

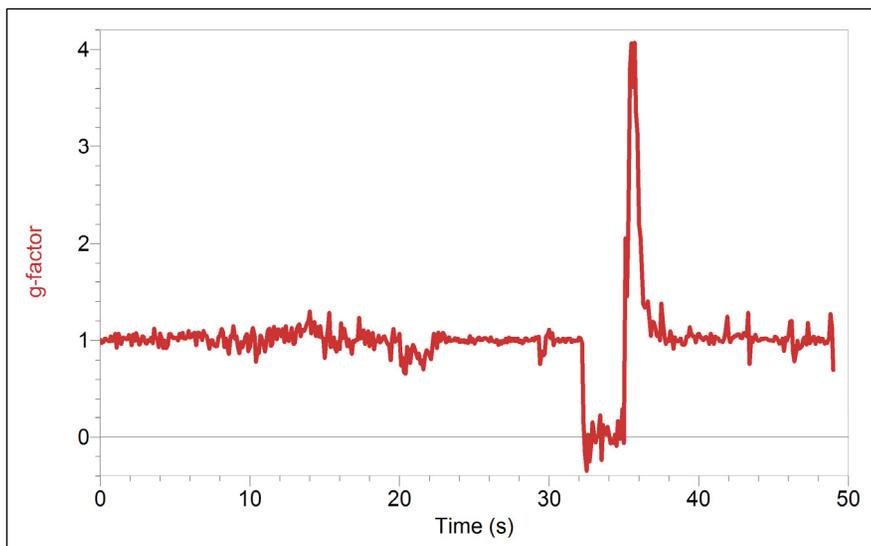
# Data Vest

(Order Code DV)

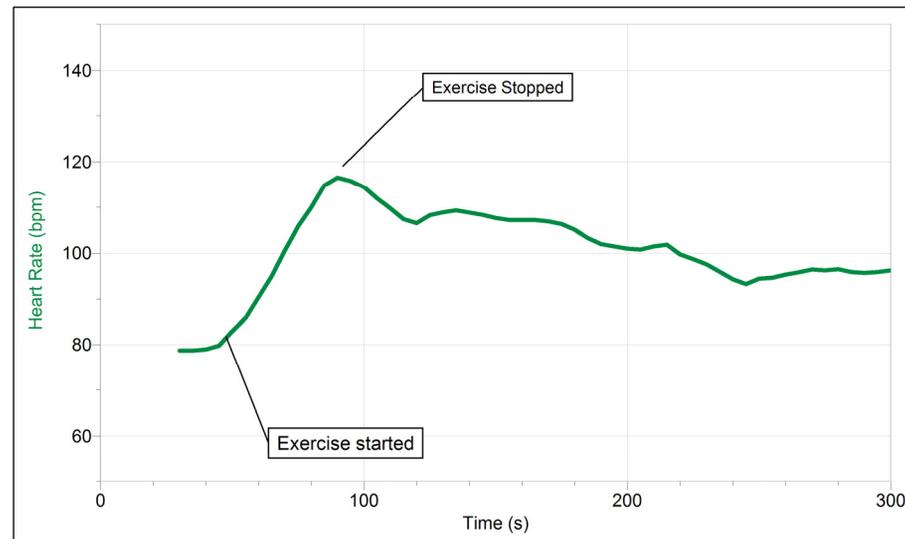
The Data Vest makes it easier to collect data outside the classroom. The vest is designed to hold a data-collection interface and sensors. You can use the vest with the Vernier LabQuest<sup>®</sup> 2, Vernier LabQuest<sup>®</sup>, Vernier LabPro<sup>®</sup>, TI-Nspire<sup>™</sup>, and the CBL 2<sup>™</sup> with one or more sensors and the Wireless Dynamic Sensor System (WDSS). Here are some sample uses:

- Use a Vernier Low-g Accelerometer or Wireless Dynamic Sensor System at a playground to collect centripetal acceleration data on a merry-go-round.
- Collect acceleration data on amusement park rides with the Low-g Accelerometer, 3-Axis Accelerometer, or the Wireless Dynamic Sensor System.
- Use the Vernier Barometer during amusement park rides to measure height along with acceleration data.

This graph shows data collected with a Low-g Accelerometer on the Drop Zone ride at Great America, Santa Clara, CA.



These data were collected with an Exercise Heart Rate Monitor while jogging on hilly terrain.



## Using the Data Vest

The vest has a front pouch that holds a LabQuest 2, LabQuest, LabPro, CBL 2<sup>™</sup>, TI-Nspire<sup>™</sup>, and Wireless Dynamic Sensor System. If you are using LabPro or CBL 2<sup>™</sup>, there is enough room for the interface and a graphing calculator. If you are using a TI-Nspire<sup>™</sup>, there is enough room for the TI-Nspire<sup>™</sup> Lab Cradle. A clear plastic covering on the pouch allows you to see the top of the equipment. This provides access to the buttons and the indicator lights of LabQuest 2, LabQuest, LabPro, CBL 2<sup>™</sup>, TI-Nspire<sup>™</sup>, or Wireless Dynamic Sensor System.





Also included is a foam insert to fit the Wireless Dynamic Sensor System (see above).

The vest was designed after consultation with the engineers and safety officers at a major amusement park. It has features such as the pockets opening to the inside, which are required for use on rides in some parks. Hook and pile tabs on the top of the pockets holds the interface and sensors in place. Two pockets are available for the sensors. Cables from the interface to the sensor or sensors can be run through the top opening of the pouch or through slits in the side of the pouch. Slots on the inside of the interface pouch provide access to the interface so that data can be transferred to a computer or calculator after the ride.

### Data Collection at Amusement Parks

A popular use of the Data Vest is collecting data at amusement parks.

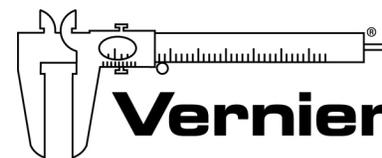
*Amusement Park Physics* (order code AMPK) is the second edition of a book published by The American Association of Physics Teachers. The book's author Clarence Bakken, a retired physics teacher from Palo Alto, California, has been developing curricular materials related to amusement park physics since 1995.

The book is an excellent resource for teachers who want their students to connect their experiences at an amusement park to the physics concepts studied in class. The book explains how the instruments used to collect data, including electronic sensors, work on a conceptual level.

The book provides an extensive discussion of the analysis of the data including graphs. A key portion of the book discusses taking your class to the amusement park, and includes sample lab sheets and problem sets.

### Warranty

Vernier warrants this product to be free from defects in materials and workmanship for a period of five years from the date of shipment. The warranty does not cover damage to the product caused by abuse or improper use.



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