

the average Lorentz factor of the particles) have been checked to ensure that they are consistent with available observations made of active extragalactic nuclei. Thus, the 14,200 years BP superwave model in particular and the Superwave Model in general are justified on the basis of extragalactic evidence. The only important hypothesis included in the 14,200 years BP superwave model that cannot be inferred from extragalactic evidence is the date at which the event horizon would have first passed the Earth, i.e., 14,200 years BP. As mentioned earlier, this was derived from what seems to be an ancient documentation of the event.

The 14,200 years BP superwave model predicts that there should be presently observable evidence of energetic phenomena taking place at certain locations in the Galaxy. Taking the date 14,200 years BP as the time when the superwave would have begun its arrival in the solar vicinity, the shape and location in the Galaxy of the radially propagating event horizon becomes uniquely specified. To an observer located within the perimeter of this superwave shell, the Galactic center and the region contained within the shell would appear relatively calm. However, slightly further out in the vicinity of the shell itself, a "cosmic storm" would be raging. The purpose of Chapter 5 is to review pertinent astronomical evidence available in the literature, and to show that it is compatible with the prediction that a superwave event horizon is present in the specified region of the Galaxy. In addition, to support the prediction that a superwave may have recently passed through the solar vicinity, evidence is presented (Chapter 4) of possible aftermath effects presently observable in the solar system. Also evidence is presented indicating that the Galactic center has been the site of recent explosive activity.

Part III reviews terrestrial evidence with the intention of determining whether the proposed superwave could have passed the Earth beginning about 14,200 years ago. In particular, this evidence is gathered in support of statements 4 and 6 of the GEH. In Part III the mode of inquiry changes from one of predominantly considering direct observations of related events currently taking place in the Galaxy, to one of piecing together past evidence registered in the Earth's sedimentary and glacial ice records.

The Galactic evidence presented in Part II and the geological evidence presented in Part III were gathered after the GEH had been formulated. To my knowledge, none of the evidence uncovered in the literature search contradicts the GEH in its present form. Rather, the evidence appears to be quite compatible with the hypothesis. Before the literature search was begun, a number of qualitative predictions were made on the basis of the GEH; see Table I. The resulting after-the-fact confirmation of these early predictions supports the credibility of the GEH. A list of additional predictions which have emerged as a consequence of conducting this study are presented in Chapter 13 (Table XVIII).

TABLE I
EARLY PREDICTIONS OF THE GALACTIC EXPLOSION HYPOTHESIS

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- 1) There should be an "event horizon" which passed the Earth beginning about 11,000–14,000 years ago and which is presently traveling away from the Galactic center at close to the speed of light. Moreover, at the present location of this horizon, one should perceive highly energetic events taking place.
 - 2) About 11,000–14,000 years ago the Earth should have been exposed to elevated levels of cosmic ray radiation.
 - 3) There should have been an increased rate of deposition of cosmic dust around 11,000–14,000 years BP.
 - 4) There should have been a greater chance of extinction of animal life at this time.