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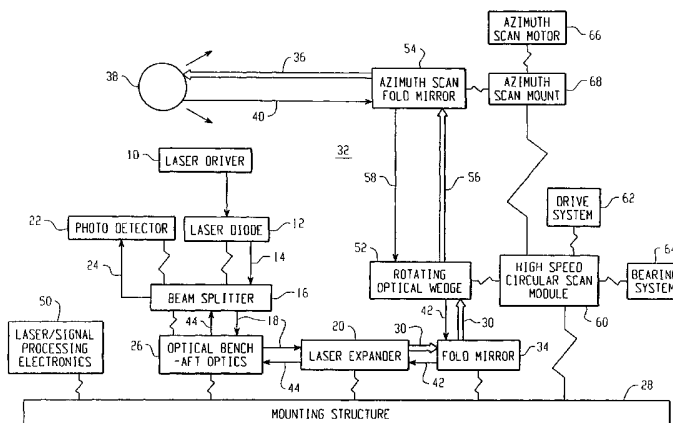
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For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: SYSTEM AND METHOD OF MEASURING FLOW VELOCITY IN THREE AXES



(57) Abstract: A LIDAR system for measuring flow velocity in three axes comprises: a LIDAR arrangement of optical elements for generating a coherent beam of light and directing the coherent beam of light by at least one rotationally operated optical element from the system with a predetermined pattern, the at least one rotationally operated optical element also for receiving reflections from particles along the predetermined pattern and directing the beam reflections to a light detector which converts the beam reflections into representative electrical signals; and a processor for detecting bursts from the electrical signals which are representative of light beam reflections from at least one particle substantially at a corresponding position along the predetermined pattern, and for computing a Doppler frequency for each of a selected plurality of detected bursts from the signal content thereof. The processor also capable of associating the selected plurality of detected bursts with their corresponding positions along the predetermined pattern and for computing a three axis flow velocity measurement from at least three of the selected plurality of computed Doppler frequencies and their corresponding positions along the predetermined pattern. A method of measuring flow velocity in three axes is further disclosed.



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# INTERNATIONAL SEARCH REPORT

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<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC 7 G01S17/93				
According to International Patent Classification (IPC) or to both national classification and IPC				
<b>B. FIELDS SEARCHED</b>				
Minimum documentation searched (classification system followed by classification symbols) IPC 7 G01S G01P				
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 practical, search terms used)  EPO-Internal				
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>				
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
X Y X X	US 5 313 263 A (ABBISS JOHN B ET AL) 17 May 1994 (1994-05-17) abstract; figures 1-3,8 column 4, line 60 -column 8, line 15 --- US 5 724 125 A (AMES LAWRENCE L) 3 March 1998 (1998-03-03) abstract; figures 5-8 column 3, line 56 -column 7, line 63 --- EP 0 947 834 A (MARCONI ELECTRONIC SYST LTD) 6 October 1999 (1999-10-06) abstract; figure 7 column 14, line 4 - line 8 column 16, line 40 -column 17, line 27 --- -/--	1-7,11, 13-17,21 10,20  1,4, 12-14,22  1,12,13, 22		
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <span style="margin-left: 200px;"><input checked="" type="checkbox"/> Patent family members are listed in annex.</span>				
° Special categories of cited documents :				
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none; vertical-align: top;">                     *A* document defining the general state of the art which is not considered to be of particular relevance                      *E* earlier document but published on or after the international filing date                      *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)                      *O* document referring to an oral disclosure, use, exhibition or other means                      *P* document published prior to the international filing date but later than the priority date claimed                 </td> <td style="width: 50%; border: none; vertical-align: top;">                     *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention                      *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone                      *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.                      *Z* document member of the same patent family                 </td> </tr> </table>			*A* document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) *O* document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. *Z* document member of the same patent family
*A* document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) *O* document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. *Z* document member of the same patent family			
Date of the actual completion of the international search  <p style="text-align: center; font-size: 1.2em;">11 April 2003</p>		Date of mailing of the international search report  <p style="text-align: center; font-size: 1.2em;">22/04/2003</p>		
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer  <p style="text-align: center; font-size: 1.2em;">Niemeijer, R</p>		

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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