# FILE FORMAT OF SOFTWARE CORRELATOR OUTPUT

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Note: Differences from previous version of FORMAT 7 is displayed with underline.

| LINE# | CONTENTS |
|---|---|
| 1 | "#FORMAT7" Fringe stopping information — description of Format (fixed text) and fringe stopping information with stopped frequency in video and etc. |
| 2 | Host name of processing PC |
| 3 | Experimental Code |
| 4 | Scan # (starting from 1) |
| 5 | Baseline ID |
| 6 | Processing Date and Time (year, total day, hour, min, sec, month, day of month) |
| 7 | Station 1 name |
| 8 | Coordinates (x,y,z) of Station 1 (m) |
| 9 | Observation data file name of Station 1 |
| 10 | Station 2 name |
| 11 | Coordinates (x,y,z) of Station 2 (m) |
| 12 | Observation data file name of Station 2 |
| 13 | Radio source name |
| 14 | Right Ascencion of source (hour, min, sec) |
| 15 | Declination of source (deg min sec) |
| 16 | Epoch of source position |
| 17 | Greenwitch apparent sidereal time at Processing Reference Time (hour, min, sec) |
| 18 | Start time of scan (year, total day, hour, min, sec) |
| 19 | Stop time of scan (year, total day, hour, min, sec) |
| 20 | Processing Reference Time (PRT) (year, total day, hour, min, sec) |
| 21 | Apriori delay ($\tau$) at PRT (sec) |
| 22 | Apriori delay rate ($\dot{\tau}$) at PRT (s/s) |
| 23 | Apriori $\ddot{\tau}$ at PRT (s/s$^2$) |
| 24 | Apriori $d\ddot{\tau}/dt$ at PRT (s/s$^3$) |
| 25 | Y-clock offset(to X :sec) , X-clock offset to UTC (sec) |
| 26 | Clock rate(s/s) |
| 27 | UT1-UTC (sec) Wob X (arcsec) Wob Y (arcsec) — Earth Orientation Parameters |
| 28 | # of channels [N] (1 or 4) |
| 29 | CH-1 RF frequency(Hz), PCAL frequency (Hz), sideband information (1:USB, 0:LSB) |
| | ... |
| . | CH-N RF frequency (Hz), PCAL frequency (Hz), sideband information |
| 29+N | Sampling frequency (Hz) |
| 30+N | Number of A/D bits (1, 2, 4, or 8) |
| 31+N | Parameter Period [PP] (sec) |
| 32+N | Total integration time (sec) |
| 33+N | # of delay lags [L] |
| 34+N | # of PP [K] |

| | |
|---|---|
| 35+N | "PP# 1" — start of PP# 1 results |
| 36+N | lag index#, ch index#, real part of correlation, imaginary part of correlation |
| repeated N×L times | |
| 36+N(1+L) | "VALIDITY FLAG, FRACTIONAL BIT and FRINGE PHASE (APRIORI)" — fixed text |
| 37+N(1+L) | vflag dtime ibit fbit frphase1 [frphase2 frphase3 frphase4]<br>where<br>vflag – validity flag (1: valid, 0: failure in 1PP before results)<br>dtime – seconds in day at BOPP (BOPP: begin of PP)<br>ibit – integer number of delay in sampling period unit at BOPP<br>fbit – fractional part of delay in sampling period unit at BOPP<br>frphase1 – apriori fringe phase of CH 1 at BOPP (deg)<br>frphase2 – apriori fringe phase of CH 2 at BOPP (deg)<br>frphase3 – apriori fringe phase of CH 3 at BOPP (deg)<br>frphase4 – apriori fringe phase of CH 4 at BOPP (deg) |
| 38+N(1+L) | "X-PCAL" — fixed text to declare station 1 PCAL(phase calibration) information |
| 39+N(1+L) | m ns PCALR PCALI AMP PHASE<br>where<br>m – channel index<br>ns – number of samples used for PCAL detection<br>PCALR – real part of PCAL detection<br>PCALI – imaginary part of PCAL detection<br>AMP – PCAL amplitude<br>PHASE – PCAL phase (deg) |
| repeated N (# of CH) times | |
| 39+N(2+L) | "Y-PCAL" — fixed text to declare station 2 PCAL information |
| 40+N(2+L) | m ns PCALR PCALI AMP PHASE — for Station 2 |
| repeated N (# of CH) times | |
| 40+N(3+L) | "PP# 2" — start of PP# 2 results |
| repeated K (total # of PP) times | |
| ... | |