Guide to the Spatial Index of U2 Aerial Photography of the Middle East, 1958-1960

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The master index of U2 film cans (rolls) held by NARA is **NARA_INDEX_MIDEAST.tab**. It contains basic information on the eleven declassified missions, including the numbers necessary to recall the film canisters from cold storage.

Field Name	*Field Description*
COUNTRY	The NARA collection designation (for this group, all MIDEAST)
DATE	The date the mission was flown
MISSION	The mission number, without the "B" designation (for Detachment B, based in Adana)
CAMERA	L or R for the two sides (in the direction of flight) of the main camera, or TRACKER for the low resolution tracking camera
ROLL	The number of the film roll
STARTFRAME	The first frame number of the film roll
ENDFRAME	The final frame number of the film roll
TOTFRAMES	The total number of film frames on the roll (a complete roll will have 133 frames)
ON	The ON number assigned to the roll
BARCODE	The BARCODE number assigned to the roll
CAN	The CAN number assigned to the roll
ROLL_ID	A unique film roll identifier that can be used to join this table to several of the spatial datasets (see below).

The ON, BARCODE, and CAN numbers are necessary to recall a film roll from the cold storage facility.

Each of the eleven declassified U2 missions with film held by NARA has up to five spatial datasets, where XXXX is the four-digit mission number.

BXXXX_FLIGHT_PATH.zip: Mission Flight Path. This polyline dataset reconstructs the flight path of each mission. Most flight paths are approximations based on:

1. The clock positions on the tracking films;
2. The ground footprints of geo-referenced vertical frames from the main camera; and
3. Declassified planning and analysis documents about the missions held by NARA.

The flight paths have been subdivided into segments for each pair of film rolls (e.g., Roll 1 left and Roll 1 right). The attribute data include the NARA-assigned numbers needed to recall the film rolls from the

cold storage facility. These attributes are mirrored in the BXXXX_PHOTO_COVERAGE datasets (see below).

Field Name	*Field Description*
MISSION	The mission number, without the "B" designation (for Detachment B, based in Adana)
MISS_DATE	The date the mission was flown
FILM_ROLL	The number of the film roll
MODE	The camera position mode. • 0: code indicating that the position mode is unknown; • Mode 1 photographed from horizon to horizon in one vertical and six oblique positions; • Mode 2 photographed three positions (vertical, left oblique, right oblique); • 99: code indicating that the main cameras were turned during this flight segment
ON_L	The ON number assigned to the roll containing the negatives for the left side of the camera frames (needed for requesting the film roll from cold storage)
BARCODE_L	The BARCODE number assigned to the roll containing the negatives for the left side of the camera frames (needed for requesting the film roll from cold storage)
CAN_L	The CAN number assigned to the roll containing the negatives for the left side of the camera frames (needed for requesting the film roll from cold storage)
ON_R	The ON number assigned to the roll containing the negatives for the right side of the camera frames (needed for requesting the film roll from cold storage)
BARCODE_R	The BARCODE number assigned to the roll containing the negatives for the right side of the camera frames (needed for requesting the film roll from cold storage)
CAN_R	The CAN number assigned to the roll containing the negatives for the right side of the camera frames (needed for requesting the film roll from cold storage)
ROLL_ID	A unique film roll identifier that can be used to join this table to several of the spatial datasets (see below)
Shape_Len	Length in meters of the flight segment

BXXXX_NEG_FOOTPRINTS.zip: Polygons representing the spatial extent on the ground of individual negatives from the left and right film rolls. The dataset is non-systematic, and coverage at present relates only to the specific research interests of the data compilers (Ur and Hammer).

Field Name	*Field Description*
MISSION	The mission number, without the "B" designation (for Detachment B, based in Adana)
Frame	The frame number (sequential from the start of film acquisition)
Camera_sid	The side of the frame (L or R, in the direction of flight) that the negative represents
Camera_pos	The position of the camera for the frame. In the seven-position Mode 1, these positions are: 3R 73.5 deg right of flight path (horizon visible) 2R 49.0 deg right of flight path 1R 24.5 deg right of flight path

	V 0.0 deg (nadir) 1L 24.5 deg left of flight path 2L 49.0 deg left of flight path 3L 73.5 deg left of flight path (horizon visible) In Mode 2, only the positions 1R, V, and 1L were acquired.
DATE_TIME	Date the mission was flown (note that times are not retained in the .shp file format, see the BXXXX_NEG_FOOTPRINTS_ATTRIB.tab below)

BXXXX_NEG_FOOTPRINTS_ATTRIB.tab: time-enabled attributes for polygons representing the spatial extent on the ground of individual negatives from the left and right film rolls. Because the attribute tables accompanying the BXXXX_NEG_FOOTPRINTS shapefiles cannot accommodate time, a second table in CSV format has been included that does include date and time.

Field Name	*Field Description*
MISSION	The mission number, without the "B" designation (for Detachment B, based in Adana)
Frame	The frame number (sequential from the start of film acquisition)
Camera_sid	The side of the frame (L or R, in the direction of flight) that the negative represents
Camera_pos	The position of the camera for the frame. In the seven-position Mode 1, these positions are: 3R 73.5 deg right of flight path (horizon visible) 2R 49.0 deg right of flight path 1R 24.5 deg right of flight path V 0.0 deg (nadir) 1L 24.5 deg left of flight path 2L 49.0 deg left of flight path 3L 73.5 deg left of flight path (horizon visible) In Mode 2, only the positions 1R, V, and 1L were acquired.
DATE_TIME	Date and time that the frame was acquired, derived from the analog clock stamped at the top (in the direction of flight) on the negative

BXXXX_PHOTO_COVERAGE.zip: approximate ground area of imagery coverage, based on the reconstructed flight path and assuming lateral coverage of 17.5 km for the three-position Mode 2 camera setting (i.e., the area of coverage for the 1R, V, and 1L positions on both left and right rolls).

Field Name	*Field Description*
MISSION	The mission number, without the "B" designation (for Detachment B, based in Adana)
MISS_DATE	The date the mission was flown
FILM_ROLL	The number of the film roll
MODE	The camera position mode. • 0: code indicating that the position mode is unknown; • Mode 1 photographed from horizon to horizon in one vertical and six oblique positions;

	• Mode 2 photographed three positions (vertical, left oblique, right oblique); • 99: code indicating that the main cameras were turned during this flight segment
ON_L	The ON number assigned to the roll containing the negatives for the left side of the camera frames (needed for requesting the film roll from cold storage)
BARCODE_L	The BARCODE number assigned to the roll containing the negatives for the left side of the camera frames (needed for requesting the film roll from cold storage)
CAN_L	The CAN number assigned to the roll containing the negatives for the left side of the camera frames (needed for requesting the film roll from cold storage)
ON_R	The ON number assigned to the roll containing the negatives for the right side of the camera frames (needed for requesting the film roll from cold storage)
BARCODE_R	The BARCODE number assigned to the roll containing the negatives for the right side of the camera frames (needed for requesting the film roll from cold storage)
CAN_R	The CAN number assigned to the roll containing the negatives for the right side of the camera frames (needed for requesting the film roll from cold storage)
ROLL_ID	A unique film roll identifier that can be used to join this table to several of the spatial datasets (see below)
Shape_Len	Length in meters of the flight segment

BXXXX_TRACK_CLOCK_POSITIONS.zip: the ground positions of the clock stamped on the tracking film. The position of the clock on the film does not indicate true nadir (in the direction of travel, it was stamped to the right and at the top of true nadir), but it can be used to indicate the general position of the plane at a given time during the flight, and is therefore useful for reconstructing the mission's flight path and duration.

Field Name	*Field Description*
TRACK_FRAME	The frame number (sequential from the start of film acquisition)
DATE_TIME	Date and time of the frame (when clocks were illegible, the time was interpolated from legible clocks stamped on earlier or later frames)
TRACK_COMM	Notes on the track film, not often indicating whether the plane was banking L or R
LATITUDE	Latitude of the ground position of the clock stamp, in decimal degrees (WGS 84)
LONGITUDE	Longitude of the ground position of the clock stamp, in decimal degrees (WGS 84)

BXXXX_MISSION_NOTES.pdf: Notes and observations on the mission flight path, camera modes, and general operation.