2009S Aerial Photos

Location: Covering the 70mx 200m 2009 South Site, and transect line which runs:
From 7920261.77 N 587718.95 E ("0 m end")
To 7920274.16 N 587519.66 E ("200 m end")
UTM Zone 4 North
Red squares in images demark the approximate position of the 5 platforms from which the site was scanned with terrestrial LiDAR.

Collection: Study areas were repeatedly photographed from a kite or airplane borne camera as the melt season progressed, whenever cloud conditions permitted. Kite borne images were captured with a Canon Powershot SD 890 triggered by an FM remote control servo, suspended below the kite line by a 4 point harness [Benton, 2010] at altitudes between 150 and 350 m. Airplane based images were captured from a single engine prop plane with a Nikon D70 SLR camera mounted in a custom cradle and triggered to take images with a remote intervalometer. Image mosaics were constructed using PTGui and Autopano Pro software. The airplane based images were geo-referenced with Geocode software using GPS positions recorded by the plane's navigation system, synchronized with the camera clock. The kite camera did not include a GNSS system so the kite borne images, collected from a range of perspectives, at unknown altitudes and angles, are co-registered entirely by image feature matching. This allows mosaic construction over only limited areas, not more than roughly five frames square. Manmade platforms surrounding the sites for LiDAR collection were used to geo-reference the kite mosaics, however distorting the images to create the correct relative platform placement resulted in some image anomolies between the platforms. Though these distortions prevent using the kite based photo mosaics for high accuracy pond area calculations, the mosaics still provide a compelling view of the surface evolution.

Data Format: Images are presented in .jpg format.