

CSIRO Agency Report

Summary of activities

Cindy Ong | 16 July 2020

Australia's National Science Agency



Biomass Validation and Supersite Workshop

AIMS

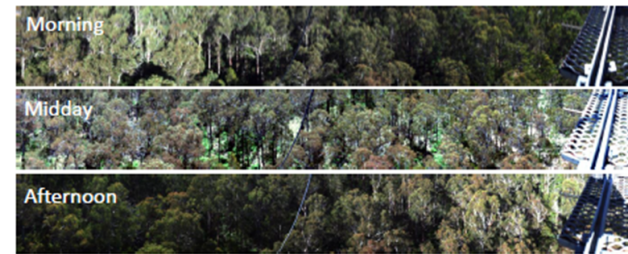
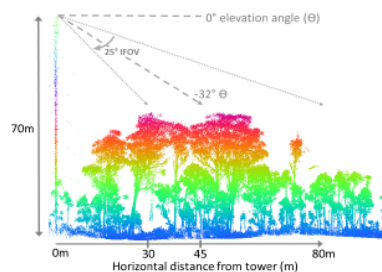
- bring together the ground in-situ measurement networks such as GBOV, TERN supersite, NEON, Enviro-Net, ICOS, etc. and biomass teams to explore and build on synergies between the CEOS WGCV LPV supersites initiative and biomass protocol work;
- generate a 'pitch' to CEOS principals in support of the biomass validation protocol;
- Address outreach to relevant policy implementation or inventory agencies such as UNFCCC.



Field Trip: Instrumentation At Tumbarumba, NSW

Thermal and Hyperspectral Imagery Monitoring System

- Operational since 2015



Automated

- Micrometeorological flux station
- PAR network of sensors
- Land Surface Temperature
- Solar Induced Fluorescence
- CIMEL sunphotometer
- Cosmic Ray Soil Moisture Probe



Field-based

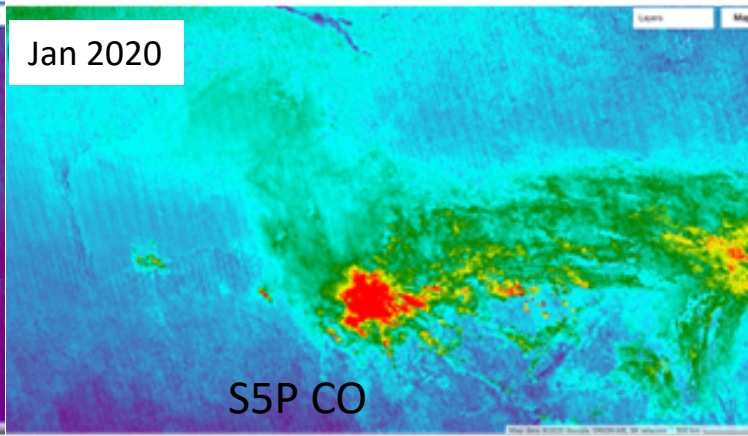
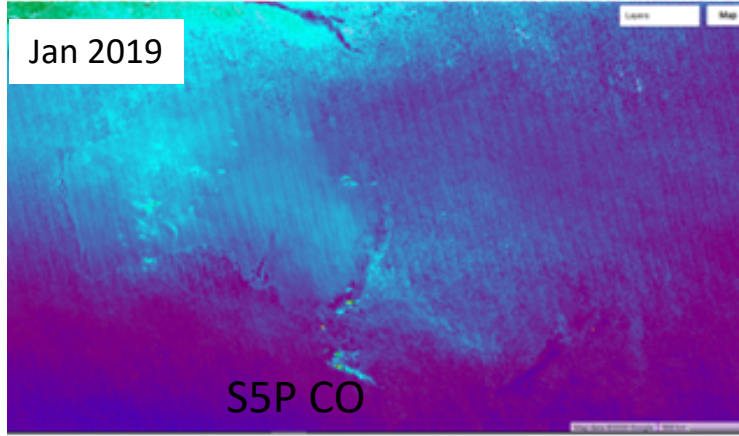
- LAI – DHP
- LAI2200
- LAI – DCP
- Emissivity
- Laser Enabled Assessment of Forest (LEAF) Mk1 Automated TLS



Photos & other material from
Woodgate, Stol, Kitchen



Tumbarumba Fire



Silver lining: Fire provides opportunity for biomass missions to map forest regeneration & understand fire ecology. There are already signs of regeneration. Most tower instrumentation appear to be fine;
Lessons: The importance of automated instrumentation to monitor such events and the need to build resilience in instrumentation.

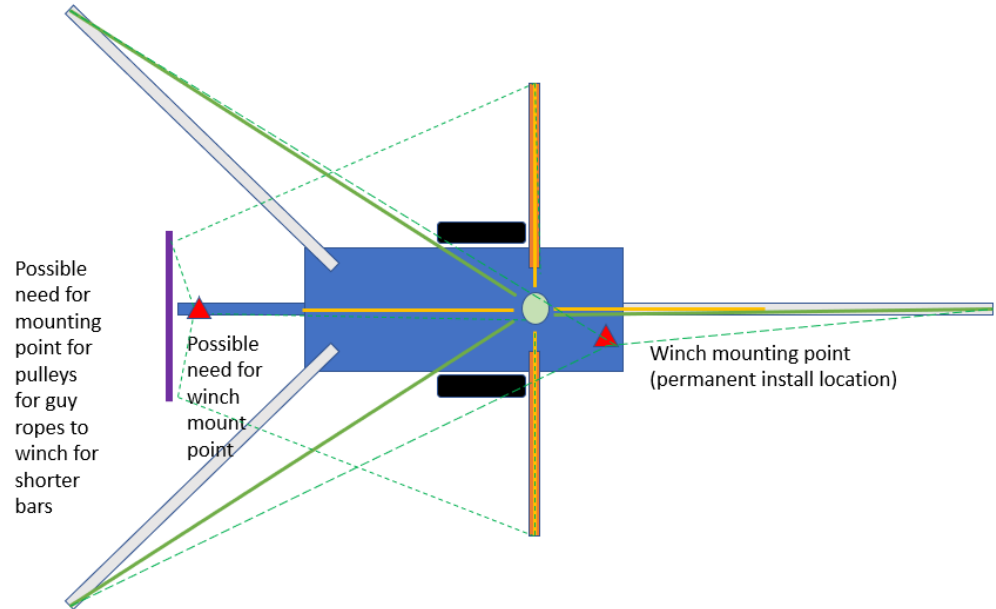
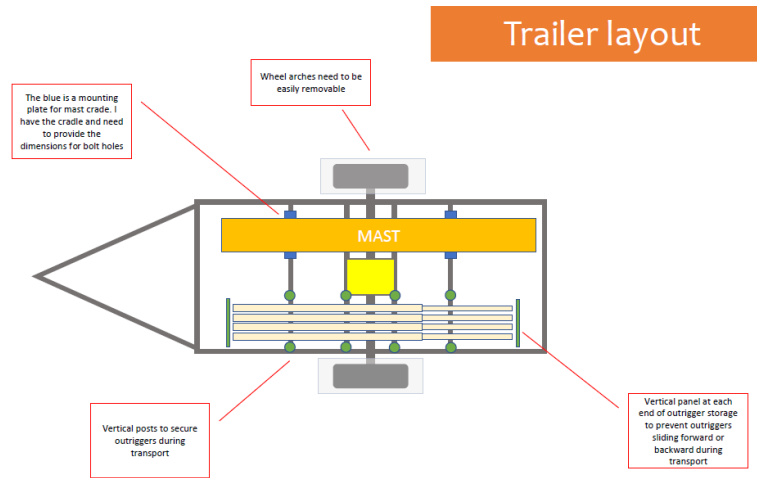


Photo credits: Haenig, Woodgate, Stol, Kitchen, Hodgson, Macfarlane



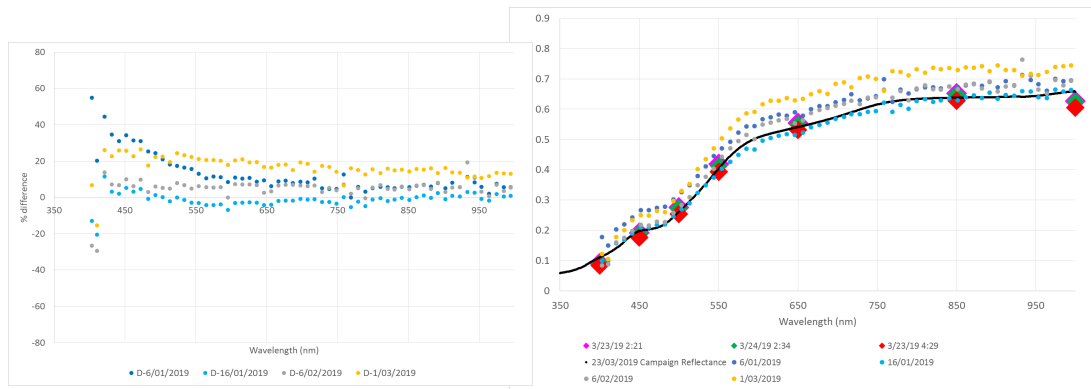
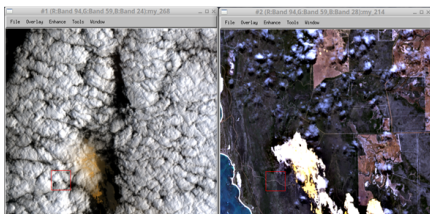
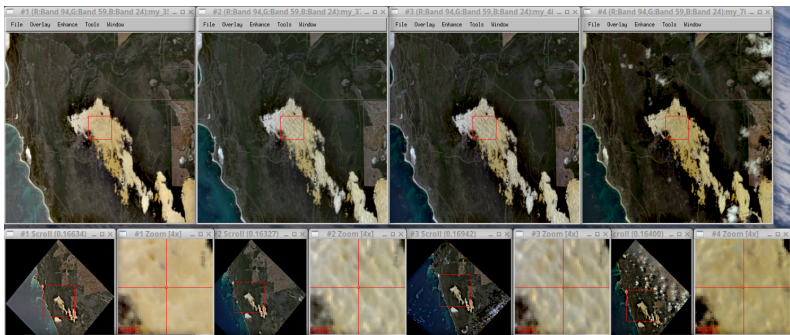
Pinnacles Status

- Slow progress related to COVID-19
 - Field work prohibited until recently
 - Platform design & development now near completion



DESI, HISUI, PRISMA Cross Calibration

- DESIS and HISUI data programmed to be collected systematically at Lake Lefroy & Pinnacles for inter comparison;
- We are in discussion with PRISMA to collect concurrent data;
- Plans for field campaigns during over flights when restrictions lifted;



AeroNet/AeroSpan Status



- Review indicated the value of AeroNet particularly for EO but future of AeroNet is still uncertain;
- COVID-19 restrictions & resource constraints resulted in some sites (red) being sometimes down for extended periods and, some communications issues.

AusCalVal

- High level concept: bringing together, coordinating and advocating for calibration and validation activities across Australia;
- Cal Val working group revived in the Earth Observation Australia (EOA, represents EO across all organisation in Australia) to develop scope, vision, roadmap. Likely to start from observables and tracking back to cal val required to meet those observables;



Thank you

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