# C181C Correlation Report

## General information

- Includes MM013B and ML005.
- Session info: http://www3.mpifr-bonn.mpg.de/div/vlbi/globalmm/
- Station feedback: http://www3.mpifr-bonn.mpg.de/div/vlbi/globalmm/sessions/apr18/feedback_apr18.asc
- GBT calibration info (Tsys files for download) and other related information for this session can be found here: https://safe.nrao.edu/wiki/bin/view/GB/Observing/WbandVLBACal/C181
- *Special processing* was applied to all data in order to correlate mismatching frequency setups of ALMA and other GMVA stations. See details here.

## Current Status

Correlation finished, data **released** on 10/12/2018.

A **second** data release, with a problem, spotted in the original release, corrected, was made on 31/01/2019.

A **third** data release, rerunning PolConvert with the latest (25.06.2019) ALMA QA2 release, was made on 26/09/2019.

## Fringes

| Station | Code | Fringes | Plots | Comments |
|---|---|---|---|---|
| Ef | B | **yes** | Fringe overview of all baselines including Ef in LL (left for each baseline) and RR (right for each baseline). Legend: white - scheduled, but no data, blue - no fringe, red-green - fringes of different quality. D -- fourfit error, in this case due to mixing upper and lower subbands in the KVN compatibility mode, no real problem with the data.<br><br>Scans 30, 33, 77-78, 80, 82-83, 92 are missing from all diagnostic plots due to a difx2mark4 error. They are present in the final correlation products.<br><br>c181c_FRINGE_RfAnt_Ef_LLRR_AllSrc.pdf<br><br>Examples of fourfit fringe plots:<br><br>c181c_No0075_3C279_AB_LL.pdf, c181c_No0075_3C279_AB_LR.pdf, c181c_No0075_3C279_AB_RL.pdf, c181c_No0075_3C279_AB_RR.pdf<br><br>c181c_No0032_3C111_Bg_RR.pdf, no LL, LR or RL fringe<br><br>Same for all antennas below unless otherwise noted. | in the plots Ef is "missing" all the baselines except to ALMA, GLT and KVN. This is due to a fourfit error, the baselines are missing only from some of the diagnostic plots, but are present in the final correlation products. |
| On | X | **yes** | c181c_FRINGE_RfAnt_On_LLRR_AllSrc.pdf<br><br>c181c_No0075_3C279_AX_LL.pdf, c181c_No0075_3C279_AX_LR.pdf, c181c_No0075_3C279_AX_RL.pdf, c181c_No0075_3C279_AX_RR.pdf<br><br>c181c_No0032_3C111_gX_LL.pdf, c181c_No0032_3C111_gX_LR.pdf, no RL fringe, c181c_No0032_3C111_gX_RR.pdf | in the plots On is "missing" all the baselines except to ALMA, GLT and KVN. This is due to a fourfit error, the |

| Station | Code | Fringes | Plots | Comments |
|---|---|---|---|---|
| | | | no LL fringe, c181c_No0106_0716+714_tX_LR.pdf, c181c_No0106_0716+714_tX_RL.pdf, c181c_No0106_0716+714_tX_RR.pdf | baselines are missing only from some of the diagnostic plots, but are present in the final correlation products. |
| Ys | Y | yes | c181c_FRINGE_RfAnt_Ys_LLRR_AllSrc.pdf<br>c181c_No0075_3C279_AY_LL.pdf, c181c_No0075_3C279_AY_LR.pdf, c181c_No0075_3C279_AY_RL.pdf, c181c_No0075_3C279_AY_RR.pdf | As usual, Ys observed LCP only, but it was also recorded as fake RCP, that's why there are common Ys "right" to other antenna's left fringes.<br>in the plots Ys is "missing" all the baselines except to ALMA, GLT and KVN. This is due to a fourfit error, the baselines are missing only from some of the diagnostic plots, but are present in the final correlation products. |
| Mh | Z | yes | c181c_FRINGE_RfAnt_Mh_LLRR_AllSrc.pdf | in the plots Mh is "missing" all the baselines except to |

| Station | Code | Fringes | Plots | Comments |
|---|---|---|---|---|
| | | | c181c_No0071_3C273_AZ_LL.pdf, c181c_No0071_3C273_AZ_LR.pdf, c181c_No0071_3C273_AZ_RL.pdf, c181c_No0071_3C273_AZ_RR.pdf | ALMA, GLT and KVN. This is due to a fourfit error, the baselines are missing only from some of the diagnostic plots, but are present in the final correlation products. |
| Pv | P | yes | c181c_FRINGE_RfAnt_Pv_LLRR_AllSrc.pdf<br>c181c_No0032_3C111_gP_LL.pdf, c181c_No0032_3C111_gP_LR.pdf, c181c_No0032_3C111_gP_RL.pdf, c181c_No0032_3C111_gP_RR.pdf<br>c181c_No0084_3C273_AP_LL.pdf, c181c_No0084_3C273_AP_LR.pdf, c181c_No0084_3C273_AP_RL.pdf, c181c_No0084_3C273_AP_RR.pdf<br>c181c_No0084_3C273_gP_LL.pdf, c181c_No0084_3C273_gP_LR.pdf, c181c_No0084_3C273_gP_RL.pdf, c181c_No0084_3C273_gP_RR.pdf<br>c181c_No0159_0716+714_tP_LL.pdf, c181c_No0159_0716+714_tP_LR.pdf, c181c_No0159_0716+714_tP_RL.pdf, c181c_No0159_0716+714_tP_RR.pdf<br>c181c_No0140_0716+714_uP_LL.pdf, c181c_No0140_0716+714_uP_LR.pdf, c181c_No0140_0716+714_uP_RL.pdf, c181c_No0140_0716+714_uP_RR.pdf<br>c181c_No0140_0716+714_yP_LL.pdf, c181c_No0140_0716+714_yP_LR.pdf, c181c_No0140_0716+714_yP_RL.pdf, c181c_No0140_0716+714_yP_RR.pdf | in the plots Pv is "missing" all the baselines except to ALMA, GLT and KVN. This is due to a fourfit error, the baselines are missing only from some of the diagnostic plots, but are present in the final correlation products. |
| VLBA: Br | b | yes | c181c_FRINGE_RfAnt_Br_LLRR_AllSrc.pdf<br>c181c_No0084_3C273_Ab_LL.pdf, c181c_No0084_3C273_Ab_LR.pdf, c181c_No0084_3C273_Ab_RL.pdf, c181c_No0084_3C273_Ab_RR.pdf<br>c181c_No0187_CTA102_bf_LL.pdf, c181c_No0187_CTA102_bf_LR.pdf, c181c_No0187_CTA102_bf_RL.pdf, c181c_No0187_CTA102_bf_RR.pdf<br>c181c_No0187_CTA102_bk_LL.pdf, c181c_No0187_CTA102_bk_LR.pdf, c181c_No0187_CTA102_bk_RL.pdf, c181c_No0187_CTA102_bk_RR.pdf<br>c181c_No0187_CTA102_bl_LL.pdf, c181c_No0187_CTA102_bl_LR.pdf, c181c_No0187_CTA102_bl_RL.pdf, c181c_No0187_CTA102_bl_RR.pdf | Baselines to EVN stations are "missing" due to a fourfit error. They are present in the final correlation products. |

| Station | Code | Fringes | Plots | Comments |
|---|---|---|---|---|
| | | | c181c_No0187_CTA102_bm_LL.pdf, c181c_No0187_CTA102_bm_RR.pdf, no LR or RL fringe<br><br>c181c_No0187_CTA102_bn_LL.pdf, c181c_No0187_CTA102_bn_RR.pdf, no LR or RL fringe<br><br>c181c_No0187_CTA102_bo_LL.pdf, no LR fringe, c181c_No0187_CTA102_bo_RL.pdf, c181c_No0187_CTA102_bo_RR.pdf<br><br>c181c_No0187_CTA102_bp_LL.pdf, c181c_No0187_CTA102_bp_LR.pdf, c181c_No0187_CTA102_bp_RL.pdf, c181c_No0187_CTA102_bp_RR.pdf | |
| VLBA: Fd | f | **yes** | c181c_FRINGE_RfAnt_Fd_LLRR_AllSrc.pdf<br><br>c181c_No0075_3C279_Af_LL.pdf, c181c_No0075_3C279_Af_LR.pdf, c181c_No0075_3C279_Af_RL.pdf, c181c_No0075_3C279_Af_RR.pdf<br><br>c181c_No0187_CTA102_bf_LL.pdf, c181c_No0187_CTA102_bf_LR.pdf, c181c_No0187_CTA102_bf_RL.pdf, c181c_No0187_CTA102_bf_RR.pdf | Baselines to EVN stations are "missing" due to a fourfit error. They are present in the final correlation products. |
| VLBA: Kp | k | **yes** | c181c_FRINGE_RfAnt_Kp_LLRR_AllSrc.pdf<br><br>c181c_No0075_3C279_Ak_LL.pdf, c181c_No0075_3C279_Ak_LR.pdf, c181c_No0075_3C279_Ak_RL.pdf, c181c_No0075_3C279_Ak_RR.pdf<br><br>c181c_No0187_CTA102_bk_LL.pdf, c181c_No0187_CTA102_bk_LR.pdf, c181c_No0187_CTA102_bk_RL.pdf, c181c_No0187_CTA102_bk_RR.pdf | Baselines to EVN stations are "missing" due to a fourfit error. They are present in the final correlation products. |
| VLBA: La | l | **yes** | c181c_FRINGE_RfAnt_La_LLRR_AllSrc.pdf<br><br>c181c_No0075_3C279_Al_LL.pdf, c181c_No0075_3C279_Al_LR.pdf, c181c_No0075_3C279_Al_RL.pdf, c181c_No0075_3C279_Al_RR.pdf<br><br>c181c_No0187_CTA102_bl_LL.pdf, c181c_No0187_CTA102_bl_LR.pdf, c181c_No0187_CTA102_bl_RL.pdf, c181c_No0187_CTA102_bl_RR.pdf | Baselines to EVN stations are "missing" due to a fourfit error. They are present in the final correlation products. |
| VLBA: Mk | m | **yes** | c181c_FRINGE_RfAnt_Mk_LLRR_AllSrc.pdf<br><br>c181c_No0103_3C279_Am_LL.pdf, c181c_No0103_3C279_Am_LR.pdf, c181c_No0103_3C279_Am_RL.pdf, c181c_No0103_3C279_Am_RR.pdf | Baselines to EVN stations are "missing" due to a fourfit |

| Station | Code | Fringes | Plots | Comments |
|---|---|---|---|---|
| | | | c181c_No0187_CTA102_bm_LL.pdf, c181c_No0187_CTA102_bm_RR.pdf,<br>no LR or RL fringe | error. They are present in the final correlation products.<br><br>Taken out for several scans because of USNO observing. |
| VLBA: Nl | n | **yes** | c181c_FRINGE_RfAnt_Nl_LLRR_AllSrc.pdf<br><br>c181c_No0075_3C279_An_LL.pdf, c181c_No0075_3C279_An_LR.pdf,<br>c181c_No0075_3C279_An_RL.pdf, c181c_No0075_3C279_An_RR.pdf<br><br>c181c_No0187_CTA102_bn_LL.pdf, c181c_No0187_CTA102_bn_RR.pdf,<br>no LR or RL fringe | Baselines to EVN stations are "missing" due to a fourfit error. They are present in the final correlation products. |
| VLBA: Ov | o | **yes** | c181c_FRINGE_RfAnt_Ov_LLRR_AllSrc.pdf<br><br>c181c_No0103_3C279_Ao_LL.pdf, c181c_No0103_3C279_Ao_LR.pdf,<br>c181c_No0103_3C279_Ao_RL.pdf, c181c_No0103_3C279_Ao_RR.pdf<br><br>c181c_No0187_CTA102_bo_LL.pdf, no LR fringe,<br>c181c_No0187_CTA102_bo_RL.pdf, c181c_No0187_CTA102_bo_RR.pdf | Baselines to EVN stations are "missing" due to a fourfit error. They are present in the final correlation products. |
| VLBA: Pt | p | **yes** | c181c_FRINGE_RfAnt_Pt_LLRR_AllSrc.pdf<br><br>c181c_No0075_3C279_Ap_LL.pdf, c181c_No0075_3C279_Ap_LR.pdf,<br>c181c_No0075_3C279_Ap_RL.pdf, c181c_No0075_3C279_Ap_RR.pdf<br><br>c181c_No0187_CTA102_bp_LL.pdf, c181c_No0187_CTA102_bp_LR.pdf,<br>c181c_No0187_CTA102_bp_RL.pdf, c181c_No0187_CTA102_bp_RR.pdf | Baselines to EVN stations are "missing" due to a fourfit error. They are present in the final correlation products.<br><br>Taken out for several scans because of |

| Station | Code | Fringes | Plots | Comments |
|---|---|---|---|---|
| | | | | USNO observing. |
| GBT: Gb | G | **yes** | c181c_FRINGE_RfAnt_Gb_LLRR_AllSrc.pdf<br><br>c181c_No0075_3C279_AG_LL.pdf, c181c_No0075_3C279_AG_LR.pdf,<br>c181c_No0075_3C279_AG_RL.pdf, c181c_No0075_3C279_AG_RR.pdf | Baselines to EVN stations are "missing" due to a fourfit error. They are present in the final correlation products. |
| GLT: Gl | g | **yes** | c181c_FRINGE_RfAnt_Gl_LLRR_AllSrc.pdf<br><br>c181c_No0071_3C273_Ag_LL.pdf, c181c_No0071_3C273_Ag_LR.pdf,<br>c181c_No0071_3C273_Ag_RL.pdf, c181c_No0071_3C273_Ag_RR.pdf<br><br>c181c_No0084_3C273_gP_LL.pdf, c181c_No0084_3C273_gP_LR.pdf,<br>c181c_No0084_3C273_gP_RL.pdf, c181c_No0084_3C273_gP_RR.pdf<br><br>c181c_No0032_3C111_Bg_RR.pdf, no LL, LR or RL fringe<br><br>c181c_No0032_3C111_gP_LL.pdf, c181c_No0032_3C111_gP_LR.pdf,<br>c181c_No0032_3C111_gP_RL.pdf, c181c_No0032_3C111_gP_RR.pdf<br><br>c181c_No0032_3C111_gX_LL.pdf, c181c_No0032_3C111_gX_LR.pdf,<br>no RL fringe, c181c_No0032_3C111_gX_RR.pdf<br><br>_____ | Data analysis has shown that GLT recorded in unknown polarization instead of circular (most probably unknown elliptic). At this moment **IT SHOULD NOT BE USED FOR ANY POLARIMETRY** and in general dealt with very carefully. |
| ALMA: Aa | A | **yes** | c181c_FRINGE_RfAnt_Aa_LLRR_AllSrc.pdf<br><br>c181c_No0071_3C273_Ag_LL.pdf, c181c_No0071_3C273_Ag_LR.pdf,<br>c181c_No0071_3C273_Ag_RL.pdf, c181c_No0071_3C273_Ag_RR.pdf<br><br>c181c_No0071_3C273_AZ_LL.pdf, c181c_No0071_3C273_AZ_LR.pdf,<br>c181c_No0071_3C273_AZ_RL.pdf, c181c_No0071_3C273_AZ_RR.pdf<br><br>c181c_No0075_3C279_AB_LL.pdf, c181c_No0075_3C279_AB_LR.pdf, c181c_No0075_3C279_AB_RL.pdf,<br>c181c_No0075_3C279_AB_RR.pdf<br><br>c181c_No0075_3C279_Af_LL.pdf, c181c_No0075_3C279_Af_LR.pdf,<br>c181c_No0075_3C279_Af_RL.pdf, c181c_No0075_3C279_Af_RR.pdf | Observed in linear polarization, converted to circular polarization in post-correlation uning PolConvert. For technical reasons the atmospheric |

| Station | Code | Fringes | Plots | Comments |
|---|---|---|---|---|
| | | | c181c_No0075_3C279_AG_LL.pdf, c181c_No0075_3C279_AG_LR.pdf, c181c_No0075_3C279_AG_RL.pdf, c181c_No0075_3C279_AG_RR.pdf<br><br>c181c_No0075_3C279_Ak_LL.pdf, c181c_No0075_3C279_Ak_LR.pdf, c181c_No0075_3C279_Ak_RL.pdf, c181c_No0075_3C279_Ak_RR.pdf<br><br>c181c_No0075_3C279_Al_LL.pdf, c181c_No0075_3C279_Al_LR.pdf, c181c_No0075_3C279_Al_RL.pdf, c181c_No0075_3C279_Al_RR.pdf<br><br>c181c_No0075_3C279_An_LL.pdf, c181c_No0075_3C279_An_LR.pdf, c181c_No0075_3C279_An_RL.pdf, c181c_No0075_3C279_An_RR.pdf<br><br>c181c_No0075_3C279_Ap_LL.pdf, c181c_No0075_3C279_Ap_LR.pdf, c181c_No0075_3C279_Ap_RL.pdf, c181c_No0075_3C279_Ap_RR.pdf<br><br>c181c_No0075_3C279_AX_LL.pdf, c181c_No0075_3C279_AX_LR.pdf, c181c_No0075_3C279_AX_RL.pdf, c181c_No0075_3C279_AX_RR.pdf<br><br>c181c_No0075_3C279_AY_LL.pdf, c181c_No0075_3C279_AY_LR.pdf, c181c_No0075_3C279_AY_RL.pdf, c181c_No0075_3C279_AY_RR.pdf<br><br>c181c_No0084_3C273_Ab_LL.pdf, c181c_No0084_3C273_Ab_LR.pdf, c181c_No0084_3C273_Ab_RL.pdf, c181c_No0084_3C273_Ab_RR.pdf<br><br>c181c_No0103_3C279_Am_LL.pdf, c181c_No0103_3C279_Am_LR.pdf, c181c_No0103_3C279_Am_RL.pdf, c181c_No0103_3C279_Am_RR.pdf<br><br>c181c_No0103_3C279_Ao_LL.pdf, c181c_No0103_3C279_Ao_LR.pdf, c181c_No0103_3C279_Ao_RL.pdf, c181c_No0103_3C279_Ao_RR.pdf<br><br>c181c_No0084_3C273_AP_LL.pdf, c181c_No0084_3C273_AP_LR.pdf, c181c_No0084_3C273_AP_RL.pdf, c181c_No0084_3C273_AP_RR.pdf | correction was applied twice -- both in original ALMA data and during the correlation. Although a special procedure was developed to compensate for this, we found that its application leads to other difficulties, in particular to abnormally high fringe rate jumps, so in the final production run the double atmospheric correction was left as is. |
| KVN: Kt | t | **yes** | c181c_FRINGE_RfAnt_Kt_LLRR_AllSrc.pdf<br><br>no LL fringe, c181c_No0106_0716+714_tX_LR.pdf, c181c_No0106_0716+714_tX_RL.pdf, c181c_No0106_0716+714_tX_RR.pdf<br><br>c181c_No0159_0716+714_tP_LL.pdf, c181c_No0159_0716+714_tP_LR.pdf, c181c_No0159_0716+714_tP_RL.pdf, c181c_No0159_0716+714_tP_RR.pdf<br><br>c181c_No0140_0716+714_tu_LR.pdf, c181c_No0140_0716+714_tu_LR.pdf, c181c_No0140_0716+714_tu_RL.pdf, c181c_No0140_0716+714_tu_RR.pdf<br><br>c181c_No0140_0716+714_ty_LL.pdf, c181c_No0140_0716+714_ty_LR.pdf, c181c_No0140_0716+714_ty_RL.pdf, c181c_No0140_0716+714_ty_RR.pdf | |
| KVN: Ku | u | **yes** | c181c_FRINGE_RfAnt_Ku_LLRR_AllSrc.pdf | |

| Station | Code | Fringes | Plots | Comments |
|---|---|---|---|---|
| | | | c181c_No0140_0716+714_tu_LR.pdf, c181c_No0140_0716+714_tu_LR.pdf,<br>c181c_No0140_0716+714_tu_RL.pdf, c181c_No0140_0716+714_tu_RR.pdf<br><br>c181c_No0140_0716+714_uP_LL.pdf, c181c_No0140_0716+714_uP_LR.pdf,<br>c181c_No0140_0716+714_uP_RL.pdf, c181c_No0140_0716+714_uP_RR.pdf<br><br>c181c_No0140_0716+714_uy_LL.pdf, c181c_No0140_0716+714_uy_LR.pdf,<br>c181c_No0140_0716+714_uy_RL.pdf, c181c_No0140_0716+714_uy_RR.pdf | |
| KVN: Ky | y | **yes** | c181c_FRINGE_RfAnt_Ky_LLRR_AllSrc.pdf<br><br>c181c_No0140_0716+714_ty_LL.pdf, c181c_No0140_0716+714_ty_LR.pdf,<br>c181c_No0140_0716+714_ty_RL.pdf, c181c_No0140_0716+714_ty_RR.pdf<br><br>c181c_No0140_0716+714_uy_LL.pdf, c181c_No0140_0716+714_uy_LR.pdf,<br>c181c_No0140_0716+714_uy_RL.pdf, c181c_No0140_0716+714_uy_RR.pdf<br><br>c181c_No0140_0716+714_yP_LL.pdf, c181c_No0140_0716+714_yP_LR.pdf,<br>c181c_No0140_0716+714_yP_RL.pdf, c181c_No0140_0716+714_yP_RR.pdf | |

## Notes

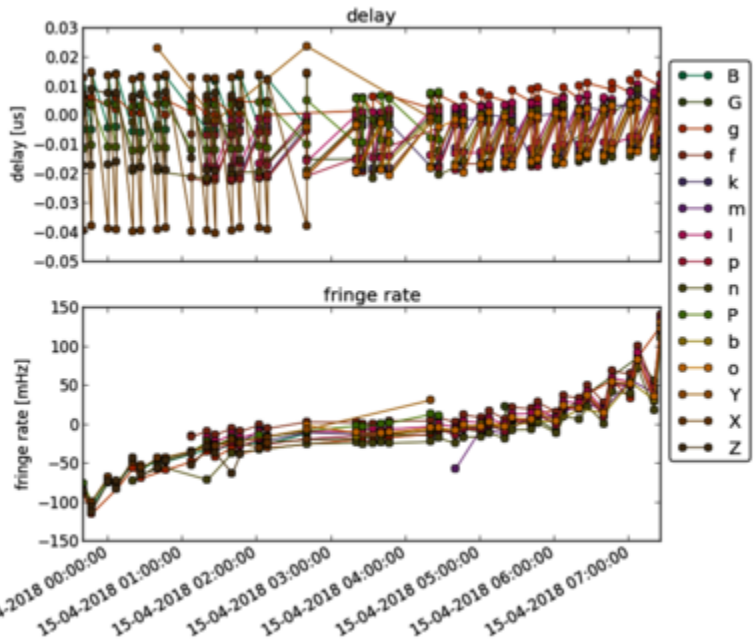
There were problems with some diagnostic plots of this experiment due to yet poorly understood errors of fourfit and other HOPS components. But this does not change the quality of the final correlation products. *(These issues were **fixed** in the second data release of 31/01/2019)*

GLT participated in this session for the first time as a test, and serious problems were detected when analysing its data. Be very carerful when using them.

For technical reasons the correlation output is saved as 8 different fits files, see their content below in the pclist section.

## Post-Correlation checks

## Residuals



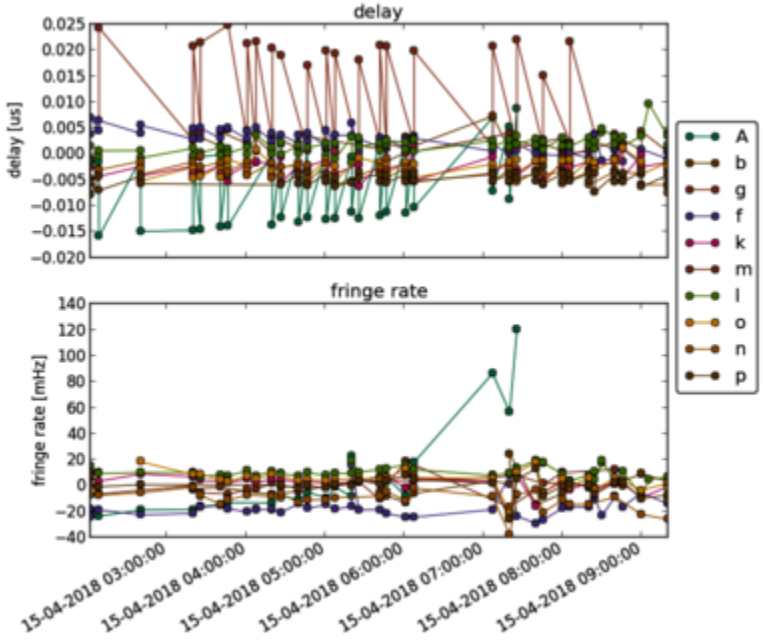

Delays statistics

| st | #pts | mean | std. dev |
|---|---|---|---|
| B | 30 | +0.0042 | 0.009071 |
| G | 43 | -0.0052 | 0.007266 |
| g | 62 | +0.0054 | 0.003494 |
| f | 64 | -0.0088 | 0.008994 |
| k | 60 | -0.0081 | 0.008372 |
| m | 18 | -0.0035 | 0.008307 |
| l | 64 | -0.0047 | 0.008480 |
| p | 52 | -0.0099 | 0.008227 |
| n | 60 | -0.0090 | 0.008904 |
| P | 44 | -0.0030 | 0.007660 |
| b | 24 | -0.0071 | 0.008417 |
| o | 47 | -0.0077 | 0.008457 |
| Y | 04 | +0.0111 | 0.012330 |
| X | 32 | -0.0129 | 0.026255 |
| Z | 26 | -0.0051 | 0.012292 |

Fringe rate statistics

| st | #pts | mean | std. dev |
|---|---|---|---|
| B | 30 | -47.6433 | 26.575722 |
| G | 43 | +6.0263 | 35.986387 |
| g | 62 | -12.7950 | 49.182459 |
| f | 64 | +21.3096 | 33.406679 |
| k | 60 | +9.4964 | 32.031003 |
| m | 18 | +10.7581 | 31.343742 |
| l | 64 | +13.5819 | 33.168849 |
| p | 52 | +9.2203 | 35.368835 |
| n | 60 | -6.5083 | 37.121839 |
| P | 44 | -29.5560 | 30.541903 |
| b | 24 | +7.2276 | 19.638748 |
| o | 47 | +18.8094 | 33.067150 |
| Y | 04 | -11.3661 | 28.284323 |
| X | 32 | -44.7536 | 24.504896 |
| Z | 26 | -58.9294 | 22.043387 |

Reference station: A | Pol: RR,LL



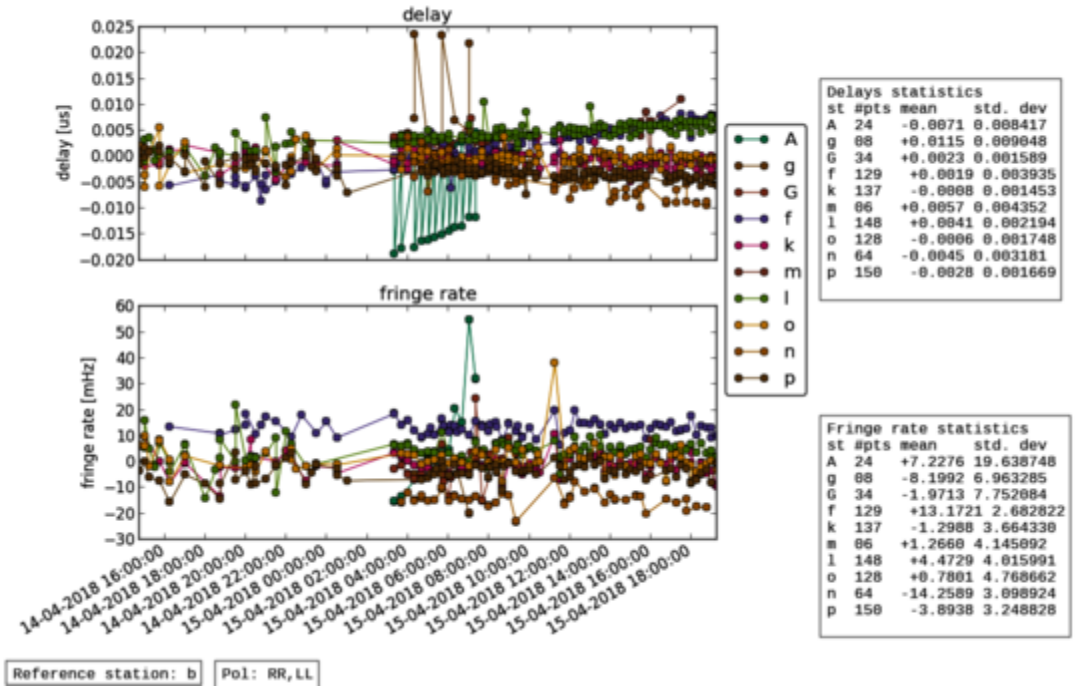

Delays statistics

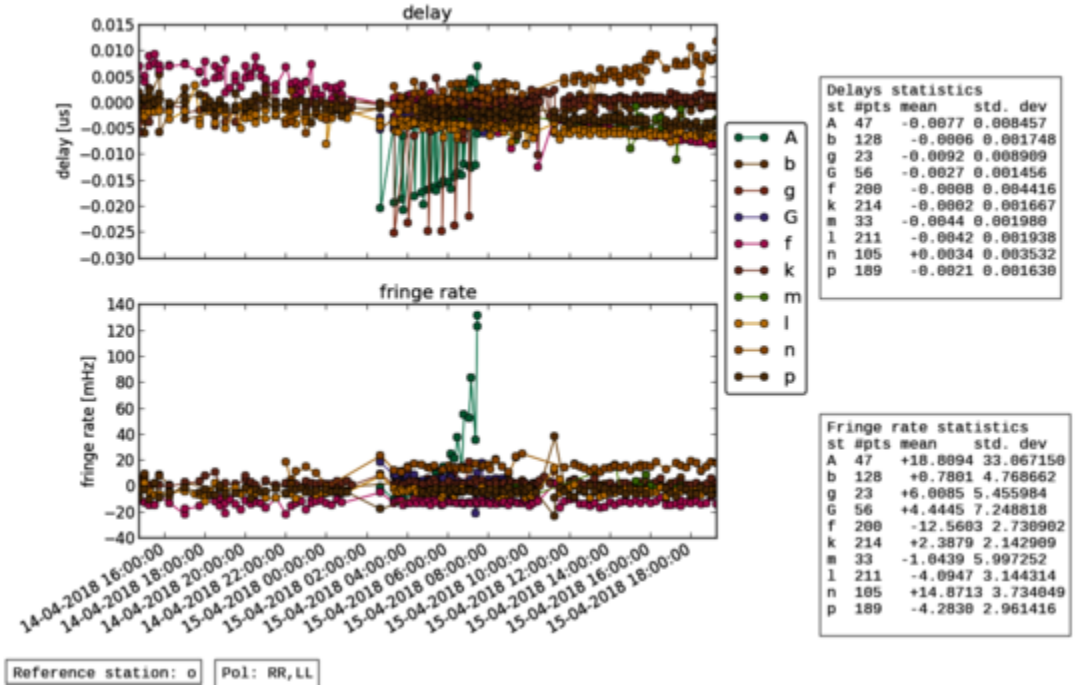
| st | #pts | mean | std. dev |
|---|---|---|---|
| A | 43 | -0.0052 | 0.007266 |
| b | 34 | +0.0023 | 0.001589 |
| g | 37 | +0.0114 | 0.009474 |
| f | 69 | +0.0023 | 0.002071 |
| k | 65 | -0.0027 | 0.001565 |
| m | 09 | +0.0013 | 0.001988 |
| l | 69 | +0.0016 | 0.001680 |
| o | 56 | -0.0027 | 0.001456 |
| n | 51 | -0.0038 | 0.001556 |
| p | 53 | -0.0048 | 0.001194 |

Fringe rate statistics

| st | #pts | mean | std. dev |
|---|---|---|---|
| A | 43 | +6.0263 | 35.986387 |
| b | 34 | -1.9713 | 7.752084 |
| g | 37 | -0.3091 | 4.492007 |
| f | 69 | -17.1668 | 7.697970 |
| k | 65 | +1.3156 | 7.089349 |
| m | 09 | +4.8895 | 13.261829 |
| l | 69 | +9.9507 | 4.626563 |
| o | 56 | +4.4445 | 7.248818 |
| n | 51 | -11.0145 | 7.483748 |
| p | 53 | -0.3837 | 7.055397 |

Reference station: G | Pol: RR,LL




**FITS completeness (pclist)**

**legend:**

```
o -- station scheduled and fully accounted for in the fits file
42 (or another number) -- station scheduled, but data found
                          only for 42% of the scheduled interval
x -- station scheduled, but corresponding entry not found in the fits file
. -- station not scheduled
```

**c181c_setup1.fits:**

| | | | EF | ON | PV | YS | MH | NL | FD | PT | LA | OV | KP | BR | GL | MK | AA | AA | GB | KY | KU | KT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| c181c_001D2D No0001 | 3C84 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | o | o | o | x | . | . | . | . | . | . | . |
| c181c_002D2D No0002 | 3C84 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | o | o | o | x | . | . | . | . | . | . | . |
| c181c_023D2D No0023 | 3C111 | 3mm_RDBE | o | o | . | . | o | . | . | . | . | . | . | . | x | o | . | . | . | . | . | . |
| c181c_025D2D No0025 | 3C120 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | . | o | . | . | . | . | . | . |
| c181c_028D2D No0028 | 3C120 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | . | o | . | . | . | . | . | . |
| c181c_031D2D No0031 | 3C120 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | . | o | . | . | . | . | . | . |
| c181c_034D2D No0034 | 3C120 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | . | o | . | . | . | . | . | . |
| c181c_037D2D No0037 | 3C84 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | . | o | . | . | . | . | . | . |
| c181c_040D2D No0040 | 3C120 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | . | o | . | . | . | . | . | . |
| c181c_043D2D No0043 | 3C111 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | . | o | . | . | . | . | . | . |
| c181c_046D2D No0046 | 3C120 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | . | o | . | . | . | . | . | . |
| c181c_047D2D No0047 | 3C111 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | . | o | . | . | . | . | . | . |
| c181c_050D2D No0050 | 3C120 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | . | o | . | . | . | . | . | . |
| c181c_053D2D No0053 | 3C111 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | . | o | . | . | . | . | . | . |
| c181c_056D2D No0056 | 3C120 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | . | o | . | . | . | . | . | . |
| c181c_057D2D No0057 | 3C111 | 3mm_RDBE | . | . | . | . | . | . | o | o | o | o | o | o | . | o | . | . | . | . | . | . |
| c181c_060D2D No0060 | 3C120 | 3mm_RDBE | . | . | . | . | . | . | o | o | o | o | o | o | . | o | . | . | . | . | . | . |
| c181c_063D2D No0063 | 3C111 | 3mm_RDBE | . | . | . | . | . | . | o | o | o | o | o | o | . | o | . | . | . | . | . | . |
| c181c_066D2D No0066 | 3C120 | 3mm_RDBE | . | . | . | . | . | . | . | o | o | o | o | o | . | o | . | . | . | . | . | . |
| c181c_067D2D No0067 | 3C120 | 3mm_RDBE | . | . | . | . | . | . | . | . | . | o | o | o | . | o | . | . | . | . | . | . |
| c181c_072D2D No0073 | M87 | 3mm_RDBE | . | o | . | . | o | o | o | o | o | . | o | . | o | . | . | . | . | . | . | . |
| c181c_090D2D No0095 | 3C279 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | . | o | o | o | o | . | . | . |
| c181c_091D2D No0096 | M87 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | o | o | 93 | 93 | o | . | . | . |
| c181c_093D2D No0099 | 3C273 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | o | o | 91 | 91 | o | . | . | . |
| c181c_094D2D No0100 | M87 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | o | o | o | o | o | . | . | . |
| c181c_097D2D No0103 | 3C279 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | . | o | o | o | o | . | . | . |
| c181c_098D2D No0104 | M87 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | o | o | o | o | o | . | . | . |
| c181c_100D2D No0107 | 3C273 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | o | o | o | o | o | . | . | . |
| c181c_101D2D No0108 | M87 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | o | o | o | o | o | . | . | . |
| c181c_103D2D No0111 | 3C279 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | . | o | o | o | o | . | . | . |
| c181c_104D2D No0112 | M87 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | o | o | o | o | o | . | . | . |
| c181c_107D2D No0115 | 3C273 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | o | o | o | o | o | . | . | . |
| c181c_108D2D No0116 | M87 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | o | o | o | o | o | . | . | . |
| c181c_110D2D No0118 | 3C279 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | . | o | o | o | o | . | . | . |
| c181c_111D2D No0119 | M87 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | o | o | 94 | 94 | o | . | . | . |
| c181c_113D2D No0122 | 3C273 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | o | o | o | o | o | . | . | . |
| c181c_114D2D No0123 | M87 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | o | o | 94 | 94 | o | . | . | . |
| c181c_117D2D No0126 | 3C279 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | . | o | o | o | o | . | . | . |
| c181c_118D2D No0127 | M87 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | o | o | o | o | o | . | . | . |
| c181c_120D2D No0130 | 3C273 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | . | o | . | . | o | . | . | . |
| c181c_121D2D No0131 | M87 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | o | o | . | . | o | . | . | . |
| c181c_123D2D No0134 | 3C279 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | . | o | . | . | o | . | . | . |
| c181c_124D2D No0135 | M87 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | o | o | . | . | o | . | . | . |
| c181c_127D2D No0138 | 3C273 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | . | o | . | . | o | . | . | . |
| c181c_129D2D No0139 | M87 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | o | o | . | . | o | . | . | . |
| c181c_131D2D No0142 | 3C279 | 3mm_RDBE | . | . | . | . | . | o | o | o | o | o | o | o | . | o | . | . | o | . | . | . |

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c181c_132D2D No0143      M87 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  o  o  .  .  o  .  .  .
c181c_134D2D No0145    3C273 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  .  o  .  .  o  .  .  .
c181c_135D2D No0146      M87 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  o  o  .  .  o  .  .  .
c181c_138D2D No0149    3C279 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  .  o  .  .  o  .  .  .
c181c_139D2D No0150      M87 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  .  o  .  .  .  .  .  .
c181c_141D2D No0152    3C273 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  .  o  .  .  .  .  .  .
c181c_142D2D No0153      M87 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  .  o  .  .  .  .  .  .
c181c_143D2D No0154      M87 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  .  o  .  .  .  .  .  .
c181c_145D2D No0156    3C279 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  .  o  .  .  .  .  .  .
c181c_146D2D No0157      M87 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  .  o  .  .  .  .  .  .
c181c_147D2D No0158      M87 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  .  o  .  .  .  .  .  .
c181c_150D2D No0161    3C273 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  .  o  .  .  .  .  .  .
c181c_151D2D No0162      M87 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  .  o  .  .  .  .  .  .
c181c_152D2D No0163      M87 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  .  o  .  .  .  .  .  .
c181c_155D2D No0166 0716+714 3mm_RDBE .  .  .  .  .  .  .  .  .  o  o  o  x  o  .  .  .  o  o  o
c181c_157D2D No0168 0716+714 3mm_RDBE .  .  .  .  .  .  .  .  .  o  o  o  x  o  .  .  .  o  o  o
c181c_173D2D No0184   CTA102 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  x  o  .  .  .  .  .  .
c181c_174D2D No0185  3C454.3 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  x  o  .  .  .  .  .  .
c181c_176D2D No0187   CTA102 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  x  o  .  .  .  .  .  .
c181c_178D2D No0189  3C454.3 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  x  o  .  .  .  .  .  .
c181c_180D2D No0191   CTA102 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  x  o  .  .  .  .  .  .
c181c_182D2D No0193  3C454.3 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  x  o  .  .  .  .  .  .
c181c_184D2D No0195   CTA102 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  x  o  .  .  .  .  .  .
c181c_186D2D No0197  3C454.3 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  x  o  .  .  .  .  .  .
c181c_188D2D No0199   CTA102 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  x  o  .  .  .  .  .  .
c181c_190D2D No0201  3C454.3 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  x  o  .  .  .  .  .  .
c181c_192D2D No0203   CTA102 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  x  o  .  .  .  .  .  .
c181c_194D2D No0205  3C454.3 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  x  o  .  .  .  .  .  .
c181c_196D2D No0207   CTA102 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  x  o  .  .  .  .  .  .
c181c_198D2D No0209  3C454.3 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  x  o  .  .  .  .  .  .
c181c_200D2D No0211   CTA102 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  .  o  .  .  .  .  .  .
c181c_202D2D No0213  3C454.3 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  .  o  .  .  .  .  .  .
c181c_204D2D No0215   CTA102 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  .  o  .  .  .  .  .  .
c181c_206D2D No0217  3C454.3 3mm_RDBE .  .  .  .  .  o  o  o  o  o  o  o  .  o  .  .  .  .  .  .
```

**c181c_setup2.fits:**

```
                                EF ON PV YS MH NL FD PT LA OV KP BR GL MK AA AA GB KY KU KT
c181c_003D2D No0003     3C84 3mm_RDBE o  o  o  o  o  o  o  o  o  o  o  o  o  x  .  .  .  .  .  .  .
c181c_004D2D No0004     3C84 3mm_RDBE o  o  o  o  o  o  o  o  o  o  o  o  o  x  .  .  .  .  .  .  .
c181c_005D2D No0005     3C84 3mm_RDBE o  o  o  o  o  o  o  o  o  o  o  o  o  x  .  .  .  .  .  .  .
c181c_006D2D No0006    3C111 3mm_RDBE o  o  o  o  o  o  o  o  o  o  o  o  o  x  .  .  .  .  .  .  .
```

**c181c_setup3.fits:**

```
                                EF ON PV YS MH NL FD PT LA OV KP BR GL MK AA AA GB KY KU KT
c181c_007D2D No0007     3C84 3mm_RDBE o  o  o  o  o  o  o  o  o  o  o  o  o  x  .  .  .  .  .  .  .
c181c_008D2D No0008    3C111 3mm_RDBE o  o  o  o  o  o  o  o  o  o  o  o  o  x  .  .  .  .  .  .  .
```

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| c181c_009D2D No0009 | 3C111 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | o | o | o | x | . | . | . | . | . | . | . |
| c181c_010D2D No0010 | 3C84 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | o | o | o | x | . | . | . | . | . | . | . |
| c181c_011D2D No0011 | 3C111 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | o | o | o | x | . | . | . | . | . | . | . |
| c181c_012D2D No0012 | 3C120 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | o | o | . | x | . | . | . | . | . | . | . |
| c181c_013D2D No0013 | 3C111 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | o | o | o | x | . | . | . | . | . | . | . |
| c181c_014D2D No0014 | 3C120 | 3mm_RDBE | o | o | o | 33 | o | o | o | o | o | o | o | o | x | . | . | . | . | . | . | . |
| c181c_015D2D No0015 | 3C111 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | o | o | o | x | . | . | . | . | . | . | . |
| c181c_016D2D No0016 | 3C120 | 3mm_RDBE | o | o | o | o | . | o | o | o | o | o | o | o | x | . | . | . | . | . | . | . |
| c181c_017D2D No0017 | 3C84 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | o | o | o | x | o | . | . | . | . | . | . |
| c181c_018D2D No0018 | 3C120 | 3mm_RDBE | o | o | o | o | . | o | o | o | o | o | o | o | x | . | . | . | . | . | . | . |
| c181c_019D2D No0019 | 3C111 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | o | o | o | x | o | . | . | . | . | . | . |
| c181c_020D2D No0020 | 3C120 | 3mm_RDBE | o | o | o | o | . | o | o | o | o | o | o | o | x | . | . | . | . | . | . | . |
| c181c_021D2D No0021 | 3C111 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | o | o | o | x | o | . | . | . | . | . | . |
| c181c_022D2D No0022 | 3C120 | 3mm_RDBE | . | . | o | o | . | o | o | o | o | o | o | o | . | . | . | . | . | . | . | . |
| c181c_024D2D No0024 | 3C84 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | o | o | o | x | o | . | . | . | . | . | . |
| c181c_026D2D No0026 | 3C111 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | x | . | . | . | . | . | . | . |
| c181c_027D2D No0027 | 3C111 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | o | o | o | x | o | . | . | . | . | . | . |
| c181c_029D2D No0029 | 3C111 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | x | . | . | . | . | . | . | . |
| c181c_030D2D No0030 | 3C111 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | o | o | o | o | o | . | . | . | . | . | . |
| c181c_032D2D No0032 | 3C111 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | o | . | . | . | . | . | . | . |
| c181c_033D2D No0033 | 3C111 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | o | o | o | o | o | . | . | . | . | . | . |

**c181c_setup4.fits:**

| | | | EF | ON | PV | YS | MH | NL | FD | PT | LA | OV | KP | BR | GL | MK | AA | AA | GB | KY | KU | KT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| c181c_035D2D No0035 | 3C273 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| c181c_036D2D No0036 | M87 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | o | . | . | . | . | . | . | . |
| c181c_038D2D No0038 | 3C279 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| c181c_039D2D No0039 | M87 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| c181c_041D2D No0041 | 3C273 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| c181c_042D2D No0042 | M87 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | o | . | . | . | . | . | . | . |
| c181c_044D2D No0044 | 3C273 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| c181c_045D2D No0045 | M87 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | o | . | . | . | . | . | . | . |
| c181c_048D2D No0048 | 3C279 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| c181c_049D2D No0049 | M87 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | o | . | . | . | . | . | . | . |
| c181c_051D2D No0051 | 3C273 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | o | . | o | o | . | . | . | . |
| c181c_052D2D No0052 | M87 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | o | . | 94 | 94 | . | . | . | . |
| c181c_054D2D No0054 | 3C279 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | . | . | o | o | . | . | . | . |
| c181c_055D2D No0055 | M87 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | o | . | o | o | . | . | . | . |
| c181c_058D2D No0058 | 3C273 | 3mm_RDBE | o | o | o | o | o | o | . | . | . | . | . | . | o | . | o | o | . | . | . | . |
| c181c_059D2D No0059 | M87 | 3mm_RDBE | o | o | o | o | o | o | . | . | . | . | . | . | o | . | o | o | . | . | . | . |
| c181c_061D2D No0061 | 3C279 | 3mm_RDBE | o | o | o | o | o | o | . | . | . | . | . | . | . | . | o | o | . | . | . | . |
| c181c_062D2D No0062 | M87 | 3mm_RDBE | o | o | o | o | o | o | . | . | . | . | . | . | o | . | 94 | 94 | . | . | . | . |
| c181c_064D2D No0064 | 3C273 | 3mm_RDBE | o | o | o | o | o | o | o | . | . | . | . | . | o | . | x | x | . | . | . | . |
| c181c_065D2D No0065 | M87 | 3mm_RDBE | o | o | o | o | o | o | o | . | . | . | . | . | o | . | o | o | . | . | . | . |
| c181c_068D2D No0068 | 3C273 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | . | . | . | o | . | o | o | . | . | . | . |
| c181c_069D2D No0069 | M87 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | . | . | . | o | . | o | o | . | . | . | . |
| c181c_070D2D No0071 | 3C273 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | . | o | . | o | . | o | o | o | . | . | . |
| c181c_071D2D No0072 | M87 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | . | o | . | o | . | 94 | 94 | o | . | . | . |

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c181c_073D2D No0075    3C279 3mm_RDBE o  o  o  o  .  o  o  o  o  .  o  .  .  .  o  o  o  .  .  .
c181c_074D2D No0076      M87 3mm_RDBE o  o  o  o  .  o  o  o  o  .  o  .  o  .  o  o  o  .  .  .
c181c_075D2D No0077    3C273 3mm_RDBE o  o  o  o  o  o  o  o  o  o  o  o  o  .  o  o  o  .  .  .
c181c_076D2D No0078      M87 3mm_RDBE o  o  o  o  o  o  o  o  o  o  o  o  o  .  o  o  o  .  .  .
c181c_077D2D No0079    3C279 3mm_RDBE o  o  o  o  .  o  o  o  o  o  o  o  .  .  o  o  o  .  .  .
c181c_078D2D No0080      M87 3mm_RDBE o  o  o  o  .  o  o  o  o  o  o  o  o  .  o  o  o  .  .  .
c181c_079D2D No0082    3C273 3mm_RDBE o  o  o  o  .  o  o  x  o  o  o  o  o  .  o  o  o  .  .  .
c181c_080D2D No0083      M87 3mm_RDBE o  o  o  o  .  o  o  x  o  o  o  o  o  .  o  o  o  .  .  .
c181c_081D2D No0084    3C273 3mm_RDBE o  .  o  o  .  o  o  x  o  o  o  o  o  .  o  o  o  .  .  .
c181c_082D2D No0085      M87 3mm_RDBE o  .  o  o  .  o  o  x  o  o  o  o  o  .  o  o  o  .  .  .
c181c_083D2D No0086      M87 3mm_RDBE .  .  .  o  .  o  o  x  o  o  o  o  o  .  o  o  .  .  .  .
c181c_084D2D No0088    3C279 3mm_RDBE .  .  o  o  .  o  o  x  o  o  o  o  .  .  o  o  o  .  .  .
c181c_085D2D No0089      M87 3mm_RDBE .  .  o  o  .  o  o  x  o  o  o  o  o  .  o  o  o  .  .  .
c181c_086D2D No0091    3C273 3mm_RDBE .  .  o  o  .  o  o  x  o  o  o  o  o  x  91 91 o  .  .  .
c181c_087D2D No0092      M87 3mm_RDBE .  .  o  o  .  o  o  x  o  o  o  o  o  x  x  x  o  .  .  .
c181c_088D2D No0093    3C273 3mm_RDBE .  .  o  o  .  o  o  x  o  o  o  o  o  x  o  o  o  .  .  .
c181c_089D2D No0094      M87 3mm_RDBE .  .  o  o  .  o  o  16 o  o  o  o  o  16 o  o  o  .  .  .
c181c_092D2D No0097 0716+714 3mm_RDBE o  o  o  o  o  .  .  .  .  .  .  .  .  .  .  .  .  o  o  o
c181c_095D2D No0101 0836+710 3mm_RDBE o  o  o  o  o  .  .  .  .  .  .  .  .  .  .  .  .  o  o  o
c181c_096D2D No0102 0954+658 3mm_RDBE o  o  o  o  o  .  .  .  .  .  .  .  .  .  .  .  .  o  o  o
c181c_099D2D No0106 0716+714 3mm_RDBE o  o  o  o  o  .  .  .  .  .  .  .  .  .  .  .  .  o  o  o
c181c_102D2D No0109 0836+710 3mm_RDBE o  o  o  o  o  .  .  .  .  .  .  .  .  .  .  .  .  o  o  o
c181c_105D2D No0113 0954+658 3mm_RDBE o  o  o  o  o  .  .  .  .  .  .  .  .  .  .  .  .  o  o  o
c181c_106D2D No0114 0716+714 3mm_RDBE o  o  o  o  o  .  .  .  .  .  .  .  .  .  .  .  .  o  o  o
c181c_109D2D No0117 0836+710 3mm_RDBE o  o  o  o  o  .  .  .  .  .  .  .  .  .  .  .  .  o  o  o
c181c_112D2D No0120 0954+658 3mm_RDBE o  o  o  o  o  .  .  .  .  .  .  .  .  .  .  .  .  o  o  o
c181c_115D2D No0124 0716+714 3mm_RDBE o  o  o  o  o  .  .  .  .  .  .  .  .  .  .  .  .  o  o  o
c181c_116D2D No0125 0836+710 3mm_RDBE o  o  o  o  o  .  .  .  .  .  .  .  .  .  .  .  .  o  o  o
c181c_119D2D No0128 0954+658 3mm_RDBE o  o  o  o  o  .  .  .  .  .  .  .  .  .  .  .  .  o  o  o
c181c_122D2D No0132 0716+714 3mm_RDBE o  o  o  o  o  .  .  .  .  .  .  .  .  .  .  .  .  o  o  o
c181c_125D2D No0136 0836+710 3mm_RDBE o  o  o  o  o  .  .  .  .  .  .  .  .  .  .  .  .  o  o  o
c181c_126D2D No0137 0954+658 3mm_RDBE o  o  o  o  o  .  .  .  .  .  .  .  .  .  .  .  .  o  o  o
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**c181c_setup5.fits:**

```
                                  EF ON PV YS MH NL FD PT LA OV KP BR GL MK AA AA GB KY KU KT
c181c_130D2D No0140 0716+714 3mm_RDBE o  o  o  o  14 .  .  .  .  .  .  .  .  .  .  .  .  o  o  o
c181c_133D2D No0144 0836+710 3mm_RDBE o  o  o  o  o  .  .  .  .  .  .  .  .  .  .  .  .  o  o  o
c181c_136D2D No0147 0954+658 3mm_RDBE o  o  o  o  o  .  .  .  .  .  .  .  .  .  .  .  .  o  o  o
c181c_137D2D No0148 0716+714 3mm_RDBE o  o  o  o  o  .  .  .  .  .  .  .  .  .  .  .  .  o  o  o
c181c_140D2D No0151 0836+710 3mm_RDBE o  o  o  o  o  .  .  .  .  .  .  .  x  .  .  .  .  o  o  o
c181c_144D2D No0155 0954+658 3mm_RDBE o  o  o  o  o  .  .  .  .  .  .  .  x  .  .  .  .  o  o  o
c181c_148D2D No0159 0716+714 3mm_RDBE o  o  o  o  o  .  .  .  .  .  .  .  x  .  .  .  .  o  o  o
c181c_149D2D No0160 0836+710 3mm_RDBE o  o  o  o  o  .  .  .  .  .  .  .  x  .  .  .  .  o  o  o
c181c_153D2D No0164 0954+658 3mm_RDBE o  o  o  o  o  .  .  .  .  .  .  .  x  .  .  .  .  o  o  o
```

**c181c_setup6.fits:**

| | | | EF | ON | PV | YS | MH | NL | FD | PT | LA | OV | KP | BR | GL | MK | AA | AA | GB | KY | KU | KT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| c181c_154D2D No0165 | 3C454.3 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | . | . | . | . | . | . | . | . | . | . | . |
| c181c_156D2D No0167 | 3C454.3 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | . | . | . | . | . | . | . | . | . | . | . |

**c181c_setup7.fits:**

| | | | EF | ON | PV | YS | MH | NL | FD | PT | LA | OV | KP | BR | GL | MK | AA | AA | GB | KY | KU | KT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| c181c_158D2D No0169 | 3C454.3 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | o | o | o | x | . | . | . | . | . | . | . |
| c181c_159D2D No0170 | CTA102 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | o | o | o | x | . | . | . | . | . | . | . |
| c181c_160D2D No0171 | 3C454.3 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | o | o | o | x | . | . | . | . | . | . | . |

**c181c_setup8.fits:**

| | | | EF | ON | PV | YS | MH | NL | FD | PT | LA | OV | KP | BR | GL | MK | AA | AA | GB | KY | KU | KT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| c181c_161D2D No0172 | CTA102 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | o | o | o | x | . | . | . | . | . | . | . |
| c181c_162D2D No0173 | 3C454.3 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | o | o | o | x | . | . | . | . | . | . | . |
| c181c_163D2D No0174 | CTA102 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | o | o | o | x | . | . | . | . | . | . | . |
| c181c_164D2D No0175 | 3C454.3 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | o | o | o | x | . | . | . | . | . | . | . |
| c181c_165D2D No0176 | CTA102 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | o | o | o | x | . | . | . | . | . | . | . |
| c181c_166D2D No0177 | 3C454.3 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | o | o | o | x | . | . | . | . | . | . | . |
| c181c_167D2D No0178 | CTA102 | 3mm_RDBE | o | o | o | o | . | o | o | o | o | o | o | o | x | . | . | . | . | . | . | . |
| c181c_168D2D No0179 | 3C454.3 | 3mm_RDBE | o | o | o | o | o | o | o | o | o | o | o | o | x | . | . | . | . | . | . | . |
| c181c_169D2D No0180 | CTA102 | 3mm_RDBE | o | o | o | o | . | o | o | o | o | o | o | o | x | o | . | . | . | . | . | . |
| c181c_170D2D No0181 | 3C454.3 | 3mm_RDBE | o | o | o | o | . | o | o | o | o | o | o | o | x | o | . | . | . | . | . | . |
| c181c_171D2D No0182 | CTA102 | 3mm_RDBE | . | . | o | o | . | o | o | o | o | o | o | o | x | o | . | . | . | . | . | . |
| c181c_172D2D No0183 | 3C454.3 | 3mm_RDBE | o | o | o | o | . | o | o | o | o | o | o | o | x | o | . | . | . | . | . | . |
| c181c_175D2D No0186 | 0716+714 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | . | . | . | . | . | o | o | o |
| c181c_177D2D No0188 | 0836+710 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | . | . | . | . | . | o | o | o |
| c181c_179D2D No0190 | 0954+658 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | . | . | . | . | . | o | o | o |
| c181c_181D2D No0192 | 0716+714 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | . | . | . | . | . | o | o | o |
| c181c_183D2D No0194 | 0836+710 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | . | . | . | . | . | o | o | o |
| c181c_185D2D No0196 | 0954+658 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | . | . | . | . | . | o | o | o |
| c181c_187D2D No0198 | 0716+714 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | . | . | . | . | . | o | o | o |
| c181c_189D2D No0200 | 0836+710 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | . | . | . | . | . | o | o | o |
| c181c_191D2D No0202 | 0954+658 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | . | . | . | . | . | o | o | o |
| c181c_193D2D No0204 | 0716+714 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | . | . | . | . | . | o | o | o |
| c181c_195D2D No0206 | 0836+710 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | . | . | . | . | . | o | o | o |
| c181c_197D2D No0208 | 0954+658 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | . | . | . | . | . | o | o | o |
| c181c_199D2D No0210 | 0716+714 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | . | . | . | . | . | o | o | o |
| c181c_201D2D No0212 | 0836+710 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | x | . | . | . | . | o | o | o |
| c181c_203D2D No0214 | 0954+658 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | x | . | . | . | . | o | o | o |
| c181c_205D2D No0216 | 0716+714 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | x | . | . | . | . | o | o | o |
| c181c_207D2D No0218 | 0954+658 | 3mm_RDBE | o | o | o | o | o | . | . | . | . | . | . | . | x | . | . | . | . | o | o | o |