

temporal area of the head. The proposed criterion is consistent with ANSI, ASTM, and Snell bicycle helmet standards, and with the FMVSS 218 motorcycle helmet standard. Therefore, the Commission makes no change to the proposed rule in response to this comment.

*Comment:* Vertical vision. One commenter suggested that the Commission adopt requirements for a vertical field of vision.

*Response:* The Commission has no information to indicate that bicycle helmets are posing a risk of injury due to inadequate upward or downward visual clearance. Accordingly, the Commission is not proposing a vertical field of vision requirement.

*Comment:* Dwell time. Several commenters disagreed with the dwell time specification in the first proposed CPSC standard.

*Response:* The Commission agrees with these comments, and the impact attenuation requirements are revised to specify only peak g as the evaluation criteria. This change was made because of a lack of scientific evidence to support application of dwell time as a bike helmet evaluation criterion.

*Comment:* Point loading requirements. Two commenters recommended that the Commission explore requirements to limit localized loads on the head that could be caused by strategically located high-density foam in helmet liners.

*Response:* The Commission has no information to indicate that some helmet designs may pose a risk of injury due to localized loading. Therefore, the Commission is not adding point loading requirements to the proposed rule at this time.

*Comment:* Daytime and nighttime conspicuity. Some comments related to possible requirements for helmets to improve a bicyclist's conspicuity in both daytime and nighttime conditions.

*Response:* Available data do not suggest that requirements to increase the visibility of bicyclists to others would significantly reduce daytime incidents. Data do show an increased risk of injury while bicycling during non-daylight hours.

Commission staff observed informal demonstrations which suggested that reflective material on bike helmets could enhance the conspicuity of a nighttime rider. However, at this time, the Commission lacks information on what requirements might be effective to achieve this goal.

The Commission intends to study this issue further in conjunction with planned work on evaluating the bicycle reflector requirements of CPSC's

mandatory requirements for bicycles. 16 CFR part 1512. After that work is completed, the Commission will decide whether to propose reflectivity requirements for bicycle helmets under the authority of the Children's Bicycle Helmet Safety Act of 1994. The Commission does not intend to delay issuance of the standard proposed in this notice to coincide with any reflectivity requirements that may be issued later.

*Comment:* Type of test rig. The originally proposed CPSC standard and the current interim mandatory standards allow the use of either a wire- or rail-guided impact test rig. A commenter recommended that the Commission adopt a free-fall test rig that has no rigid connection between the headform and the guide system. The Commission also received a proposal from one respondent to evaluate differences between twin-wire and monorail test rigs through exhaustive comparison testing.

*Response:* The Commission has no information to indicate that the suggested free-fall rig provides a more reliable test system or that it represents the dynamics of a human head impacting a surface better than other types of impact test equipment. Accordingly, the Commission is not proposing a free-fall test rig.

To avoid the possibility that different results would be obtained with the two types of test rigs, the Commission is specifying only the monorail test rig in the revised mandatory standard. The suggested tests would be helpful only if both test rigs were permitted.

For helmet certification testing, the regulation does not require that the manufacturer follow specifically the procedures of the CPSC standard. Thus, a manufacturer may choose to certify helmets by testing with a wire-guided test rig, provided the manufacturer assures that the helmets will meet the requirements of the CPSC standard when tested on the standard's monorail test rig.

*Comment:* Dynamic strength of retention system test—spinning rollers. A comment suggested that the "jaw rods" in the strength of retention system test rig should be rotatable.

*Response:* The requested feature is consistent with provisions in both the ANSI and Canadian standards and should help ensure that the maximum loading is transmitted to the retention system attachment points. Accordingly, the Commission has adopted this suggestion, and the revised proposal states that the "stirrups" that represent the bone structure of the jaw shall be freely spinning cylindrical rollers.

*Comment:* Dimensions of impact base. Three commenters recommended revising the standard to allow a smaller impact base. The commenters claimed that the dimensions specified in the proposed standard are not consistent with many existing test rigs.

*Response:* The Commission concludes that there is no known reason to exclude bases with smaller surface dimensions. Therefore, the Commission proposes to reduce the minimum surface area specification from 0.30 m<sup>2</sup> to 0.10 m<sup>2</sup>. This is consistent with impact base specifications in Snell helmet standards. The minimum mass of the impact base will still be the originally proposed 135 kg.

*Comment:* Instrument system check procedure. One commenter claimed that the instrument system check procedure specified in the first proposed rule only tests repeatability and not the accuracy of calibration. The commenter recommended that the procedure allow using a test headform, instead of the spherical impactor, for the instrument system check impacts. The commenter also suggested that the instrument system check be performed at least once a week.

*Response:* The commenter is correct that this instrument system check procedure primarily indicates that the test is producing repeatable results. The Commission's staff, using the procedures proposed in the originally proposed CPSC standard, obtained daily test results on an average of 12 drops of a spherical impactor on a modular elastomer programmer ("MEP") pad for 3 months. These tests yielded peak accelerations that met the originally proposed 389±8g criteria for the specified velocity range. The specific g-level that will be achieved depends on the MEP pad in use.

The Commission agrees that the instrument system check procedure should have greater flexibility to allow other laboratories to conduct testing based on their internal procedures. To help assure that consistent, reproducible data are obtained, the Commission proposes to continue the use of an impactor with a spherical impact surface, rather than impact headforms. The Commission also believes that the system check interval should not be longer than the beginning and end of each test day. The revised procedure, however, is not intended to prevent each laboratory from exercising sound engineering practice in establishing their specific methodology.

*Comment:* Distance between impacts. A commenter recommends revising the minimum distance between impact sites