```
                          ===========
                          LEVEL2 data
                                    *
                           (R-3.00)
                          ===========
```

LEVEL2 nt-uple structure:

```
  ****************************************************************
 * Ntuple ID = 22     Entries = 4519      LEVEL2                    *
 ****************************************************************
 * Var numb * Type * Packing *    Range     *  Block    *  Name    *
 ****************************************************************
 *      1   * L*4  *    1    *              * GENERAL  * GOOD2
 *      2   * I*4  *         *              * GENERAL  * NEV2
 *      3   * I*4  *         *              * GENERAL  * WHIC_CALIB
 *      4   * I*4  *         *              * GENERAL  * SWCODE
 *      5   * L*4  *    1    *              * GENERAL  * CRC(12)
 *      1   * U*4  *    6    * [0,50]       * CPU      * PKT_TYPE
 *      2   * I*4  *         *              * CPU      * PKT_NUM
 *      3   * I*4  *         *              * CPU      * OBT
 *      4   * L*4  *    1    *              * CPU      * CPU_CRC
 *      1   * I*4  *         * [0,50]       * TRACKS   * NTRK
 *      2   * U*4  *    6    * [0,50]       * TRACKS   * IMAGE(NTRK)
 *      3   * R*4  *         *              * TRACKS   * XM(6,NTRK)
 *      4   * R*4  *         *              * TRACKS   * YM(6,NTRK)
 *      5   * R*4  *         *              * TRACKS   * ZM(6,NTRK)
 *      6   * R*4  *         *              * TRACKS   * RESX(6,NTRK)
 *      7   * R*4  *         *              * TRACKS   * RESY(6,NTRK)
 *      8   * R*4  *         *              * TRACKS   * AL(5,NTRK)
 *      9   * R*4  *         *              * TRACKS   * COVAL(5,5,NTRK)
 *     10   * R*4  *         *              * TRACKS   * CHI2(NTRK)
 *     11   * U*4  *    1    * [0,1]        * TRACKS   * XGOOD(6,NTRK)
 *     12   * U*4  *    1    * [0,1]        * TRACKS   * YGOOD(6,NTRK)
 *     13   * R*4  *         *              * TRACKS   * XV(6,NTRK)
 *     14   * R*4  *         *              * TRACKS   * YV(6,NTRK)
 *     15   * R*4  *         *              * TRACKS   * ZV(6,NTRK)
 *     16   * R*4  *         *              * TRACKS   * AXV(6,NTRK)
 *     17   * R*4  *         *              * TRACKS   * AYV(6,NTRK)
 *     18   * R*4  *         *              * TRACKS   * DEDX_X(6,NTRK)
 *     19   * R*4  *         *              * TRACKS   * DEDX_Y(6,NTRK)
 *      1   * I*4  *         * [0,500]      * SINGLETX * NCLSX
 *      2   * I*4  *         *              * SINGLETX * PLANEX(NCLSX)
 *      3   * R*4  *         *              * SINGLETX * XS(NCLSX)
 *      4   * R*4  *         *              * SINGLETX * SGNLXS(NCLSX)
 *      5   * I*4  *         * [0,500]      * SINGLETY * NCLSY
 *      6   * I*4  *         *              * SINGLETY * PLANEY(NCLSY)
 *      7   * R*4  *         *              * SINGLETY * YS(NCLSY)
 *      8   * R*4  *         *              * SINGLETY * SGNLYS(NCLSY)
 ****************************************************************
 *  Block   *  Entries  * Unpacked * Packed *   Packing Factor    *
 ****************************************************************
 * GENERAL  *  4519     * 16       * 13     *       1.231        *
 * CPU      *  4519     * 16       * 9      *       1.778        *
 * TRACKS   *  4519     * 23252    * Var.   *    Variable        *
 * SINGLETS *  4519     * 12008    * Var.   *    Variable        *
 * Total    *    ---    * 35292    * Var.   *    Variable        *
 ****************************************************************
 * Blocks = 4           Variables = 36      Max. Columns = 8823  *
 ****************************************************************
```

The GENERAL block stores the global event flag GOOD2, the event counter NEV2,
a variable that relates each event to the calibration parameters (WHICH_CALIB)
the version number of the software (SWCODE) and the result of the crc check for
the 12 views of th etracking system (CRC(12)).
If WHICH_CALIB=0 (missing calibration) then GOOD2=.FALSE.

The CPU block stores the event tag extracted from the physics-packet
CPU-header (PKT_TYPE, PKT_NUM, OBT, CPU_CRC) .

The TRACKS block stores track information:

- NTRK – number of identified tracks (in case the Y ambiguity is not solved both the track images are stored)
- IMAGE(NTRK) – ID of the track image (=0 if no image)
- XM(6,NTRK) – measured coordinates associated to the track
- YM(6,NTRK) – ’
- ZM(6,NTRK) – ’
- RESX(6,NTRK) – spatial resolution associated to each coordinate
- RESY(6,NTRK) – ’
- AL(5,NTRK) – TRACK PARAMETERS: X0,Y0,sin(THETA0),PHI0,DEFLECTION
- COVAL(5,5,NTRK) – Variance/covariance matrix of parameters
- CHI2(NTRK) – reduced chi^2 of the track
- XGOOD(6,NTRK) – flag indicating if a plane was included in the track fitting
- YGOOD(6,NTRK) – ’
- XV(6,NTRK) – calculated coordinates
- YV(6,NTRK) – ’
- ZV(6,NTRK) – ’
- AXV(6,NTRK) – calculated angles
- AYV(6,NTRK) – ’
- DEDX_X(6,NTRK) – energy release in MIP, scaled to 300 microns, for x clusters
- DEDX_Y(6,NTRK) – energy release in MIP, scaled to 300 microns, for y clusters

The SINGLETS block stores information about those clusters not associated with
any track:

- NCLSX – number of singlets on the x views
- PLANEX(NCLSX) – plane which the i-th x-singlet belong to
- XS(NCLSX) – coordinate
- SGNLXS(NCLSX) – signal in MIP (not scaled)
- NCLSY – number of singlets on the y views
- PLANEY(NCLSY) – plane which the i-th y-singlet belong to
- YS(NCLSY) – coordinate
- SGNLYS(NCLSY) – signal in MIP (not scaled)