

New in StripAlign 2.21 - XML tagged option file

```
<opt soft="STRIPALIGN 2.21 220421 [0SX64]">

<!-- Input Tree -->

<flight id="test">
  <input ch="0" bore="0 0 +14">
    $/*2224050_CH1*.laz
  </input>
  <input ch="1" bore="0 0 -14">
    $/*2224050_CH2*.laz
  </input>
  <po time="1">
    $/*FullTrj.txt
  </po>
</flight>

<!-- Global Options -->

align
$=Data/Test/Dataset_input
0=$/test221b
h_log
h_range=1
p_inv

</opt>
```

Simpler option file, equivalent to the one above (no longer XML compliant but fully compatible with StripAlign):
no quotes, no global <opt> tag, no comments (indentation recommended but optional), opening and closing tag allowed on same line for a more compact file (spacing is optional).

```
<flight id=test>
  <input ch=0 bore=0,0,+14> $/*2224050_CH1*.laz </input>
  <input ch=1 bore=0,0,-14> $/*2224050_CH2*.laz </input>
  <po time=1> $/*FullTrj.txt </po>
</flight>

align
$=Data/Test/Dataset_input
0=$/test221b
h_log
h_range=1
p_inv
```

Usage

stripalign -opt file_name.xml [options]

Extension does not need to be .xml (can be .txt or other). Full path name must be provided if file not in current directory.

Can be combined with regular command line options. Most useful for **complex input** (several flights, some multichannel, some spllit, some reference data).

For example, input defined by option file, then processing command and related options in the command line for a more interactive experience (like testing various -corr options).

Syntax

Options not enclosed between tags are treated the same way as in previous versions when using an option file. Only one option per line. Arguments are not always required. (refer to manual for more info)

Syntax: for each line, either single tag, or <tag> text </tag>

Tags: <flight> <input> <map> <bore> <po> <ref> <opt>

Attributes: standard XML syntax, optional quotes if no spaces in value string, vector input can be comma delimited.

Meaning: attributes are options (boresight, time format...) and values are arguments (angles, time type...). They are not required and always have default values.

Text content between tags: one item per line (file name or wildcards, pair option=argument, or data)

Comments: XML comments, or for convenience, lines starting with [, / or # are ignored.

<flight>

Contains all the information defining a separate flight (swaths, at least one channel, and PO data)

Attributes:

- **id** (unused, for convenience only)

<input>

Contains the swath file names, and defines separate channels within a single flight when used more than once

Always enclosed in <flight> and can be used multiple times

Attributes:

- **id** (unused, for convenience only)
- **ch** (unused but checked, must be in order 0 1 2 etc., for convenience only)
- **bore** (large boresight rotation, last 3 angles in file entered with option -mount) - in deg, format Rx,Ry,Rz or "Rx Ry Rz"
- **split** (if present, specify the split type, refer to manual for more info)
- **n** (use only with split, specify the number of channels to split into), in [2,4]

<map>

Defines a channel map (or refers to a channel map file)

Always enclosed in <input> and only used with split

Format: source_ch target_ch (as many lines as needed)

Attributes:

- **file** (use 1 if map file used instead of integer pair list, default 0)

<bore>

Defines a boresight angle table (or refers to a boresight file)

Always enclosed in <input> and only used with split

Format: Rx Ry Rz (one line per channel, eg. 2 lines for n=2)

Attributes:

- **file** (use 1 if boresight file used instead of boresight angles list, default 0)

<po>

Contains the PO file names, required only for some commands

Always enclosed in <flight> and only one allowed per flight

Attributes:

- **time** (see option -A or -po_time) - in [0,10], default 0
- **gps_date** (see option -gps_date) - format YYYY-MM-DD or YYYY/MM/DD
- **geo** (see option -G or -po_geo) - in [0,2], 0 projected, 1 geodetic, 2 ECEF, default depends on format
- **parse** (see option -po_parse) - parse string, default txyzwpk
- **rad** (see option -po_rad) - default 0 (deg)
- **att** (see option -po_att) - in [0,1], 1 for attitude reconstruction, 2 for sbet ignore wander, default 0 (original)
- **imu** (IMU rotation, first 3 angles in file entered with option -mount) - in deg, format Rx,Ry,Rz or "Rx Ry Rz"

<ref>

Contains the swaths or tiles to be used as reference data (no PO needed)

Only one allowed per file

Attributes:

- **id** (unused, for convenience only)

<opt>

Root tag, only one allowed per file, contains all other tags for XML compatibility, optional for StripAlign

Attributes:

- any (unused, for convenience only)

Examples

These are examples of input only (without commands or processing options), assuming the input, output and temp. directories are already defined.

Riegl 1560 dual channel

```
<flight>
  <input bore=0,0,+14> *Channel 1*.laz </input>
  <input bore=0,0,-14> *Channel 2*.laz </input>
  <po> *.out </po>
</flight>
```

Leica ALS80 split using scan direction

```
<flight>
  <input split=sd n=2> *.las </input>
  <po> *.sol </po>
</flight>
```

2 missions with custom PO format and reference data

```
<flight>
  <input > mission1_dir\*.las </input>
  <po time=10 gps_date=2022-03-17 imu=0,0,180> mission1_dir\sbt*.out </po>
</flight>
<flight>
  <input > mission2_dir\*.laz </input>
  <po time=1 rad=1 geo=2 parse=t.yzkpw> mission2_dir\traj*.txt </po>
</flight>
<ref>
  missionA_dir\*.laz
  missionB_dir\*.laz
</ref>
```

Multiple missions, dual channel, split, simple, reference

```
<flight>
  <input bore=0,0,+14> missionA_dir\*Channel 1*.laz </input>
  <input bore=0,0,-14> missionA_dir\*Channel 2*.laz </input>
  <po> missionA_dir\*.out </po>
</flight>
<flight>
  <input bore=0,0,+14> missionB_dir\*Channel 1*.laz </input>
  <input bore=0,0,-14> missionB_dir\*Channel 2*.laz </input>
  <po> missionB_dir\*.out </po>
</flight>
<flight>
  <input split=sd n=2> missionC_dir\*.las </input>
  <po> missionC_dir\*.sol </po>
</flight>
<flight>
  <input> missionD_dir\*.laz </input>
  <po time=4> missionD_dir\*.txt </po>
</flight>
<ref> ref_tiles_dir\*.laz </ref>
```

Single mission, explicit file list

```
<flight>
  <input>
    L004-1-SL014590-S1-C1_r.laz
    L005-1-SL014590-S1-C1_r.laz
    L006-1-SL014590-S1-C1_r.laz
  </input>
  <po att=2 parse=t...xyzwpk>
    L004-traj.txt
    L005-traj.txt
    L006-traj.txt
  </po>
</flight>
```

VUX-120 split using LAS channel attribute, explicit map and bore list

```
<flight>
  <input split=ch n=3>
    *.laz
    <map>
      0 1
      1 0
      2 2
    </map>
    <bore>
      0 0 0
      0 -10 0
      0 +10 0
    </bore>
  </input>
  <po> *.out </po>
</flight>
```