EXOPT - Exploitation Usability Optical Information

The Exploitation Usability Optical Information extension is optional. EXOPT is used with optical sensors and provides metadata that allows a user program to determine if the image is suitable for the exploitation problem currently being performed. The format and descriptions for the user-defined fields of the EXOPTA are detailed in Table 1. A single EXOPT is placed in the image subheader with the corresponding AIMID and ACFT extensions.

TABLE 1 EXOPTA – EXPLOITATION USABILITY OPTICAL INFORMATION EXTENSION FORMAT

R = REQUIRED, C = CONDITIONAL, <> = BCS SPACES ALLOWED FOR ENTIRE FIELD

Field	Name	Size	Value Range	Units	Type
CETAG	Unique Extension Identifier.	6	EXOPTA	N/A	R
CEL	Length Data Fields.	5	00107	bytes	R
The following fields define EXOPTA					
ANGLE_TO_NORTH	Angle to True North. Measured clockwise from first row of the image.	3	000 to 359	degrees	<R>
MEAN_GSD	Mean Ground Sample Distance. The geometric mean of the cross and along scan center-to-center distance between contiguous ground samples. Accuracy = ±10% Note: Systems requiring an extended range shall insert a default value of "000.0" for this field and utilize the PIAMC tag.	5	000.0 to 999.9	inches	<R>
(reserved-001)		1	1		R
DYNAMIC_RANGE	Dynamic Range of image pixels.	5	00000 to 65535		<R>
(reserved-002)		7	7 spaces		R
OBL_ANG	Obliquity Angle. Angle between the local NED horizontal and the optical axis of the image.	5	00.00 to 90.00	degrees	<R>
ROLL_ANG	Roll Angle of the platform body.	6	±90.00	degrees	<R>
PRIME_ID	Primary Target ID	12	alphanumeric		<R>
PRIME_BE	Primary Target BE / OSUFFIX (target designator)	15	alphanumeric		<R>
(reserved-003)		5	5 space		R
N_SEC	Number Of Secondary Targets in Image. Determines the number of SECTG extension present in the image subheader.	3	000 to 250		R
(reserved-004)		2	2 spaces		R
(reserved-005)		7	0000001		R
N_SEG	Number of Segments. Segments are separate imagery pieces within an imaging operation.	3	001 to 999		R
MAX_LP_SEG	Maximum Number of Lines Per Segment. Includes overlap lines.	6	000001 to 199999		<R>
(reserved-006)		12	12 spaces		R

SUN_EL	Sun Elevation. Angle in degrees, measured from the target plane at intersection of the optical line of sight with the earth's surface at the time of the first image line (NSIF row 1). 999.9 indicates data is not available.	5	±90.0, 999.9	degrees	R
SUN_AZ	Sun Azimuth. Angle in degrees, from True North clockwise (as viewed from space) at the time of the first image line (NSIF row 1). 999.9 indicates data is not available.	5	000.0 to 359.9, 999.9	degrees	R