

NASA MOON TREK NEW VISUALIZATION AND ANALYSIS TOOLS

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Introduction: NASA’s Moon Trek (<https://trek.nasa.gov/moon/>) is one of a growing number of interactive, browser-based, online portals for planetary data visualization and analysis produced by NASA’s Solar System Treks Project (SSTP). Moon Trek continues to be enhanced with new data and new capabilities enabling it to facilitate the planning and conducting of upcoming lunar missions by NASA, its commercial partners, and its international partners, as well as scientific research [Figure 1].



Figure 1 – Moon Trek

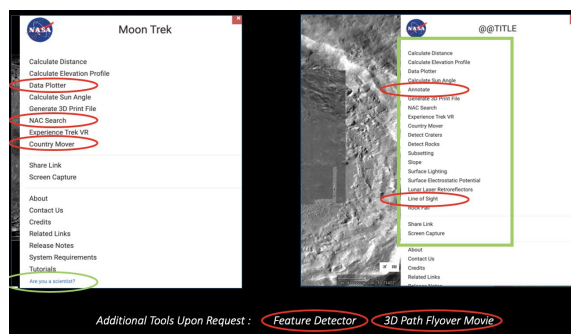


Figure 2 – Lists of Tools (new ones in red ovals)

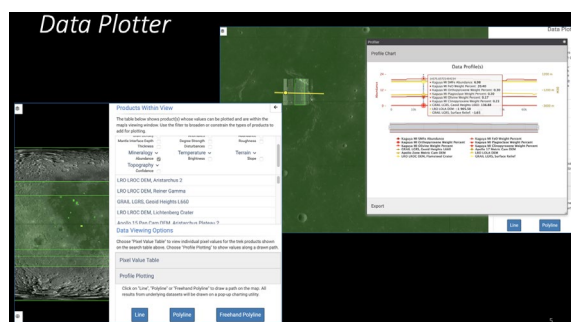


Figure 3 – Data Plotter Tool

Background: Moon Trek’s innovation visualization and analysis tools are already being used by a growing number of missions and scientists around the world. The tools deployed including interactive 2D and 3D visualization, a DEM and Ortho Mosaic Image production pipeline as well as tools for distance measurement, elevation profile generation, solar altitude and azimuth calculation, 3D print file generation, virtual reality visualization generation, lighting analysis, electrostatic surface potential analysis, slope analysis, rock detection, crater detection, and rockfall detection, etc.

New Tools: Moon Trek is adding a new set of visualization and analysis tools include line of sight analysis (facilitating communications planning and detailed studies of solar illumination), traverse path planning, and 3D traverse path visualization tool, among others. The new tools are highlighted in the red ovals [Figure 2]. This presentation for PSIDA will walk through Moon Trek’s latest tools including Data Plotter [Figure 3], NAC Search Tool [Figure 4] and others.

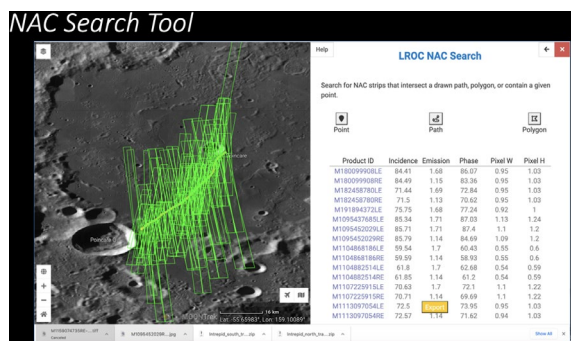


Figure 4 – NAC Search Tool

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