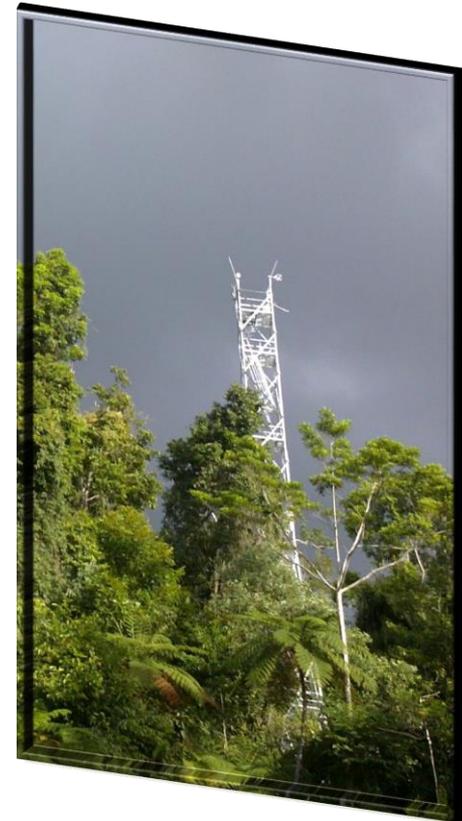




FNQ Tropical Rainforest: Robson Creek

The First Year



Presentation by :
Associate Professor Mike Liddell
James Cook University
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Robson Creek Tower site

❖ Lamb Range

Simple Notophyll Vine Forest (SNVF) 26 – 40m canopy

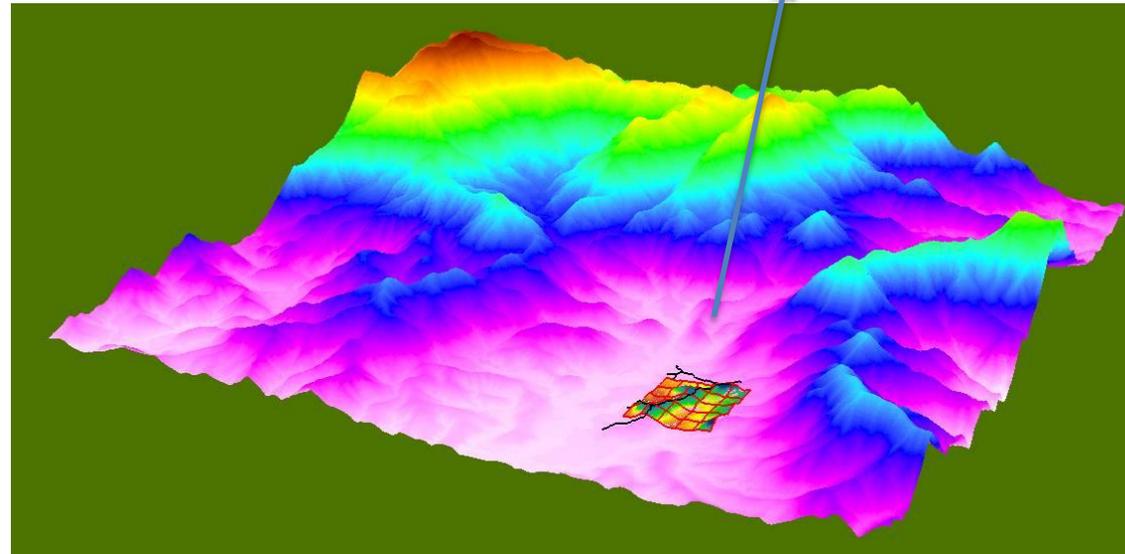
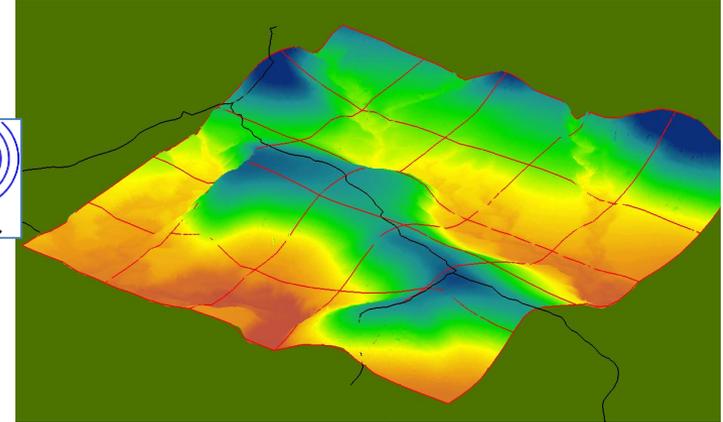
❖ **Soil pit: Acidic, Dystrophic, Brown Dermosol**

❖ **Tower at 691m**

❖ **Rainfall: $\approx 2093\text{mm}$**

❖ **T_{mean} : $\approx 19.2^{\circ}\text{C}$**

❖ **$T_{\text{min}} - \text{max } ^{\circ}\text{C}$
 $\approx 2.9 - 39.1$**



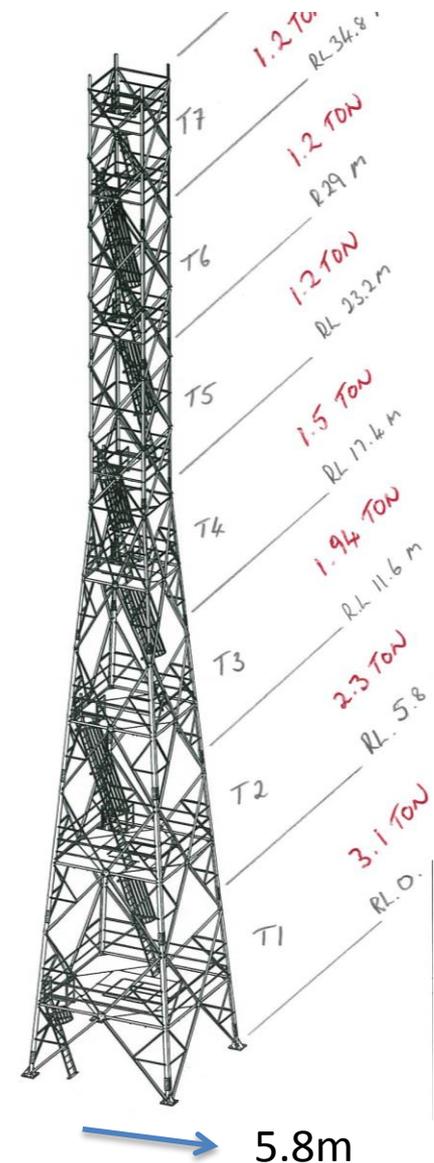


Robson Creek : The Tower

- ❖ **Operational : June 2013 :**
- ❖ **TERN Ozflux Standard system.**
- ❖ **All sensors → L3 1/8/2013**



40.6m





Robson Creek : The Incident



STUDENT PROOF

**RAZAR
TAPE**



Robson Creek : 2013-14

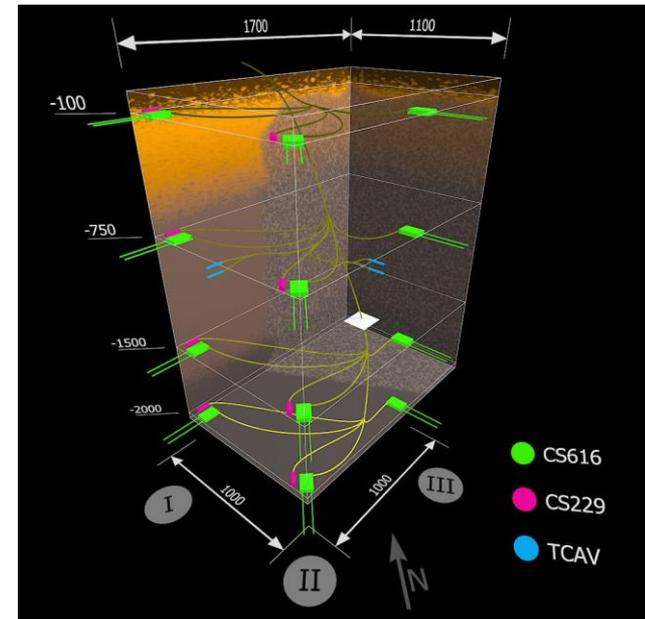
- ❖ **Get power supply finished.**
- ❖ **Get all the sensors working**
A few issues with NR01, rain-gauge.
- ❖ **Trialling a new RH/T Sensor : Rotronics HC2S3**
- ❖ **New bore: (third time lucky)**
20m drilled on 7/02/14. Logging depth, T.





Robson Creek : 2013-14

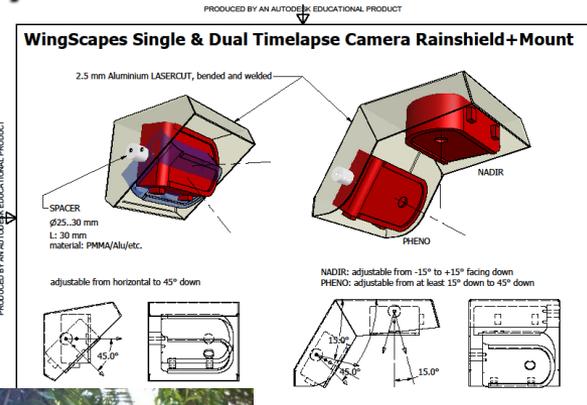
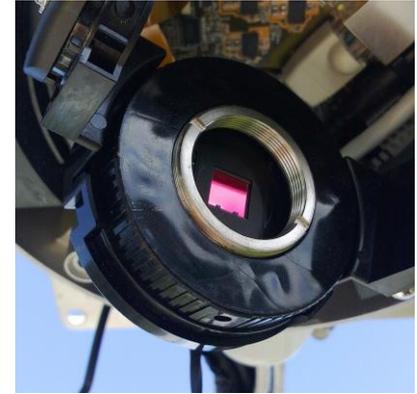
- ❖ **Old soil pit = collateral damage**
(removed 19/04/13) 2 years data
- ❖ **New soil pit –**
(installed & live 31/01/14)





Robson Creek : 2013-14

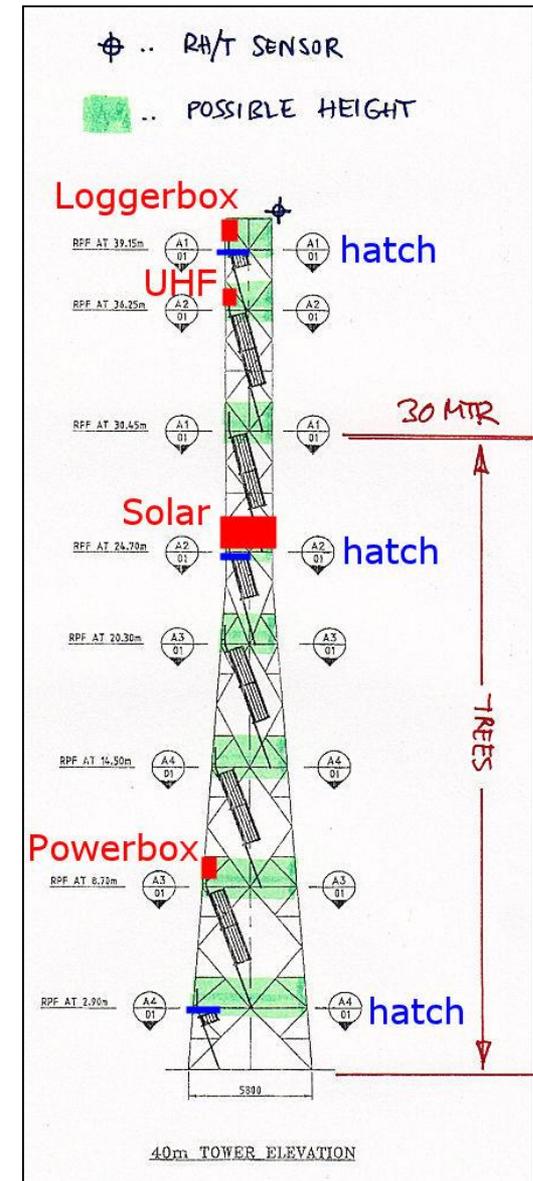
- ❖ **Phenocams:**
- ❖ **Auscover phenocams (Wingscapes)**
- ❖ **Stardot IP cam**





Robson Creek : How is it going & What's next...

- ❖ Tower is weathering well.
- ❖ A few loose bits but nothing much to worry about.
- ❖ Little bits of rust (\Rightarrow cold gal)
- ❖ Profile system : T, RH, WS, CO₂

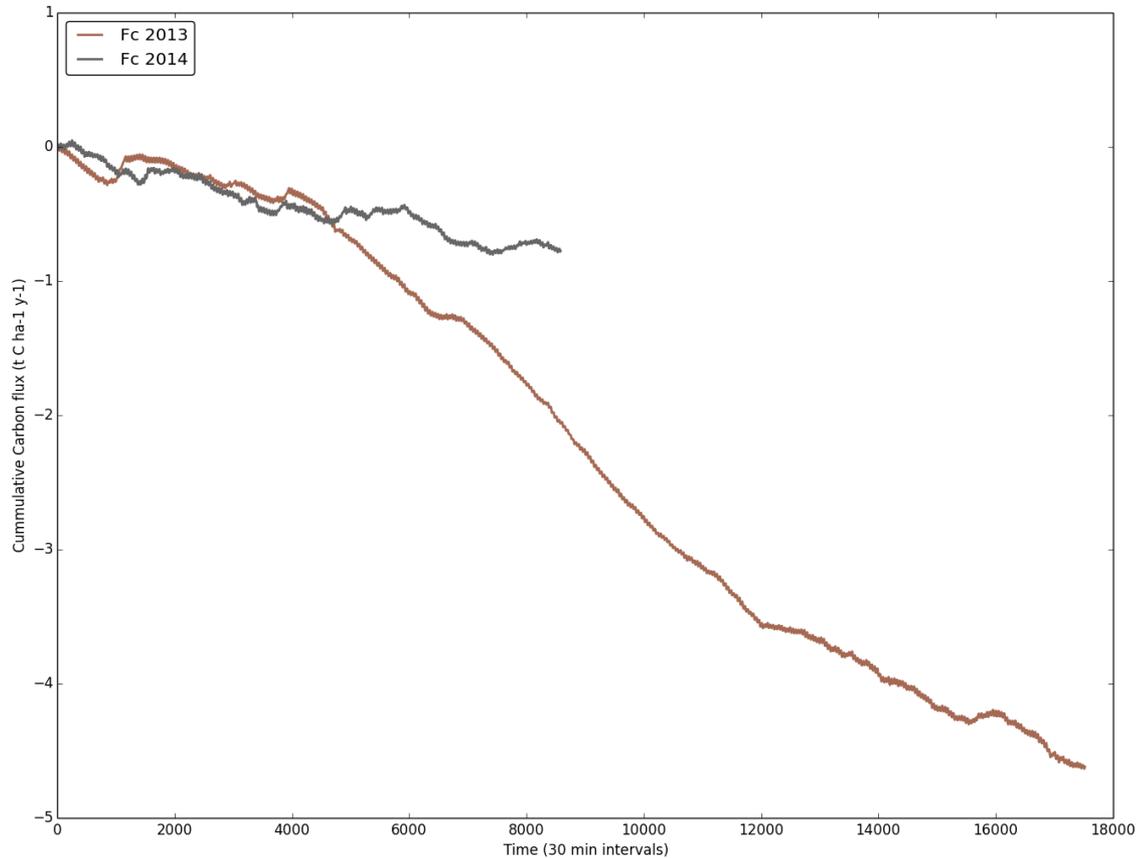




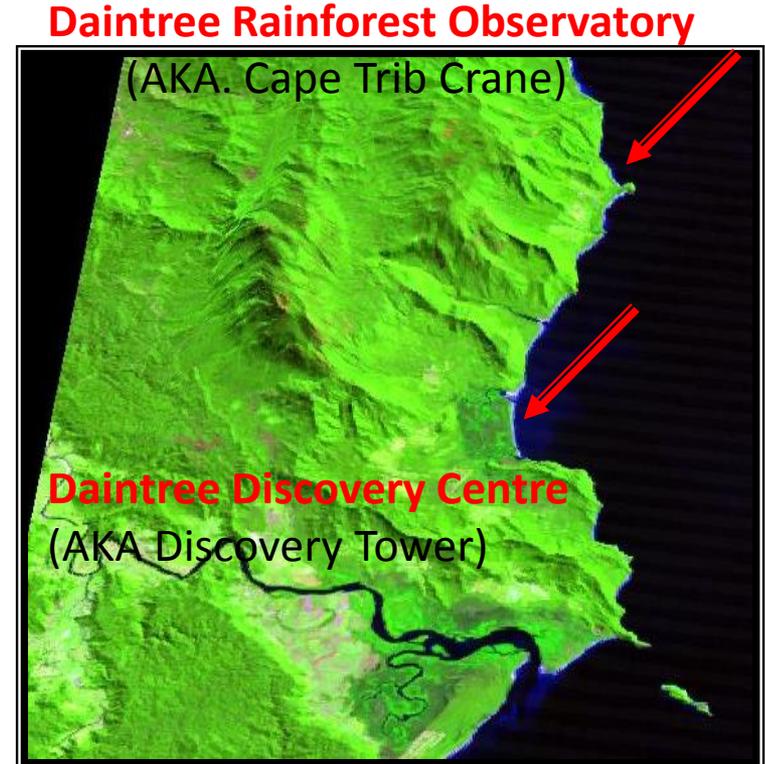
Robson Creek : L3Data

TERN-EIF 2013 (DINGO)

Cummulative CO2 Fc plot for RobsonCreek_v12



- ❖ Pristine lowland rainforest at both stations.
- ❖ Complex Type 1A mesophyll vine forest
- ❖ **Canopy height** 25-35m
- ❖ **Leaf area index** ≈ 4
- ❖ **Elevation:** 65m
- ❖ **Rainfall:** 4250mm (DDC)
5179mm (DRO)
- ❖ **T_{mean}**: 24.2 (DDC)
24.4 (DRO)
°C
- T_{min - max}** **°C**
- ❖ **DRO**
10.6 – 38.6
- ❖ **DDC**
11.2 – 39.9





Daintree Tower



❖ **TERN Ozflux Standard system.**

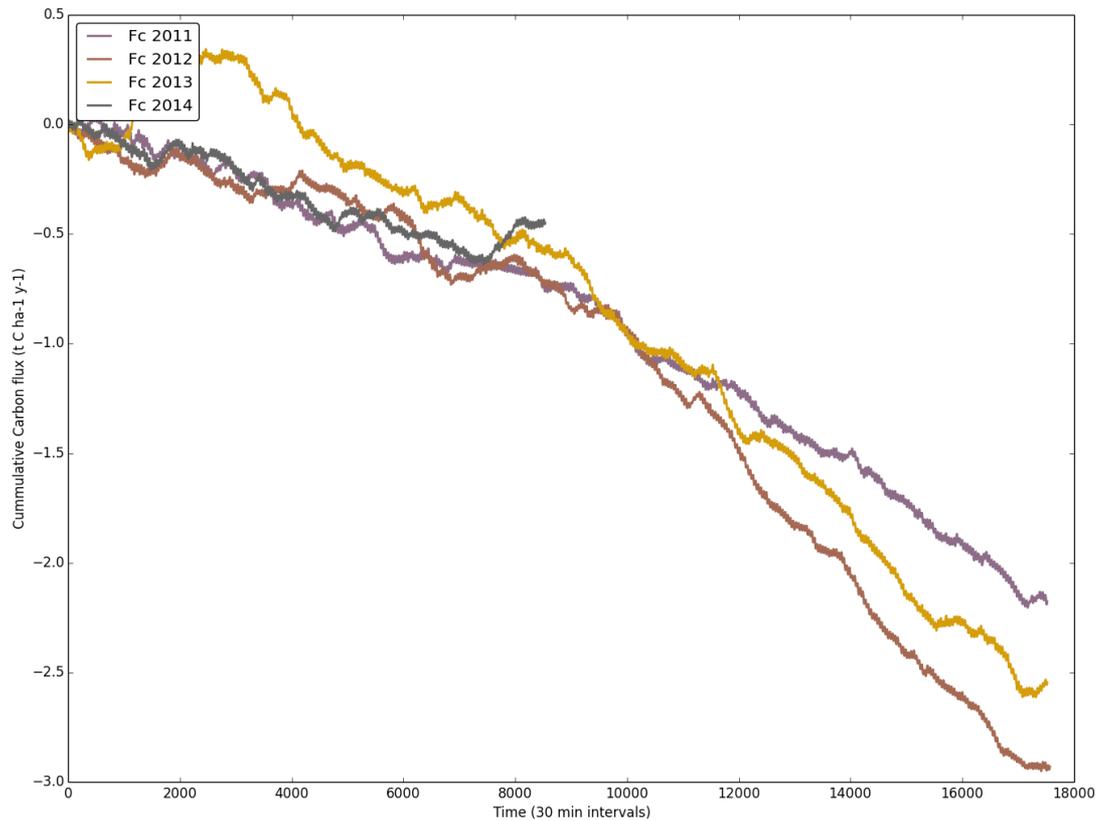




Daintree Tower : L3 Data

TERN-EIF 2013 (& before) DINGO

Cummulative CO2 Fc plot for Daintree_v12



DAINTREE RAINFOREST OBSERVATORY





Daintree Rainforest Observatory

- ❖ **Class room for 40 students.**
- ❖ **Large basic laboratory.**
- ❖ **Bunk-bed style lodge to accommodate 40**
- ❖ **Large communal kitchen.**
- ❖ **Toilet and shower block.**
- ❖ **Establish ecological monitoring plot**
- ❖ **Establish sensor network.**





Daintree Rainforest Observatory

❖ **Underneath the crane a drought is starting sometime soon....**





Crane Tower

- ❖ Running since 2001.
- ❖ Upgraded to the CR3000 system.
- ❖ Replaced IRGA
- ❖ Replaced power supply
- ❖ Still no comms so handed over to a post-doc Alex Cheeseman to look after for us.
- ❖ Working on getting all of the fast data into EddyPro to then feed into OzfluxQC.

