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HIGH-RESOLUTION CERES SURVEY ATLAS DERIVED FROM DAWN FC IMAGES. Th. Roatsch[1], E. Kersten[1], K.-D. Matz[1], F. Preusker[1], F. Scholten[1], R. Jaumann[1], C. A. Raymond[2], and C. T. Russell[3], [1]Institute of Planetary Research, German Aerospace Center (DLR), Berlin, Germany, Thomas.Roatsch@dlr.de, [2]JetPropulsion Laboratory, California Institute of Technology, Pasadena, CA, [3]Institute of Geophysics, UCLA, Los Angeles, CA.

Introduction: NASA's *Dawn* spacecraft will orbit the dwarf planet Ceres in June 2015 with an altitude of about 4,400 km to characterize the geology, elemental and mineralogical composition, topography, shape, and internal structure of Ceres before it will be transferred to lower orbits. One of the major goals of the mission is a global mapping of Ceres.

Data: The Dawn mission will map Ceres from three different orbital heights during Survey orbit (4,424 km altitude), HAMO (High Altitude Mapping Orbit, 1474 km altitude), and LAMO (Low Altitude Mapping Orbit, 374 km altitude) [1]. The Dawn mission is equipped with a framing camera (FC) [2]. Dawn will orbited Ceres during Survey in 7 cycles in June 2015. The framing camera will take about 700 clear filter images with a resolution of about 400 m/pixel during these cycles. The images will be taken with different viewing angles and different illumination conditions. We will select the nadir looking images with similar illumination conditions for the global mosaic of Ceres.

Data Processing: The first step of the processing chain is to ortho rectify the images to the proper scale and map projection type. This process requires detailed information of Ceres' topography and will be calculated during the stereo processing of the Survey images [3]. The shape model will be used for the calculation of the ray intersection points while the map projection itself will be done onto a sphere with a mean radius of 470 km. The next step will be the mosaicking of all images to one global mosaic of Ceres, the so called basemap.

Ceres map tiles: The Ceres atlas will be produced in a scale of 1:2,000,000 and will consist of 3 tiles that conform to the subdivision of the synoptic quadrangle scheme proposed by Greeley and Batson [4] and was used e.g., for mapping Vesta in a scale of 1:1,500,000. A map scale of 1:2,000,000 guarantees a mapping at the highest available Dawn resolution in Survey and results in an acceptable printing scale for the hardcopy map of 5 pixel/mm.

Nomenclature: The Dawn team proposed to the International Astronomical Union (IAU) to use the names of gods and goddesses of agriculture and vegetation from world mythology as names for the craters and to use names of of agricultural festivals of the world for other feature names. This proposal was accepted by the IAU and the team will propose names for geological features to the IAU based on the Survey mosaic. These feature names will be applied to the map tiles as shown in Figure 1. The entire Ceres atlas consisting of 3 map tiles will become available to the public through the Dawn GIS web page [http://dawn_gis.dlr.de/atlas].

References: [1] Russell, C.T. and Raymond, C.A., Space Sci. Review, 163, DOI 10.1007/s11214-011-9836-2; [2] Sierks, et al., 2011, Space Sci. Rev., 163, DOI 10.1007/s11214-011-9745-4; [3] Preusker, F. et al., this session; [4] Greeley, R. and Batson, G., 1990, Planetary Mapping, Cambridge University Press.

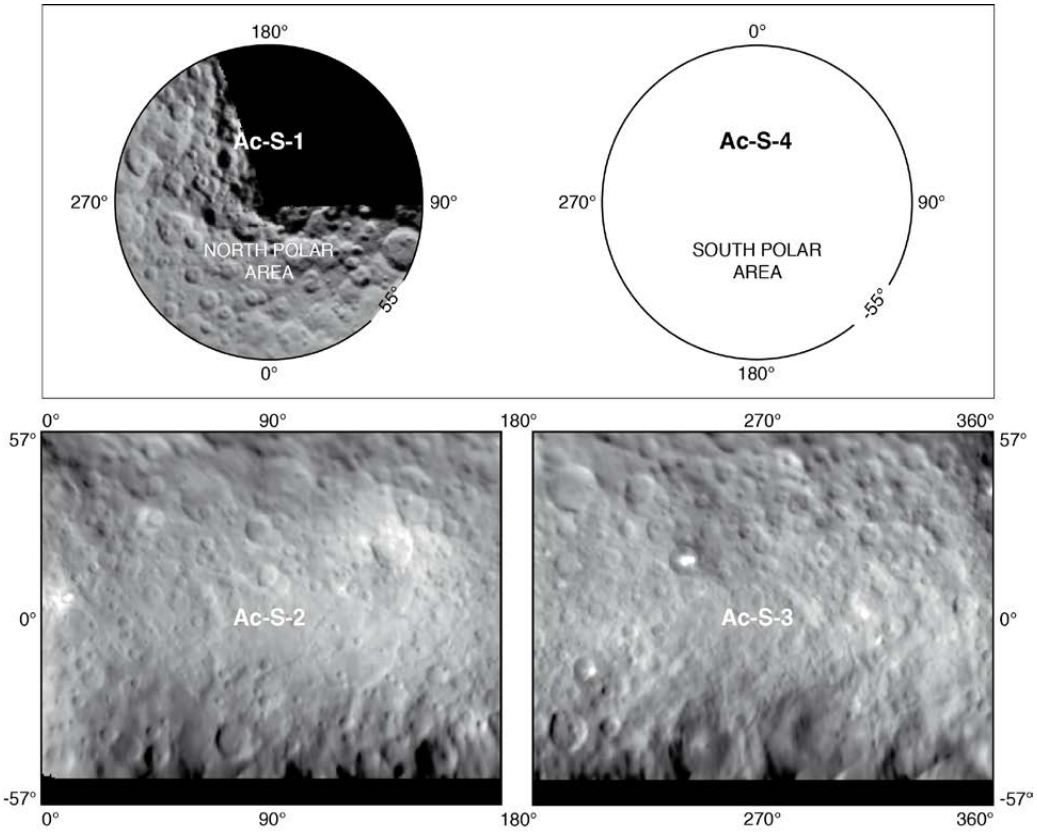

Figure 1: Subdivision of the synoptic quadrangle scheme of the Ceres Survey atlas.