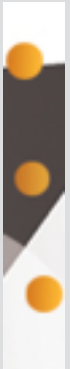


PLAsticiTY of P erceptual space U nder S ensorimotor interactions



**Research and Innovation
Staff Exchange (RISE) Call:
H2020-MSCA-RISE-2016**



A gap in the map: the blind spot

Task 2.1



Changes to Calibration

- 9 Point Calibration
- set background color to [50 50 50]
- distance between calibration points
100*100 pix
- smaller icons



- probe appears after 500-1100 ms
- probe size 2x2 pix
- present for 11ms
- slow stabilization



Signal to answer

- Joypad: left, right



Recalibration trial

- both targets 4x4 pix
- different intervals

Experimental Phases

- several different phases to determine Blind Spot borders
- within each phase: random presentation of probe (reduce prediction)
- Session 1 always consists of phase 1 to 3
- finest measurement of the 15 most interesting positions at the borders in Phase 4

Phase	distance between probe locations	Positions/Repetitions
Phase 1	1 deg	12/ 3
Phase 2	.2 deg	22/ 2
Phase 3	2 Pixel	50/ 2
Phase 4	2 Pixel	30/3-4



Data Exclusion

- Exclusion of trials during which the mean eye velocity during presentation of the probe is faster than 120 arcmin/s, currently: about 1 % of data
- need to exclude anything else?

Accuracy of Positioning the Monitor

- 1 cm difference in depth could lead to a displacement of the nasal blind spot border by 12 pixel and the temporal blind spot border by 17 pixel

distance from eye to screen	resulting arcmin/pixel
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74	1.2675
----	--------

74	1.2675
----	--------

75	1.2844
----	--------

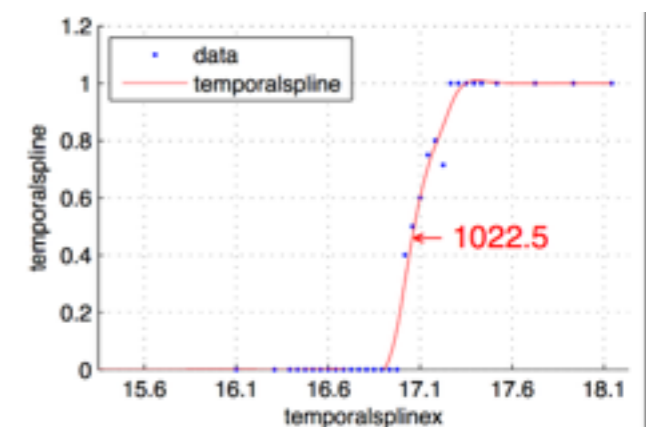
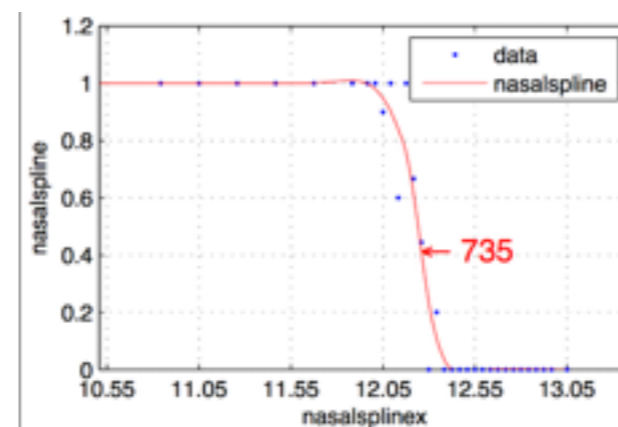
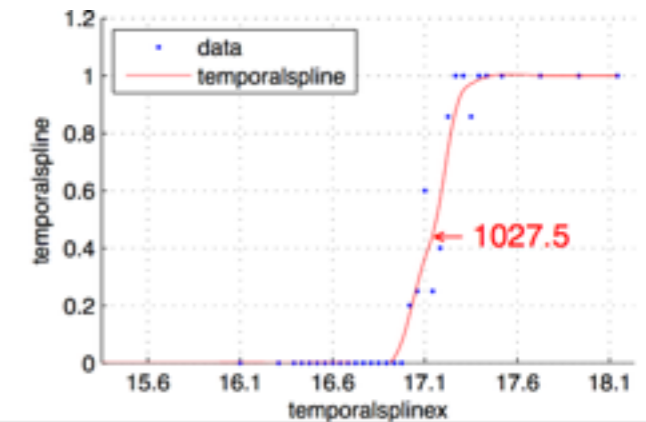
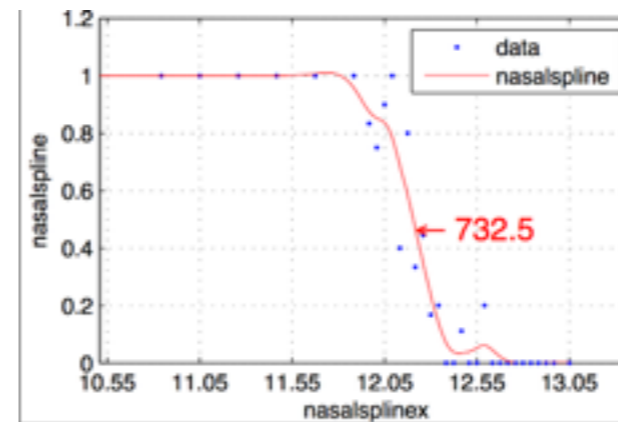
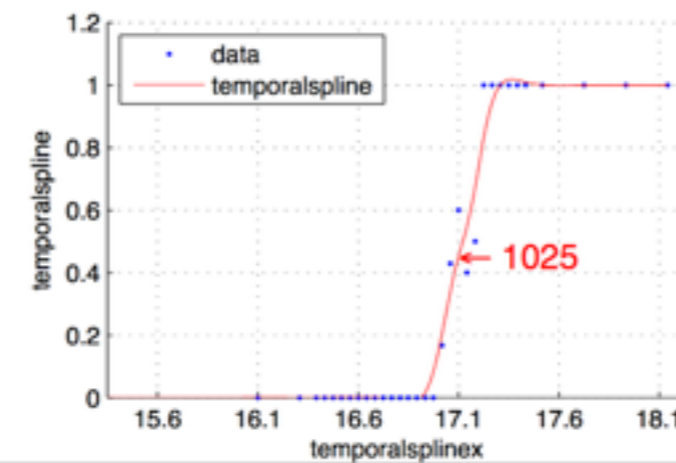
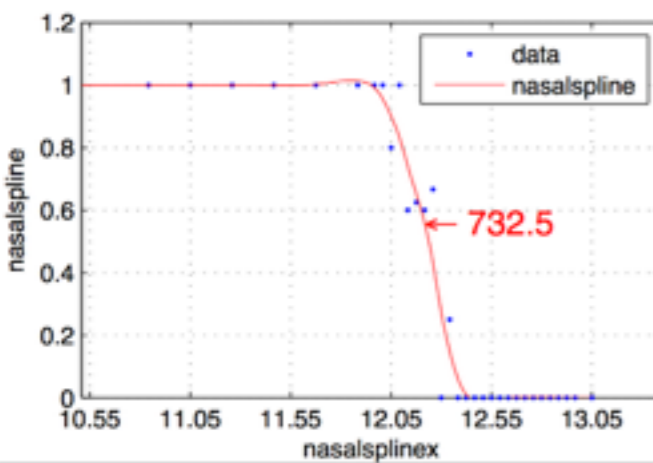
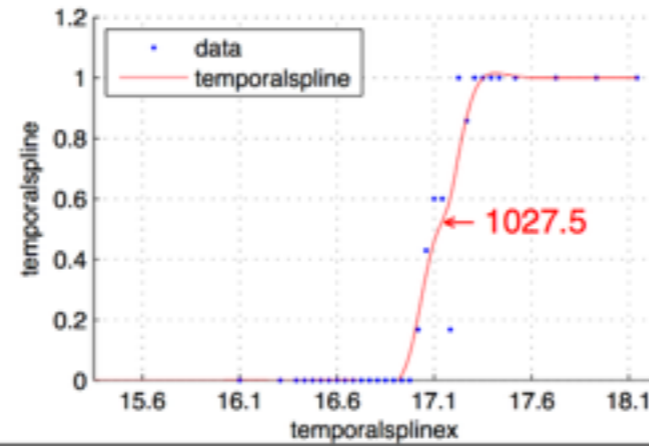
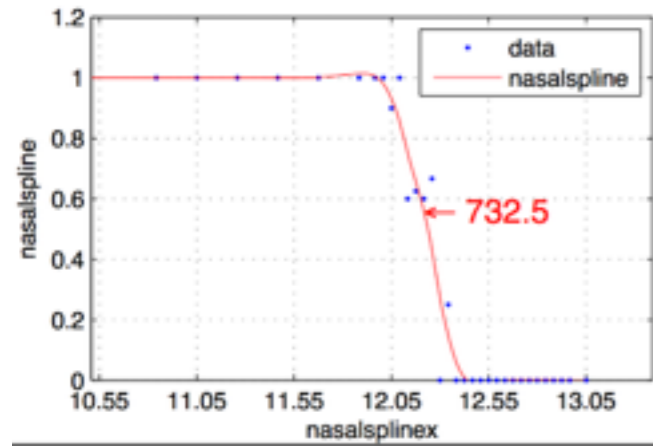
75	1.2844
----	--------

76	1.3017
----	--------

76	1.3017
----	--------

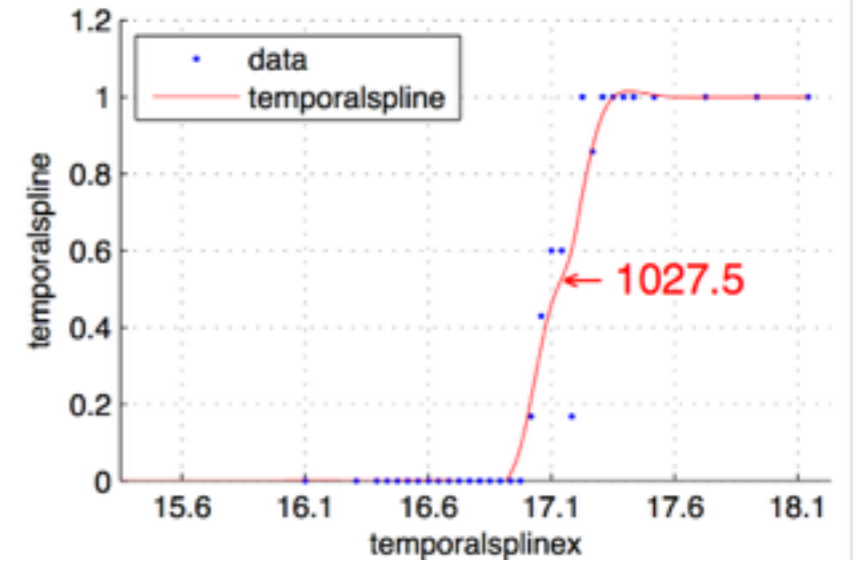
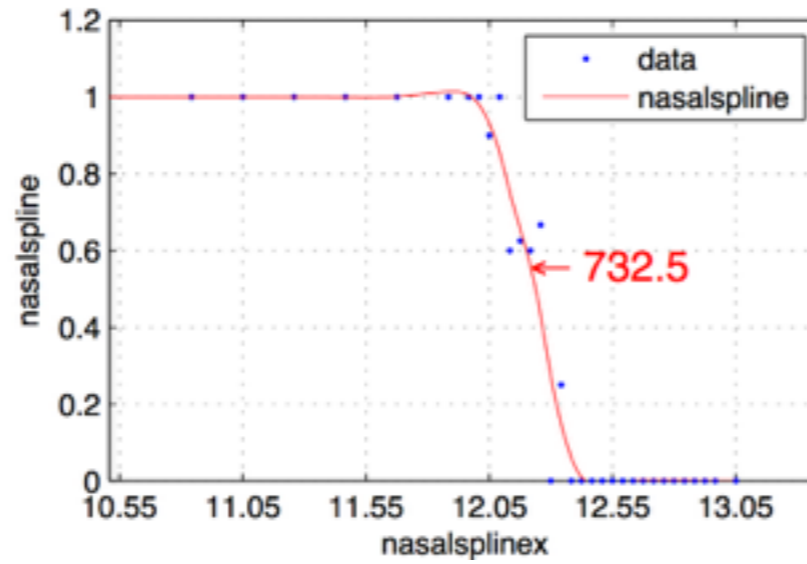
Differences within sessions

- same setup, new calibration



200 Trial

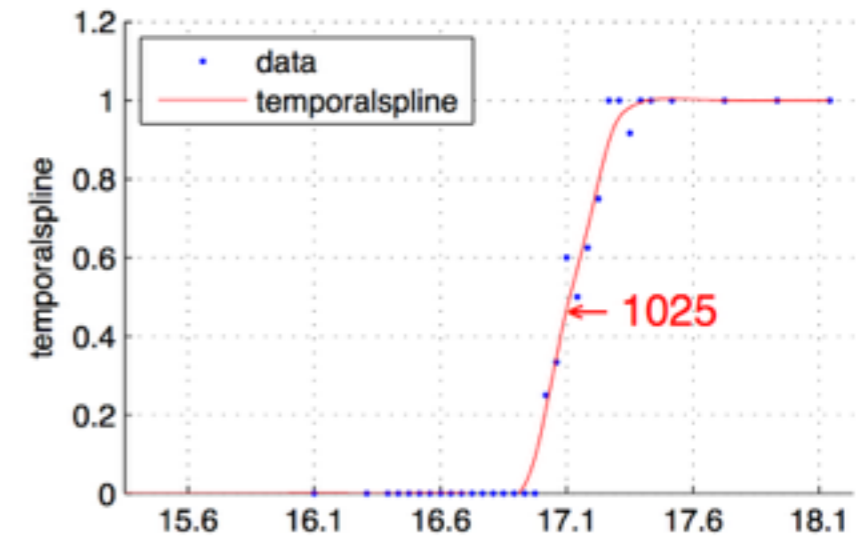
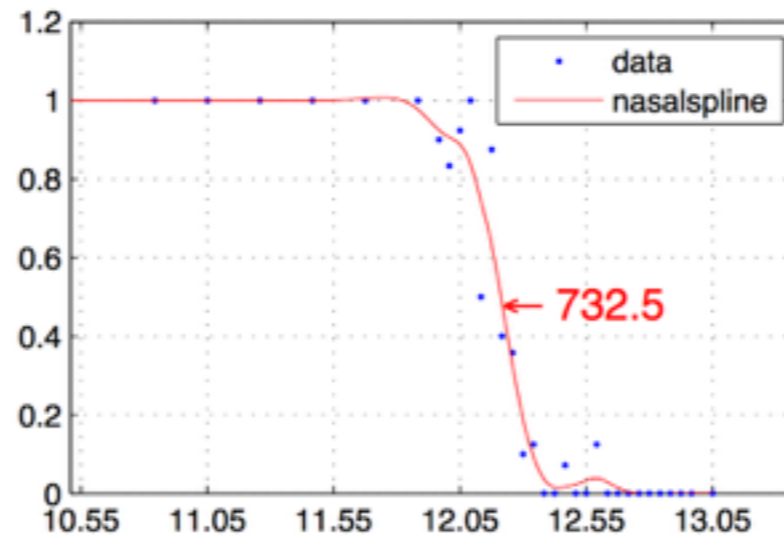
distance right: 43.3cm
distance left: 43.3cm



200 Trial

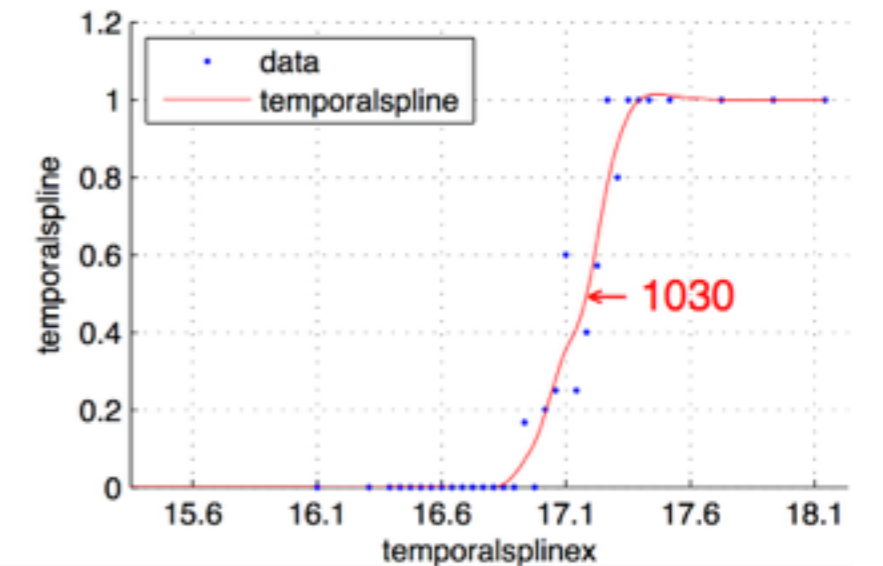
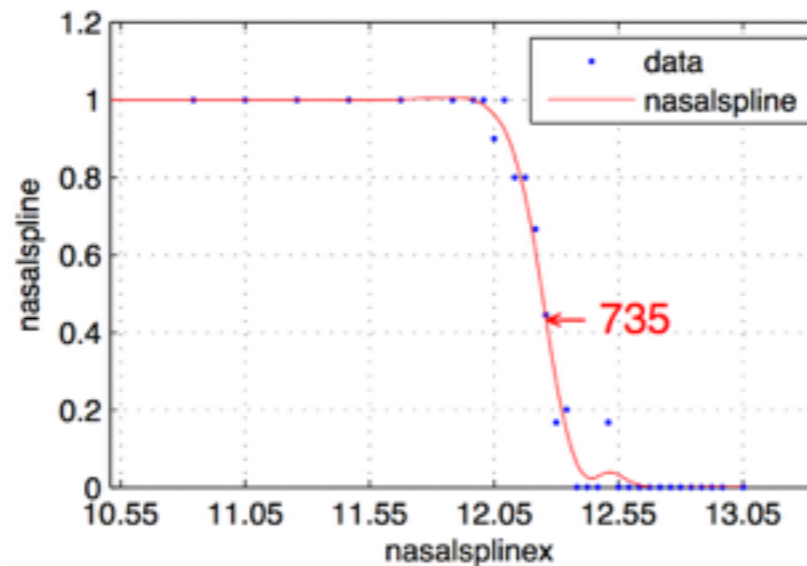
bringing it out and in again

distance right: 43.3cm
distance left: 43.3cm

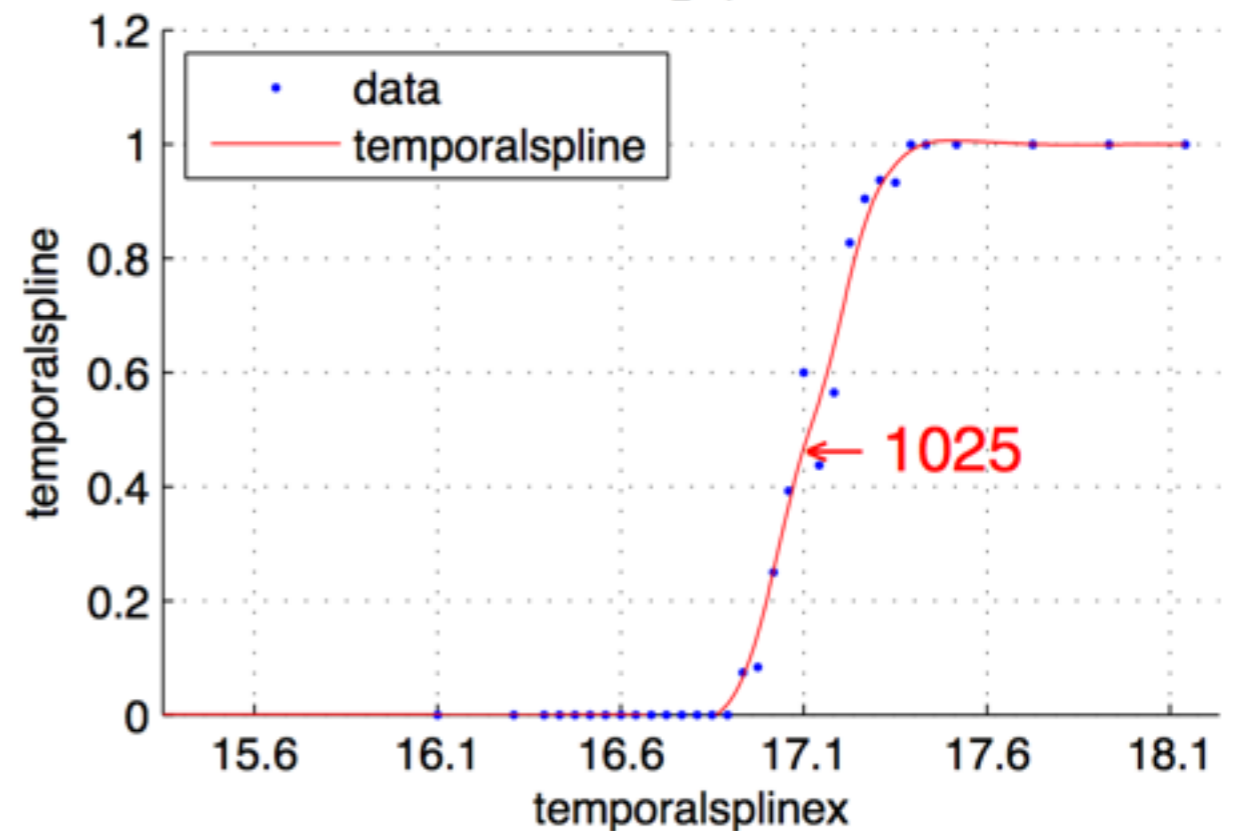
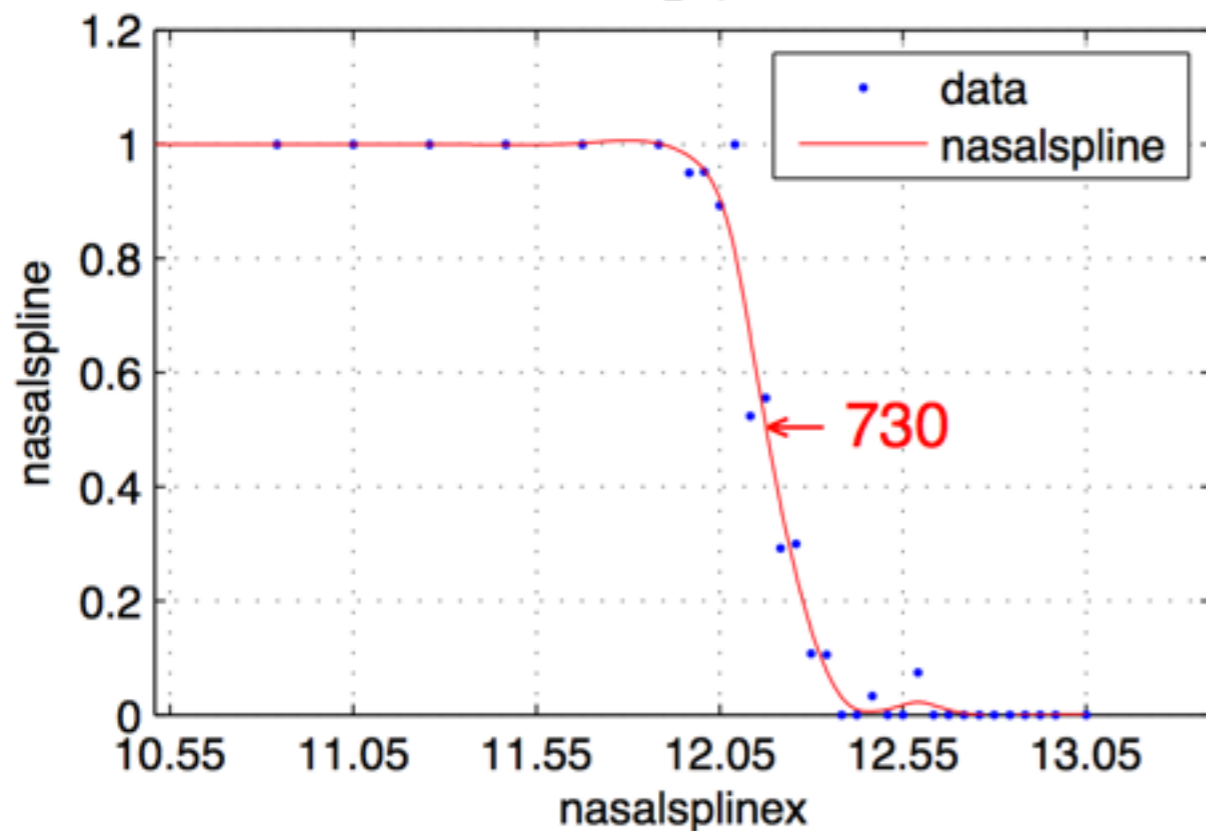


100 Trial

distance right: 44.0 cm
distance left: 44.3 cm



Collapsed Data so far



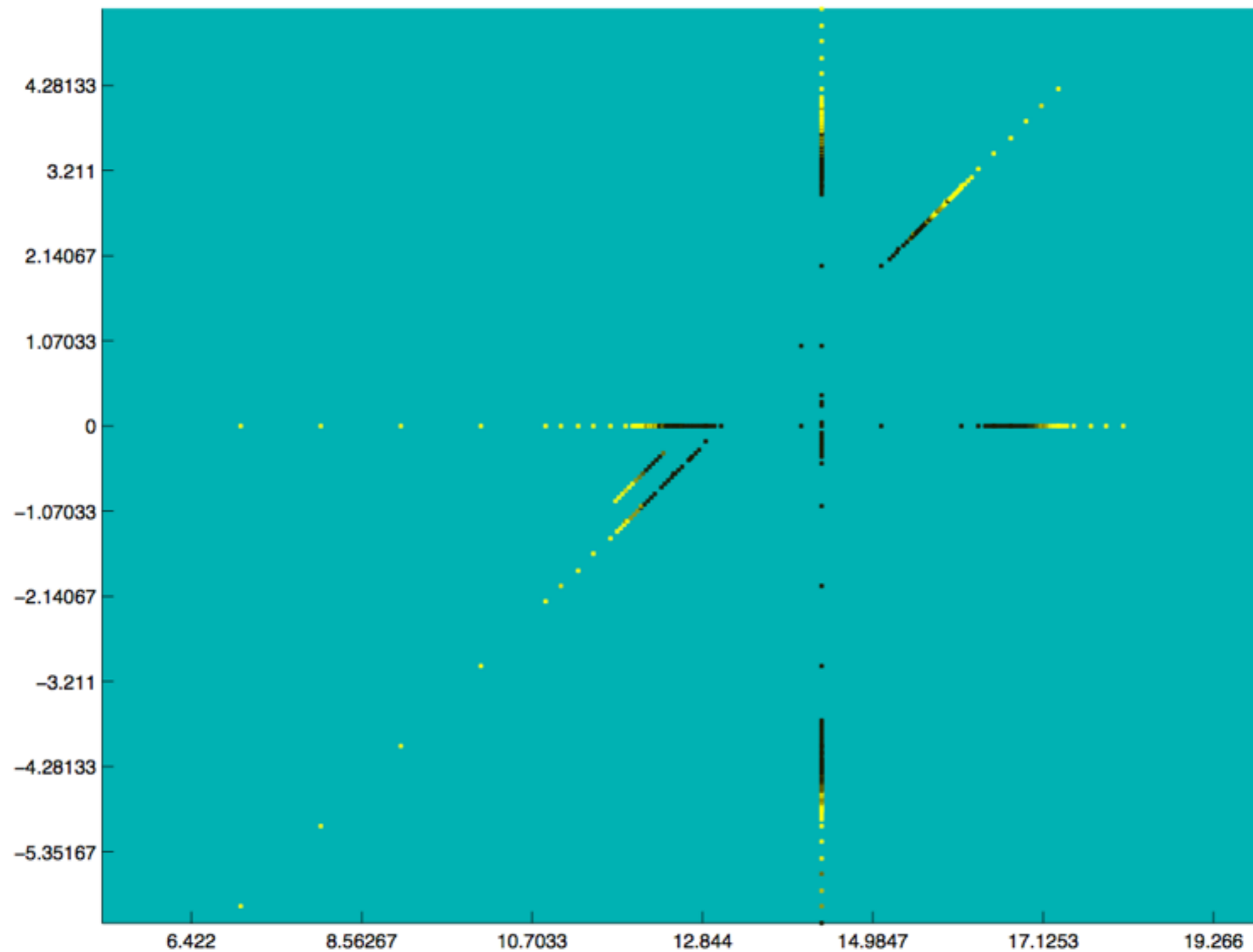
825 valid trials from 7 sessions

Width of blind spot border

nasal: ~25 arcmin

temporal: ~30 arcmin

Collapsed Data so far





Open Questions

- The subject has to be able to see the probe well in the eccentricity,
 - if not \rightarrow probe and step size bigger ?
- Do the pilot data look as expected?
- What could be interesting to look at in more detail?