

Calperum Tower



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of ADELAIDE

AUSTRALIAN
LANDSCAPE
TRUST



NCRIS
National Research
Infrastructure for Australia
An Australian Government Initiative



Wayne Meyer, Georgia Koerber; University of Adelaide, South Australia, Peter Cale and staff from Australian Landscape Trust at Calperum, 2010 to current

Recovery since the Bushfire in January 2014

 Repairs to the tower and regrowth of the mallee and Understorey

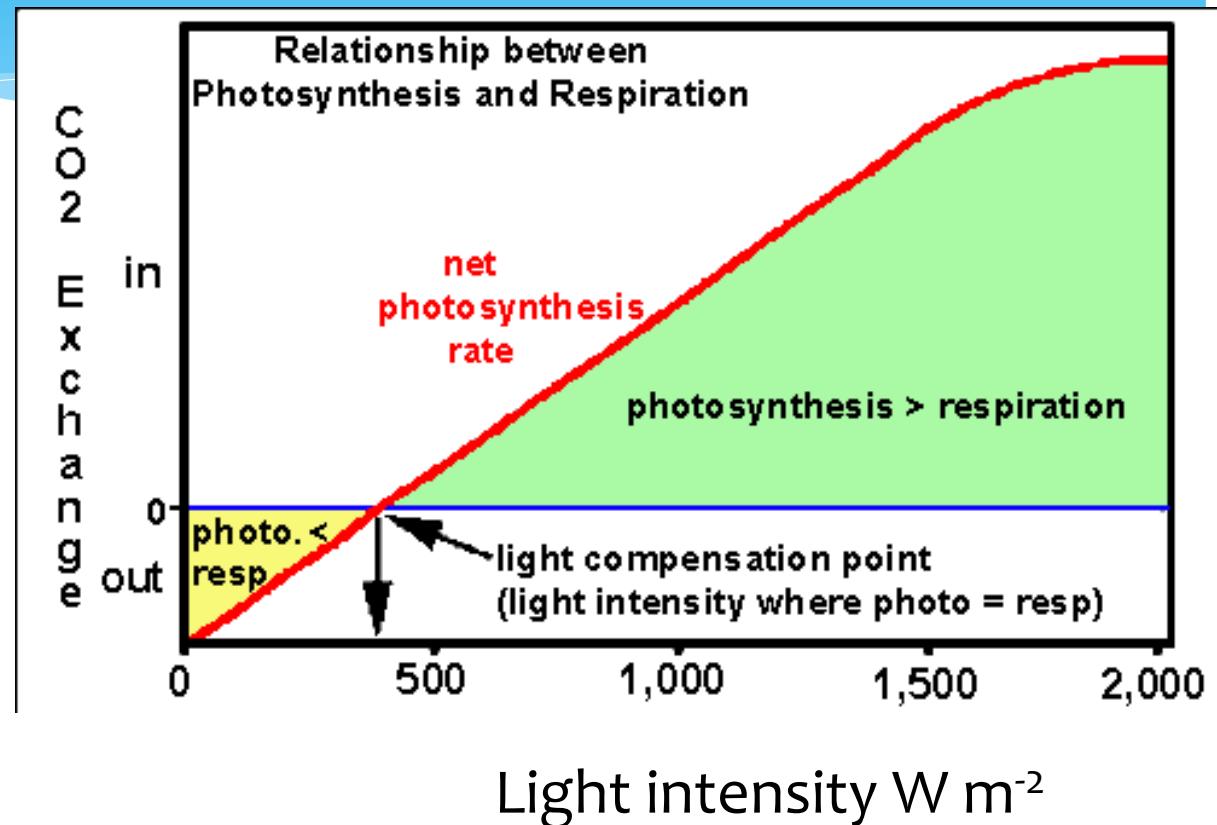


April 2014

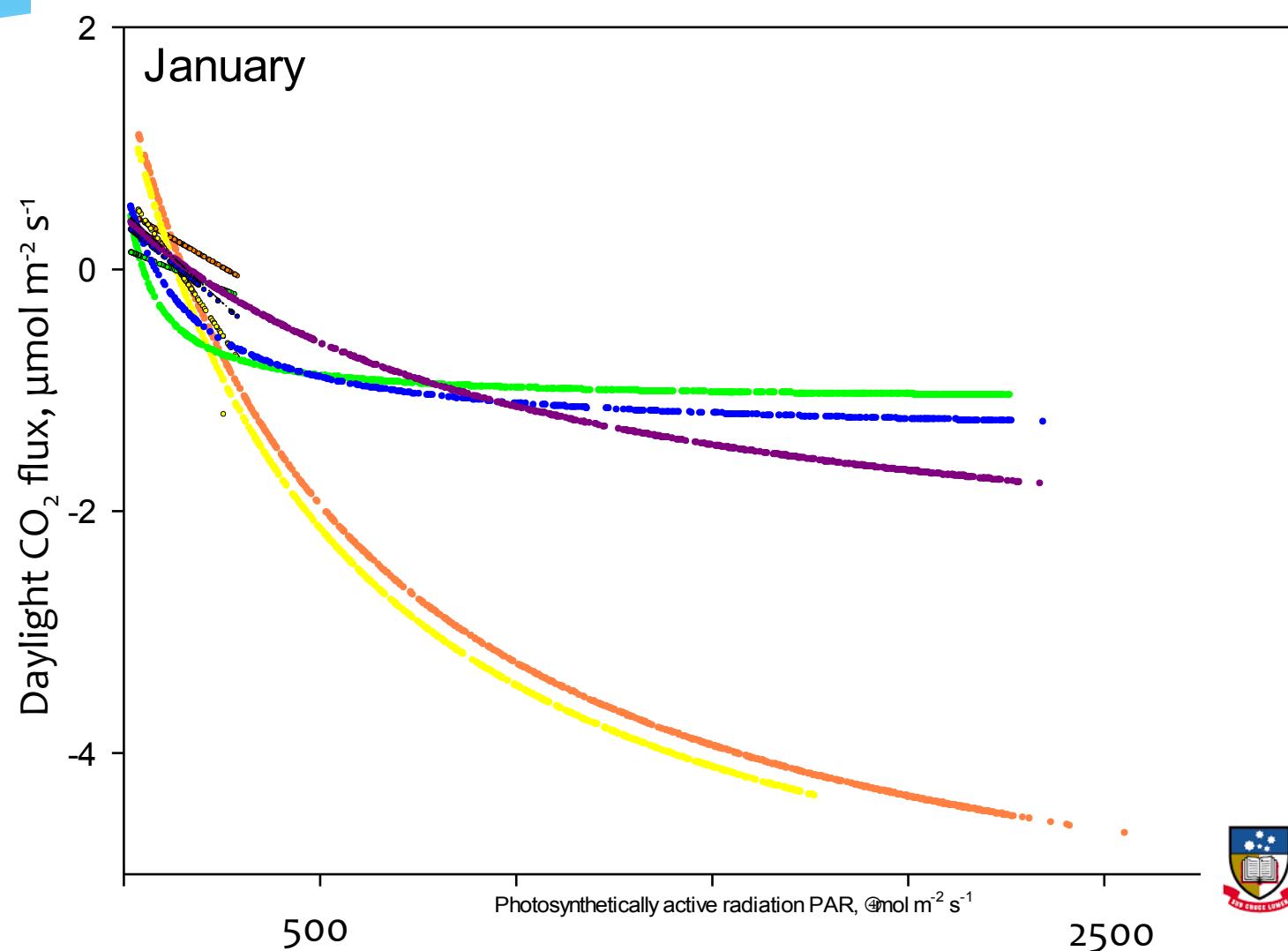


July 2014

 Light use
efficiency curves
for the plant
respiration in the
night and the
day

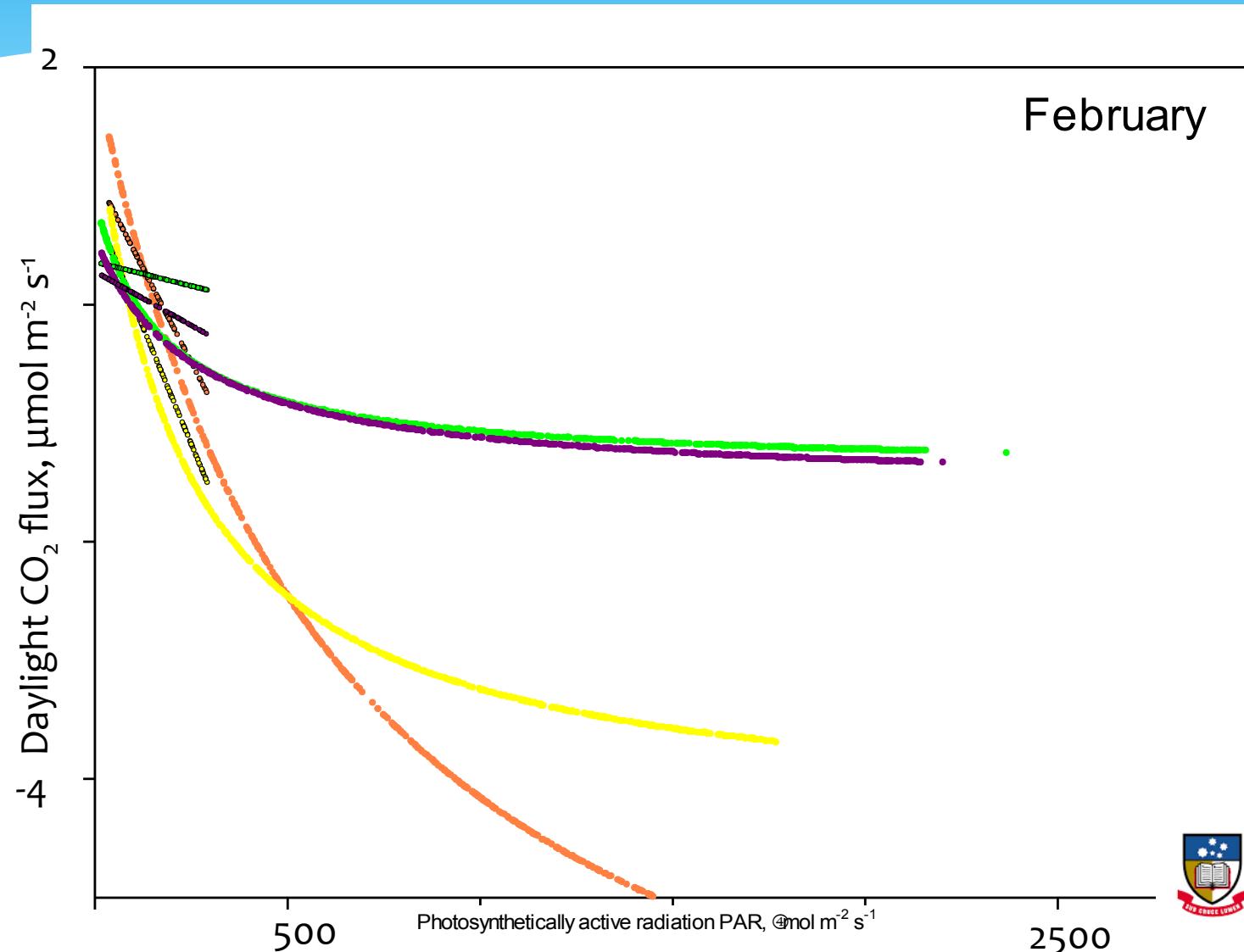


Light Use efficiency curves



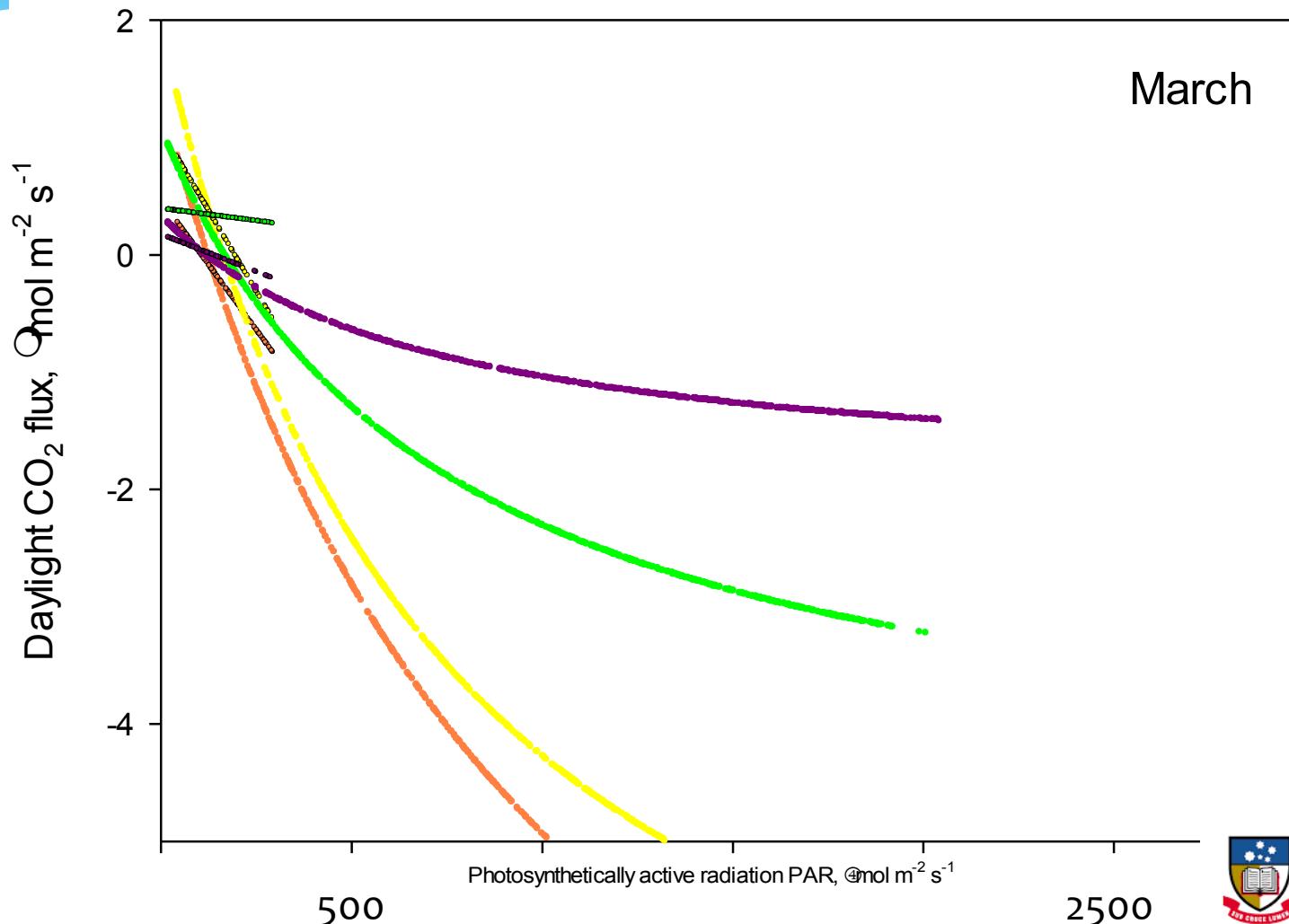
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Light Use efficiency curves



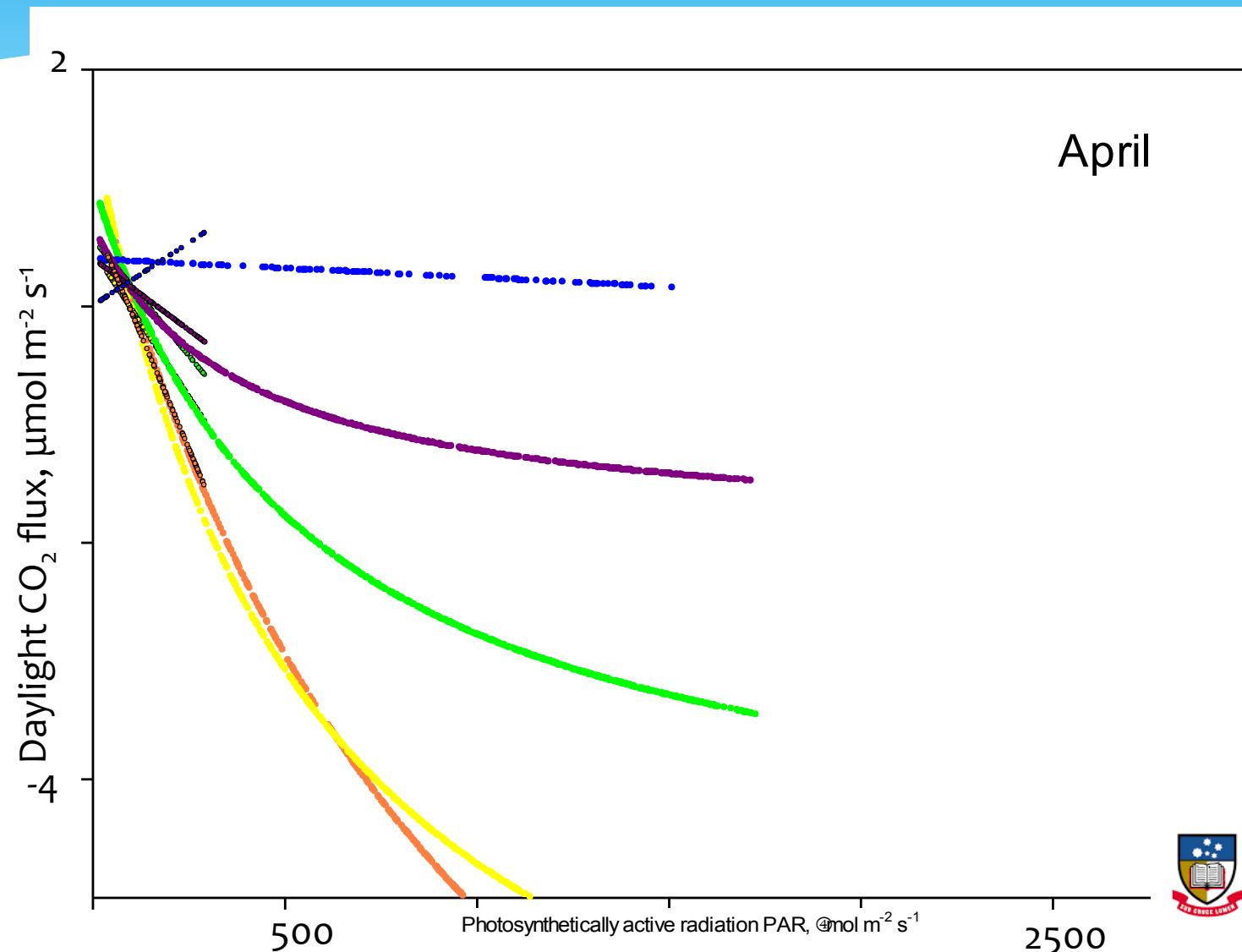
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Light Use efficiency curves

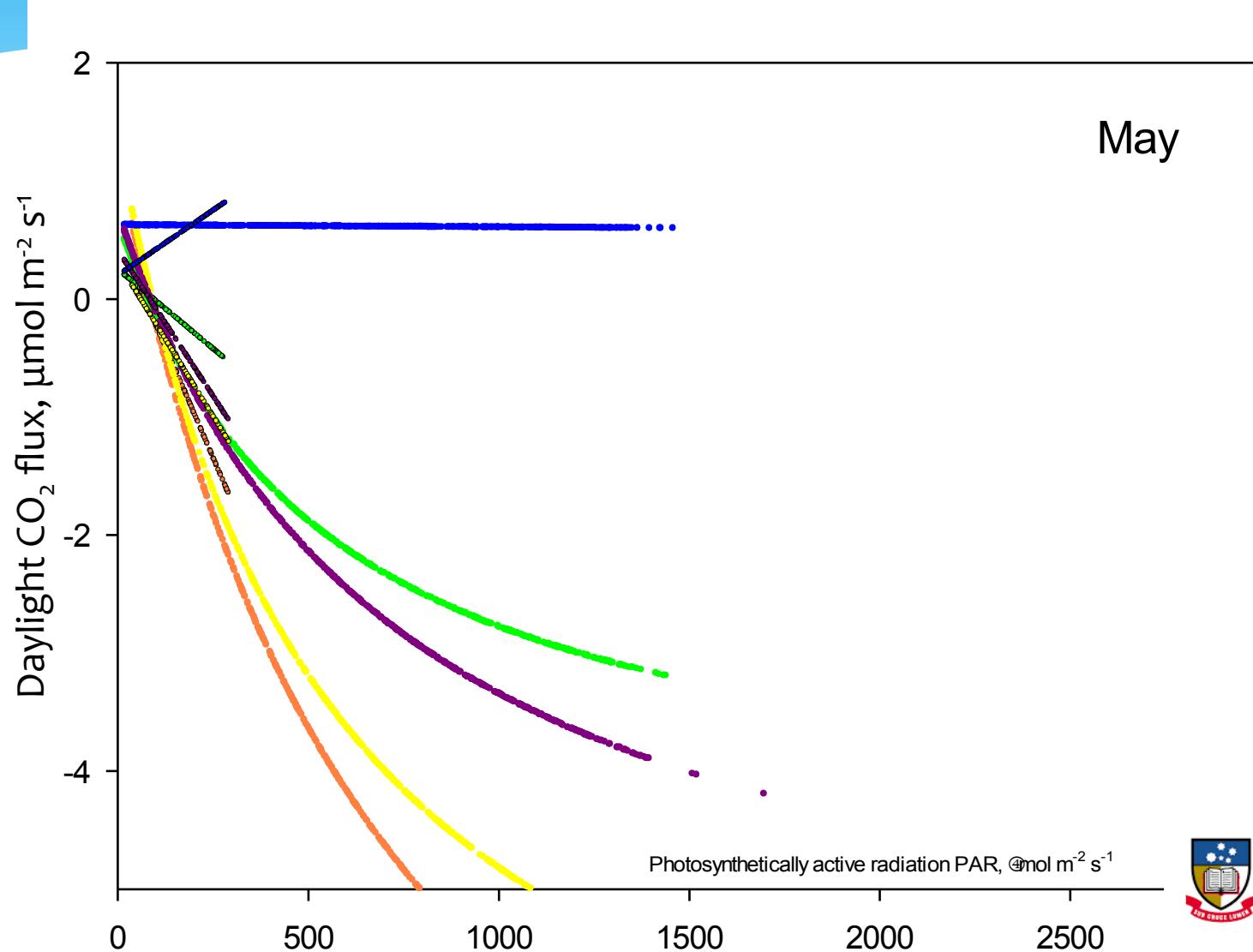


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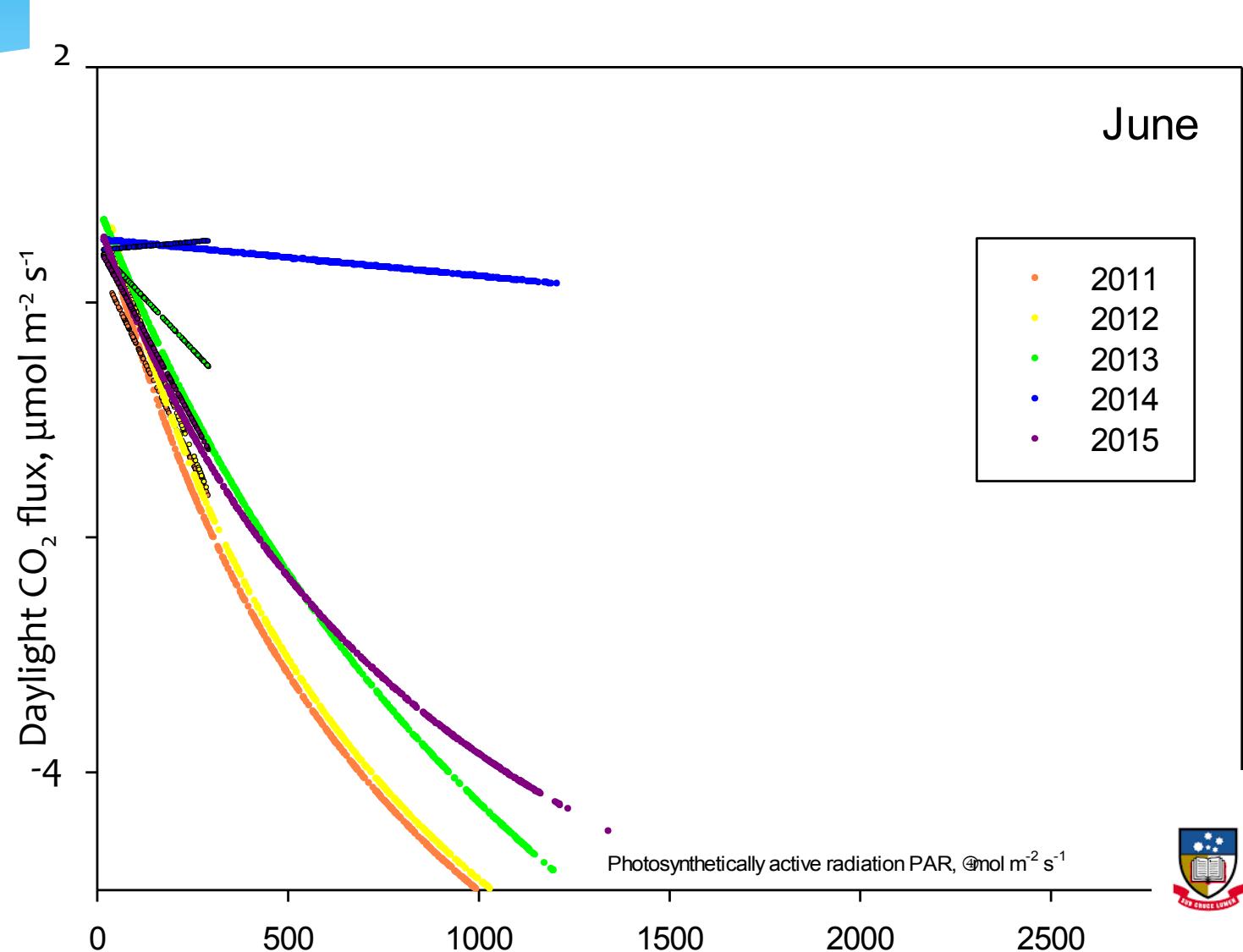
Light Use efficiency curves



Light Use efficiency curves

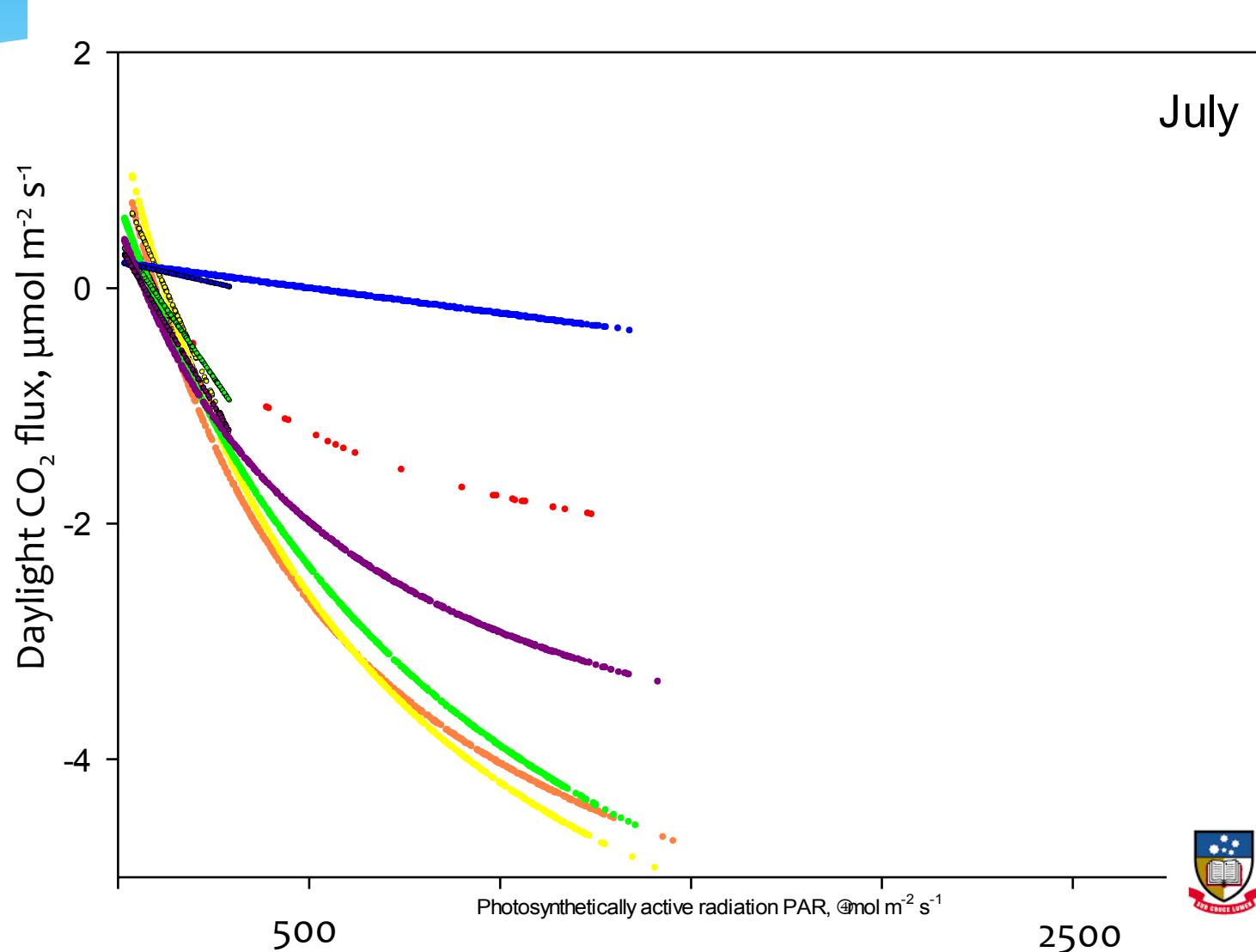


Light Use efficiency curves

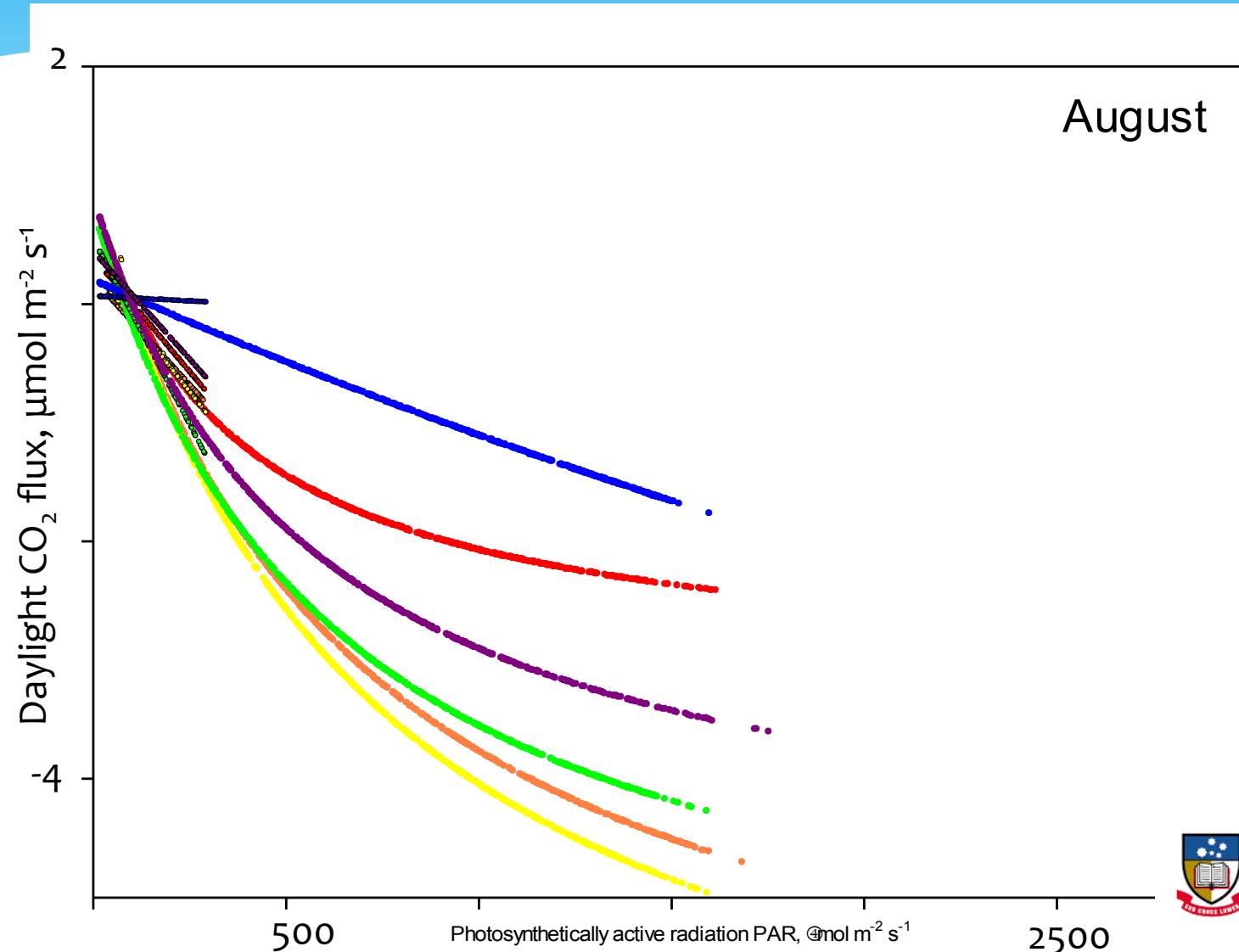


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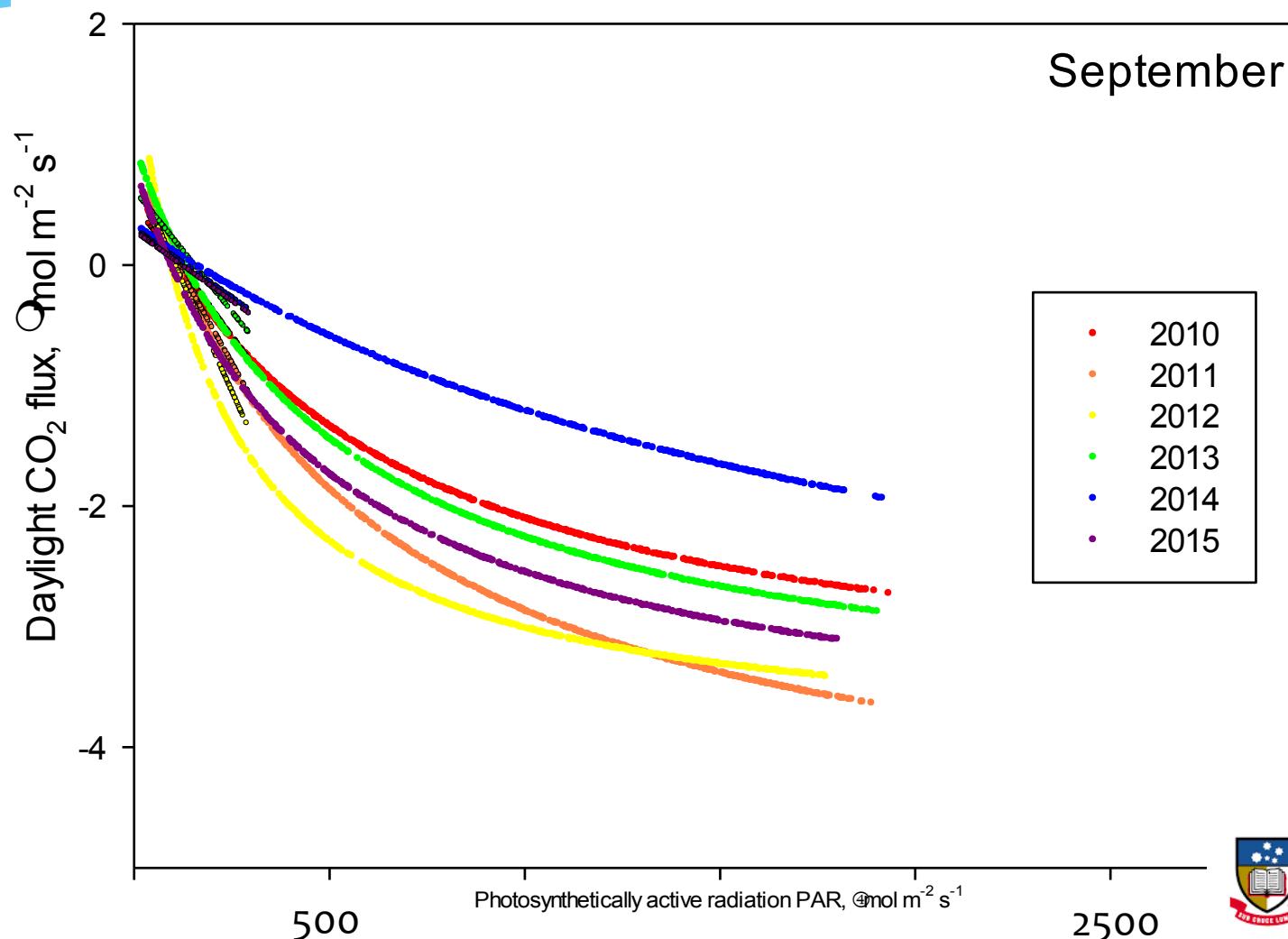


Light Use efficiency curves



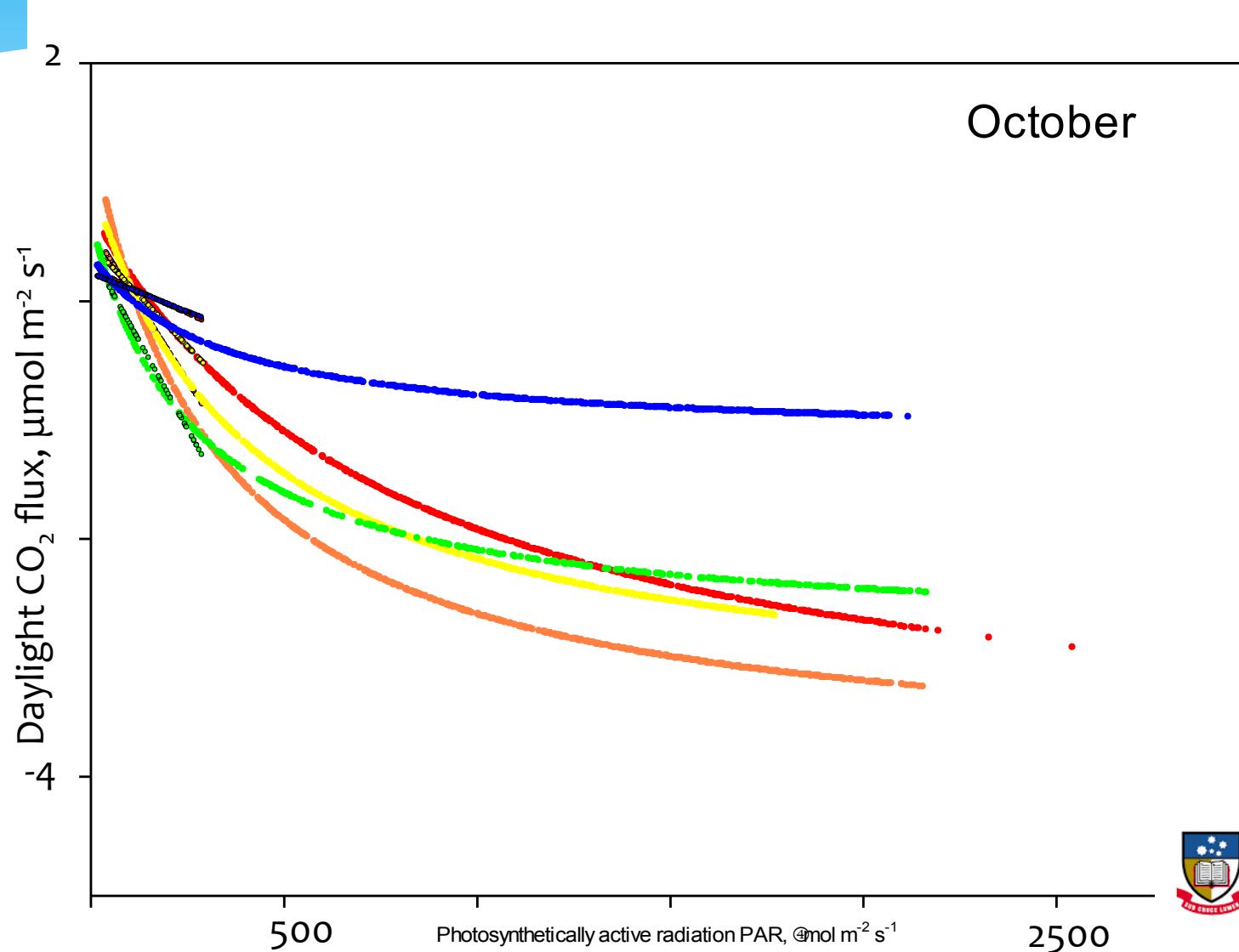
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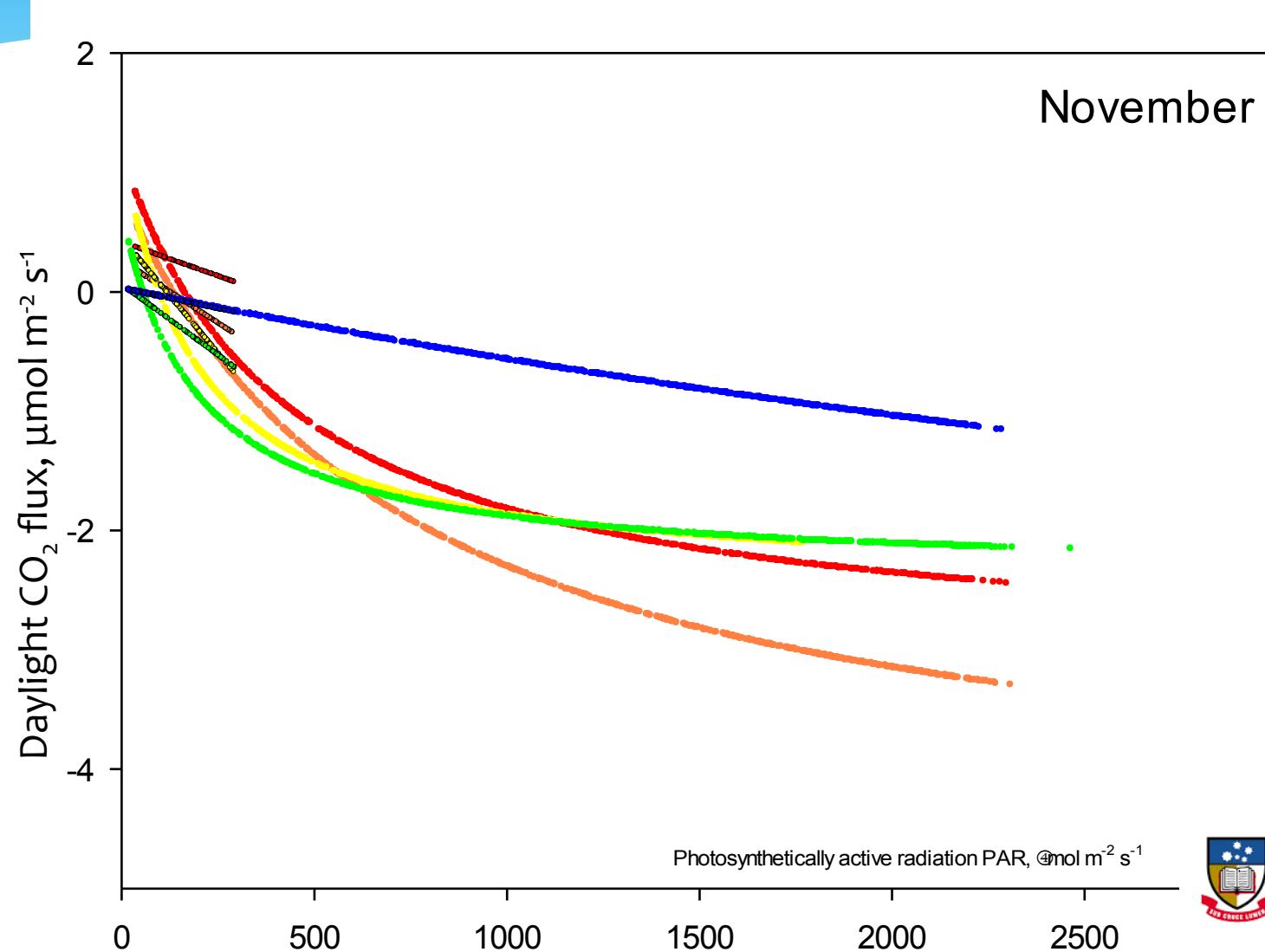


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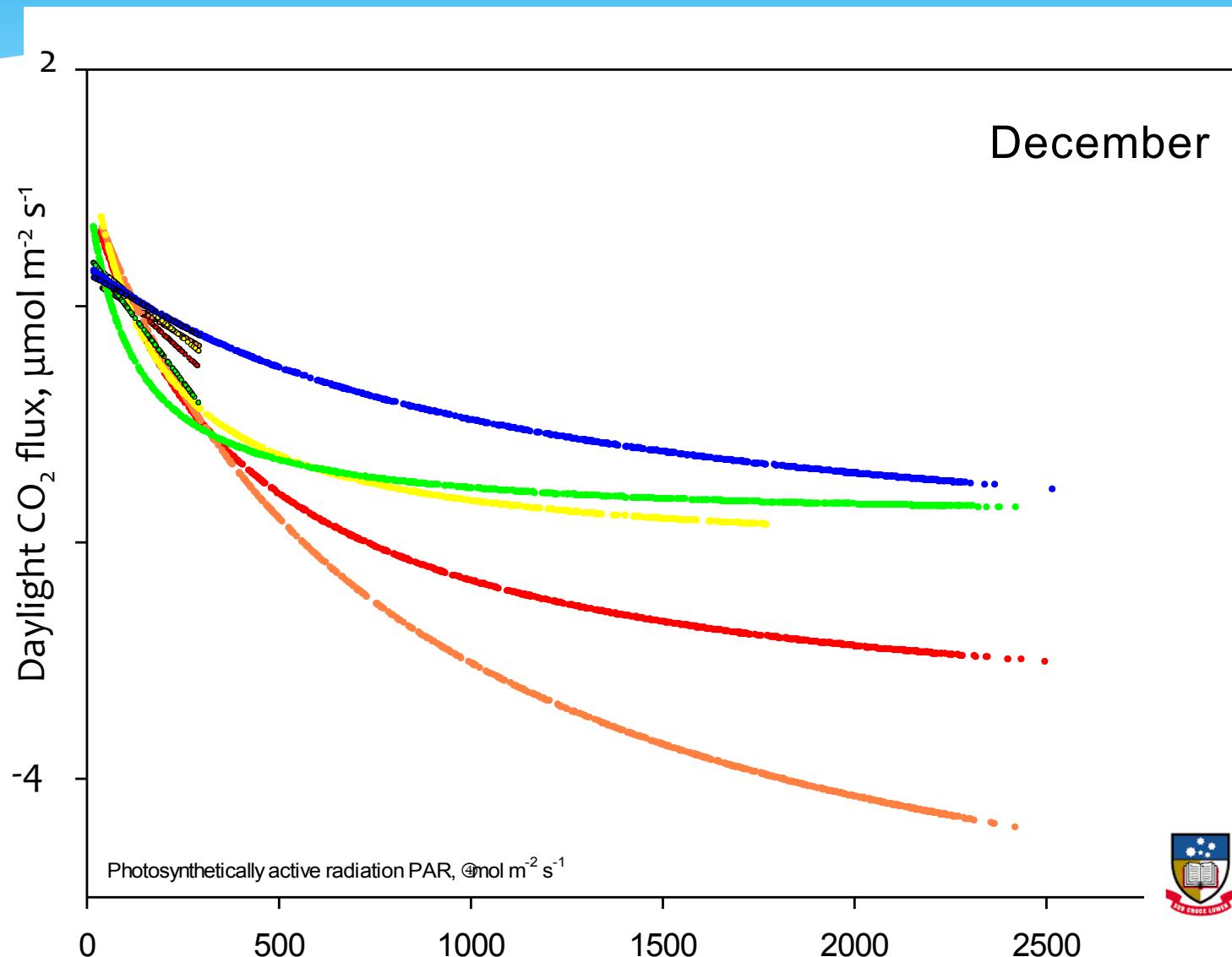
Light Use efficiency curves



Light Use efficiency curves



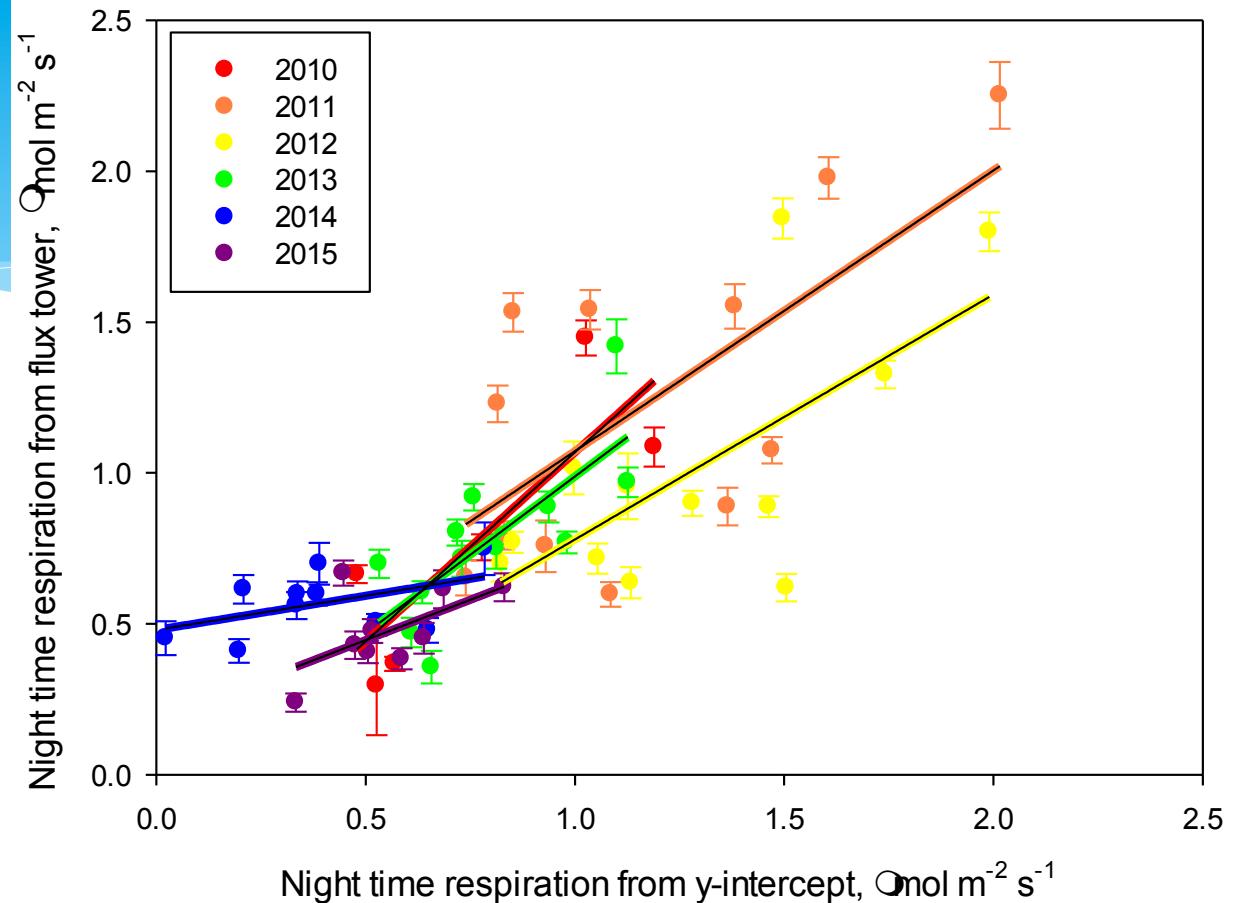
Light Use efficiency curves



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Night, direct and indirect (daytime)

System is recovering
after fire



2010 Adj Rsqr = 0.6220 $y_0 = 1.2536x - 0.1849$

$P = 0.0385^*$

2011 Adj Rsqr = 0.4052 $y_0 = 0.9306x + 0.1418$

$P = 0.0155^*$

2012 Adj Rsqr = 0.4185 $y_0 = 0.8125x - 0.0330$

$P = 0.0137^*$

2013 Adj Rsqr = 0.5220 $y_0 = 1.0384x - 0.0500$

$P = 0.0048^{**}$

2014 Adj Rsqr = 0.1251 $y_0 = 0.2264x + 0.4796$

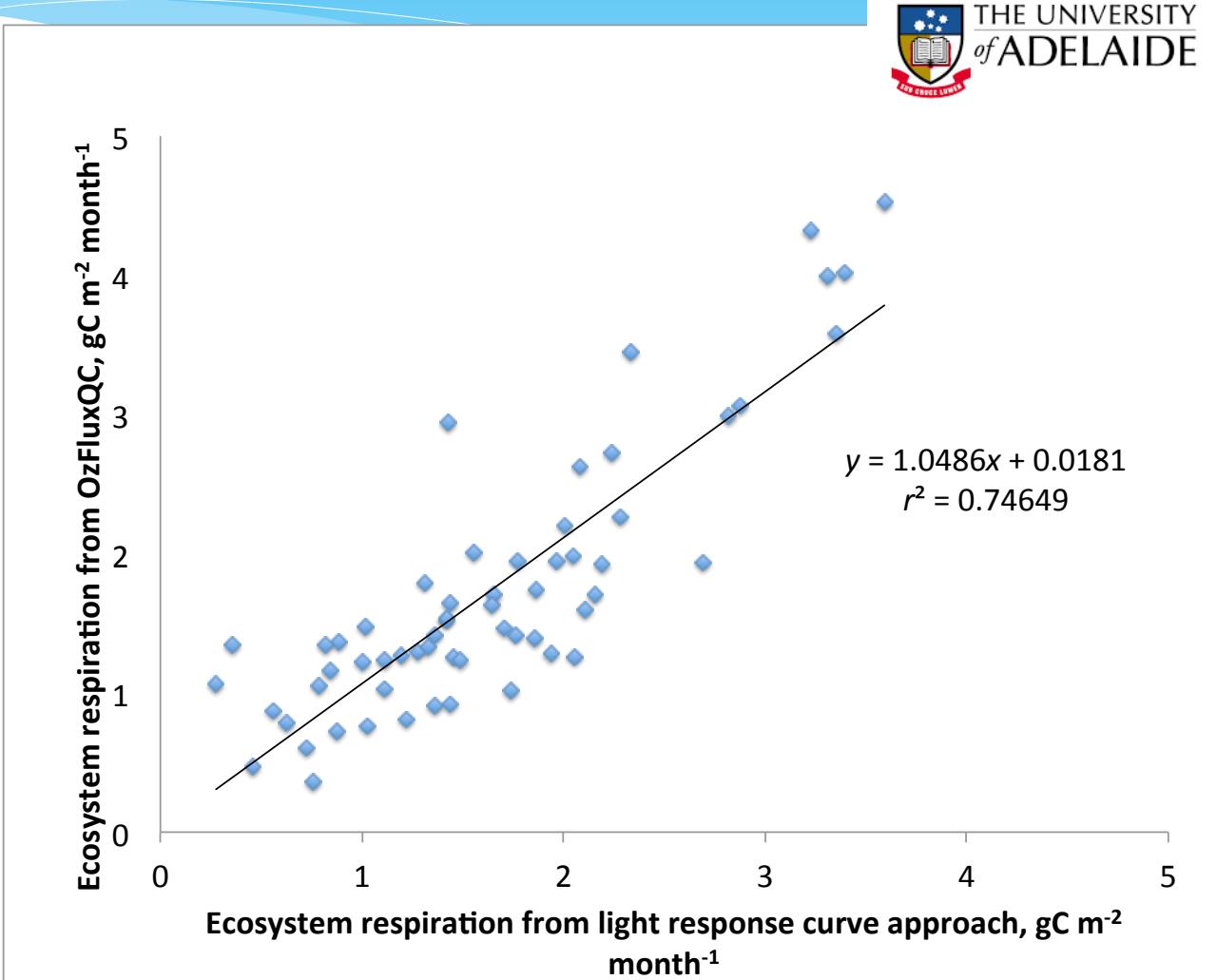
$P = 0.169$

2015 Adj Rsqr = 0.2354 $y_0 = 0.5346x + 0.1785$

$P = 0.105$

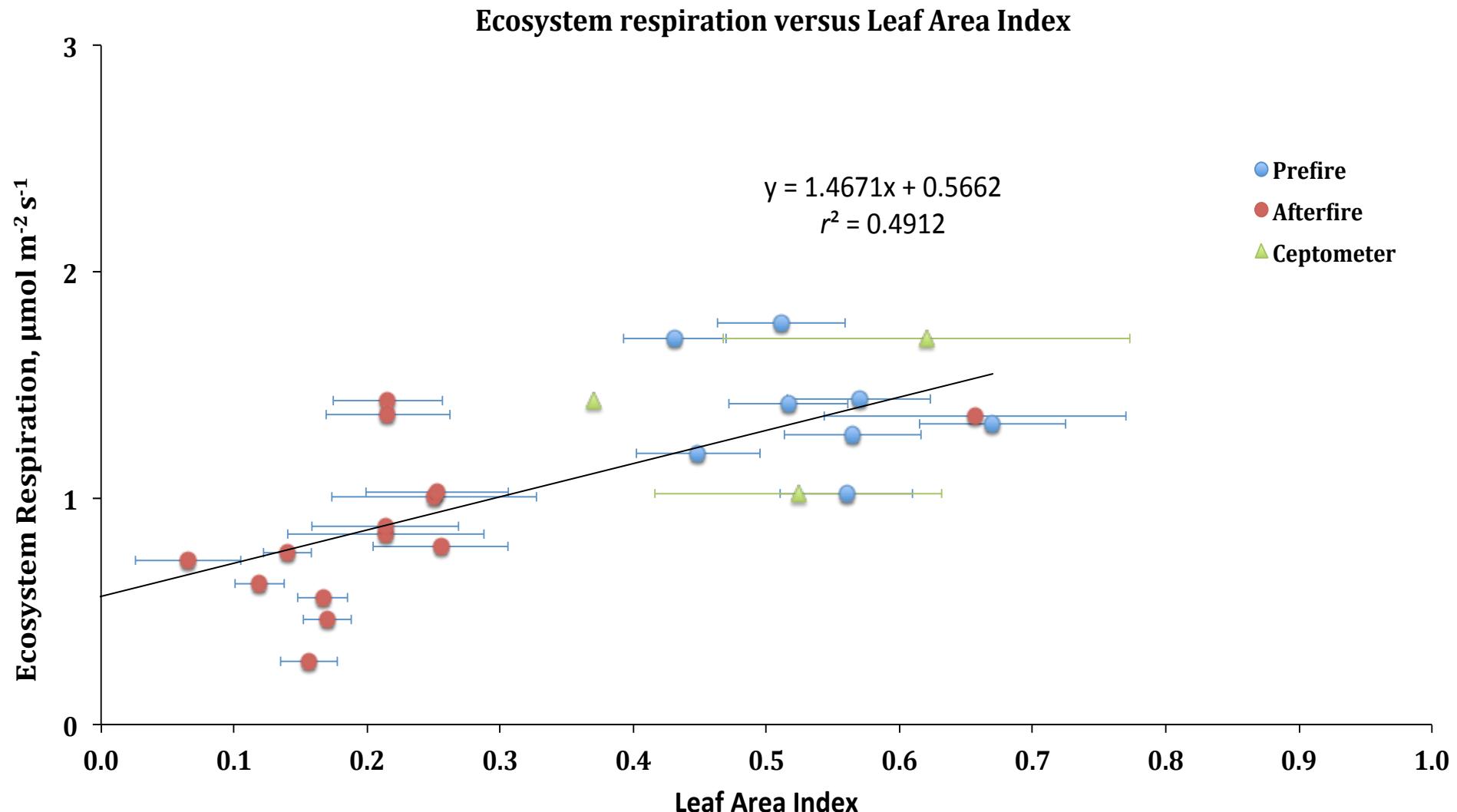
Comparison with OzFlux processing

	gC m ⁻² year ⁻¹	NEE – our calculations	NEE – OzFlux processing
2010	-98	-71	
2011	-428	-318	
2012	-407	-284	
2013	-229	-168	
2014	43	-19	
2015	-144	-97	



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y-intercept of heterotrophic soil respiration in a similar approach to root biomass
by Yackov Kuzyakov (2006), Koerber et al. (2010)



Groundtruthing

We are busy measuring soil respiration, biomass, leaf area index for determination of the basal soil respiration (R_h) and net primary production (NPP).

Thankyou

