

Brewer-OMI comparisons using EUBREWNET

Regional Brewer Calibration Center for Europe

- Compare Brewer and OMI O₃ and UV data
- A useful tool to check Brewers
- September-October 2015: MATLAB/Octave code

Soon: plots at EUBREWNET

→ O₃ products:

Level 0) All data from B files

Level 1) Counts from B files, configurations in EUBREWNET, processed with the Brewer Python Module

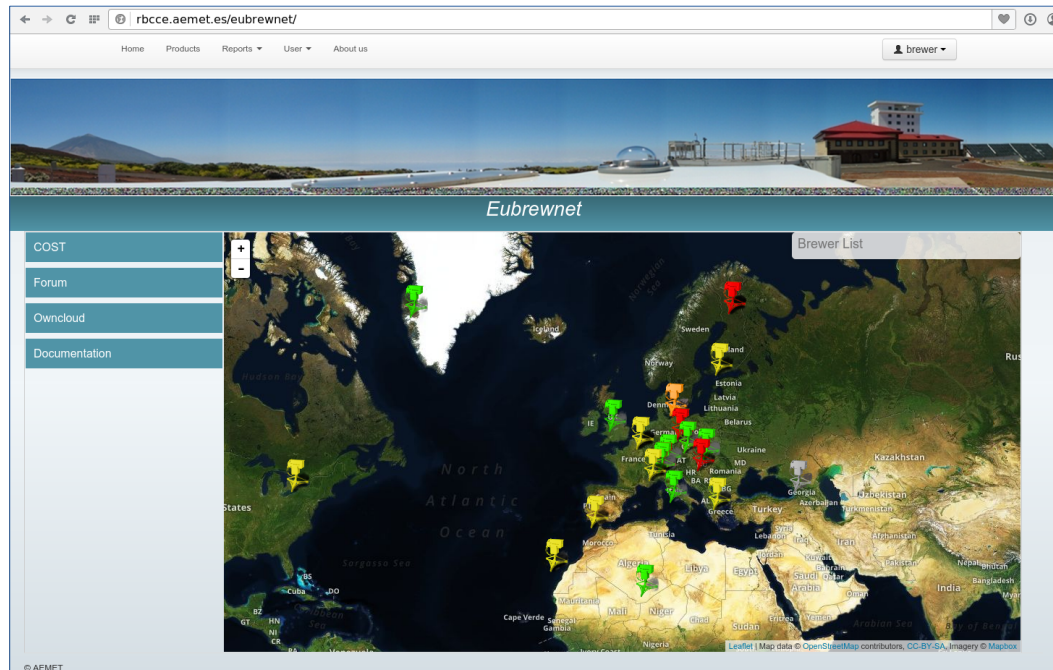
Level 1.5) L1 data with cloud, airmass, and Hg filters, plus standard lamp, filter, and stray-light corrections

Level 2) Using configurations which have been validated

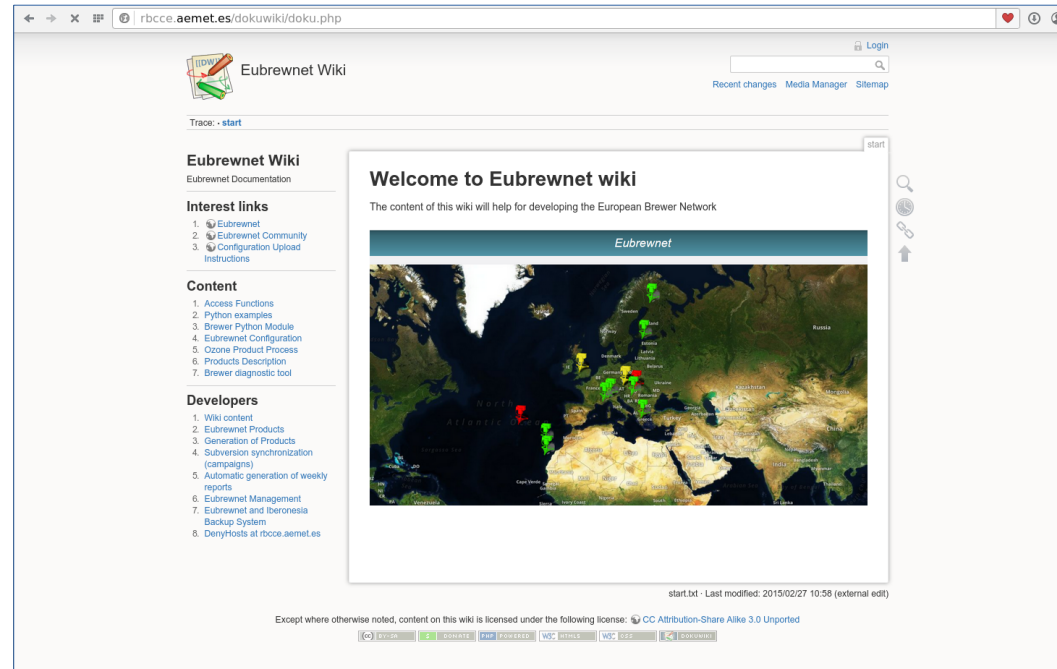
→ UV products:

Level 0) Data from UV and UVR files, processed with the Brewer Python Module

<http://rbcce.aemet.es/eubrewnet>



<http://rbcce.aemet.es/dokuwiki>



The screenshot shows the Eubrewnet Wiki homepage in a web browser. The browser's address bar displays `rbcce.aemet.es/dokuwiki/doku.php`. The page features a sidebar on the left with sections: "Eubrewnet Wiki" (with a sub-link "Eubrewnet Documentation"), "Interest links" (listing Eubrewnet, Eubrewnet Community, and Configuration Upload Instructions), "Content" (listing Access Functions, Python examples, Brewer Python Module, Eubrewnet Configuration, Ozone Product Process, Products Description, and Brewer diagnostic tool), and "Developers" (listing Wiki content, Eubrewnet Products, Generation of Products, Subversion synchronization campaigns, Automatic generation of weekly reports, Eubrewnet Management, Eubrewnet and Iberonisia Backup System, and DenyHosts at rbcce.aemet.es). The main content area is titled "Welcome to Eubrewnet wiki" and includes the text "The content of this wiki will help for developing the European Brewer Network". Below this text is a map of Europe with various colored markers (green, yellow, red) indicating locations. At the bottom of the page, there is a license notice: "Except where otherwise noted, content on this wiki is licensed under the following license: CC Attribution-Share Alike 3.0 Unported".

← → ↻ 📄 | rbce.aemet.es/dokuwiki/doku.php?id=codes:accessfunctions | ❤️ ⓘ ⓘ

FUNCTION TABLE

Function	Short Description	Long Description	Link
getETC	Returns the ETC on Ozone ratio from ICFS	getETC	Get ETC
getDS	Returns the DS measures of a brewer for a date	getDS	Get DS
getDSInterval	Returns the DS measures of a brewer for a range of dates	getDSInterval	Get DSInterval
getZS	Returns the ZS measures of a brewer for a date	getZS	Get ZS
getSL	Returns the SL measures of a brewer for a date	getSL	Get SL
getConfigbyDate	Returns the available Configuration of a brewer for a date	getConfigbyDate	Get Config by Date
getDSS	Returns the DS summaries of a brewer for a date	getDSS	Get DSS
getZSS	Returns the ZS summaries of a brewer for a date	getZSS	Get ZSS
getSLS	Returns the SL summaries of a brewer for a date	getSLS	Get SLS
getHG	Returns the mercury lamp tests of a brewer for a date	getHG	Get HG
getFileStatus	Returns the status of the received files	getFileStatus	Get FileStatus
getUmkehr	Returns the Umkehr measures for a date	getUmkehr	Get Umkehr
getBfileAvailable	Returns the available B files for a year	getBfileAvailable	Get BfileAvailable
getHGInterval	Returns the HG tests for an interval	getHGInterval	Get HG Interval
getUV	Returns the UV measures for a specific scantype	getUV	Get UV
getUVAvailableScanTypes	Returns the UV available types of scan	getUVAvailableScanTypes	Get UV Available Scan Types
getUVP	Returns the available UVP for a	getUVP	Get UVP

🔍 ⌕ ⌕ ⬆

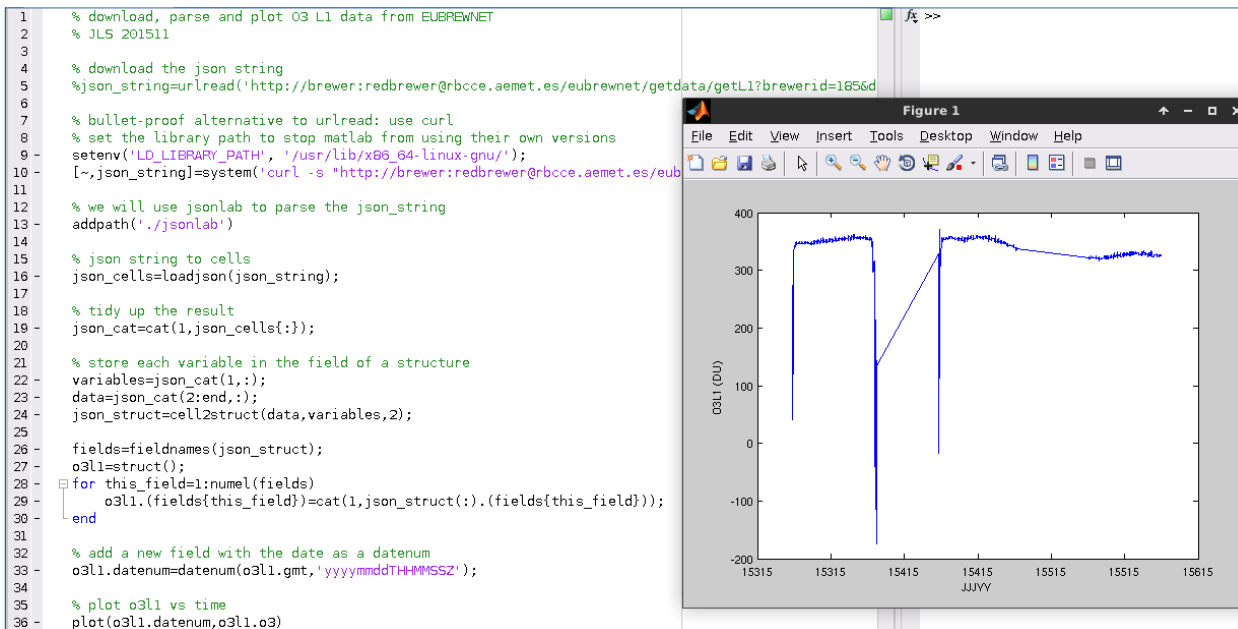
<http://rbcce.aemet.es/eubrewnet/getdata/getL1?brewerid=157&date=2015-01-01&enddate=2015-01-02>

```

[{"brewerid", "gmt", "date_index", "sza", "airmass", "temperature", "fhl", "o3", "std_o3", "msnr", "so2", "std_so2", "msrh", "fi", "f2", "f3", "f4", "f5", "latitude", "longitude", "press", "configdate", "configtype"}, {"20150101T082939Z", 735599.3539236111, 8.05468922321024, 8.059710999086214, 12, 0, 72.90904135664641, 27.794242914960478, 3575, -2.585023030711575, 13.728557500357098, 6420, 3010, 7853, 13380, 18432, 2107, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T083018Z", 735599.354375, 84.56054745321839, 7.956611155485154, 12, 0, 95.8896191821658, 27.794242914960478, 4170, 7.080856871401846, 13.728557500357098, 10519, 3010, 9402, 13380, 19314, 20951, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T083056Z", 735599.354814149, 84.4398888243204, 7.857811414831213, 12, 0, 119.87007582467072, 27.794242914960478, 4778, -9.139485428734517, 13.728557500357098, 9116, 3010, 8433, 14172, 19530, 21676, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T083135Z", 735599.3552662038, 84.31575282669022, 7.758120298186739, 12, 0, 72.56477432553548, 27.794242914960478, 3491, 15.223222240544337, 13.728557500357098, 9891, 3010, 10194, 14314, 19613, 21546, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T083214Z", 735599.3557175926, 84.19192178888805, 7.660163564127781, 12, 0, 156.84838805459094, 27.794242914960478, 5659, -3.92533345901745, 13.728557500357098, 6812, 6394, 8433, 14441, 20046, 22022, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T083256Z", 735599.3562037037, 84.05868310084286, 7.556610062450459, 12, 0, 114.91477193889232, 24.772888131019037, 4528, -13.58336750858876, 9.289328434846524, 7437, 4176, 8945, 15311, 20120, 22620, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T083352Z", 735599.356559026, 83.93507160922536, 7.46224758798836, 12, 0, 138.4043265273544, 24.772888131019037, 5086, -32.40290045530834, 9.289328434846524, 5568, 8435, 9402, 14841, 20574, 22472, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T083414Z", 735599.3571064814, 83.81156649910535, 7.369603749707122, 12, 0, 96.929734358631, 24.772888131019037, 4005, 2.6358743461189036, 9.289328434846524, 8963, 4176, 10194, 15198, 20737, 22958, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T083453Z", 735599.3575578703, 83.6881683234155, 7.276606307052083, 12, 0, 138.21532983598382, 24.772888131019037, 4995, -8.894607051199067, 9.289328434846524, 10045, 4176, 9816, 15311, 21162, 23181, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T083532Z", 735599.3580092592, 83.56487757750472, 7.189420441049317, 12, 0, 195.97765394266384, 24.772888131019037, 6363, -19.53070149899814, 9.289328434846524, 12633, 3010, 9816, 16560, 21415, 23071, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T083615Z", 735599.3585069445, 83.42960674016223, 7.092960724824635, 12, 0, 229.5341829050019, 42.87100929972445, 7107, -61.32273038930864, 25.00528078739803, 7193, 7188, 8433, 16643, 21550, 23646, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T083652Z", 735599.3589467593, 83.2915701328419, 7.00930278873855, 12, 0, 221.9695123011065, 42.87100929972445, 6862, -56.9048232884723, 25.00528078739803, 7383, 8435, 9402, 16643, 21954, 23743, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T083732Z", 735599.3593981481, 83.186205535154, 6.925231103722181, 12, 0, 120.084298463513, 42.87100929972445, 4403, 11.378722615450549, 25.00528078739803, 11918, 3010, 11444, 16724, 22097, 24197, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T083812Z", 735599.359849537, 83.0633529679886, 6.84280809219368, 12, 0, 133.105602043221, 42.87100929972445, 4677, -6.293703923389735, 25.00528078739803, 7193, 7188, 8433, 16643, 21550, 23646, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T083849Z", 735599.3602938519, 82.94376110496869, 6.7637136332882, 12, 0, 196.53496198967548, 42.87100929972445, 6093, -26.143132848056905, 25.00528078739803, 10733, 5425, 10864, 17725, 23275, 25363, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T083932Z", 735599.3607870371, 82.80855999138602, 6.67626243901122, 12, 0, 184.8913921882098, 49.608597631559924, 5771, -30.831366077686383, 17.571332708029395, 8858, 7186, 11444, 18431, 24244, 26073, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T084011Z", 735599.361238462, 82.6805244678852, 6.598508193753749, 12, 0, 141.50764179974513, 49.608597631559924, 4750, -16.702472862015554, 17.571332708029395, 7985, 8435, 12827, 16796, 24707, 27244, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T084040Z", 735599.3616841848, 82.5635646275046, 6.52256798862404, 12, 0, 272.30017956001193, 49.608597631559924, 7610, -44.7533353049505, 17.571332708029395, 9235, 8435, 11163, 19393, 25826, 28245, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T084128Z", 735599.3621296296, 82.44450663773685, 6.449381865815193, 12, 0, 249.74726122486885, 49.608597631559924, 7048, -19.096410456397308, 17.571332708029395, 15420, 3010, 12190, 20082, 26141, 28423, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T084207Z", 735599.3625810185, 82.32233243781216, 6.37602084725862, 12, 0, 277.0048453883011, 49.608597631559924, 7589, -52.88071707026925, 17.571332708029395, 11408, 6394, 12044, 20264, 25865, 28240, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T084250Z", 735599.3630787038, 82.20150101T084402Z, 735599.3634212963, 81.8254178779975, 6.2983513261415, 12, 0, 253.0150788451365, 50.36272539525644, 4554, -4.542119340061515, 15.732841569804943, 11071, 5425, 13552, 19854, 25644, 28379, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T084329Z", 735599.3635300926, 82.0658290480227, 6.226381244715961, 12, 0, 195.5779292480545, 50.36272539525644, 5714, -11.877964965070731, 15.732841569804943, 12230, 6394, 13874, 20639, 28582, 29301, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T084404Z", 735599.3639909974, 81.94712354844004, 6.159096116310359, 12, 0, 291.13948445332676, 50.36272539525644, 7668, -41.1768893050994, 15.732841569804943, 14072, 6394, 12304, 21387, 27777, 29963, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T08449Z", 735599.3644212963, 81.8254178779975, 6.2983513261415, 12, 0, 253.0150788451365, 50.36272539525644, 4554, -4.542119340061515, 15.732841569804943, 13262, 6394, 14026, 22142, 28244, 30809, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T084525Z", 735599.3649726852, 81.7038193052072, 6.02493123038806, 12, 0, 272.6287553007222, 50.36272539525644, 7157, 1.28105811371891, 15.732841569804943, 19323, 3010, 15737, 23533, 30161, 32490, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T084607Z", 735599.365358793, 81.573000919877, 5.94842839396245, 12, 0, 230.76301038435244, 15.792123219297007, 6245, 4.334664581024839, 4.263465613185074, 16725, 5425, 17256, 25011, 31169, 33869, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T084653Z", 735599.3658218532, 81.451675155077, 5.8010261308673, 12, 0, 272.71376706335786, 15.792123219297007, 6101, -1.002932877220264, 4.263465613185074, 18541, 4176, 16562, 24599, 31072, 33569, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T084752Z", 735599.3662615741, 81.33041110957626, 5.828451610968109, 12, 0, 267.68896797452726, 15.792123219297007, 6877, 6.48400292073922, 4.263465613185074, 19189, 3010, 16215, 24099, 30322, 32748, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T084844Z", 735599.366712963, 81.20929213824857, 5.767074314212022, 12, 0, 295.050664719234, 15.792123219297007, 7566, -7.8695641025517375, 4.263465613185074, 18597, 4176, 16215, 24599, 30322, 32748, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T084932Z", 735599.367164519, 81.08821114646953, 5.65086761046953, 12, 0, 295.050664719234, 15.792123219297007, 7566, -7.8695641025517375, 4.263465613185074, 18597, 4176, 16215, 24599, 30322, 32748, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T084952Z", 735599.367605403, 80.95811508019871, 5.643394586815375, 12, 0, 322.1578218110703, 9.138499167539612, 7752, -28.193479106481007, 7.912070426283375, 16833, 13206, 23241, 32096, 38408, 40994, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T085004Z", 735599.368118519, 80.8373699964555, 5.58455171322165, 12, 0, 318.525557588714, 9.138499167539612, 7620, -14.24650433705901, 7.912070426283375, 18534, 13206, 23241, 32096, 38408, 40994, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T085042Z", 735599.3686216519, 80.716726366661, 5.528283081, 16.4992, 770.0, 20140916, 3}, {"20150101T085122Z", 735599.369046297, 80.5962154923236, 5.472897100192754, 12, 0, 311.69631825311224, 9.138499167539612, 7372, -4.596411424439282, 7.912070426283375, 19163, 14590, 27234, 35598, 41834, 44255, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T085201Z", 735599.3694580186, 80.4781925806508, 5.418331204767006, 12, 0, 294.0441255303552, 9.138499167539612, 6989, 1.659207762172299, 7.912070426283375, 18790, 14590, 27198, 35135, 41469, 43815, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T085242Z", 735599.3699421296, 80.346308103055, 5.36460976230487, 12, 0, 373.8716801767267, 3.1106122186956053, 7473, -9.965619432747169, 2.077556484957666, 20047, 15532, 28921, 37354, 43594, 45997, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T085327Z", 735599.37039421296, 80.21934767676767, 5.3106122186956053, 7473, -9.965619432747169, 2.077556484957666, 20047, 15532, 28921, 37354, 43594, 45997, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T085377Z", 735599.370841296, 80.09292929292929, 5.260417711111111, 12, 0, 373.8716801767267, 3.1106122186956053, 7473, -9.965619432747169, 2.077556484957666, 20047, 15532, 28921, 37354, 43594, 45997, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T085427Z", 735599.3712963, 80.09292929292929, 5.260417711111111, 12, 0, 373.8716801767267, 3.1106122186956053, 7473, -9.965619432747169, 2.077556484957666, 20047, 15532, 28921, 37354, 43594, 45997, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T085477Z", 735599.3717476, 80.09292929292929, 5.260417711111111, 12, 0, 373.8716801767267, 3.1106122186956053, 7473, -9.965619432747169, 2.077556484957666, 20047, 15532, 28921, 37354, 43594, 45997, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T085527Z", 735599.3721989, 80.09292929292929, 5.260417711111111, 12, 0, 373.8716801767267, 3.1106122186956053, 7473, -9.965619432747169, 2.077556484957666, 20047, 15532, 28921, 37354, 43594, 45997, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T085577Z", 735599.3726502, 80.09292929292929, 5.260417711111111, 12, 0, 373.8716801767267, 3.1106122186956053, 7473, -9.965619432747169, 2.077556484957666, 20047, 15532, 28921, 37354, 43594, 45997, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T085627Z", 735599.3731015, 80.09292929292929, 5.260417711111111, 12, 0, 373.8716801767267, 3.1106122186956053, 7473, -9.965619432747169, 2.077556484957666, 20047, 15532, 28921, 37354, 43594, 45997, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T085677Z", 735599.3735528, 80.09292929292929, 5.260417711111111, 12, 0, 373.8716801767267, 3.1106122186956053, 7473, -9.965619432747169, 2.077556484957666, 20047, 15532, 28921, 37354, 43594, 45997, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T085727Z", 735599.3740041, 80.09292929292929, 5.260417711111111, 12, 0, 373.8716801767267, 3.1106122186956053, 7473, -9.965619432747169, 2.077556484957666, 20047, 15532, 28921, 37354, 43594, 45997, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T085777Z", 735599.3744554, 80.09292929292929, 5.260417711111111, 12, 0, 373.8716801767267, 3.1106122186956053, 7473, -9.965619432747169, 2.077556484957666, 20047, 15532, 28921, 37354, 43594, 45997, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T085827Z", 735599.3749067, 80.09292929292929, 5.260417711111111, 12, 0, 373.8716801767267, 3.1106122186956053, 7473, -9.965619432747169, 2.077556484957666, 20047, 15532, 28921, 37354, 43594, 45997, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T085877Z", 735599.375358, 80.09292929292929, 5.260417711111111, 12, 0, 373.8716801767267, 3.1106122186956053, 7473, -9.965619432747169, 2.077556484957666, 20047, 15532, 28921, 37354, 43594, 45997, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T085927Z", 735599.3758093, 80.09292929292929, 5.260417711111111, 12, 0, 373.8716801767267, 3.1106122186956053, 7473, -9.965619432747169, 2.077556484957666, 20047, 15532, 28921, 37354, 43594, 45997, 28.3081, 16.4992, 770.0, 20140916, 3}, {"20150101T085977Z", 735599.3762606, 80.09292929292929, 5.260417711111111, 12, 0, 373.8716801767267, 3.1106122186956053, 7473, -9.965619432747169, 2.0775564849
```

→ JSONlab

<http://iso2mesh.sourceforge.net/cgi-bin/index.cgi?jsonlab>



- On board of NASA's Aura satellite
- Data available since October 2004
- Ozone products: OMT03 (TOMS-like) and
OMDOAO3 (DOAS algorithm)
- UV product: OMUVB
- Level 2 station-overpass data: Aura Validation Data Center

<http://avdc.gsfc.nasa.gov>

OVERVIEW HOME

The AVDC

The Aura Validation Data Center (AVDC) is a centralized, long-term, archive for validation data hosted by the Atmospheric Chemistry and Dynamics Branch at the National Aeronautics and Space Administration (NASA) Goddard Space Flight Center (GSFC) in Greenbelt, Maryland. The AVDC mission is to support the Earth Observing System (EOS)-Aura validation and science activities, and the future "A-Train" Earth Science satellites validation activities.

Data archived at the AVDC originates from several special Aura validation campaigns, NASA aircraft and balloon deployments, established measurement networks for collection atmospheric data, the Network for Detection of Atmospheric Composition Change (NDACC), the Southern Hemisphere Additional Ozoneondes (SHADOZ), and the World Meteorological Organization (WMO)'s Global Atmosphere Watch (GAW), among others.

Latest Images

November 22, 2015

Total NO2 vertical column densities (VCD)

November 22, 2015

Tropospheric NO2 CS30 vertical column densities (VCD)

[...more data](#)

Latest News

- Oct 15, 2015 - Reprocessed OMI L2 ovp files for orbit 59494 (59487-59501 for OMNO2)
- Sep 28, 2015 - Reprocessed total column water vapor (2005-2009) online (OMH2O/SAO) [[P](#)]
- Jul 20, 2015 - MLS v4.2 profiles and station overpass files on-line [[P](#)]

Quick Links

- AVDC public data access [[P](#)]
- GEOMS data upload [[P](#)]
- GEOMS overview [[P](#)]
- DSCOVR Mission [[P](#)]
- OMNO2 L3 data access [[P](#)]
- OMNO2 L3 gallery [[P](#)]
- Summary of volcanic activity (S. T. Massie, NCAR) [[P](#)]

U.S. Government Public Information Exchange Resource. You have accessed a U.S. Government Resource. This site is intended to be used by the public for information exchange. Any attempt to modify or exploit this resource or associated information other than for intended use is strictly prohibited and may be punishable under the Computer Fraud and Abuse Act of 1986. The government may monitor and audit the usage of this resource. All persons are hereby notified that use of this resource constitutes consent for monitoring, keystroke recording, or auditing.

2-OMI: AVDC overpass data



GOBIERNO
DE ESPAÑA

MINISTERIO
DE AGRICULTURA, ALIMENTACIÓN
Y MEDIO AMBIENTE

Aemet
Agencia Estatal de Meteorología

avdc.gsfc.nasa.gov/index.php?site=2045907950

Aura/OMI data

Product	Level/Type	Description	Source	Access
Level 1B	L1	OMI Level-1B	GES-DISC	public
OMAERUV	L2 OVP	Aerosol Optical Thickness & Single Scattering Albedo. Station overpass data.	AVDC	public
	L3	OMI Near-UV Aerosol Extinction and Absorption Optical Depth Daily L3 Global.	GES-DISC	public
OMBRO	L2 OVP	Total column bromine monoxide (BrO). Station overpass data.	AVDC	public
OMCLDO2	L2G	Cloud pressure and fraction measured using O2-O2 absorption and the DOAS technique. Gridded dataset.	GES-DISC	public
OMCLDRR	L2G	Cloud pressure and cloud fraction from Raman scattering. Gridded dataset.	GES-DISC	public
OMDOAO3	L2 OVP	Total ozone column using the DOAS technique. Station overpass data.	AVDC	public
	L2G	Total ozone column using the DOAS technique. Gridded dataset.	GES-DISC	public
OMHCHO	L2 OVP	Total column formaldehyde (HCHO). Station overpass data.	AVDC	public
	L2 OVP	Nitrogen dioxide (NO2) total column. Station overpass data.	AVDC	public
	L2G	Nitrogen dioxide (NO2) total columns using the DOAS technique. Gridded dataset.	GES-DISC	public
OMNO2	L3	Mapped OMI NO2 product. Daily 0.25 deg. x 0.25 deg. Images and data.	AVDC	public
OMOCLO	L2 OVP	Slant column chlorine dioxide (ClO). Station overpass data.	AVDC	public
OMSO2	L2 OVP	Sulphur dioxide (SO2) total column. Station overpass data.	AVDC	public
	L2 OVP	TOMS-like total ozone column and aerosol index. Station overpass data.	AVDC	public
OMTO3	L2G	TOMS-like total ozone column and aerosol index. Gridded dataset.	GES-DISC	public
	L3	Mapped OMI TO3 product. Daily 0.25 deg. x 0.25 deg. data.	GES-DISC	public
OMUVB	L2 OVP	Surface UV irradiances. Station overpass data.	AVDC	public
OMO3PR	L2	Ozone Profiles	GES-DISC	public
	L2 OVP	Ozone Profiles. Station overpass data.	AVDC	public
PROFOZ	L2	Ozone Profiles, including tropospheric ozone.	SAO	public
OMH2O	L2	Total column water vapor (H2O).	SAO	public

Aura/TES data

Please download and read the [TES product information documents](#) that describe available status, expected precision, resolution, and known

2-OMI: AVDC overpass data

avdc.gsfc.nasa.gov/pub/most_popular/overpass/OMI/OMTO3/aura_omi_i2ovp_omto3_v8.5_izana_300.txt

Izana, Spain OVPID: 300 Latitude: 28.290 deg. Longitude: -16.490 deg. Altitude: 2367 m
EOS Aura OMI OMTO3 (v8.5, Collection 3), Generated: 23-Nov-2015 by http://avdc.gsfc.nasa.gov

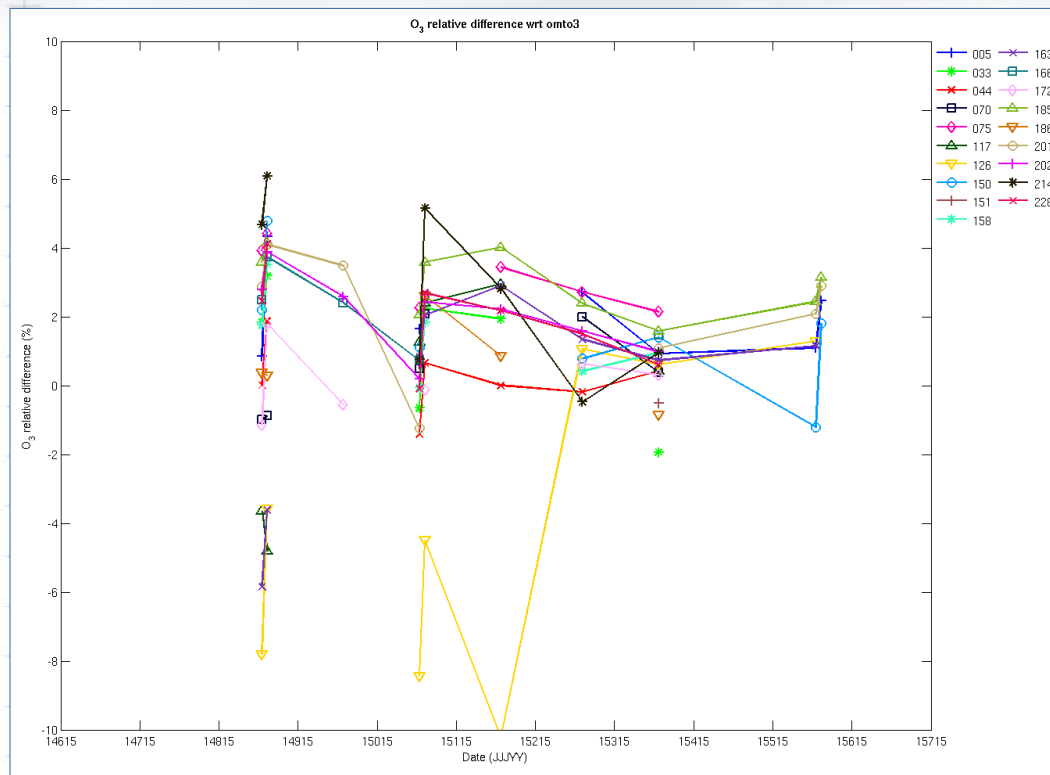
Criteria : Direct geographic collocation; L2 quality flag equal to 0 or 1 and bit 6 is not set

Datetime : Date and time
MJD2000 : Modified Julian Day 2000
Year : Year
DOY : Day Of Year
sec. (UT) : Elapsed time (seconds, UT)
Orbit : Aura orbit number
CTP : OMI Cross Track Position (0-59)
Lat. : CTP center latitude (degree)
Lon. : CTP center longitude (degree)
Dist. : Distance between the station and the CTP (km)
SZA : Solar Zenith Angle (degree)
Ozone : Total ozone column (DU)
O3blwCld : Ozone below fractional cloud (DU)
Surf. P. : Terrain pressure (hPa)
Cld. P. : Cloud Pressure (hPa)
Cld. F. : Radiative Cloud Fraction (dimensionless)
Ref. : Effective surface reflectivity at 360 nm (%)
AI : UV Aerosol Index (dimensionless)
SOI : SOI Index (dimensionless)

Read format (FORTRAN/IDL): i4.4,2i2.2,a1,3i2.2,i3.3,a1,f14.6,i6,i5.3,i11.5,i8.5,i6,2f8.2,f7.1,2f9.2,3f10.2,f11.3,2f10.2,i8

Datetime	MJD2000	Year	DOY	sec. (UT)	Orbit	CTP	Lat.	Lon.	Dist.	SZA	Ozone	O3blwCld	Surf. P.	Cld. P.	Cld. F.	Ref.	AI	SOI
20041001T141130107Z	1735.591321	2004	275	51090	01140	13	28.33	-16.42	8.1	36.70	272.10	-0.00	960.32	960.32	0.000	7.28	0.25	1
20041002T145421003Z	1736.621076	2004	276	53661	01155	50	28.25	-16.39	11.0	43.10	277.51	-0.00	961.51	961.51	0.000	7.63	1.28	2
20041003T135918786Z	1737.582856	2004	277	50358	01169	6	28.22	-16.46	16.8	35.90	274.40	5.29	890.75	467.78	0.600	39.87	-0.17	2
20041004T144159680Z	1738.612496	2004	278	52919	01184	41	28.24	-16.49	5.6	41.81	289.70	0.85	933.80	725.09	0.289	25.80	0.37	0
20041005T134709462Z	1739.574415	2004	279	49629	01198	2	28.15	-16.81	35.1	35.40	276.06	-0.07	912.90	912.90	0.158	20.58	0.10	3
20041005T152510579Z	1739.642484	2004	279	55510	01199	59	28.17	-17.14	64.8	48.75	278.23	-0.01	973.67	973.67	0.056	18.05	0.26	-90000
20041007T133501350Z	1741.565988	2004	281	48901	01227	0	28.29	-16.43	5.9	35.49	280.08	-0.07	954.86	954.86	0.233	25.95	0.98	-90000
20041007T151248465Z	1741.633894	2004	281	54768	01228	57	28.32	-16.43	6.2	47.84	281.25	1.72	956.82	682.05	0.317	31.58	0.80	-90000
20041008T141726243Z	1742.595443	2004	282	51446	01242	17	28.21	-16.57	11.5	39.85	281.16	1.70	908.80	686.73	0.509	34.28	0.29	-1
20041009T150025146Z	1743.6125291	2004	283	54025	01257	53	28.36	-16.38	14.0	46.54	281.99	6.00	968.77	633.31	0.734	55.88	0.35	0
20041010T140514933Z	1744.586978	2004	284	50714	01271	9	28.28	-16.53	4.1	39.25	278.13	1.92	932.81	718.63	0.554	38.55	0.78	1
20041011T144801834Z	1745.616688	2004	285	53281	01286	46	28.34	-16.45	6.8	45.24	276.26	2.87	957.45	504.02	0.320	28.64	0.67	3
20041012T135303618Z	1746.578514	2004	286	49983	01300	4	28.22	-16.50	7.4	38.75	276.87	6.99	929.12	428.74	0.622	43.97	0.59	1
20041013T143540516Z	1747.608108	2004	287	52540	01315	35	28.27	-16.54	5.4	44.05	280.13	-0.00	929.60	929.60	0.000	5.92	1.59	1
20041014T134054306Z	1748.570073	2004	288	49254	01329	1	28.24	-16.47	6.1	38.50	280.70	0.90	940.86	809.71	0.452	36.84	1.24	-90000
20041014T151849423Z	1748.638072	2004	288	55129	01330	58	28.28	-16.88	38.2	50.77	278.36	5.39	952.71	578.21	0.573	48.70	1.01	-90000
20041015T142323204Z	1749.599574	2004	289	51803	01344	23	28.29	-16.43	6.1	43.21	284.26	2.53	955.32	698.82	0.582	39.56	0.65	2
20041018T14540006Z	1752.620833	2004	292	53640	01388	50	28.27	-16.34	14.8	48.43	262.39	5.67	972.03	420.05	0.453	37.31	0.84	-1
20041020T144138689Z	1754.612253	2004	294	52898	01417	41	28.38	-16.45	5.6	47.28	265.11	1.10	955.34	494.23	0.143	20.81	0.82	0
20041021T134646478Z	1755.574149	2004	295	49606	01431	2	28.15	-16.75	29.5	41.30	262.61	1.41	893.81	687.89	0.420	32.38	0.03	-90000
20041021T152449596Z	1755.642241	2004	295	55489	01432	59	28.28	-17.09	58.7	53.73	265.58	9.88	984.06	355.64	0.556	49.35	0.88	-90000
20041022T142919379Z	1756.603697	2004	296	52159	01446	29	28.33	-16.44	6.2	46.30	270.45	0.54	956.61	741.54	0.203	21.86	0.46	3
20041023T133437168Z	1757.565708	2004	297	48877	01460	0	28.28	-16.36	12.7	41.36	270.23	-0.00	968.06	968.06	0.000	12.72	1.50	-90000
20041023T15122483Z	1757.639314	2004	297	54744	01461	57	28.31	-16.37	12.1	52.78	269.10	-0.00	967.47	967.47	0.000	11.67	0.91	-90000
20041024T141702066Z	1758.595163	2004	298	51422	01475	17	28.24	-16.51	5.7	45.38	266.77	-0.00	930.19	930.19	0.000	5.98	1.00	-1
20041025T145958969Z	1759.624988	2004	299	53998	01490	53	28.31	-16.30	19.0	51.49	258.88	-0.00	977.47	977.47	0.000	7.74	0.85	1
20041026T140448751Z	1760.586675	2004	300	50688	01504	9	28.26	-16.45	4.8	44.77	255.62	-0.00	946.13	946.13	0.000	8.65	0.02	3
20041027T144735653Z	1761.616385	2004	301	53255	01519	46	28.26	-16.38	13.4	50.29	261.49	0.13	968.08	604.28	0.023	16.65	0.65	2
20041028T135237438Z	1762.578211	2004	302	49957	01533	4	28.29	-16.45	3.7	46.33	268.00	0.74	950.52	801.85	0.354	29.98	0.74	1
20041029T143512337Z	1763.607782	2004	303	52512	01548	35	28.27	-16.47	3.6	49.11	260.62	1.69	944.59	606.07	0.317	26.68	0.37	2
20041030T134036433Z	1764.566343	2004	304	49336	01563	1	28.28	-16.46	8.6	44.64	270.73	1.30	968.71	834.68	0.670	44.30	0.61	-90000

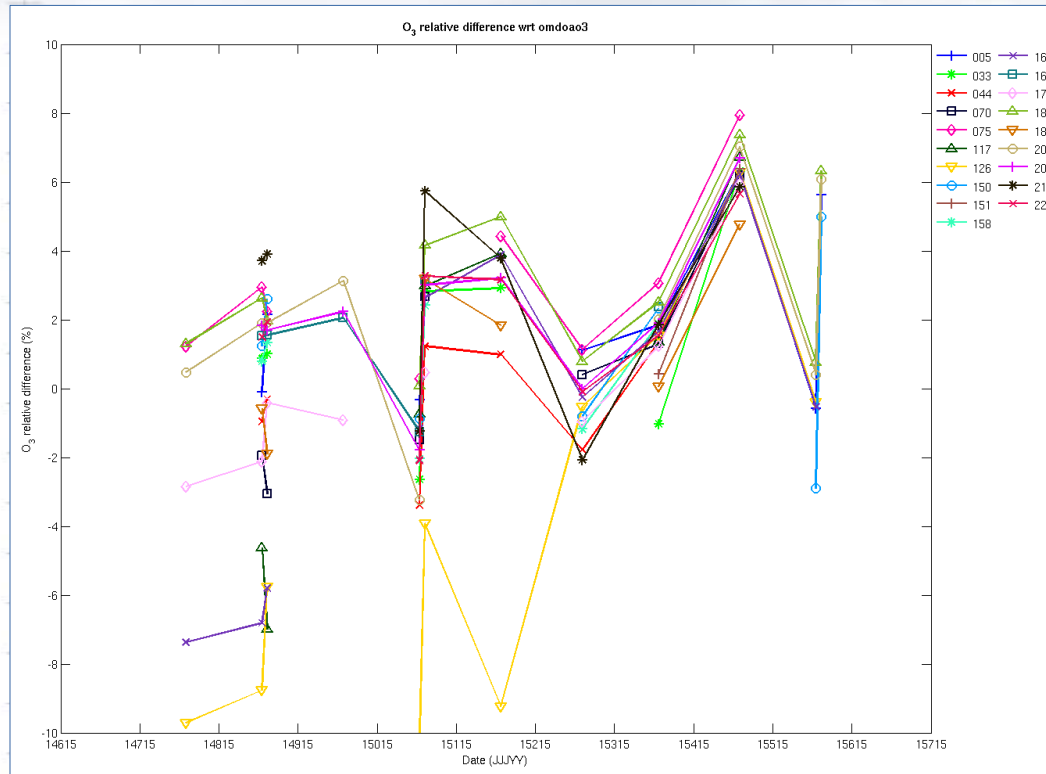
- Brewers at El Arenosillo (2015 campaign, March 25th to June 5th) or at their stations (January 1st 2013 to October 15th 2015)
- Average of Brewer data within 30 minutes of each OMI observation (usually, 1 per day)
- Relative difference =
$$\frac{X_B - X_O}{(X_B + X_O)/2} 100$$



El Arenosillo 2015 campaign

A very ugly plot!

But: most Brewers behave in the same way in the last days of the campaign

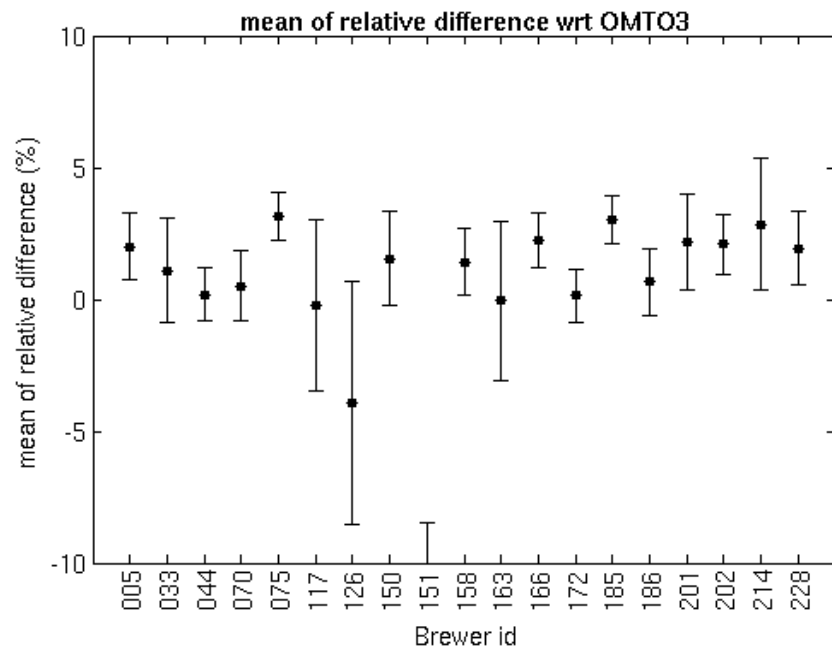


El Arenosillo 2015 campaign

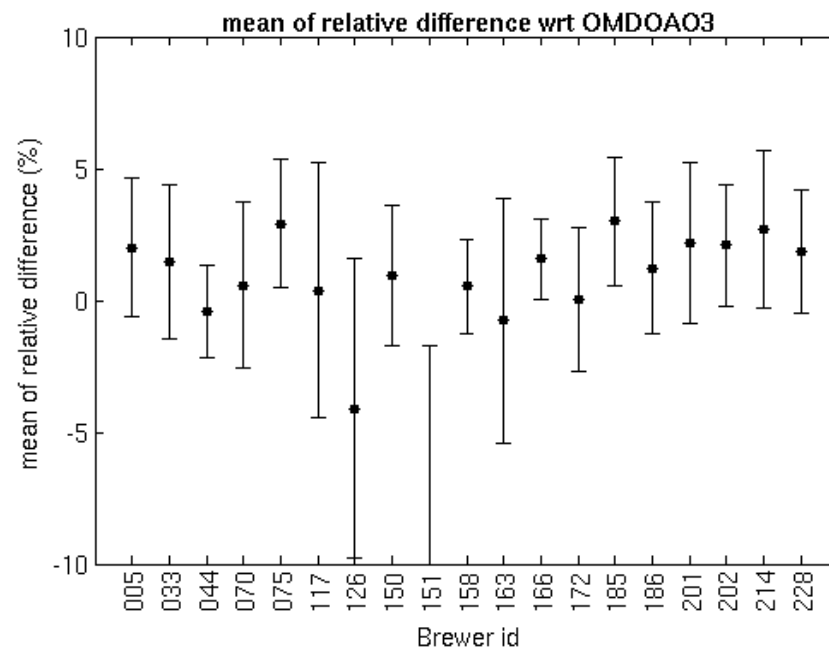
Differences w.r.t. OMI's
TOMS-like and DOAS
products are roughly the
same

El Arenosillo 2015 campaign

OMT03

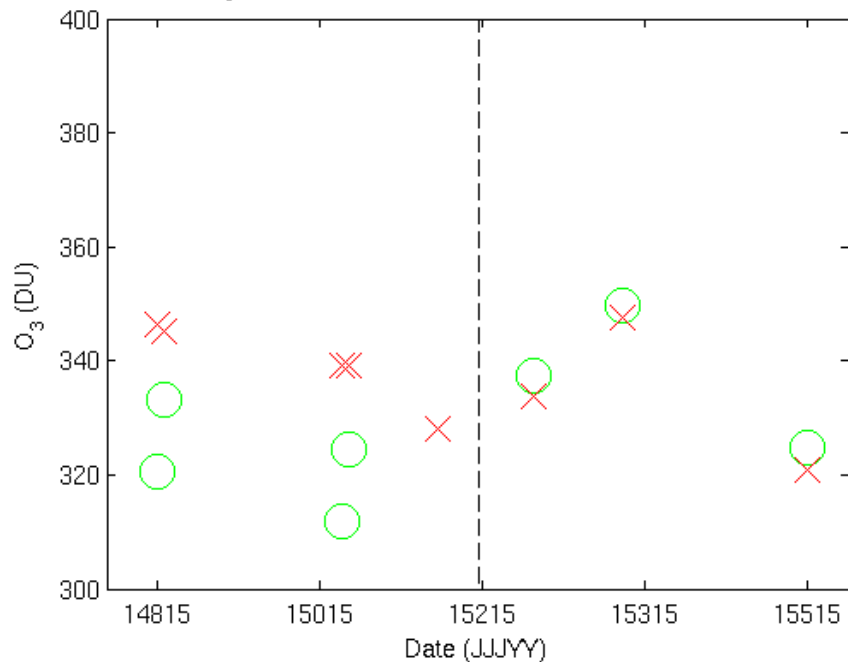


OMDOAO3

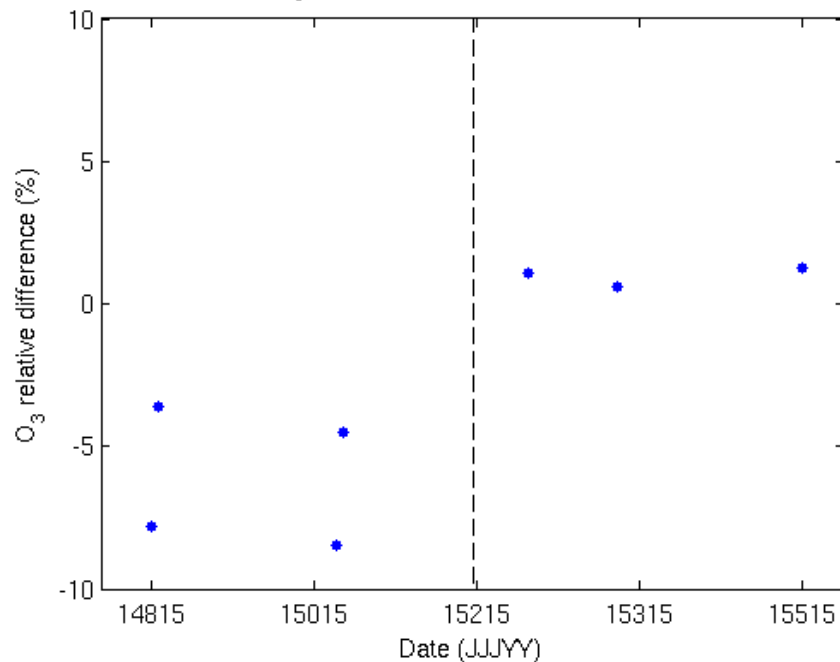


Brewer #126@El Arenosillo 2015 campaign → Maintenance on June 1st

Brewer #126 O₃ simultaneous (30 min) obs: Eubrewnet (go), OMT03 (rx)

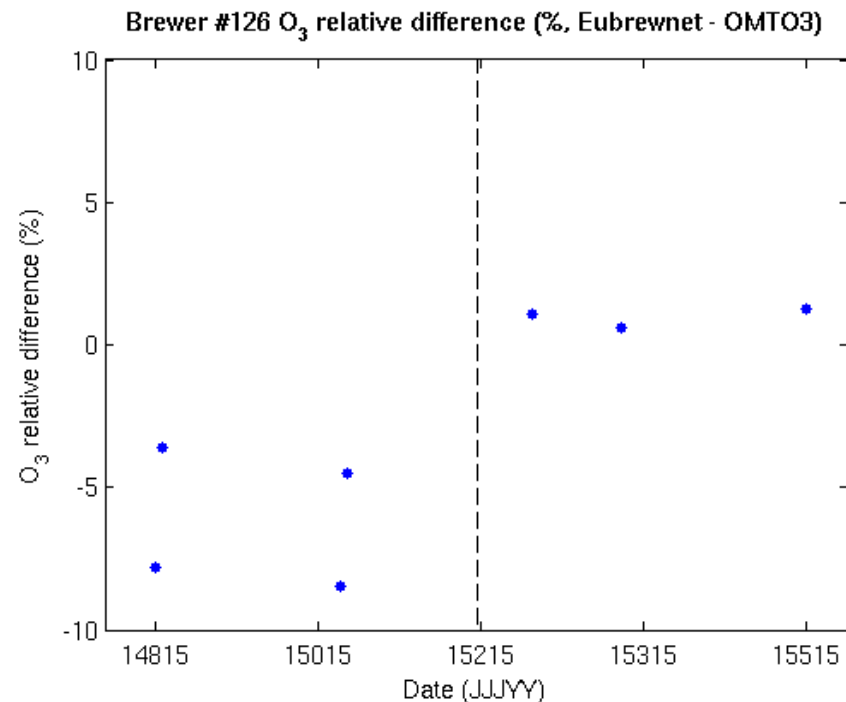


Brewer #126 O₃ relative difference (%; Eubrewnet - OMT03)



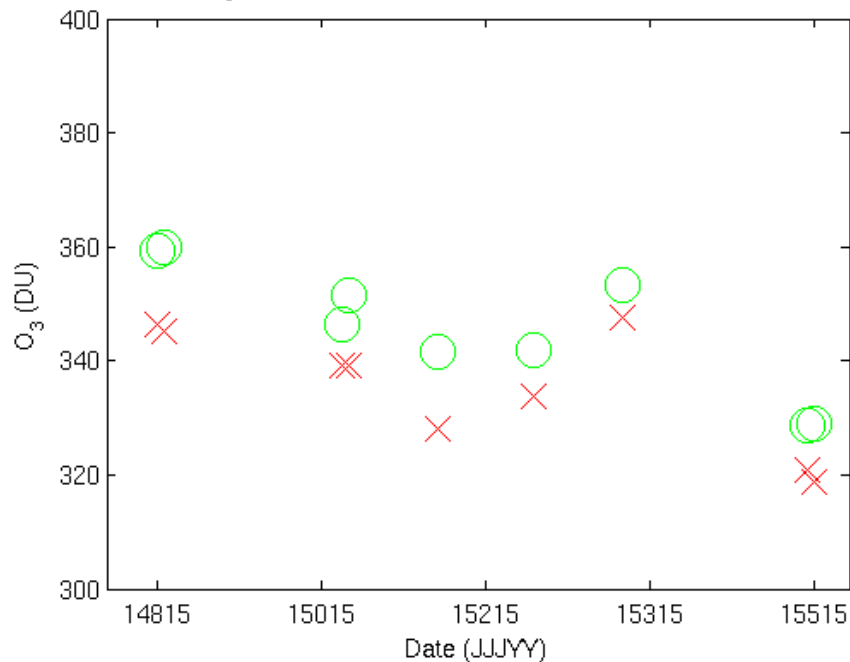
Brewer #126@El Arenosillo 2015 campaign

Calibration date	2013-06-15	2015-06-01
Brewer model	MKIV	mkii
O3 temp. coeff. slit 1	0	0
O3 temp. coeff. slit 2	0.5518	0.5518
O3 temp. coeff. slit 3	0.3869	0.3869
O3 temp. coeff. slit 4	-0.1935	-0.1935
O3 temp. coeff. slit 5	-1.3538	-1.3538
O3 on O3-ratio	0.3435	0.34
ETC on O3-ratio	3250	3240
Dead time	0	3.4e-08
Calibration step number	290	290
Neutral-density filter 0	0	0
Neutral-density filter 1	4900	4900
Neutral-density filter 2	9200	9200
Neutral-density filter 3	13900	13900
Neutral-density filter 4	21520	21520
Neutral-density filter 5	25000	25000
R5 reference	4500	4446
R6 reference	2100	2093
ETC corr. slit 0	0	0
ETC corr. slit 1	0	0
ETC corr. slit 2	0	0
ETC corr. slit 3	0	0
ETC corr. slit 4	0	0
ETC corr. slit 5	0	0
Straylight multiplier A	0	0
Straylight exponent B	0	0

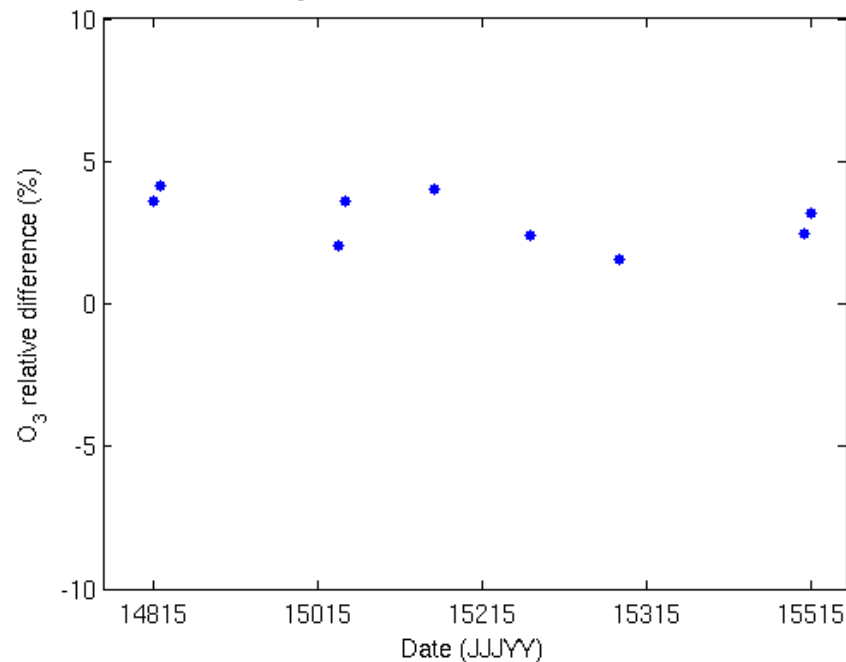


Brewer #185@El Arenosillo 2015 campaign

Brewer #185 O₃ simultaneous (30 min) obs: Eubrewnet (go), OMT03 (rx)

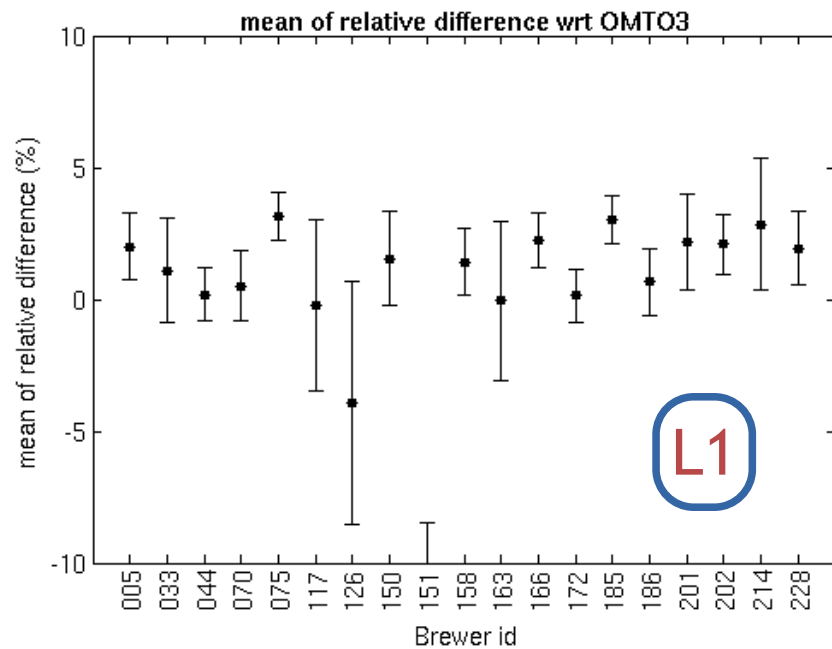


Brewer #185 O₃ relative difference (%; Eubrewnet - OMT03)

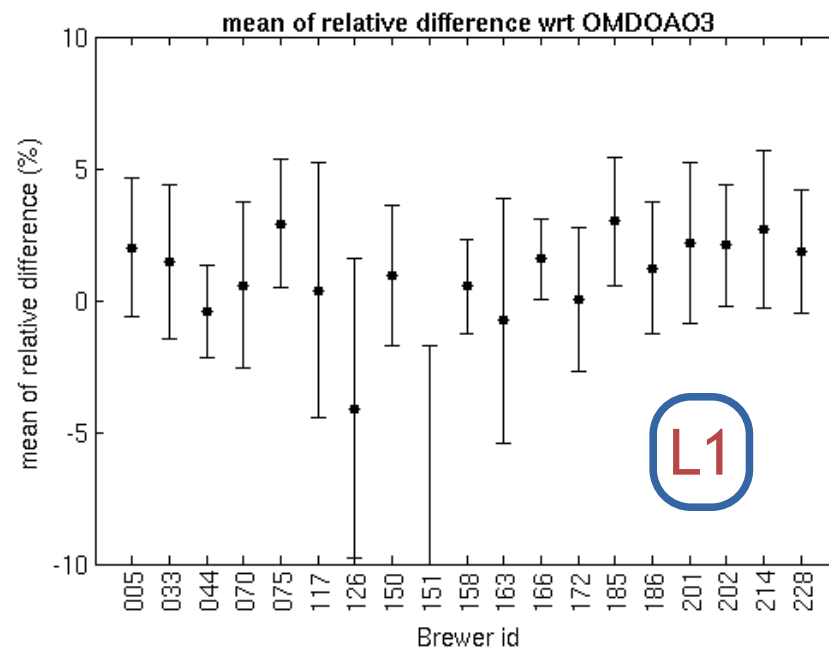


El Arenosillo 2015 campaign

OMT03

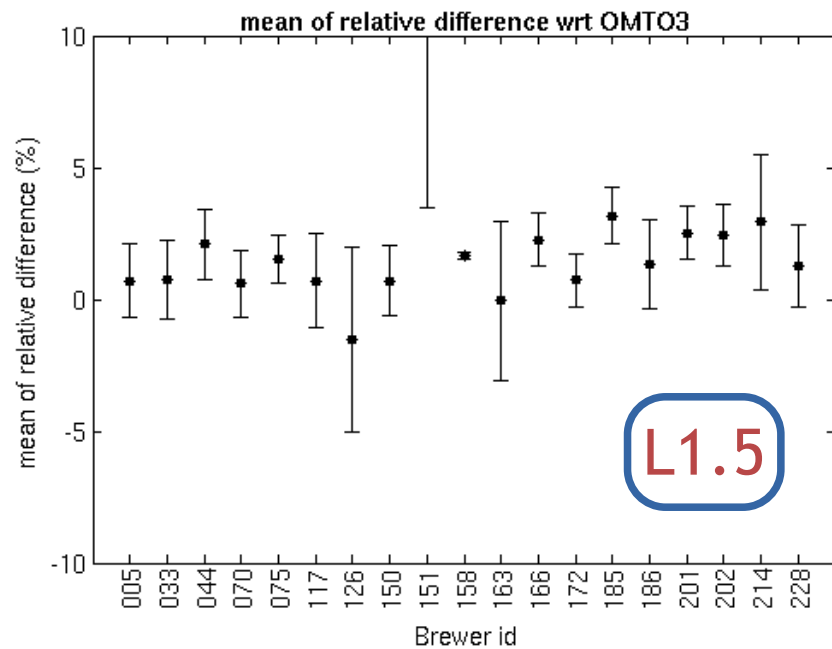


OMDOAO3

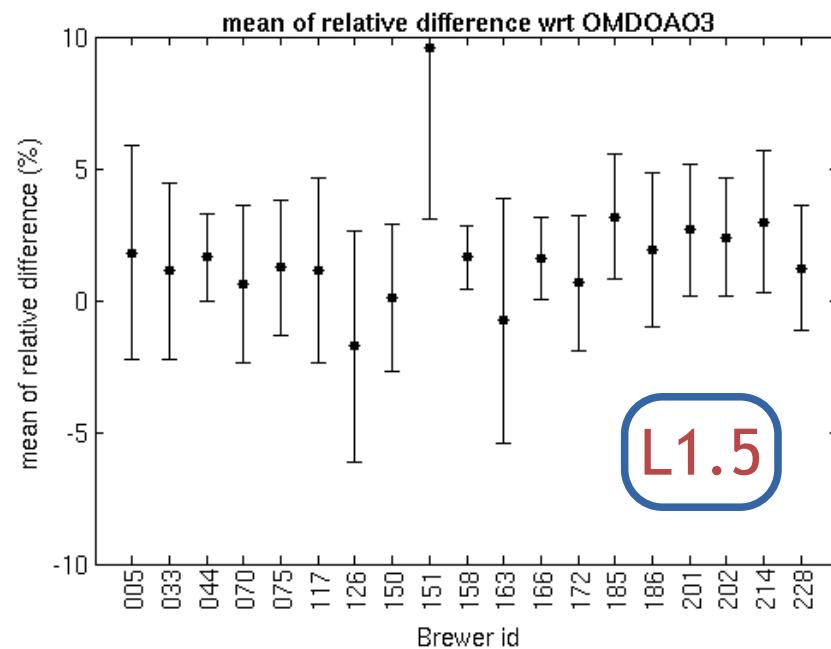


El Arenosillo 2015 campaign

OMT03

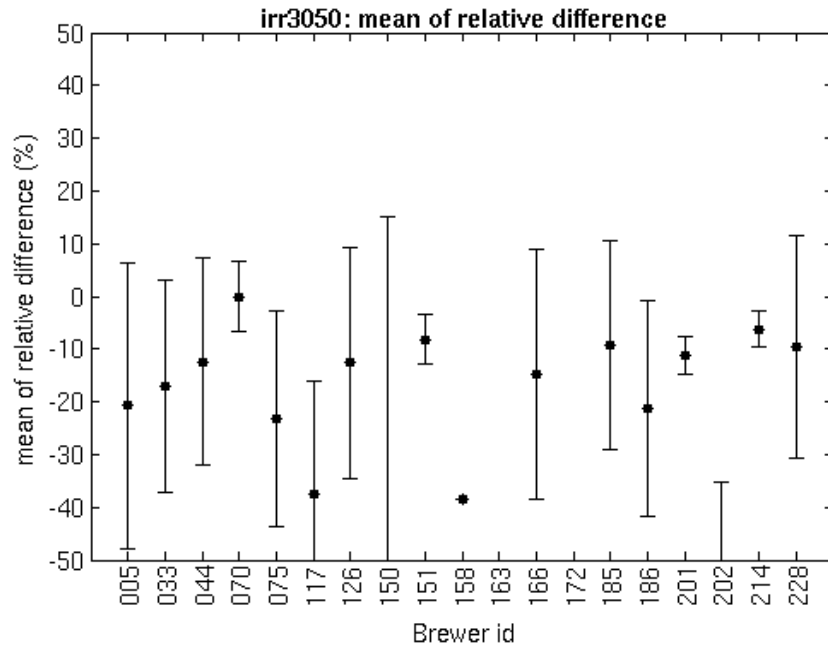


OMDOAO3

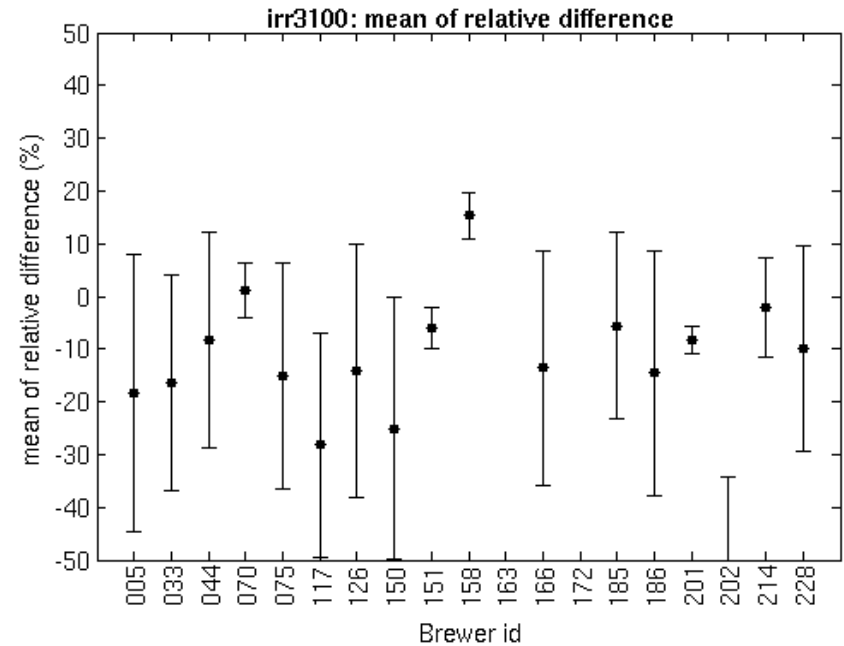


El Arenosillo 2015 campaign

Irradiance@305 nm

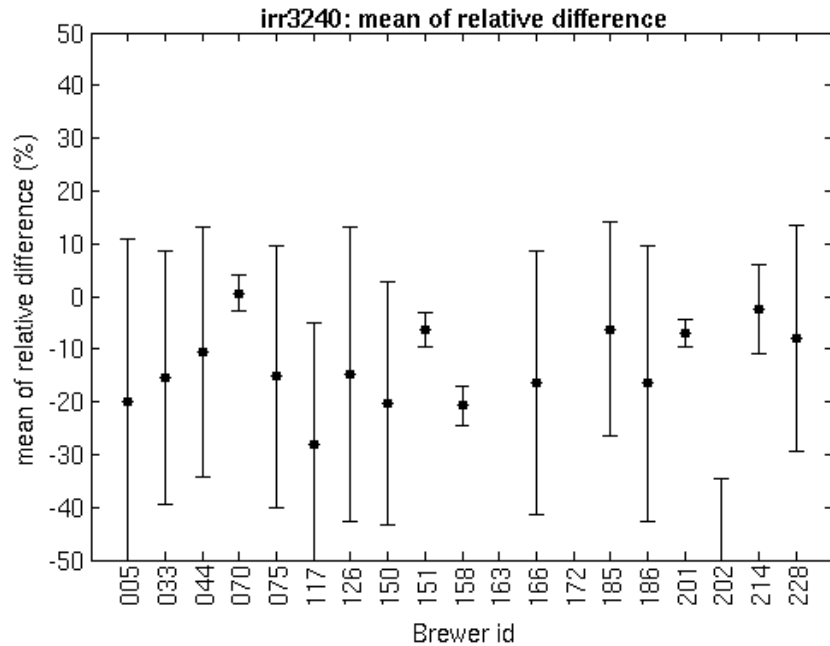


Irradiance@310 nm

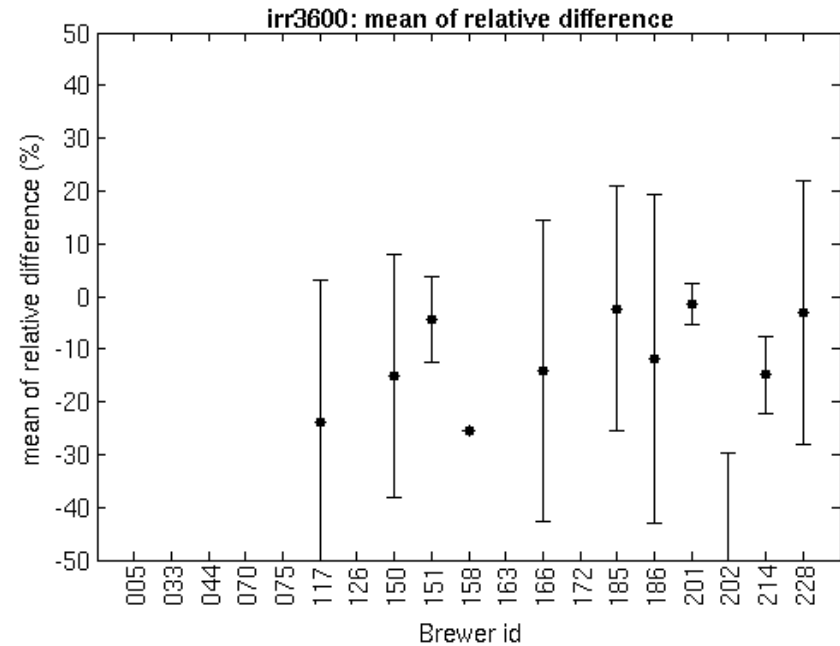


El Arenosillo 2015 campaign

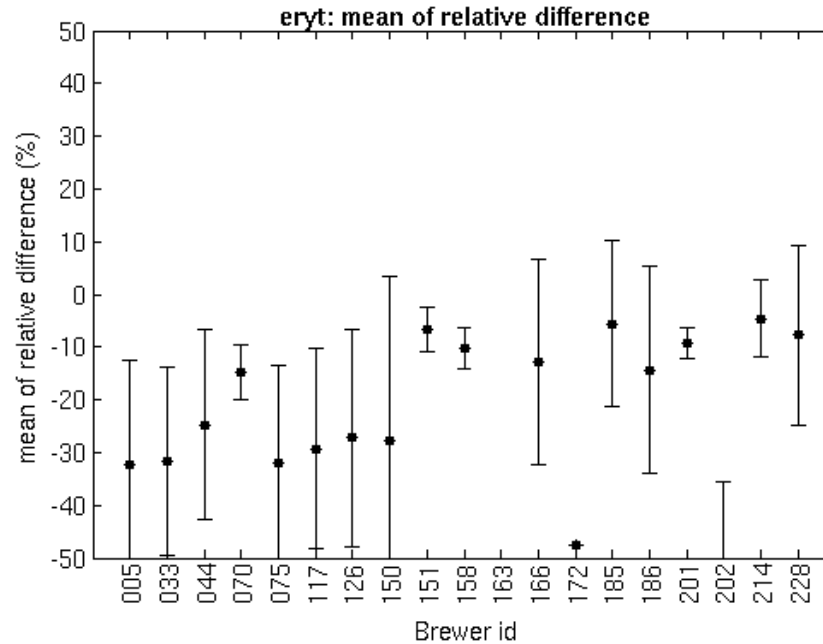
Irradiance@324 nm



Irradiance@360 nm

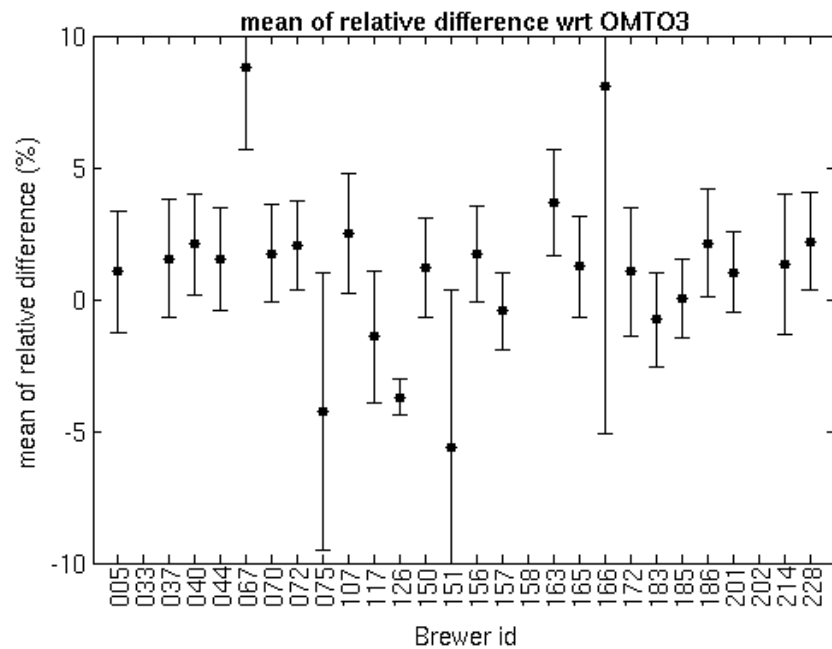


El Arenosillo 2015 campaign Erythemal Daily Dose Rate

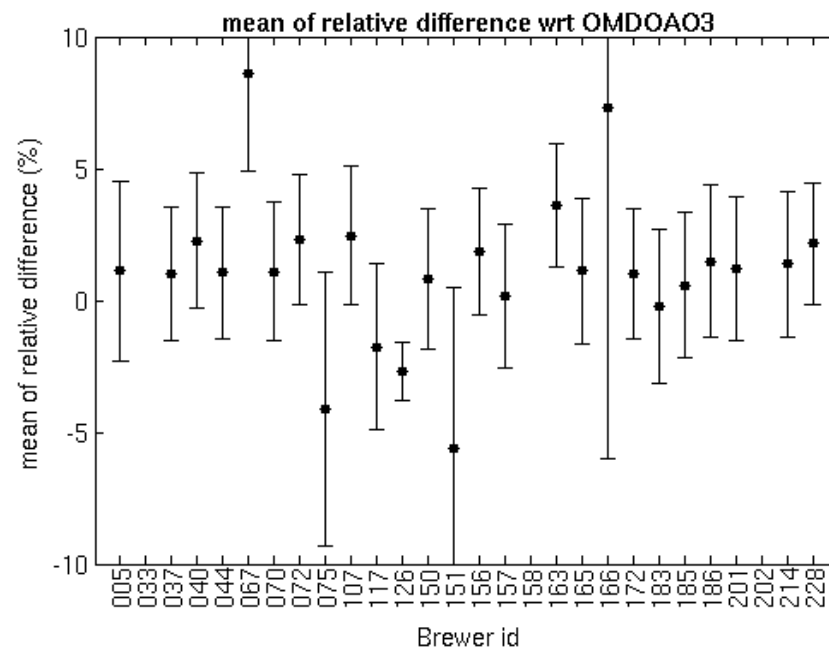


2013 – 2016

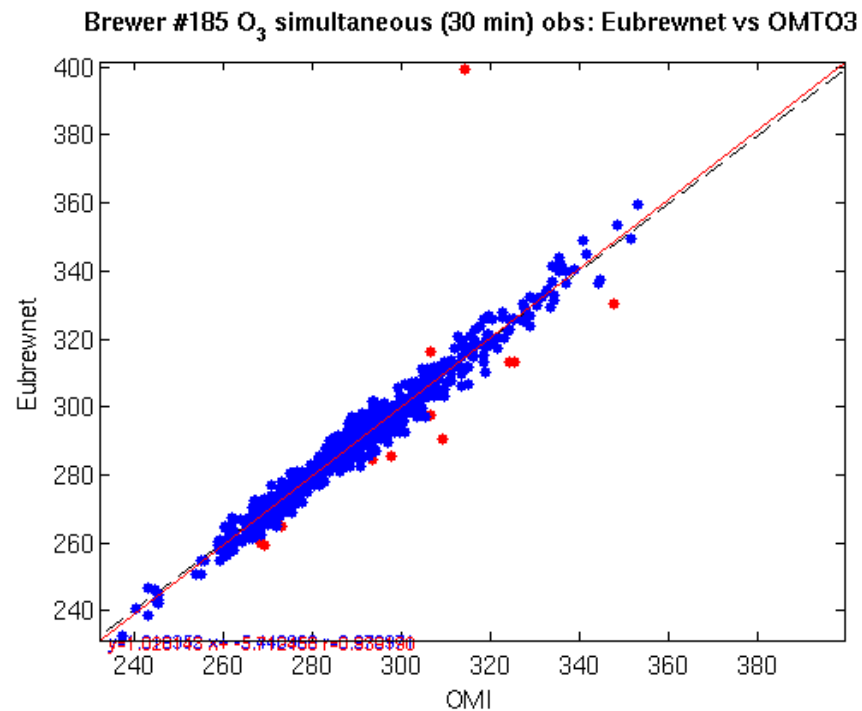
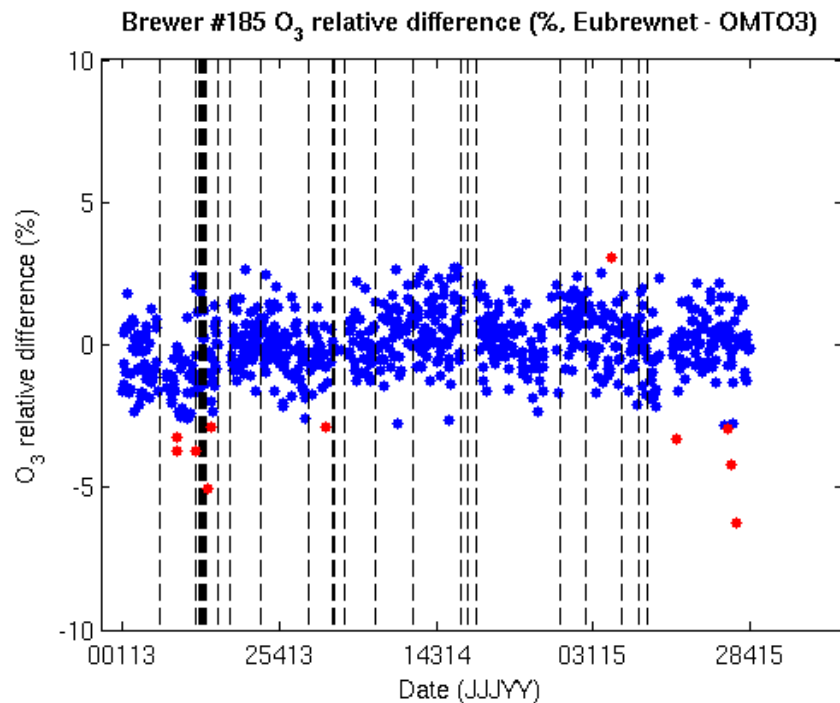
OMT03



OMDOAO3

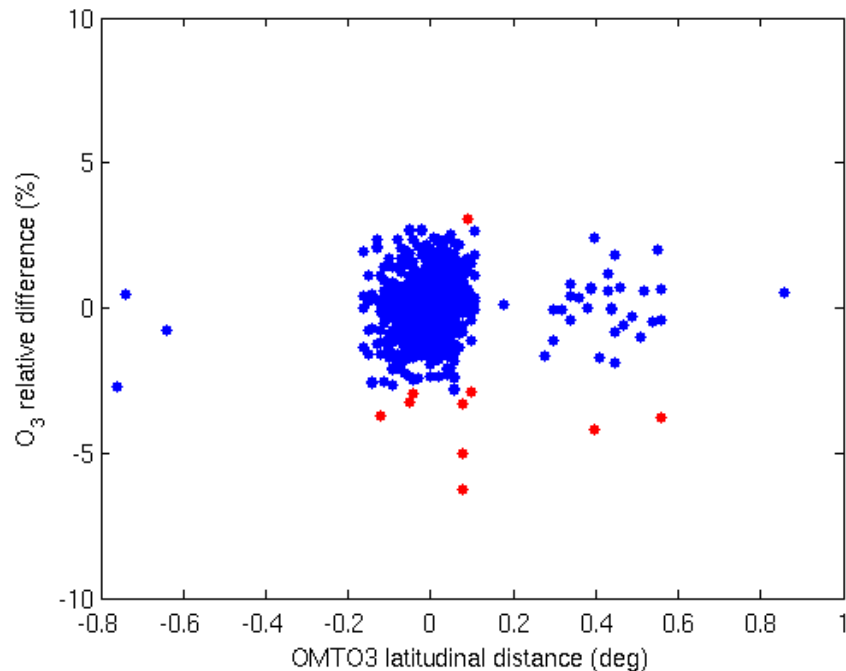


Brewer #185@Izaña 2013-2016

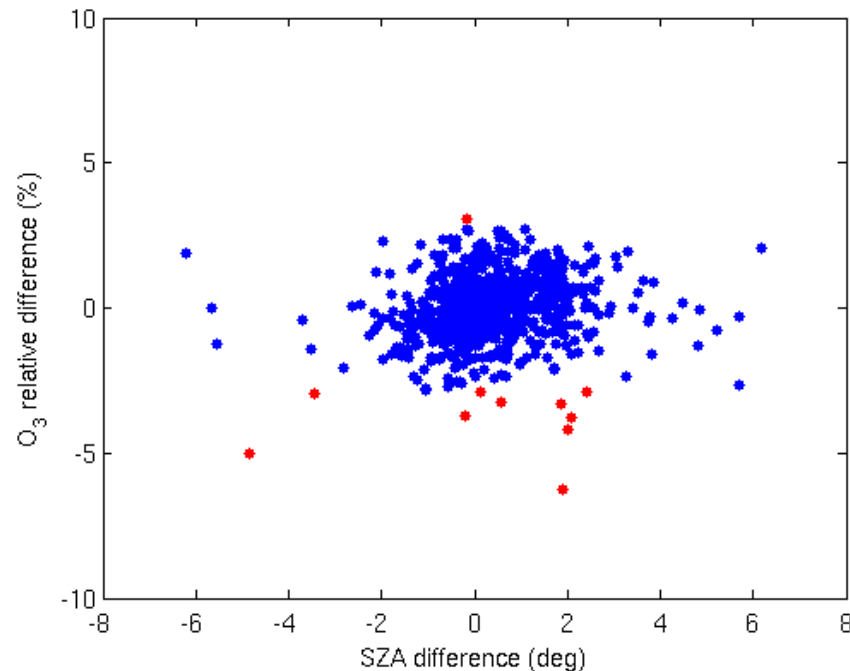


Brewer #185@Izaña 2013-2016

Brewer #185 O₃ relative difference vs OMT03 latitudinal distance

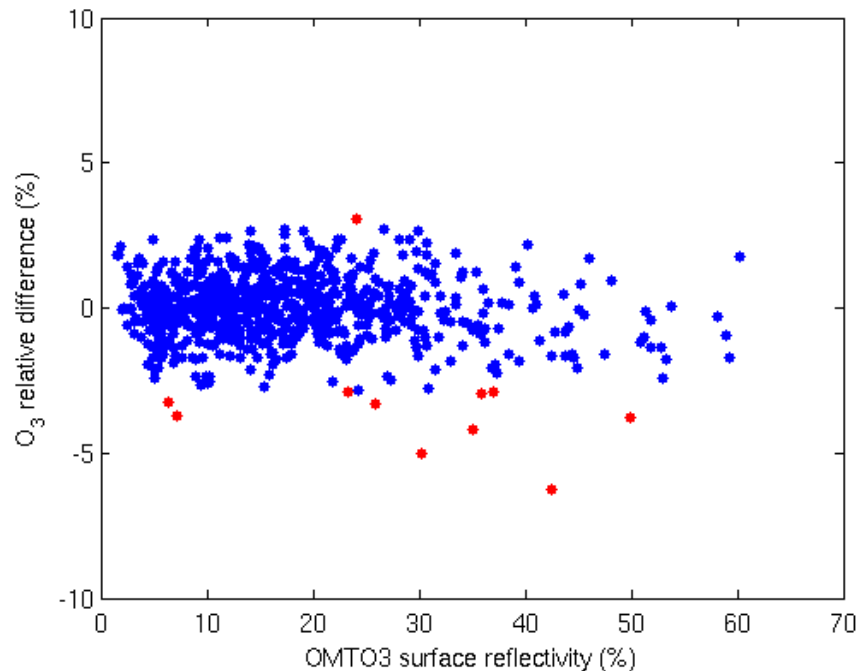


Brewer #185 O₃ relative difference vs SZA difference (OMT03)

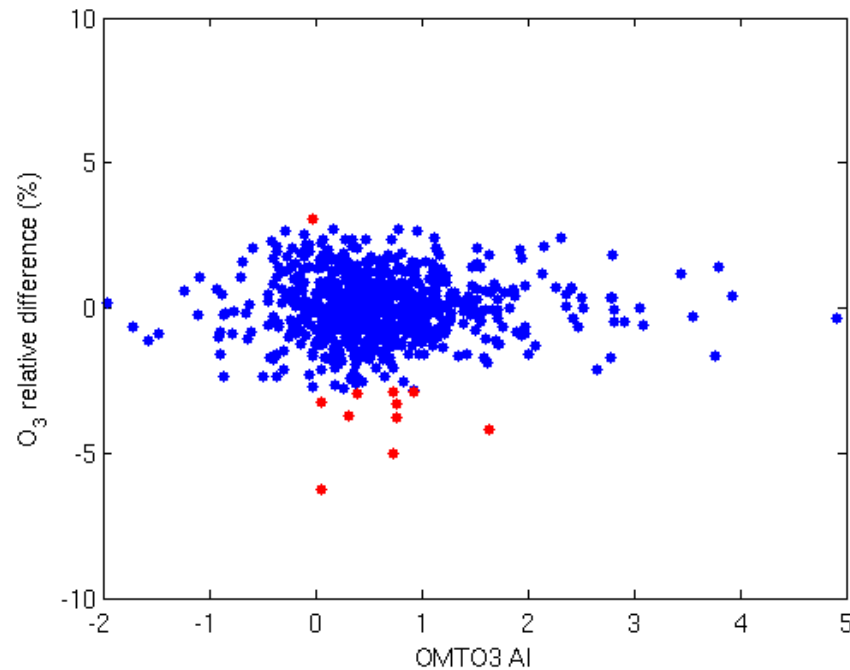


Brewer #185@Izaña 2013-2016

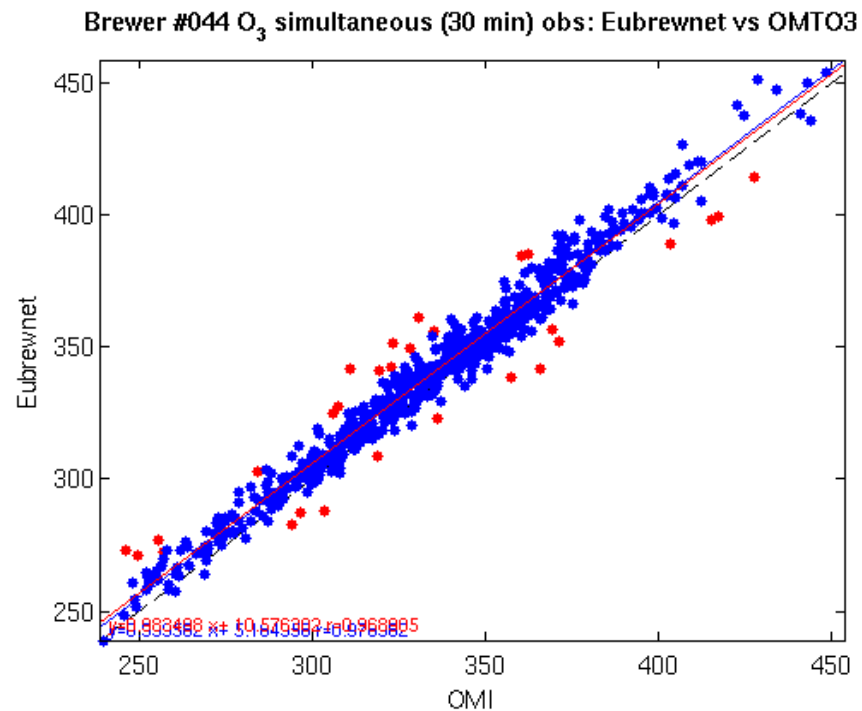
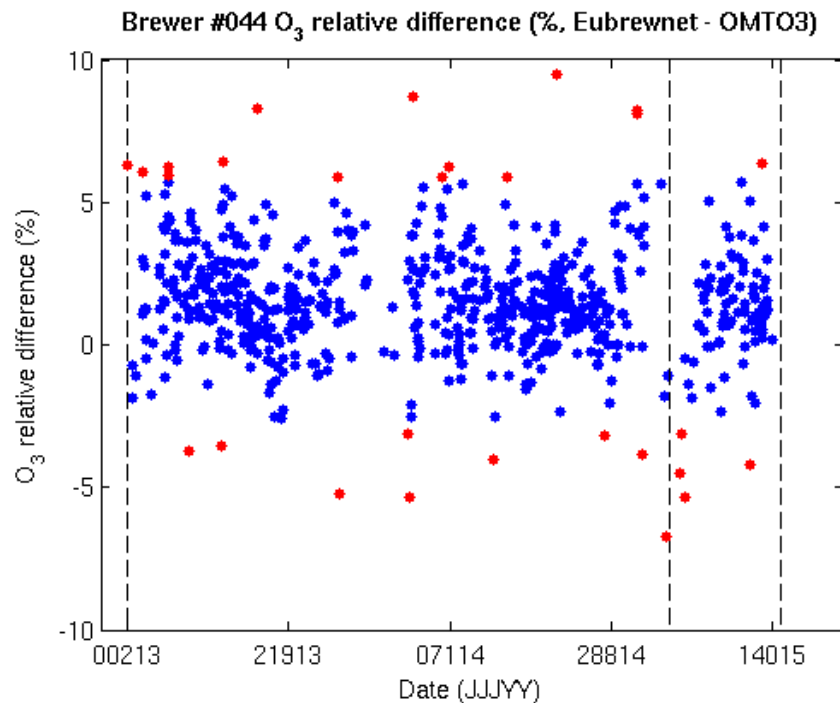
Brewer #185 O₃ relative difference vs OMT03 surface reflectivity



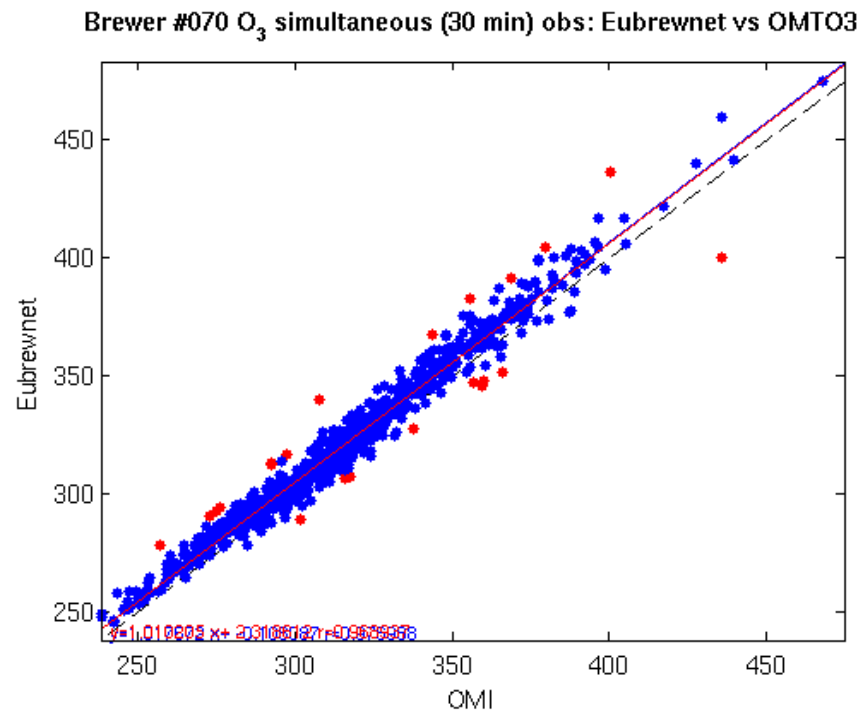
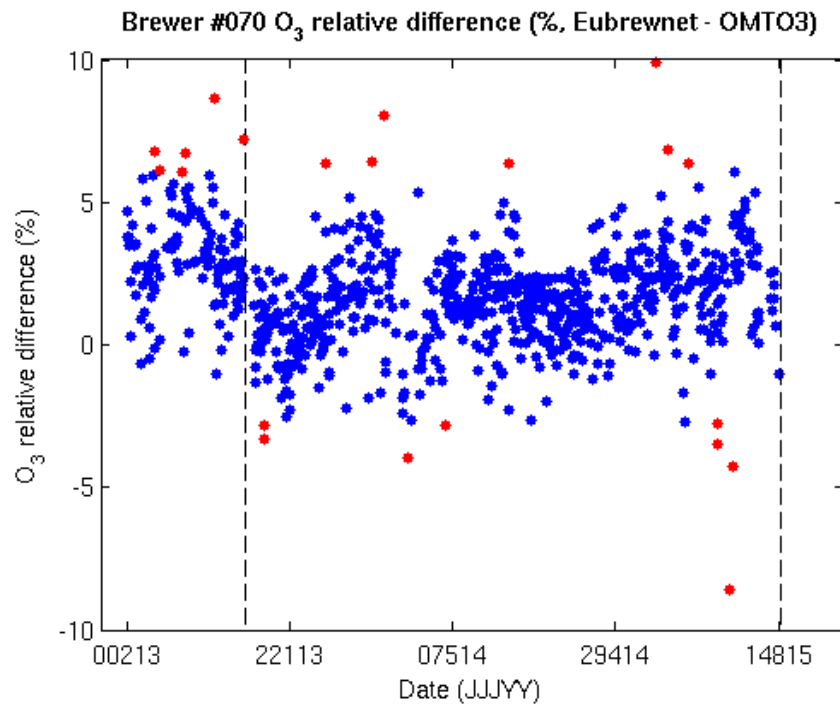
Brewer #185 O₃ relative difference vs OMT03 AI



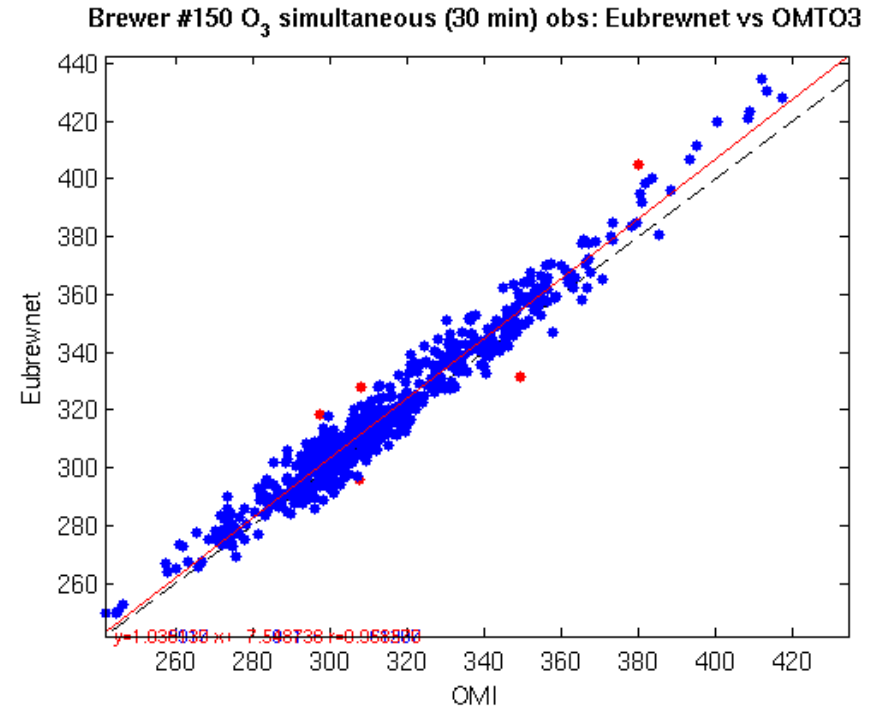
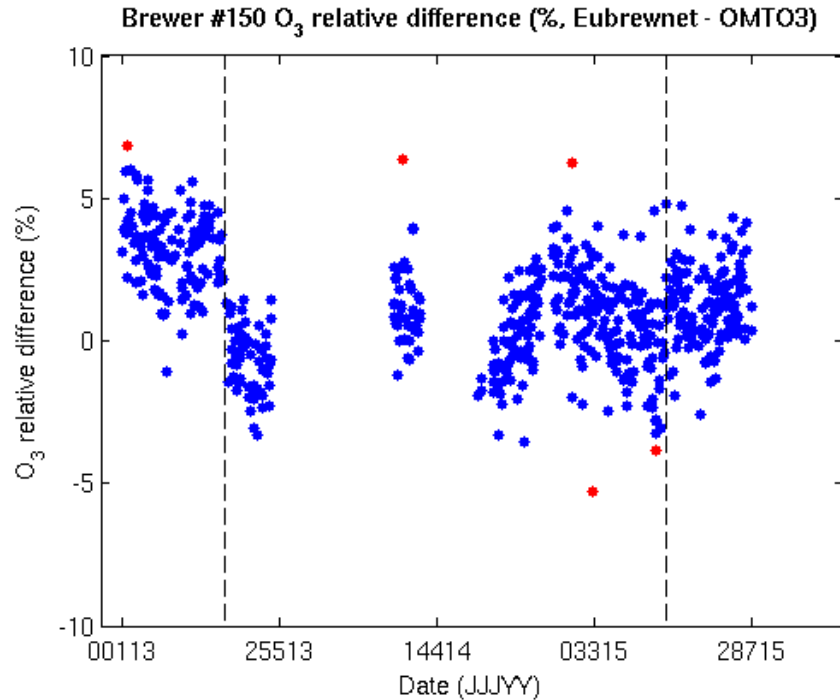
Brewer #044@Obninsk 2013-2016



Brewer #070@Madrid 2013-2016

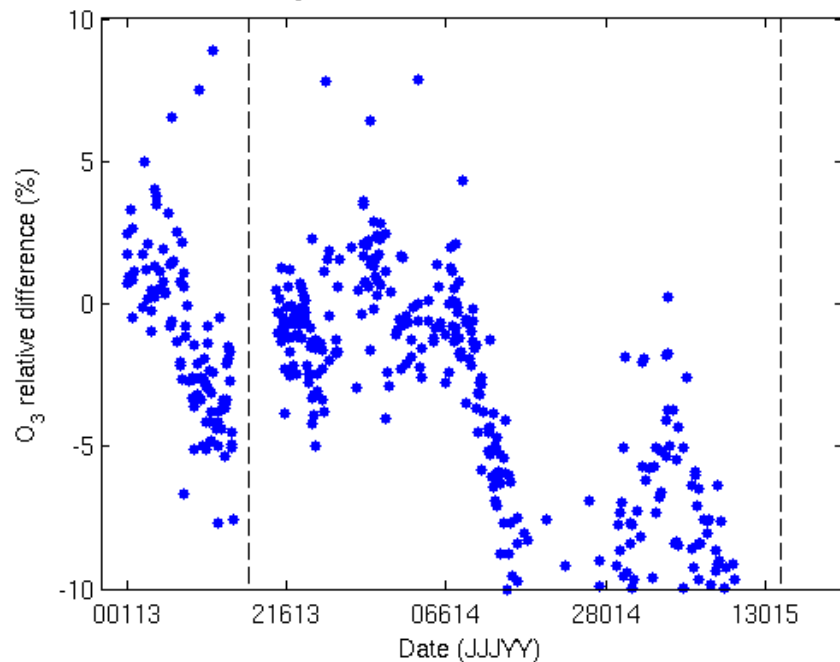


Brewer #150@El Arenosillo 2013-2016

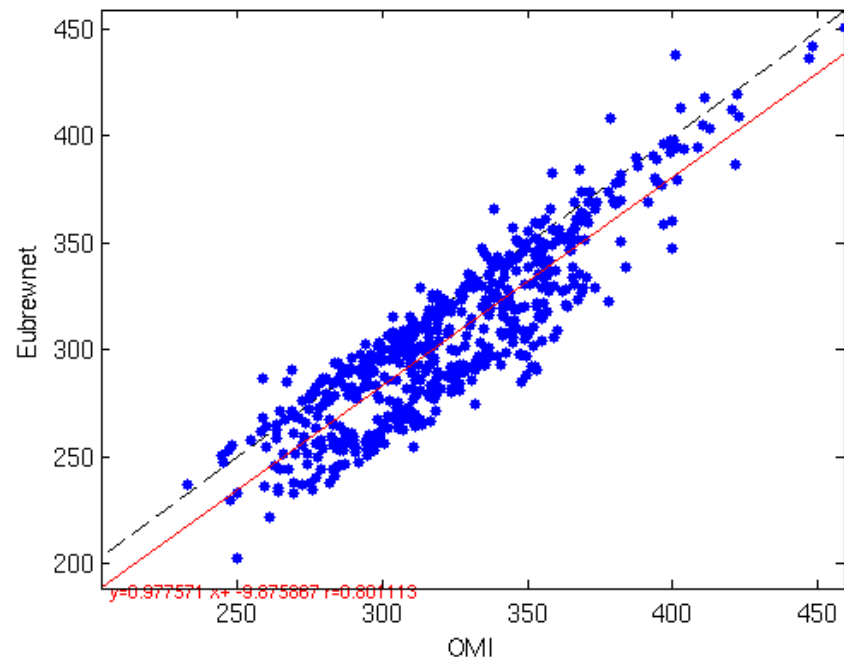


Brewer #151@La Coruña 2013-2016

Brewer #151 O₃ relative difference (%, Eubrewnet - OMT03)

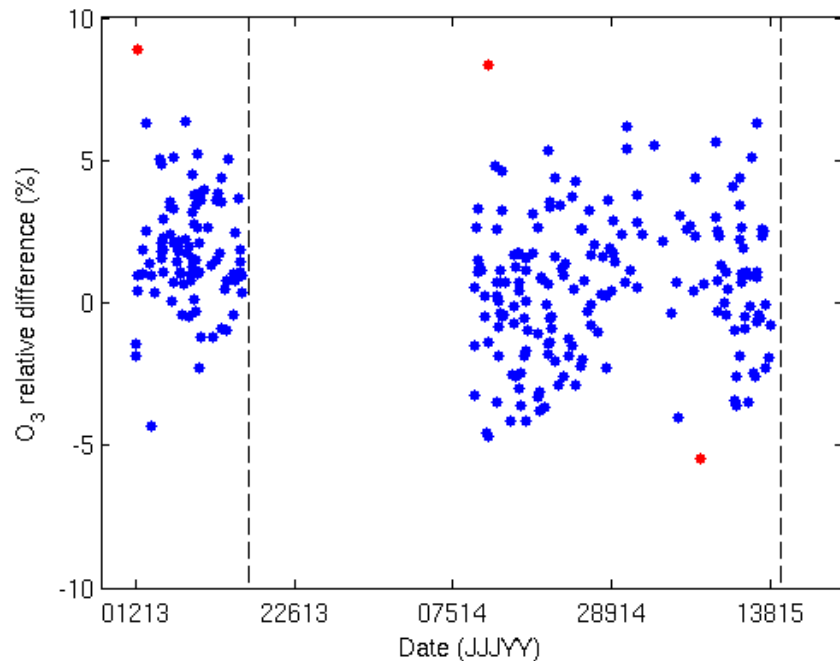


Brewer #151 O₃ simultaneous (30 min) obs: Eubrewnet vs OMT03

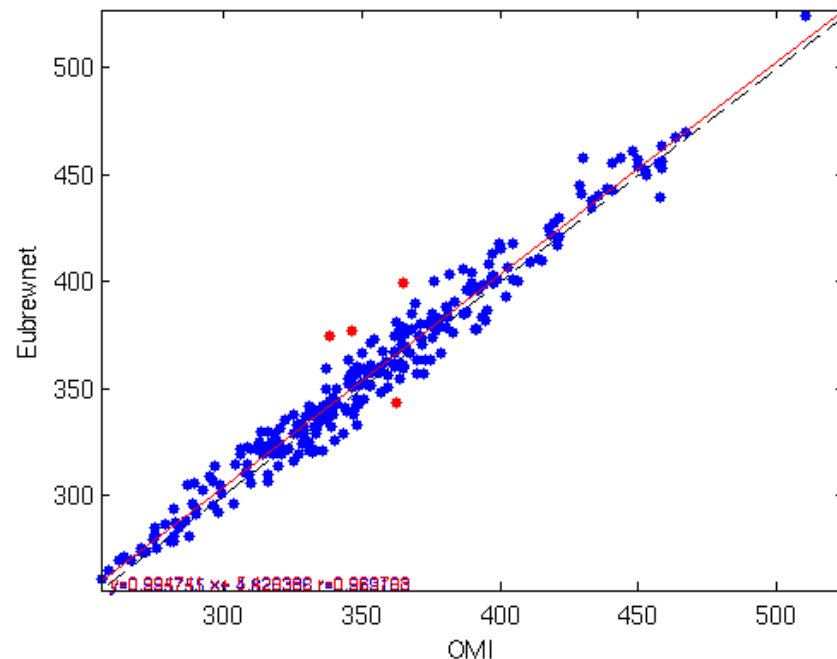


Brewer #172@Manchester 2013-2016

Brewer #172 O₃ relative difference (% Eubrewnet - OMDAO3)

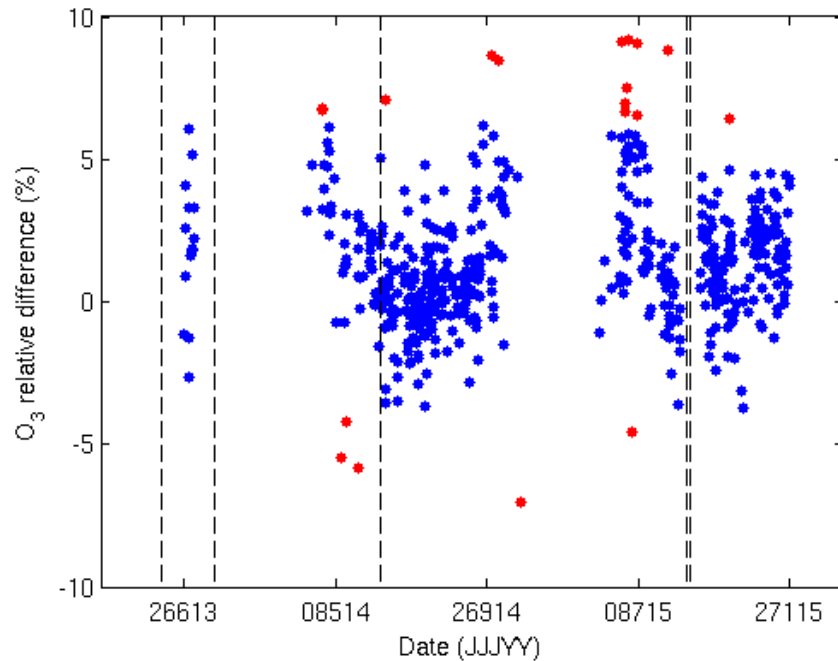


Brewer #172 O₃ simultaneous (30 min) obs: Eubrewnet vs OMDAO3

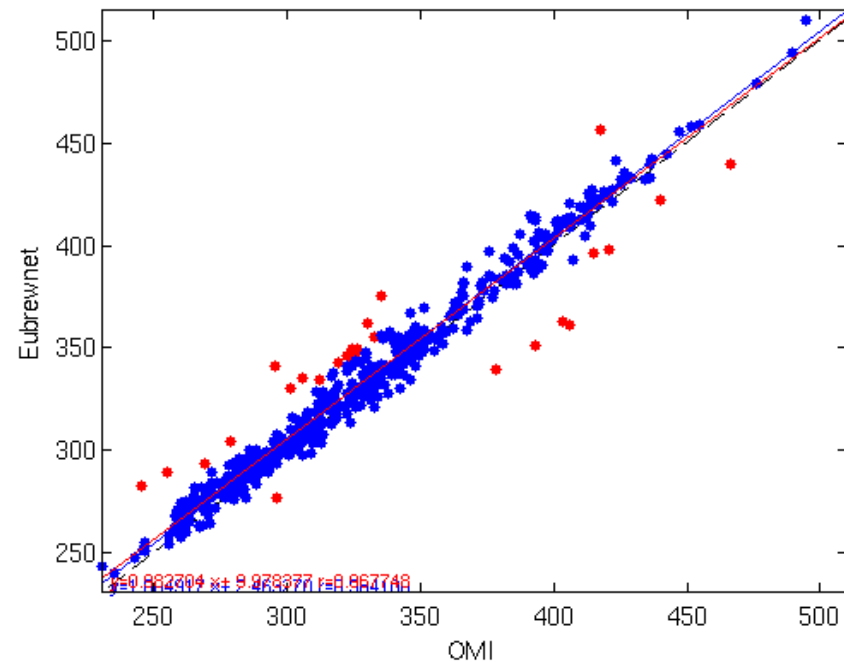


Brewer #214@Sodankylä 2013-2016

Brewer #214 O₃ relative difference (%, Eubrewnet - OMT03)



Brewer #214 O₃ simultaneous (30 min) obs: Eubrewnet vs OMT03



- EUBREWNET is a very useful tool
- O₃ relative differences <~5%, correlations ~0.9
- UV relative differences <~15%, correlations ~0.8 ←Level 0!
- Brewer operators should check the configurations
- Brewer-OMI plots coming to EUBREWNET soon