

## **NASA Space Archeology Work at Gordion: 2009 to 2012**

Working with archaeologists from the University Museum of the University of Pennsylvania, our NASA/Goddard and University of Minnesota Space Archaeology team addressed four problems at Gordion using NASA technology: (1) we provided the University of Pennsylvania's Museum of Archaeology and Anthropology a system to rectify and incorporate all existing survey data from Gordion, including previous aerial photographs of the site, detailed site surveys, maps, and excavation plans, into a common mapping system. This was accomplished with a Geographic Information System based upon a 60 cm Quickbird satellite image ortho-rectified using Shuttle Radar Topographic Mission 30 m digital elevation data and tied to a known datum at Gordion; (2) using a variety of satellite data we documented agricultural encroachment that was compromising Gordion's archaeological integrity; (3) we conducted ground penetrating radar and magnetic geophysical surveys; and (4) we continue to monitor the site with commercial satellite imagery for surveillance purposes.