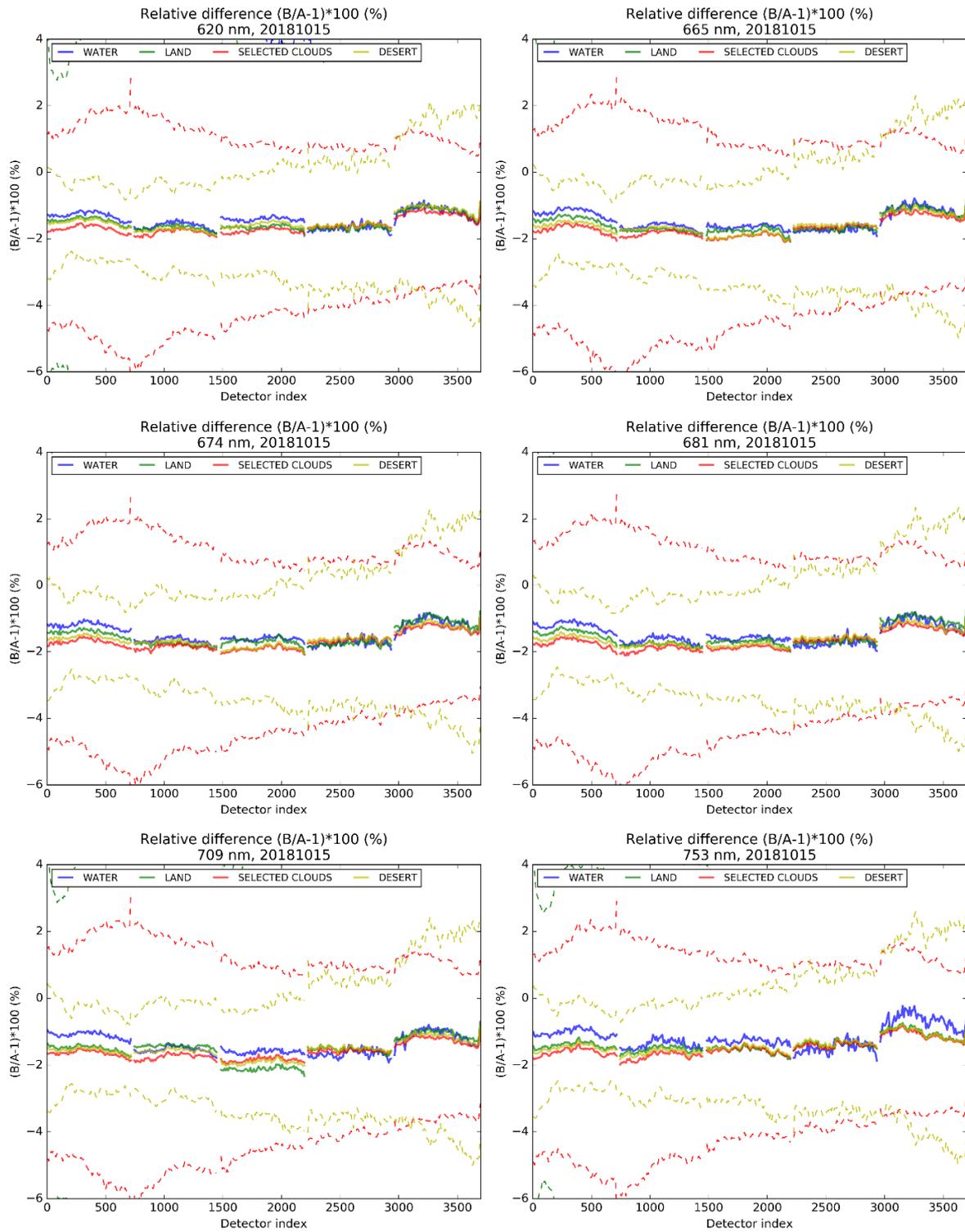
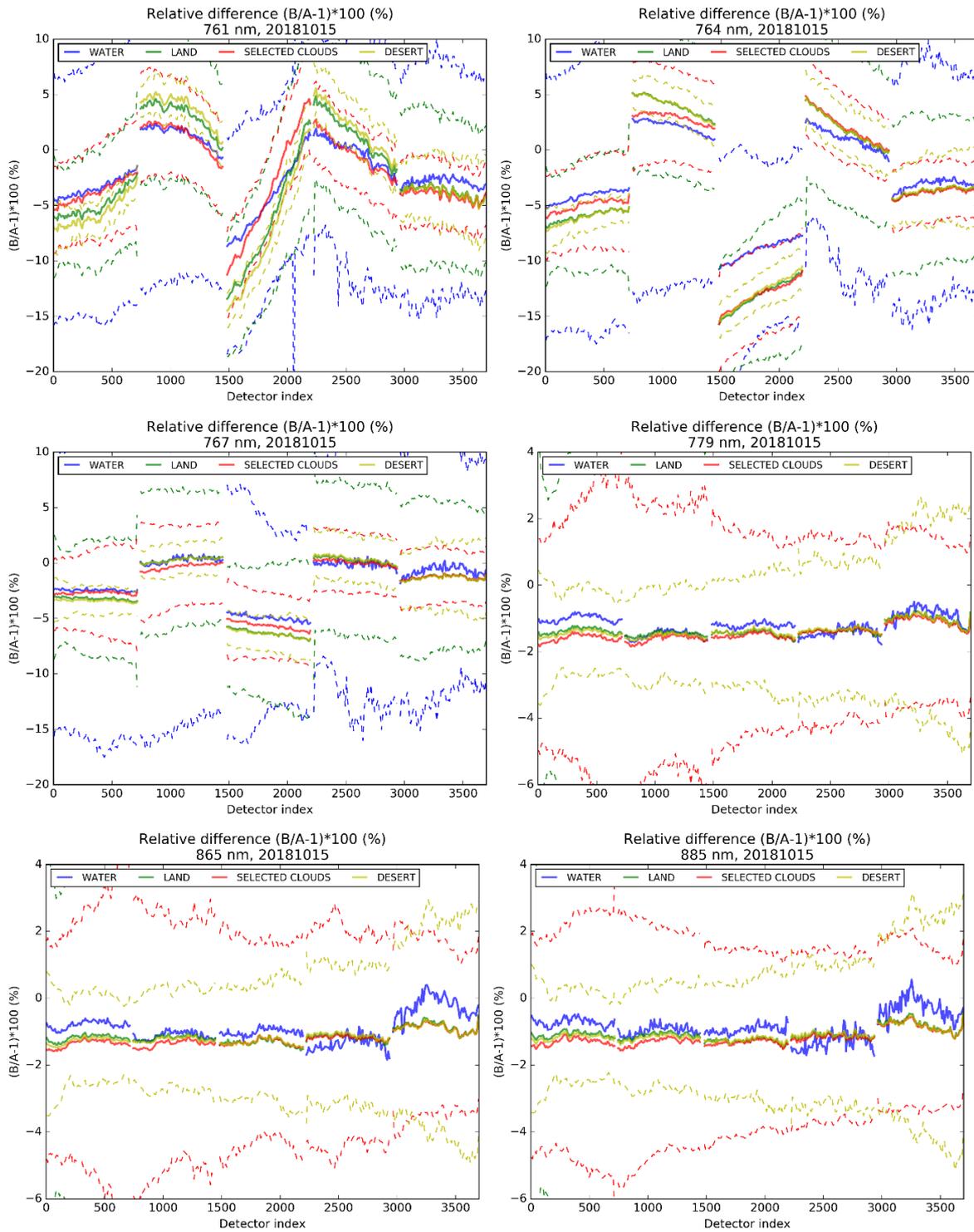


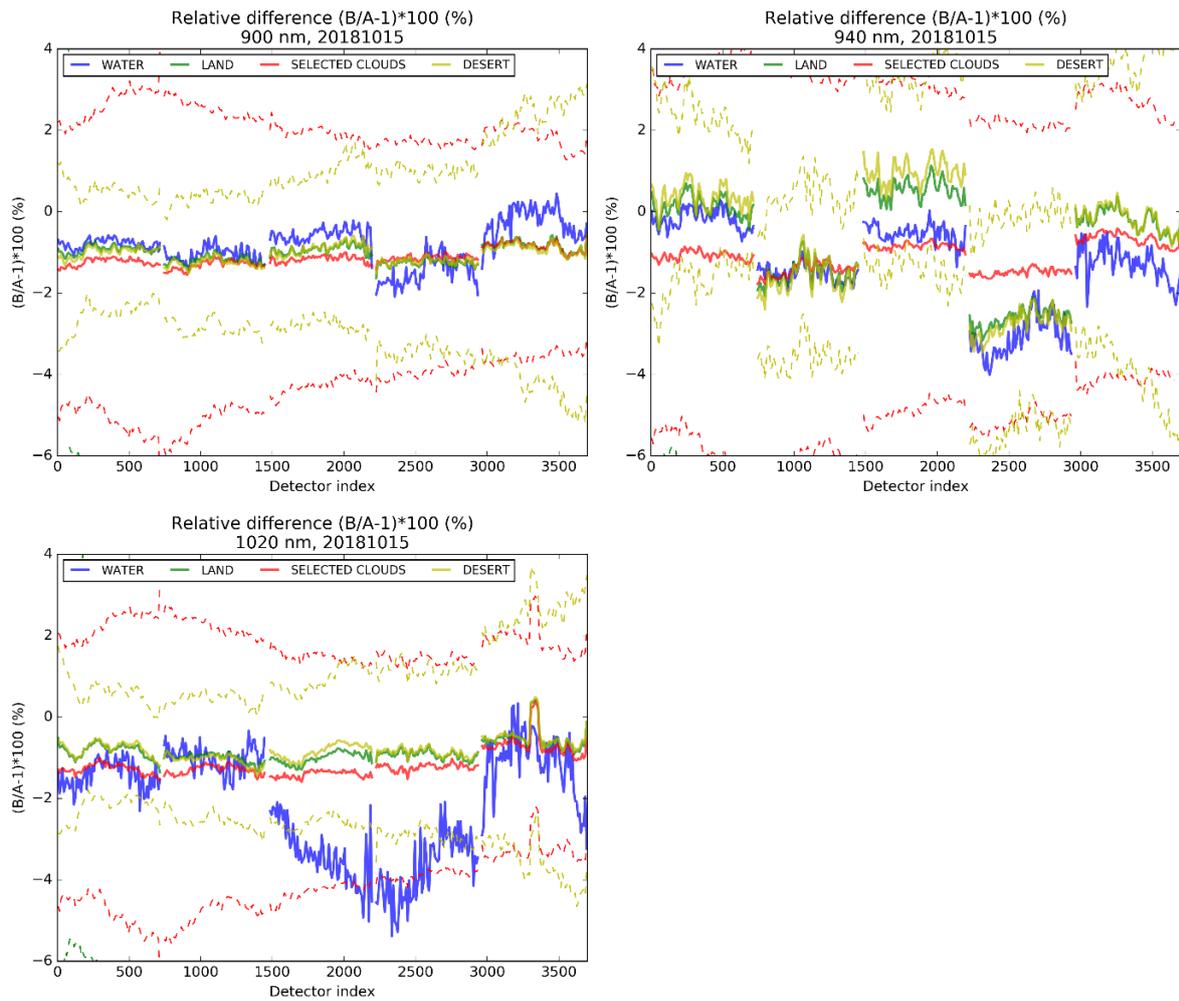
**Figure S1.** Relative differences between OLCI-A and OLCI-B homogenised reflectance per bin of instrument detectors for water (blue), land (green), selected clouds (red), and desert (yellow). Bands Oa01 (400 nm), to Oa06 (560 nm). Dashed lines indicate the standard deviation. Tandem data from October 15<sup>th</sup>, 2018.



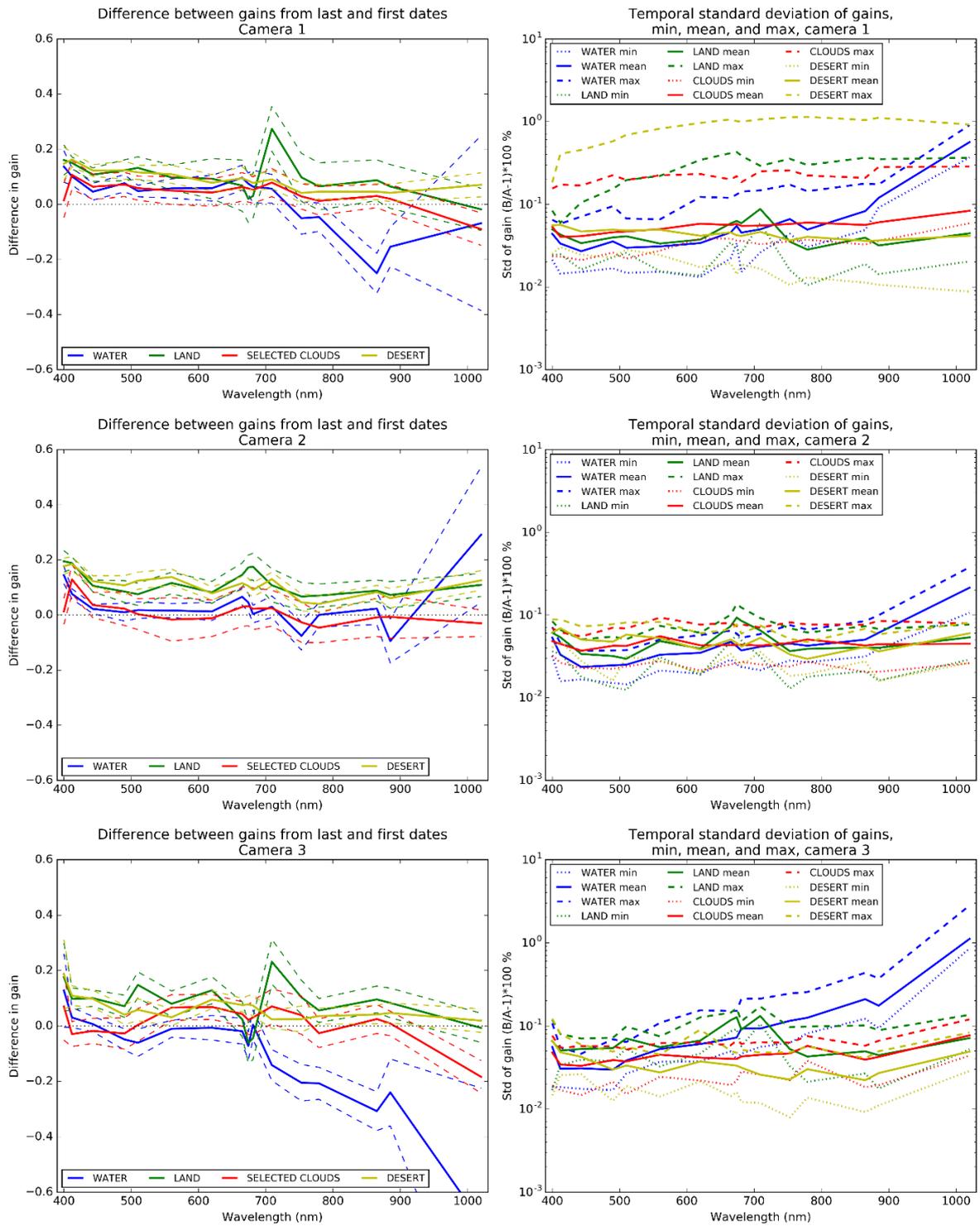
**Figure S2.** Relative differences between OLCI-A and OLCI-B homogenised reflectance per bin of instrument detectors for water (blue), land (green), selected clouds (red), and desert (yellow). Bands Oa07 (620 nm), to Oa12 (753.75 nm). Dashed lines indicate the standard deviation. Tandem data from October 15<sup>th</sup>, 2018.



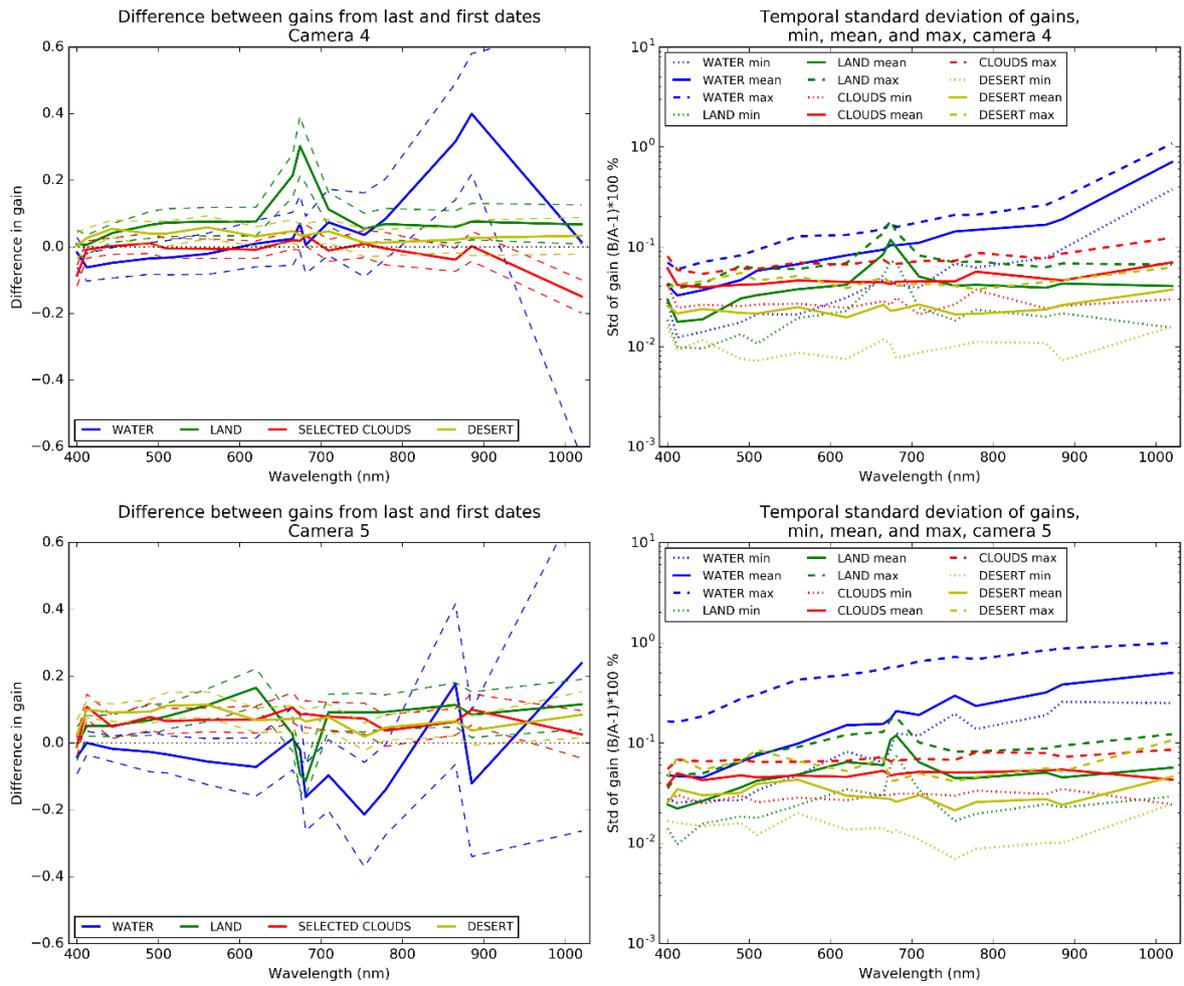
**Figure S3.** Relative differences between OLCI-A and OLCI-B homogenised reflectance per bin of instrument detectors for water (blue), land (green), selected clouds (red), and desert (yellow). Bands Oa13 (761.25 nm), to Oa18 (885 nm). Dashed lines indicate the standard deviation. Tandem data from October 15<sup>th</sup>, 2018.



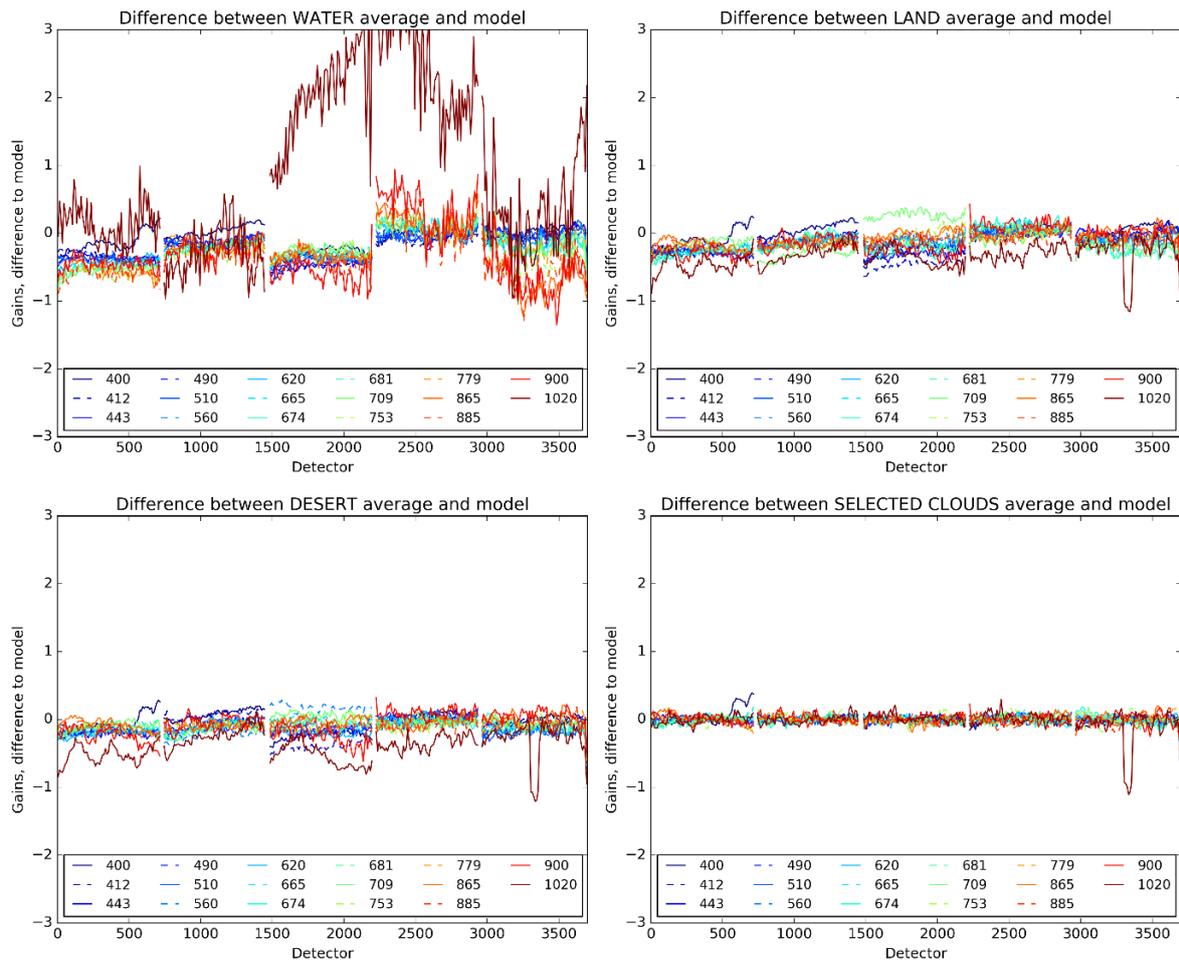
**Figure S4.** Relative differences between OLCI-A and OLCI-B homogenised reflectance per bin of instrument detectors for water (blue), land (green), selected clouds (red), and desert (yellow). Bands Oa19 (900 nm), to Oa21 (1020 nm). Dashed lines indicate the standard deviation. Tandem data from October 15<sup>th</sup>, 2018.



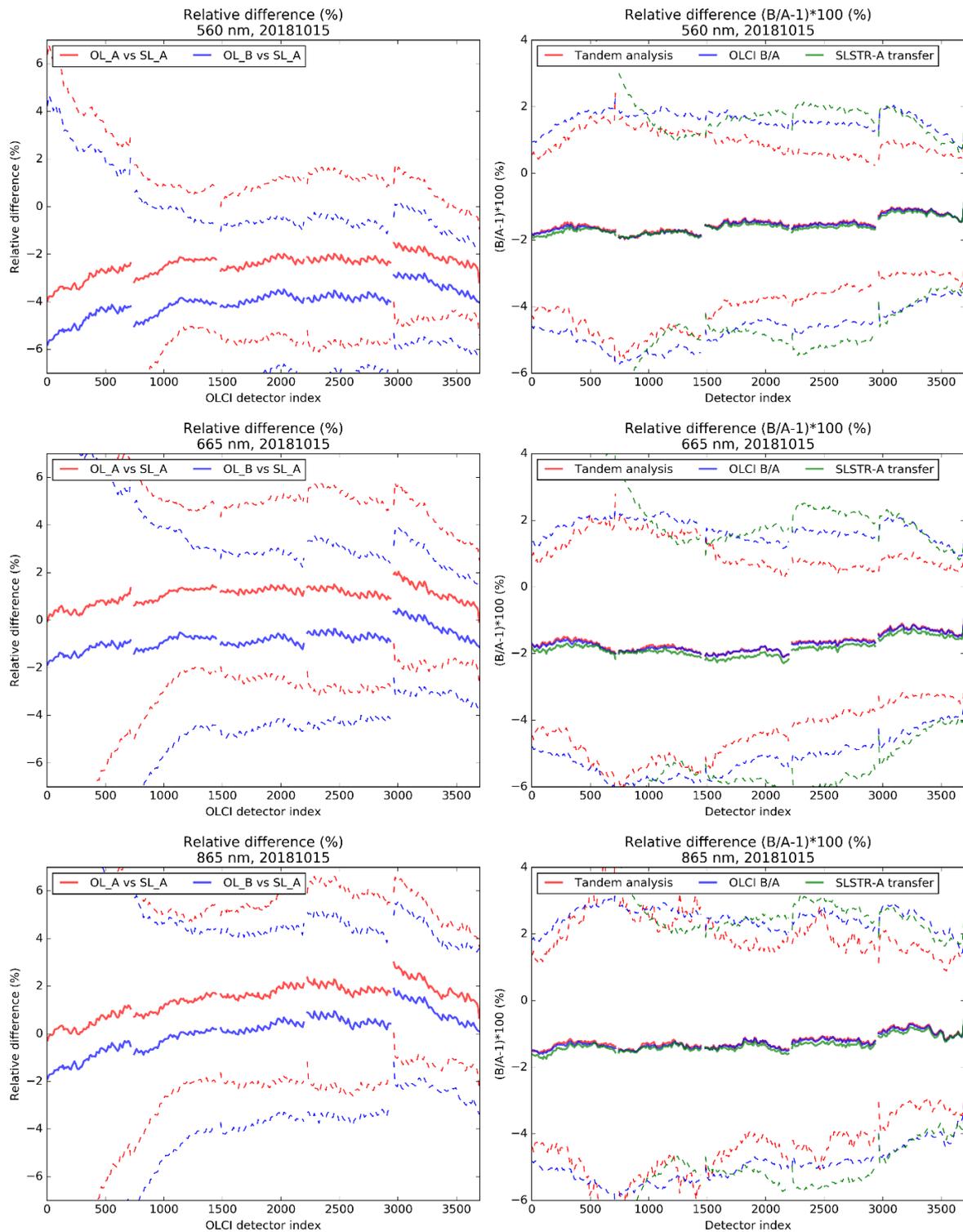
**Figure S5.** Difference between gains obtained at last and first dates of the tandem period (left) showing mean values per camera and dispersion. From temporal standard deviation of gains for each detector (right): minimal, mean, and maximal values. Cameras 1 to 3 from top to bottom.



**Figure S6.** Difference between gains obtained at last and first dates of the tandem period (left) showing mean values per camera and dispersion. From temporal standard deviation of gains for each detector (right): minimal, mean, and maximal values. Cameras 4 and 5 from top to bottom.



**Figure S7.** Residuals between model and averages obtained from WATER (top left), LAND (top right), DESERT (bottom left), and SELECTED CLOUDS (bottom right) over the same scale.



**Figure S8.** Left: relative differences between OLCI-A or OLCI-B and SLSTR-A for the three coincident channels (560, 665, and 865 nm). Right: comparisons between results from the tandem analysis above, ratios from the same dataset as used in collocation with SLSTR, and double-ratio from the raw results on the left panel.