INSPEC ACTIVITIES IN ASTRONOMY AND ASTROPHYSICS

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Considers a typical paper from the astronomical literature, shows how it was processed for 'Physics Abstracts' and illustrates how it can now be retrieved on-line from the INSPEC database.
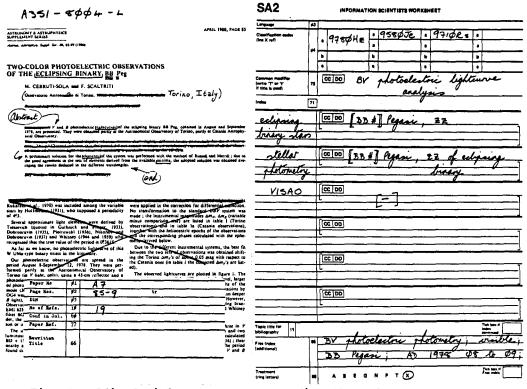
"Two-color photoelectric observations of the eclipsing binary BB Peg" by Cerruti-Sola and Scaltriti was published in Astronomy & Astrophysics Supplement Series, Vol. 40, No. 1, p. 85-9 (April 1980). The abstract for this paper appeared as No. 62194 in Physics Abstracts, Vol. 83, No. 1139, p. 4806 (1 July 1980). This particular journal article has been chosen to illustrate the way material is handled by the INSPEC database because apart from the usual bibliographic elements, a designated stellar object (BB Pegasi) is mentioned and numerical data (observation dates) are incorporated.
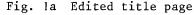
The editorial work was performed on two sheets: the title page TORN from the journal (Figure 1a) and an SA2 'worksheet' (Figure 1b). This paper was the seventh in a single batch of 11 papers and the batch code (A351-8004-L) can be seen on the top left of the title page showing that this was the fourth issue received in 1980 from the journal Astron. & Astrophys. Suppl. Ser. (A351). A label was attached to the title page indicating the paper number (A7), the pagination and the number of references given on page 86 of the article. Details on the title page include capitalization in the title (by triple underlining), editing the original abstract which in this case resulted in a shortening by three lines, and selection of uncontrolled (or "free") index terms which were underlined in the title or abstract.

The SA2 can record the language, classification codes, a common 'modifier line', controlled index headings with their modifier lines, bibliography topic title (for papers with references >50), additional free indexing, and treatment codes. An overflow sheet is available. Labour-saving devices include a common modifier recalled by using 'ZZ' (ZZ Ceti stars cause problems!) and abbreviated index headings (VISAO generates the heading "visible astronomical observations"). The 'CC'

Fig. 1a   Edited title page   Fig. 1b   SA2 worksheet

box is used for chemical sorting and 'DD' for elementary particles.   The
〖 〗 facility in this case, takes BB out of sort so that all the Pegasean
objects are kept together.   Our twice-yearly subject indexes of four-
yearly accumulative indexes will reveal the result of sorting control.

   Only the modifier lines to the fixed index headings are lost to
on-line retrieval because they are used solely for the printed indexes.
All the other fields can be retrieved on-line and a simplified example
illustrating the various ways that this paper could have been found
using the Lockheed DIALOG service is shown.   A copy of this retrieval
example with full explanation of the search strategy and responses can
be supplied free upon request.   Those of you familiar with DIALOG will
only need to have sets 13-18 explained.   Set 13 selects any papers
describing observations starting or ending in 1978 August, sets
14-15 plus set 17 select papers beginning in 1978 and ending in August
of that year.   Set 18, which is a combination of sets 13 to 17,
therefore presents papers describing observations commencing or ending
in 1978 August.   The exhaustive case is possible but more complicated!

   I would like to thank Professor Lequeux for permission to use an
Astron. & Astrophys. Suppl. Ser. paper as an example.

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B13
FILE 13: INSPEC - 78-81/ISS12
SEE FILE 12(1969 THRU 1977)
          SET   ITEMS DESCRIPTION

? S AU=CERRUTI-SOLA?(C)AU=SCALTRITI?
          1       2 AU=CERRUTI-SOLA?(C)AU=SCALTRITI?
? S CC=A9780H
          2     775 CC=A9780H
? S CO=AAESB9
          3     530 CO=AAESB9
? L3/ENG
          4     462 3/ENG
? S PY=1980
          5 135011 PY=1980
? S CS=TORINO OR CS=TURIN
                853 CS=TORINO
                110 CS=TURIN
          6     933 CS=TORINO OR CS=TURIN
? S BB(W)PEG?/TI
          7       2 BB(W)PEG?/TI
? S ECLIPSING BINARY STARS/DE
          8     543 ECLIPSING BINARY STARS/DE
? S LIGHTCURVE?/ID
          9      63 LIGHTCURVE?/ID
? S PHOTOELECTRIC?(F)LIGHTCURVE?
         10      46 PHOTOELECTRIC?(F)LIGHTCURVE?
? S ECLIPSING(W)BINAR?(C)LIGHTCURVE?
         11      34 ECLIPSING(W)BINAR?(C)LIGHTCURVE?
? C 1-11/AND
         12       1  1-11/AND
? S AD(4W)1978(W)08
         13      73 AD(4W)1978(W)08
? S AD(W)1978(3W)08
         14     102 AD(W)1978(3W)08
? S AD(W)1978(1W)08
         15      78 AD(W)1978(1W)08
? C 14-15
         16      24  14-15
? S AD(W)1978(1W)08(1W)08
         17      78 AD(W)1978(1W)08(1W)08
? C 13OR16OR17
         18     121  13OR16OR17
? C 12AND18
         19       1  12AND18
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Fig. 2   Search example on DIALOG showing how various characteristics
of the Cerruti-Sola and Scaltriti paper on BB Pegasi could have been
used for on-line retrieval.