SUPERIOR COURT OF CALIFORNIA, COUNTY OF SAN MATEO
TRAFFIC DEPARTMENT, CENTRAL DIVISION

PEOPLE OF CALIFORNIA	)	Case# 462602
v.	)	**DEFENDANT'S BENCH MEMORANDUM ON LASER EVIDENCE**
PAUL GOWDER	)	

For the following reasons, LIDAR (laser) speed detection device readings, or any testimony or other evidence derived therefrom, is inadmissible in this case.

Summary of Argument

The California Supreme Court has adopted a strict "general acceptance" standard for the admissibility of scientific and technical evidence, and has noted the special importance of being conservative when this evidence is offered to convict a criminal defendant.[1] Our state has insisted on this conservative standard even in the face of the liberalizing trend in the country at large.[2] This standard ordinarily requires a foundation of expert testimony to admit the results of scientific devices, unless the use of a device is so common and longstanding as to be recognized as generally accepted by judicial notice. While radar speed evidence is universally accepted as susceptible to judicial notice, laser evidence is derived from much newer technologies and does not yet have that status. Thus, in several of our sister states, police testimony based on laser speed readings has been rejected in the absence of expert testimony establishing the acceptance of the specific device and/or laser speed technology generally.[3]

Even in circumstances in which readings from those devices have been admitted, our sister states have required an extensive showing of the officer's training

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[1] *People v. Kelly*, 17 Cal.3d 24, 549 P.2d 1240 (1976).

[2] *People v. Leahy*, 8 Cal.4th 587, 882 P.2d 321 (1994)

[3] *People v. Canulli*, 341 Ill.App.3d 361, 792 N.E.2d 438 (2003), *Izer v. The State*, 236 Ga.App. 282, 511 S.E.2d 625 (1999), *State v. Kincaid*, 2003 Ohio 4632;796 N.E.2d 89 (County Court of Morrow County, Ohio 2003), *Hall v. State,* 297 S.W.3d 294 (Texas Court of Criminal Appeals 2009).

and the testing of the device, which cannot be limited to police department materials, but must incorporate the manufacturer's recommendations.[4] The People have produced nothing in discovery that could satisfy those standards, and thus, cannot at this point come forward with any such evidence even in the highly unlikely event that they have it. Thus, the People's laser/LIDAR evidence must be excluded.

Detailed Memorandum of Points and Authorities

The Kelly/Frye Standard and Speed Detection

California follows the conservative *Kelly/Frye* standard for admissibility of scientific evidence. In *People v. Kelly*, 17 Cal.3d 24, 549 P.2d 1240 (1976), the California Supreme Court expressly adopted the standard for scientific evidence laid out for the federal rules in *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923), which requires that any scientific or technical procedure used to offer evidence be "sufficiently established to have gained general acceptance in the particular field in which it belongs." (*Id.* at 1014.) Adopting the standard, the California Supreme Court praised its conservatism:

> The primary advantage, however, of the Frye test lies in its essentially conservative nature. For a variety of reasons, Frye was deliberately intended to interpose a substantial obstacle to the unrestrained admission of evidence based upon new scientific principles.

17 Cal.3d at 31. Moreover, the Court noted an extra concern requiring conservatism when the rights of criminal defendants are at issue: "Exercise of restraint is especially warranted when the identification technique is offered to identify the perpetrator of a crime." *Id.* at 32.

This conservative standard is still good law in California even as the federal courts have moved to a more liberal standard: in *People v. Leahy*, 8 Cal.4th 587, 882 P. 2d 321 (1994), the California Supreme Court explicitly rejected the more liberal *Daubert* standard and reaffirmed its allegiance to the *Kelly/Frye* standard.

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[4] *State v. Assaye*, 121 Haw. 204, 216 P.3d 1227 (September 30, 2009)

Ordinarily, to admit scientific and technical evidence in a criminal proceeding under the *Kelly/Frye* standard requires testimony – usually expert testimony – as to the general acceptance of that evidence in the scientific community.[5] However, for a sufficiently longstanding and established scientific tool, the trial court can simply take judicial notice of its reliability. This is where speed detection by *radar* stands: courts in every U.S. state routinely take judicial notice of the general acceptance of radar speed detection devices. In California, this was established in *People v. MacLaird*, 264 Cal.App.2d 972 (1968), and has been uncontested since then. Laser is different. As the court in *MacLaird* noted, radar speed detection has been in common use at least since 1955. By contrast, laser speed detection, or "LIDAR," is a much newer technology, and is comparatively unproven. Consequently, the People cannot use the absolutely uncontested admissibility of radar evidence to shoehorn laser evidence into this court.

<u>This Court Should Not Take Judicial Notice of the Alleged Reliability of LIDAR Speed Detection</u>

Defendant has been unable to find any California caselaw on the issue of LIDAR speed detection. However, our sister states have spoken on the matter, and, in many cases, have *rejected* the admissibility of LIDAR speed evidence without a testimonial foundation as to their general acceptance. In light of the fact that California has an unusually strict standard, among the states, for admitting scientific evidence, this court should follow those states and exclude laser speed evidence in the absence of expert testimony as to its general acceptance and reliability.

In *People v. Canulli*, 341 Ill.App.3d 361, 792 N.E.2d 438 (2003), an Illinois appellate court, applying the very same *Frye* standard used in California, reversed defendant's conviction for speeding. The *Canulli* court ruled that "the use of Lidar laser technology to measure the speed of an automobile constitutes 'new' or 'novel' evidence," and thus that an evidentiary hearing with expert testimony and/or appeal to

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[5] The *Kelly* court describes this as follows: "a two-step process: (1) the reliability of the method must be established, usually by expert testimony, and (2) the witness furnishing such testimony must be properly qualified as an expert to give an opinion on the subject." 17 Cal.3d at 30.

convincing scientific publications and prior judicial decisions is required to admit it. Importantly, the *Canulli* court specifically required that the *particular model of laser device* used by the officer must be demonstrated to meet the *Frye* general acceptance standard: the court declined to affirm the conviction based on the admission of a different LIDAR device after a *Frye* hearing in a prior case.

In *Izer v. The State*, 236 Ga.App. 282, 511 S.E.2d 625 (1999), a Georgia appellate court ruled that laser speed detection evidence was not admissible in the absence of expert testimony because "it cannot be said that a substantial number of courts have recognized the technique," and in view of "the dearth of authority showing the scientific certainty of the technique." The court made this ruling *notwithstanding the fact that the state legislature had explicitly included LIDAR in the statutory definition of acceptable speed detection devices*.

In Ohio, at least one trial court has ruled that even under the *Daubert* standard, which, again, is more liberal than the standard governing in California, expert testimony must be presented as to the reliability and general acceptance of *the specific laser device* used in speed detection, rather than LIDAR devices generally, before any court in future proceedings may take judicial notice of that device's reliability.

> This court therefore holds that expert testimony is necessary for each device, whether it be a new device or an upgrade of an existing device, before the court may take judicial notice of that particular device in future proceedings. Further, in those future proceedings, the state must demonstrate, with sufficient particularity, that the device at issue is the same device that was the subject of previous expert testimony.

State v. Kincaid, 2003 Ohio 4632;796 N.E.2d 89 (County Court of Morrow County, Ohio 2003). An earlier unpublished appellate opinion held similarly. *State v. Saphire*, 2d Dist. No. 2000 CA 39, 2000 Ohio App. LEXIS 5767, 2000 WL 1803852 (Dec. 8, 2000).

An appellate court in Texas has also reversed a conviction based on LIDAR evidence, even under the liberal *Daubert* standard, because it constitutes "novel scientific evidence" that may not be admitted absent a "full-blown gatekeeping hearing." *Hall v. State,* No. 10-07-00213-CR (Tenth Court of Appeals, July 30, 2008). On further review, the Texas Court of Criminal Appeals affirmed on different grounds, going so far as to hold that the LIDAR reading in that case, because the device was so unproven,

was insufficient even to supply probable cause for a traffic stop. *Hall v. State,* 297 S.W. 3d 294 (Texas Court of Criminal Appeals 2009). This was *last year*. (Obviously, if it's insufficient to supply probable cause, it's insufficient to meet the reasonable doubt standard for a conviction!)

This is not merely a technical defense. It's unlikely that the People could even find expert testimony sufficient to get past the *Kelly/Frye* standard. There have been numerous reports of reliability problems with LIDAR speed detection devices. This has even broken into the popular media: the Daily Mail in Britain has managed to get a popular LIDAR device to produce absurd results: "In our tests, it wrongly recorded a wall as travelling at 44mph, an empty road scored 33mph, a parked car was clocked as doing 22mph and a bicycle [in reality being ridden at 5mph] rocketed along at an impossible 66mph." Sue Reid, "The Cameras That do Lie," *Daily Mail* October 15, 2005. According to this story,

> Critically, the beam must be held firmly on the vehicle, preferably on the number plate. But if 'slippage' occurs and the beam moves up or along the car, the gun can be tricked into a false reading.
>
> For instance, tests in the U.S. have shown that if the beam slips from the windscreen of the car down to the grille of the bonnet, this can add on 8mph. Astonishingly, if the beam slips along the entire length of the car - as is possible when a vehicle comes around a corner into the speed gun's sights - an erroneous 30mph can be added to the reading.[6]

In view of the fact that the California Supreme Court has consciously chosen, in case after case, to keep California's standard for the admission of scientific evidence *more conservative* than the general trend, and has expressed a particular concern with the protection of the rights of criminal defendants against untried scientific evidence, this court follow the persuasive authority of our sister jurisdictions and should not admit testimony about the speed readings of LIDAR devices absent expert testimony showing that the particular device used has met the *Kelly/Frye* standard of general acceptance in the scientific community.

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[6] The BBC has reported on similar problems. See "BBC Documents Errors in US Laser Speed Guns," online at http://www.thenewspaper.com/news/06/649.asp.

Even if LIDAR Evidence Were Admissible, the People Would be Required to Make a Showing, Beyond the Officer's Testimony, that the Officer is Qualified to Operate the Device and Followed all Manufacturer's Recommended Testing Procedures

Once again, the California courts are silent on this issue. Here, however, there is a leading case from a sister jurisdiction that applies the same tests as California. Once again, Defendant urges this court, in light of the California Supreme Court's repeated insistence on hewing to a maximally-conservative line on scientific evidence, especially when it comes to convicting criminal defendants, to follow the persuasive authority of our sister states.

Less than a year ago, the Hawaii Supreme Court considered the question of what the People must show to convict a defendant in a speed trial based on LIDAR evidence in *State v. Assaye*, 121 Haw. 204, 216 P.3d 1227 (September 30, 2009).[7] Importantly, the *Assaye* court did not reach the question of whether LIDAR evidence is admissible generally without expert testimony. Instead, it reversed the underlying conviction based on the inadequate evidence as to

a. the officer's training in operating the device, and
b. the completion of all manufacturer recommended testing.

Most importantly for present purposes, the officer in *Assaye* testified as to both of those matters. Nonetheless, the Hawaii Supreme Court ruled that the trial court admission of the officer's testimony as to the reading of a LIDAR gun was an abuse of discretion. The rationale for this only-seemingly surprising ruling was that the officer's testimony was not alone sufficient to establish these matters. More specifically:

On the question of the officer's training, the *Assaye* court held that it is not sufficient for an officer to testify that he has been trained in accordance with police department recommended procedures to operate a laser device. Rather, there must be evidence of the *content* of the officer's training and a showing that "the nature and extent of an officer's training in the operation of a laser gun meets the requirements

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[7] Hawaii is not alone in requiring such showings from the operator of a LIDAR device. In Delaware, a trial court ruled that the readings of a LIDAR device can be admitted – *even given prior expert testimony as to the device's reliability* – only on a showing of similar foundational facts by the citing officer. *State v. Jarwan*, no. 9910003101 (Superior Court, Kent County, December 8, 2000).

indicated by the manufacturer." The court went on to hold that "testimony showing merely that a user is "certified" to operate a laser gun through instruction given by a "certified" instructor is insufficient to prove that the user is qualified by training and experience to operate the laser gun."

On the question of manufacturer-recommended testing, while the officer testified that he conducted several tests of the device, there was no evidence offered that these tests were the ones recommended by the manufacturer. The *Assaye* court held that there must be evidence of "an established manufacturer's procedure." Moreover, the *Assaye* court held that the officer's testimony, standing alone, on the reliability of the procedures he was told to use in his training would constitute inadmissible hearsay. Foundational non-hearsay evidence on what the *manufacturer* recommended was required to admit the LIDAR evidence.

<u>No Evidence is Available to the People Either on the Admissibility of LIDAR Generally or on the Testing of the Specific Device and Certification of the Officer</u>

Defendant has filed a informal discovery request pursuant to Penal Code section 1054 requesting, among other items:

> All records reflecting the testing, certification, calibration, licensure (including FCC licensure) and maintenance of any radar, laser, or other electronic speed-detection device which was used to ascertain the speed of the vehicle referred to in the above-noted citation.
> * * *
> All records reflecting the training and certification of the citing officer in traffic enforcement and in the operation [the LIDAR device].
> * * *
> The manufacturer's manual for [the LIDAR device].
> * * *
> All CHP policies or training materials relating to maintenance, calibration, testing, and field operation of [the LIDAR device].
> * * *
> All documentary evidence to be introduced at trial, as well as any materials on which any witness, including without limitation the citing officer, may rely at trial.
> * * *

> The names and addresses of all persons the prosecution intends to call as witnesses at trial.
> * * *
> Any relevant evidence not otherwise covered by this request, whether inculpatory or exculpatory.

As Penal Code 1054 requires the prosecution to disclose its evidence and witnesses on an informal discovery request by defendant, this court should exclude any evidence not so disclosed. To do otherwise would subject the defendant to an unfair and unconstitutional trial by surprise.

The entirety of the People's response to defendant's informal discovery request is attached as Exhibit 1 to this Memorandum. Notably, in that response there is no evidence as to the manufacturer's recommended testing or maintenance procedures, and no witness other than the citing officer. The only disclosed evidence on testing is from 2008 and makes no reference to the manufacturer's standards. The only disclosed evidence on the officer's training is an uninformative certificate from the CHP – precisely the sort of evidence that was rejected as insufficient in *Assaye*. Thus, the People have disclosed *no evidence whatsoever* that can be used to provide the necessary foundation for LIDAR testimony. No expert witness has been disclosed to satisfy the Kelly/Frye standard, nor have any scientific reports been disclosed. Nor has any admissible evidence been disclosed that could be used to show the manufacturer's recommended testing procedures or officer training. The citing officer's testimony about the manufacturer's recommended testing procedures and training criteria would be inadmissible hearsay for the same reasons noted in *Assaye*, and would fail to meet the standard of expert testimony for the purposes of *Kelly/Frye* (unless, that is, the officer happens to be a physicist or engineer).

Thus, there is simply no evidence available to the People on these critical issues. Since they provided no discovery on these issues, they should not even have a continuance to dig such evidence up.[8] Consequently, all evidence and testimony based on the LIDAR reading must be excluded.

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[8] Moreover, even if such a continuance were available, any trial could be held no later than the highly unrealistic date of September 8 in order to comply with the statutory speedy trial period of Penal Code section 1382. The People's failure to adequately prepare its case hardly constitutes good cause to abrogate Defendant's speedy trial rights.

Respectfully submitted, September 3, 2010

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Paul Gowder