

PACKAGE ID - 000432SPARC00 VECTUM

KWIC TITLE - Irregular 2D Velocity Vector Field Plotting
Package

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LIMITATION CODE -UNL **AUDIENCE CODE** - UNL

COMPLETION DATE - 05/04/1992 **PUBLICATION DATE** - 05/04/1992

DESCRIPTION - VECTUM is a NCAR Graphics based package, for generating a plot of an irregular 2D velocity vector field. The program reads an ASCII database of x, y, u, v, data pairs and produces a plot in Computer Graphics Metafile (CGM) format. The program also uses an ASCII parameter file for controlling annotation details such as the plot title, arrowhead style, scale of vectors, windowing, etc. Simple geometry (i.e. lines, arcs, splines) can be defined to be included with the velocity vectors. NCAR Graphics drivers can be used to display the CGM file into PostScript, HPGL, HDF, etc, output.

PACKAGE CONTENTS - Media Directory; Software Abstract; EGG-CODP-10230;
Media Includes Source Code, Compilation Instructions, Sample
Problem Input, Programmer Documentation;

SOURCE CODE INCLUDED? - Yes

MEDIA QUANTITY - 4 3.5 Diskettes

METHOD OF SOLUTION - Vectum displays normal, unit, and logarithmic
scaled vectors.

COMPUTER - SUN SPARC

OPERATING SYSTEMS - SunOS 4.1-GFX-1

PROGRAMMING LANGUAGES - FORTRAN 77

SOFTWARE LIMITATIONS - Velocity vector field is limited to less than
10000 data values.

SOURCE CODE AVAILABLE (Y/N) - Y

UNIQUE FEATURES - A new plot can be generated without re-compiling due
to the parameter file. The software reads an irregular ASCII x, y,
u, v database. It permits simple geometry to be defined and

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UNIQUE FEATURES - (CONT) included with the vector field. The vector shaft can be suppressed to generate scatter plots. Over a hundred characters are available for the arrowhead. Vectum could easily be put into a library and used as a subroutine in an NCAR program.

RELATED SOFTWARE - Vectum is dependent upon the NCAR Graphics Libraries 3.0 or later for compilation and the NCAR Graphics Utilities for displaying and file conversion of output.

HARDWARE REQS - Standard Unix workstation configuration.

TIME REQUIREMENTS - Compilation Time: 1.95 minutes; Run Time: 0.63 minutes

REFERENCES - F. McClurg and V. Mousseau, VECTUM User's Guide, Idaho National Engineering Lab. (INEL) informal report, EGG-CODP-10230, April 1992.

ABSTRACT STATUS - Submitted July 1992.

SUBJECT CLASS CODE - HN

KEYWORDS -

COMPUTER PROGRAM DOCUMENTATION
V CODES
COMPUTER GRAPHICS
DEC COMPUTERS
FLUID FLOW
FLUIDS
FORTRAN
VECTOR PROCESSING
VECTORS
VELOCITY

EDB SUBJECT CATEGORIES -
990200 420400

SPONSOR - DOE/IO

PACKAGE TYPE - AS - IS