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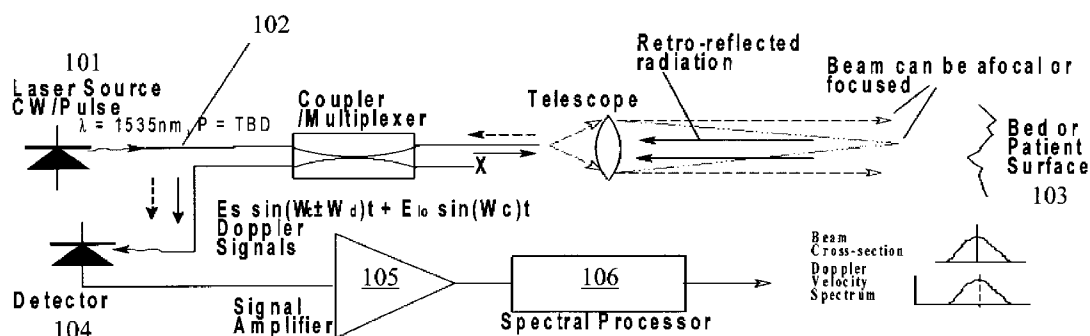


Fig. 1

(57) Abstract: An optical method and apparatus are described for the measurement of properties of a travel vehicle or a travel surface upon which the travel vehicle travels, which includes providing an incident light from a light source to the travel surface, collecting light reflected from the travel surface, determining a surface induced Doppler shift from the incident and collected light and determining at least one of a motion property of the travel vehicle and a surface property of the travel surface based on the determined surface induced Doppler shift.

INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC: G01P 3/36(2006.01)

USPC: 356/28.5

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 356/28.5, 28

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

IEEE, ECLA, SPIE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 20050102083 Xu et al. 12 May 2005, figure 2, paragraphs 23-25, 60-62.	1
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Y		2-26
Y	US 20060232052 Breed 19 October 2006, paragraph 198	3



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