

## **Appendix D**

### **Model Platforms Extract Table**



**EXTRACT MATRIX III: MODEL PLATFORMS**

<b>Model</b>	<b>Hardware-software Interface Constraints/requirements</b>	<b>Runtime Characteristics</b>
<b>ADAM</b>	Requires a PC (486 or better) with a FORTRAN compiler.	The model takes only a few seconds to run on a Pentium PC for a typical scenario.
<b>AFTOX</b>	The AFTOX model runs in the MS-DOS environment on a Pentium PC.	The AFTOX model is intended to be run in interactive mode, where the user is prompted with a series of questions during the runtime.
<b>AI-RISK</b>	PC	Fast
<b>ALOHA</b>	ALOHA enjoys extremely good portability and can be used by a first responder at the scene of an emergency.	Several seconds on a CRAY; 1-2 minutes on a PC or a workstation
<b>AQPAC</b>	Easily installed on PC.	Fast
<b>ARAC (MATHEW/ ADPIC)</b>	Two versions of the software are provided in separate file groupings: the native DEC-VMS operating system and a differential compile for UNIX platforms.	A typical one-hour simulation using 5000 marker particles completes in less than 2 CPU minutes on a VAX 6610.
<b>ARCON 96</b>	IBM compatible PC.	Executes in less than a minute.
<b>AXAIRQ</b>	Operates on the SRS IBM Mainframe.	Typically runtime is 1-3 cpu minutes.
<b>AXAOTHER XL</b>	Operates on any computer that will support Microsoft Excel 4.0 or higher.	Less than a minute.
<b>BNLGPM</b>	The Emergency Response Terminals (ERT's) for the Stack Monitoring Facility are specially programmed PCs that run the IBM OS/2 2.0 operating system.	Runs take only a few seconds to execute.
<b>CALPUFF</b>	Operates on a PC.	An initial run takes several hours to days to set up. Subsequent runs with small changes in the data set can be set up much faster.
<b>CAP88-PC</b>	Operates on a PC.	Less than 5 minutes on a 486 or better.
<b>CASRAM</b>	Unix or DOS on a Sun 4 or higher workstation or a Pentium-class PC.	Run times vary from 2-12 hours on a Sun 5 workstation for the statistical analysis of 100,000 accidents.
<b>CATS</b>	CATS operates on SUN and IBM UNIX work stations.	No information provided.
<b>CCSL</b>	DOS (Pentium PC) and UNIX SGI (Reality Engine)	Executes in less than 20 seconds.
<b>CFAST</b>	PC	Runs typically range from a few to tens of minutes.
<b>COMPBRN III</b>	PC or workstation and a FORTRAN compiler	Less than 5 minutes.
<b>CONTAIN</b>	CRAY and UNIX Workstations	The ratio of real time to run time can vary from 0.5 to 100, depending on the modalization.

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<b>Model</b>	<b>Hardware-software Interface Constraints/requirements</b>	<b>Runtime Characteristics</b>
<b>COSYMA</b>	No information provided.	No information provided.
<b>CTDMPLUS</b>	PC	Set up time 5 or 10 minutes.
<b>DEGADIS</b>	DEGADIS runs in either a VAX or PC environment.	No information provided.
<b>DOSEEP</b>	Data General MV series AOS/VS, and MS DOS	About 1 minute or less.
<b>EMGRES</b>	PC	1 to 2 minutes
<b>ERAD</b>	No information provided.	Cumbersome for some applications.
<b>ETMOD</b>	FORTRAN 77 – Any PC with MS-DOS	Executes in a few minutes.
<b>FEM3C</b>	Unix-based workstations or UNICOS on CRAY-2, CRAY, Y-MP, DEC alpha, SGI, or compatible series mainframes.	An experienced user can set up a sample problem in 1 day or less.
<b>FIRAC</b>	Machine/operating system options include CRAY, IBM PC, and SUN.	Execution time ranges from seconds to a few minutes.
<b>FIRAC/FIRIN</b>	PC	Minimal, compared to input preparation.
<b>FPETOOL</b>	PC	A few minutes.
<b>GASFLOW</b>	CRAY/UNICOS, SGI/UNIX, SUN/UNIX; a FORTRAN 77 compiler is required.	Runtimes on the CRAY vary from a few seconds to a few hours.
<b>GAUS1</b>	This model only runs on an HP48 scientific calculator, using a Language similar to FORTH.	Most results available in seconds.
<b>GENII</b>	PC	A few seconds.
<b>GXQ</b>	PC	Code takes very little time to execute.
<b>HARM II</b>	Hewlett Packard Model 9000/375 computer using UNIX X Window operating system or DEC VAX operating system.	Depends on input.
<b>HGSYSTEM</b>	PC	Approximately 2 hours should represent the setup and processing time for an experienced user.
<b>HOTMAC/ RAPTAD</b>	<b>Computer operating system:</b> UNIX on a Supercomputer, workstation, PC	HOTMAC: 2-8 hours for a 24 hour simulation. RAPTAD: 20 seconds for a 1-hour simulation.
<b>HOTSPOT</b>	All PCs and HP 100 Palmtop, Apple computers with DOS emulator, e.g., Soft PC.	The user fills in an input data template and the output results appear almost instantaneously.
<b>HPAC</b>	HPAC supports PCs and UNIX systems (SGI and SUN OS).	With familiarity a user can usually obtain useful answers in 5 or 10 minutes.
<b>HRW</b>	<b>Computer operating system:</b> PC and UNIX (SGI Reality Engine)	10 seconds or less

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<b>HYSPLIT</b>	<b>Computer operating system:</b> UNIX, Windows 95/NT; tested on IBM, SGI, DEC, SUN, and CRAY	Less than a minute.
<b>INPUFF</b>	PC	Setting up the first run may take about 15-20 minutes, while subsequent runs take as little as 3 minutes.
<b>KBERT</b>	PC	Very fast.
<b>MACCS2</b>	Pentium PC	Ten minutes when run by an experienced user.
<b>MAILS</b>	PC	Runs in 1-3 minutes for most scenarios.
<b>MARSS</b>	<b>Computer operating system:</b> DEC microVAX II.	No information provided.
<b>MELCOR</b>	IBM, VAX/VMS, SUN, PC, CRAY, and MS-DOS PC	Runtimes on the CRAY vary from 0.1 second to approximately 1 hour.
<b>OMEGA/ ADM v.3.5</b>	Run on an X-windows/Motif on a CRAY (J-90/Y-MP/C-90/T3E)	Single Processor performance for a 24 hour simulation: CRAY Y-MP:nearly 3 and ½ hours CPU
<b>PAVAN</b>	The code is currently offered through ESTSC for execution on an IBM 3033 computer using the OS/VS operating system. No PC versions are available through the software center.	The PAVAN code is very easy to use, and takes only a few seconds to execute.
<b>PIKE</b>	<b>Computer operating system:</b> PC or a Minicomputer( DG AOS/VS)	About 1 minute
<b>PUFF-PLUME</b>	<b>Computer operating system:</b> VMS on Digital Equipment Computers; DOS on IBM-PC	1 or 2 minutes.
<b>RSAC-5</b>	PC	Typical runs take less than 10 seconds.
<b>RTVSM</b>	Portability is likely to poor, due to site-specific dispersion coefficients and alignment with Dugway meteorological tower array.	No information provided.
<b>SCIPUFF</b>	Pentium PCs; future versions will also support the UNIX platform.	Once an initial run is successfully set up, subsequent runs of "similar" scenarios can be done in a few minutes.
<b>SLAB</b>	Pentium PC	Executes in about 10 seconds.
<b>SUDU</b>	PC	User interaction: Typically 1-5 minutes Model calculations: 80286: a few seconds
<b>TRAC RA/HA</b>	Code presently resides in the offices of Alpha TRAC. Internet access to code and its output is password protected.	Depending on the complexity of the problem, runs can be made in the 1-3 minute timeframe.
<b>TRIAD 2-1</b>	PC	Typical run time is a few minutes on a IBM 486/DX2 PC.
<b>TSCREEN</b>	PC	A few seconds
<b>UFOTRI</b>	PC or UNIX workstation	For a standard deterministic run on a Pentium 133 PC about one minute. Probabilistic runs about 2 hours .

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<b>VAFTAD</b>	UNIX	Several seconds (CRAY) to 1-2 minutes (workstation)
<b>VDI</b>	The program should be easily portable to any platform supporting a standard FORTRAN compiler.	Input for a simple steady-state release could be set up within several minutes.
<b>VENTSAR XL</b>	VENTSAR XL will operate on any platform that supports Microsoft Excel version 4.0 or greater.	Seconds to minutes.
<b>VLSTRACK</b>	PC or a UNIX workstation	As long as an hour
<b>VULCAN</b>	Workstation, preferably Silicon Graphics, with a FORTRAN Compiler, C Compiler, and a Text Editor.	4-24 hours, depending on the workstation.