

# Expand Your Research Capabilities with Optical Based Eye-Head Tracking.

H horz gaze coord	EH vert gaze coord	EH gaze length	pupll pos horz	pupll pos vert	cr pos horz
-58.68193436	12.16729355	725.0325928	3958	3539	4510
-60.41246796	7.62370137	723.3225195	3888	3467	4466
331.1367493	7.62370137	723.3225195	3836	3488	4430
3360596	701.00177	3800	3437	4410	
66171	717.7150879	3762	3430	4376	
03046	13.4283247	715.7507324	3761	3445	4368
16214	16.1809113	713.7449341	3776	3539	4375
59042	14.3533289	711.5945707	3776	3539	4375
2146	-40.63955078	-708.9845581	3680	3580	4266
76338	-39.8597193	-710.3952025	3680	3580	4279
27232	-9.781279564	705.005127	3764	3760	4347
46692	-5.644857693	702.6186533	3669	3927	4412
35466	4.893926144	699.8701172	3639	4100	4448
94168	6.485992577	697.6495912	3639	3698	4448
651413	5.55118572	695.5281372	3639	3638	4440
43454	1.2243355	693.4075532	3669	3414	4489
96945	-6.580243	691.2869692	3944	3445	4548
69125	2.209445	689.1663852	4029	3486	4608
21997	5.693	687.0458012	4087	3469	4634
22842	11.367	684.9252172	4178	3324	4686
44287	12.2	682.8046332	0	0	4747
14023	10.8	680.6840492	0	0	0
75305	12.81	678.5634652	0	0	0
49472	13.062	676.4428812	0	0	0
21045	22.22965	674.3222972	4578	3099	4633
15299	17.458515	672.2017132	4578	3099	4638
112421	37.20018	670.0811292	4578	3099	4668
38202	36.20418	667.9605452	4728	3099	4976
0887222	28.349	665.8400012	4728	3099	4986
1017952	13.4	663.7194172	4750	3025	4981
37478256	1.5	661.5988332	4736	3080	4978
39430618	1.5	659.4782492	4736	3092	4974

The Optotrak Certus accurately tracks your subject's head location and orientation.

The ASL eye-tracker determines the pupil's orientation.

The combined and synchronized information from the Optotrak Certus and the ASL eye-tracker allows for determining the 3D coordinate of the subject's point of gaze.

**Long Range, High Accuracy Eye-Head Integration**

brought to you by



and



# PRACTICAL EYE-HEAD INTEGRATION IS NOW AVAILABLE!

Eye-head integration allows for real-time data collection of your subject's point of gaze as your subject moves.

As your subject moves throughout the study environment, his/her head position and orientation is captured using NDI's Optotrak Certus system.

Up to 0.10 mm<sup>1</sup> RMS accuracy can be achieved with the Optotrak Certus system, which can capture data in real-time as your subject ambulates throughout his/her environment.

This information, along with the ASL eye-tracker information, is used to determine where your subject is looking at all times.

The eye-gaze information is stored digitally and can be quickly processed to determine the behavior of your test subject. Also, the information can be processed in real-time to facilitate interactive feedback into your research.

With eye-head integration, time consuming frame-by-frame examination of video data is not required to determine your subject's point of gaze.

Additional information can be captured synchronously with the eye-gaze information, such as: position, orientation, velocity and acceleration of body segments or objects within the environment. Also, any digital or analogue signal from other research equipment (i.e. emg signals, force plate signals) can be captured and synchronized with the eye-gaze information.

## For more information, please contact:



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Established 25 years ago, NDI is trusted by international leaders in medicine, industry and research for the accuracy and reliability of its measurement technology. NDI systems are used in applications from computer-assisted therapy to aeronautics; from quality inspection to human motion research. Today, the company is a world leader in advanced 3D measurement technology with over 10,000 installations in more than 30 countries around the world.



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ASL has been the leader in eye tracking technology for over 30 years. ASL was the first company to develop a head mounted eye tracker, Eye/Head integration, parallax free optics, head position assisted remote optics and many other features that now have become industry standard. This innovative spirit continues today with the world's broadest and most comprehensive line of video based eye trackers.

<sup>1</sup> At 2.25 m distance.