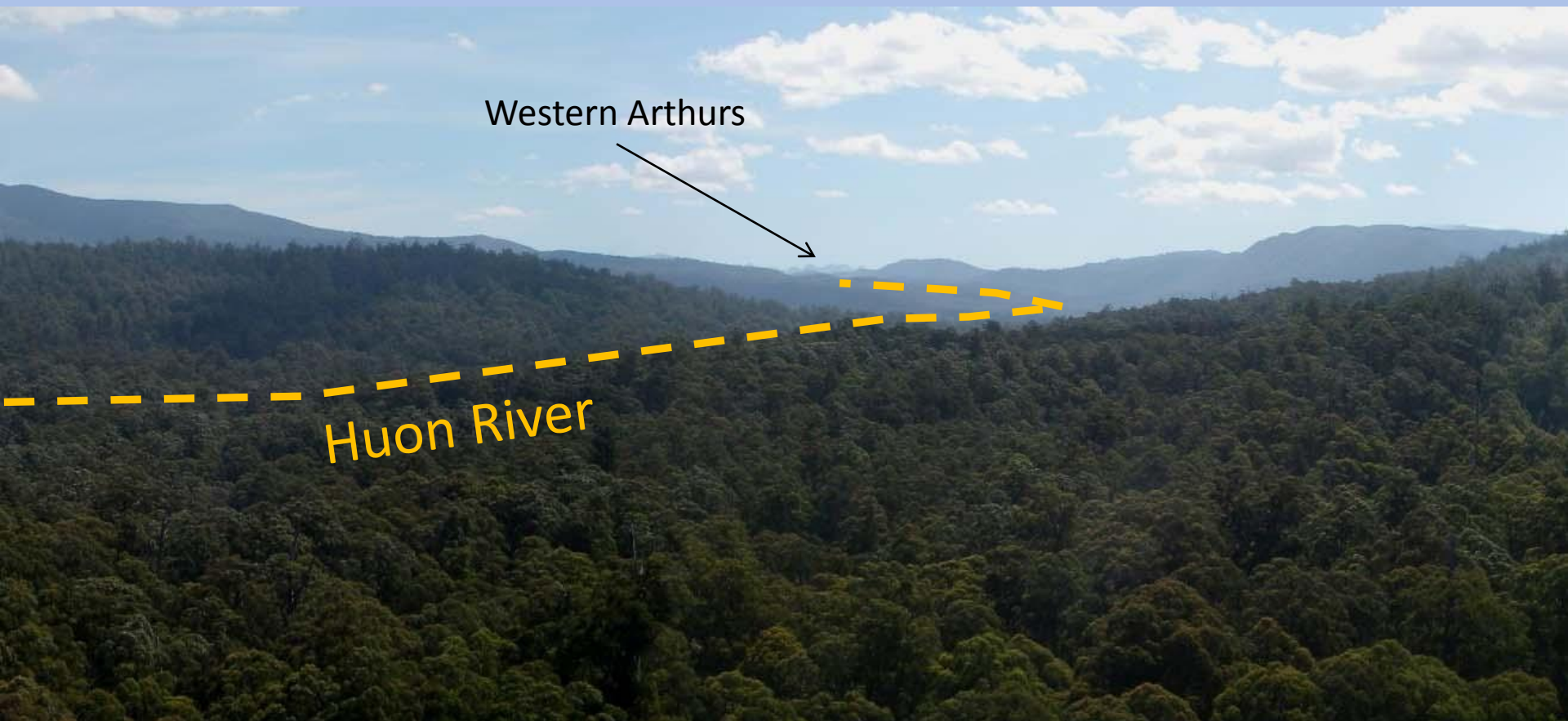
Winds from the west – you bet!





Terrain in the predominant wind direction is relatively flat

And this is the view to the west



Where to from here

The high priorities

1. Soil sensors installed and wired in to datalogger
2. Instrument maintenance schedule implemented
3. Radio communications installed
4. Understand data

It'd be nice if we had the money

1. C-Sat + Licor 7200 instead of Irgason
2. Profile system

Where to from here

Some opportunities to develop

1. Public engagement: Sense-T project to develop an intelligent interface to use flux and other sensed data from Warra to tell a story about what the forest is doing
2. Interpolating forest processes to reconstructed climates – linkages with dendrochronological studies in Southern Forests
3. Document CO₂ flux components: CWD, mature / regrowth autotrophic components