You are to select one of these topics (modifications can be made if they are approved by one of the professors). You are to write an approximately ten page (double spaced) paper on the topic in place of the shorter paper assigned to the rest of the class. Your paper will receive the same number of points for credit, but will be graded to a higher standard. In addition, we will hold a seminar on each topic at a time to be selected (but not in the regular class hour) toward the end of the term, and you should be prepared to take part in the discussion.

Books to read and topics

1. Harvard College Observatory and women in astronomy

2. Space program and management

   OR


   OR


   OR

   http://ntrs.nasa.gov/archive/nasa/casi.ntrs.nasa.gov/19910003124_1991003124.pdf
3. Use “Starry Night” to recreate the following events – write up the circumstances (date, picture of the sky at the time of the event, astronomical circumstances, and historical impact):
   a. Star of Bethlehem
   b. The eclipse that saved Columbus
   c. The painting of the Crab Nebula supernova in Chaco Canyon
   d. The eclipse that stopped a battle
   e. The Battle of Hastings
   f. Was the picture in the course notes of the sun rising over the Heelstone at Stonehenge actually taken at the Summer Solstice? If not, when might it have been taken?
   g. Reconstruct the view in the Mayan capital of Tikal from Temple IV to Temple III at the time of the winter solstice sunrise
   h. Was the solstice alignment at Newgrange the same when the tunnel into the mound was dug (say 3000 BC) as it is now?
   i. An eclipse is used to help date the fall of Troy, through its mention in Homer’s Odyssey. When did this eclipse occur? Was it visible from the general area of Troy?

4. Astronomical chaos and mass extinctions