

New Features in TerraMatch

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Version 006.xxx

- Released at start of January 2006
- Requires new license keys
- All applications

Various improvements

- *Find Match* reports if trajectories do not match points
- *Apply Correction* gives a report when running on a project
- Copies project file together with block files when writing results to another directory
- Support for project block files residing in different directories

Faster dz per flightline solution

- Specific routine in *Find Match* for solving **Z shift** with **Solve for** set to **Individual lines**
- Makes only one round of observations
- Makes it practical to run on a large project using all ground points

Find match

Use: Project points

Laser project: C:\match\laser\match.prj Browse...

Trajectory dir: c:\match\trajectory\ Browse...

Correct: All flightlines

Known points: Browse...

Use classes

| Use classes | Weight |
|---------------------|--------|
| 1 Default | |
| 2 Ground | Normal |
| 3 Low vegetation | |
| 4 Medium vegetation | |
| 5 High vegetation | |
| 6 Building | |

Select all

Deselect all

Observe every: 1 th point

Use intensity

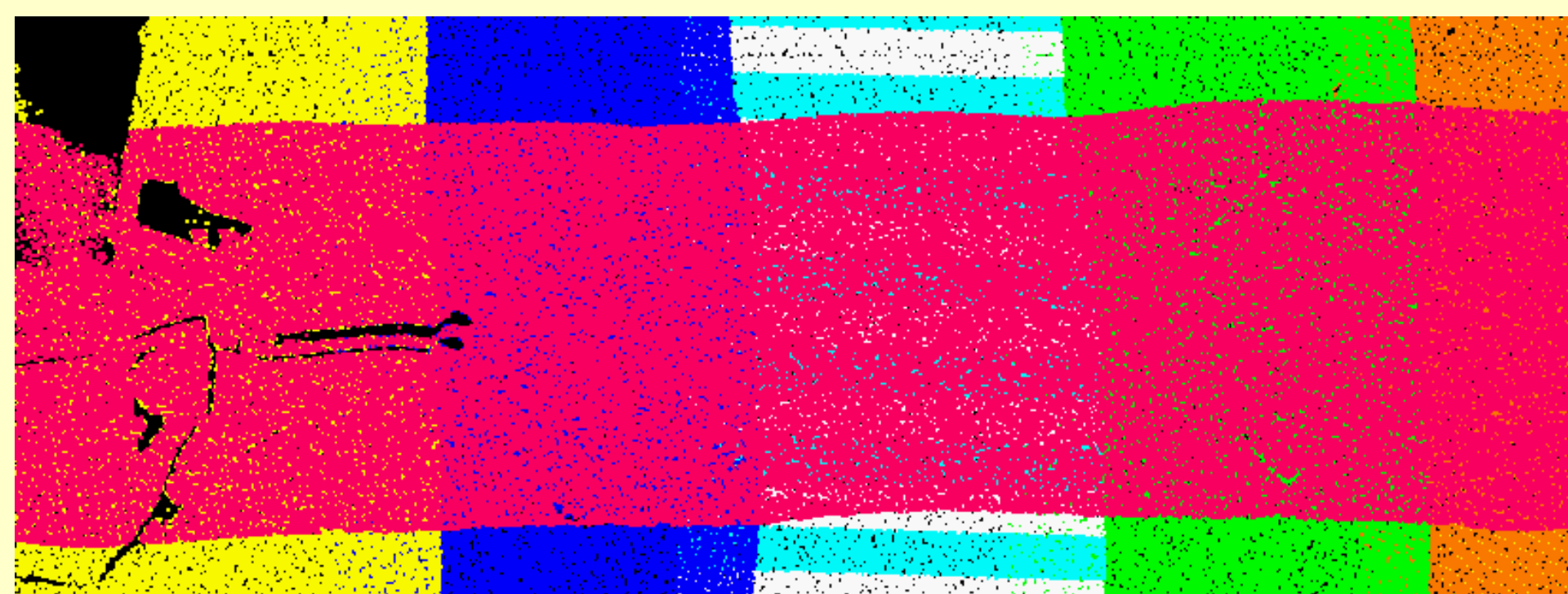
Solve for: Individual lines

| | |
|---|---|
| <input type="checkbox"/> Easting shift | <input type="checkbox"/> Easting drift |
| <input type="checkbox"/> Northing shift | <input type="checkbox"/> Northing drift |
| <input checked="" type="checkbox"/> Z shift | <input type="checkbox"/> Z drift |
| <input type="checkbox"/> Heading shift | <input type="checkbox"/> Heading drift |
| <input type="checkbox"/> Roll shift | <input type="checkbox"/> Roll drift |
| <input type="checkbox"/> Pitch shift | <input type="checkbox"/> Pitch drift |
| <input type="checkbox"/> Mirror scale | |

OK Cancel

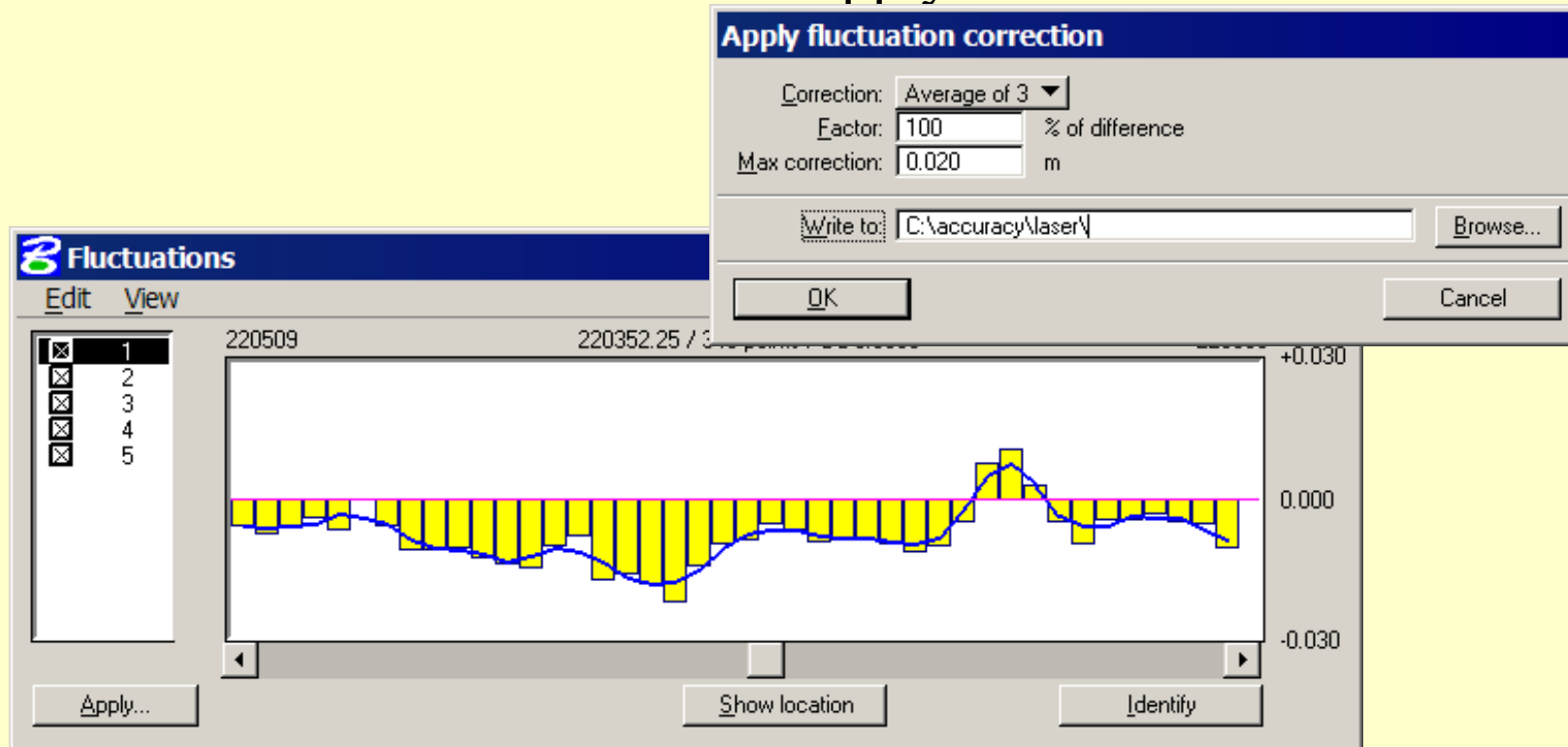
Find Fluctuations

- Corrects for inaccuracy of trajectory elevations
- Requires surfaces classified per flightline
- TerraMatch computes elevation difference of each flightline to others at user specified intervals (~ 0.5 sec)

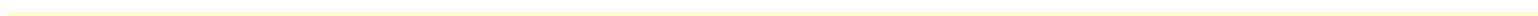
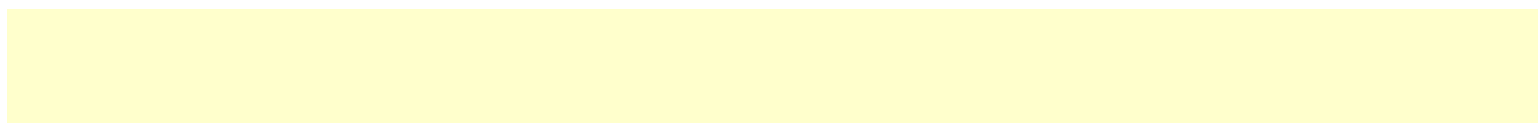
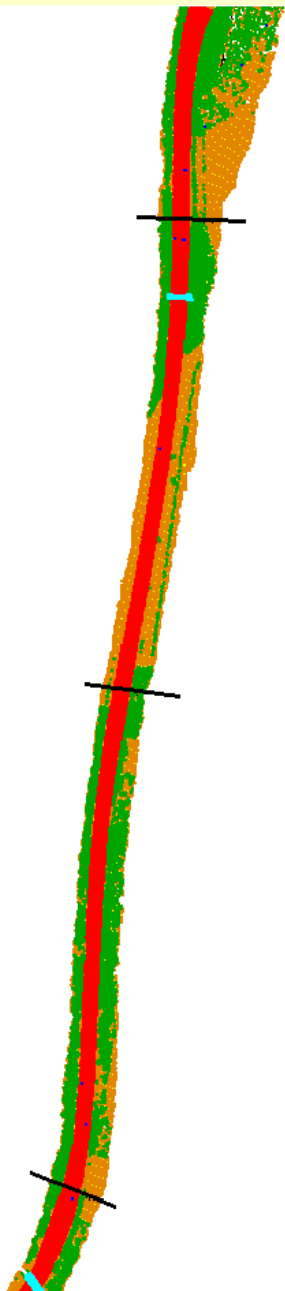


Find Fluctuations

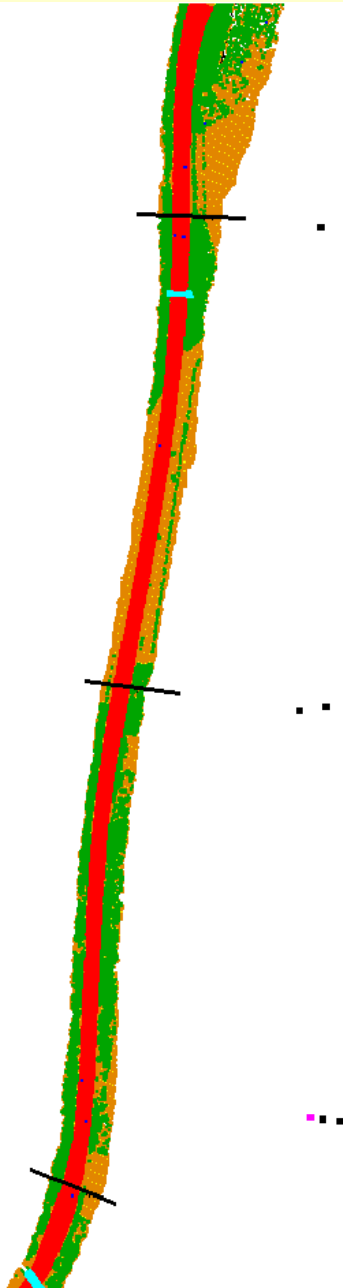
- Correction will modify laser points of each interval with a unique dz correction
- User can select:
 - how correction curve is averaged from consecutive intervals
 - what is the maximum correction to apply



Find Fluctuations - Before

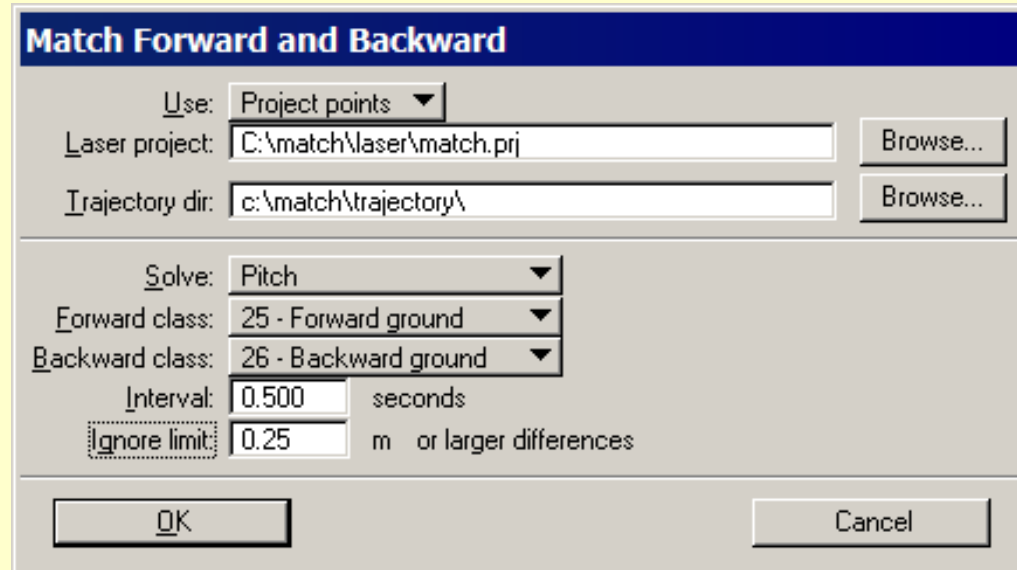


Find Fluctuations - After



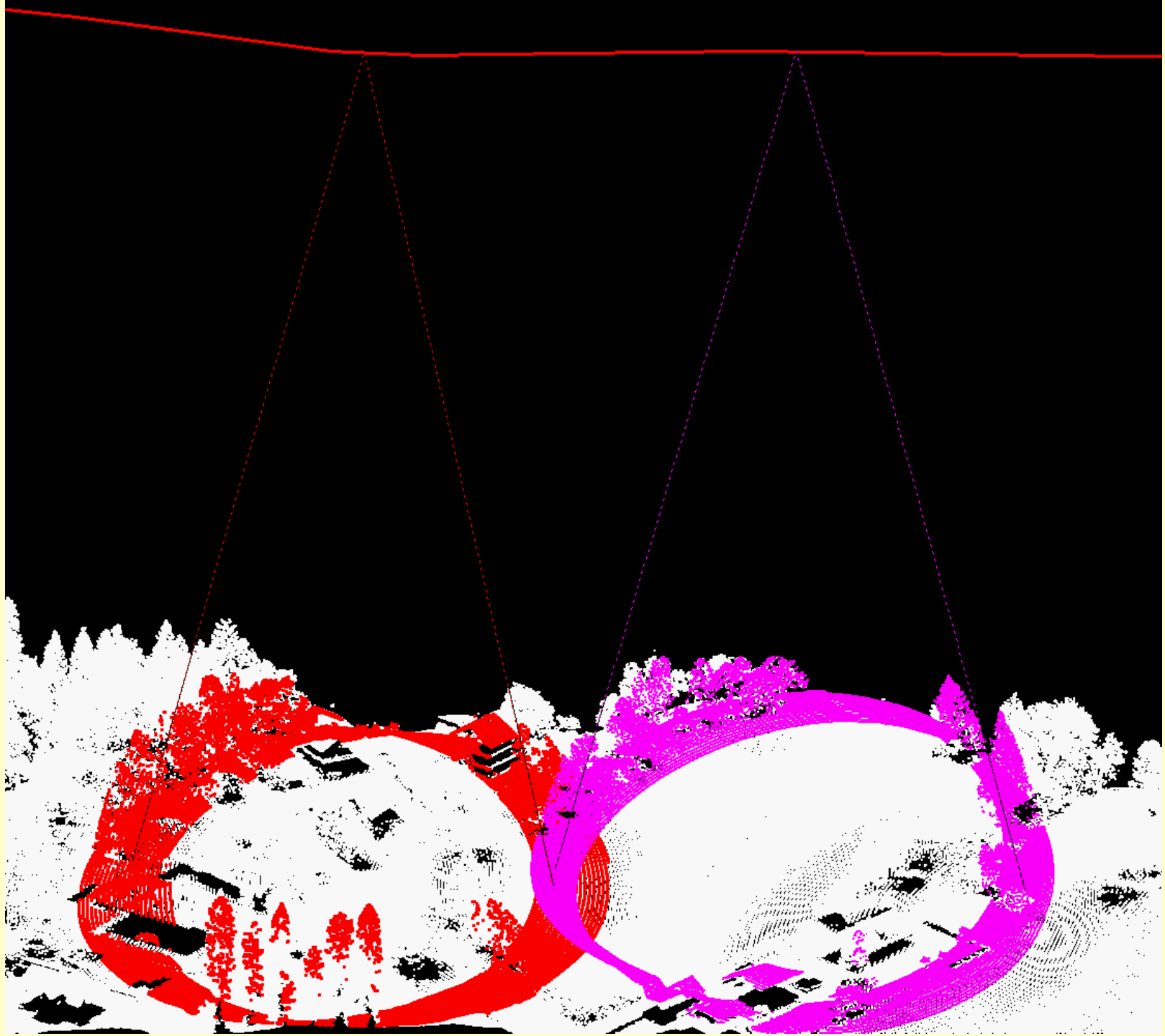
Match Forward and Backward

- Written for systems which measure the same location twice on a single flight pass
 - elliptical scan pattern
 - two laser scanners (elevation only)
- Requires surfaces classified per flightline with forward and backward measurements in their own classes
- Translates the difference between forward and backward into correction of:
 - heading
 - pitch
 - fluctuating elevation

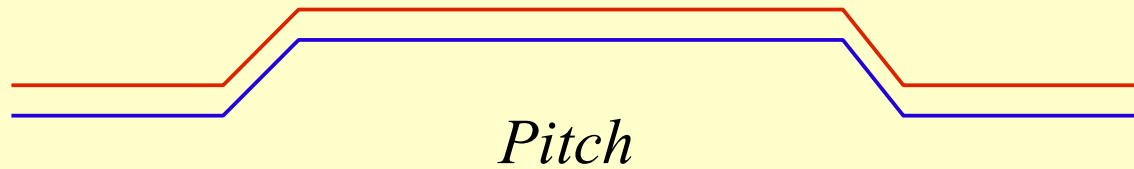
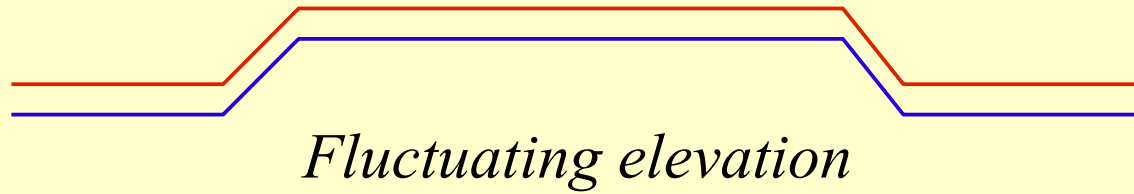


The screenshot shows a dialog box titled "Match Forward and Backward". It contains several fields and buttons:

- Use:** A dropdown menu set to "Project points".
- Laser project:** A text field containing "C:\match\laser\match.prj" and a "Browse..." button.
- Trajectory dir:** A text field containing "c:\match\trajectory\" and a "Browse..." button.
- Solve:** A dropdown menu set to "Pitch".
- Forward class:** A dropdown menu set to "25 - Forward ground".
- Backward class:** A dropdown menu set to "26 - Backward ground".
- Interval:** A text field containing "0.500" followed by the text "seconds".
- Ignore limit:** A text field containing "0.25" followed by the text "m or larger differences".
- Buttons:** "OK" and "Cancel" buttons at the bottom.



Match Forward and Backward



Match Forward and Backward

- Makes it possible to find a heading and a pitch correction using a single flightline (road or similar object)
- Improves the reliability of fluctuating elevation correction by providing additional observations
- Visualize elevation differences of left scan direction and right scan direction?

