

## ***Interactive comment on “Diazotrophic Trichodesmium influence on ocean color and pigment composition in the South West tropical Pacific” by Cécile Dupouy et al.***

### **Anonymous Referee #1**

Received and published: 15 February 2018

General comments: Trichodesmium and optical properties were investigated by comprehensive observation of the South West tropical Pacific waters. This paper seems to have some halfway conclusions, but gives valuable information to help future progress of the understanding of Trichodesmium bloom and its monitoring.

Specific comments:

Line 53-54: "Trichodesmium detection should 53 then involve examination of nLw at the green and yellow wavelengths.": 490nm is in between blue and green (greenish blue), and 565nm is in between green and yellow (yellowish green).

Line 411-412, "It showed large troughs due to absorption maxima at these wavelengths  
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in the blue channel (Fig. 6a-d).": "(Fig. 6a-d)" is wrong?

Line 455-456, "83% of total variance": 81% in fig. 12 a).

Line 459, "PC2 represents 9.4% of the total variance." 13% in fig. 12 a).

Line 467, "only 5% for PC2 (Fig. 12c).": 7% in fig. 12 c).

line 509-511: The sentence seems to be duplicated.

Fig.1, "Chlorophyll composite from MODIS on the period of the OUTPACE cruise. The positions of the short (long) duration stations are shown by cross (plus) symbols.": I could not see the "cross (plus) symbols."

Fig. 4: a)~d) are not shown

Fig. 7 a): Please explain the colors of black and red.

Fig.8: Please show wavelength on the axis instead of log (log10?) values.

Fig. 9, "a) In situ absorption spectrum of Trichodesmium rich waters as measured by the filter technique showing MAA's absorption at 330 and 360 nm wavelengths": I could not see "MAA's absorption at 330 and 360 nm" in this figure.

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