

## Scene Definition

PALSAR GDS has two scene definitions of single beam and scan beam.

### 1. Scene Definition of Single Beam

The scene is based on "scene fixed point". Scene fixed point is defined as follows.

- It is the point divided satellite foot print at intervals of 0.5 degree.
- First point is + 0.25 degree away from ascending node.

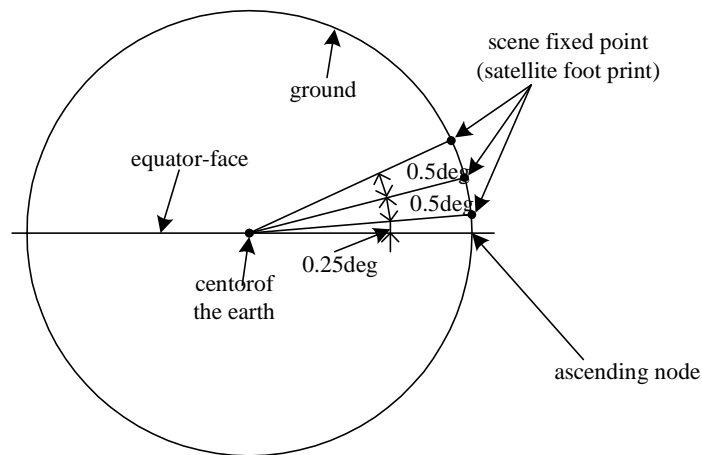


Fig. 1 Scene Fixed Point

Based on scene fixed point, the scene of single beam is defined as follows.

- (1) Range length of scene depends on swath width.
  - In the case that observation mode is fine and dual-polarimetric mode, swath width is 70 km. (Off-nadir angle is 34.3 degree on the equator.)
  - In the case that observation mode is quad-polarimetric mode, swath width is 30 km. (Off-nadir angle is 21.5 degree on the equator.)
- (2) Azimuth length of scene is defined as 10 seconds from time of scene fixed point - 5 seconds to time of scene fixed point + 5 seconds. This length is about 70 km.
- (3) No.1 of Row number is at a point +0.25 degree away from ascending node. From there, Row numbers are assigned in order up to No.720 toward along-track direction.
- (4) As a response to scene shift, ascending node is assigned as No.0.50, and two-digit number

after the decimal point is added to Row numbers from No.0.50 to No. 720.49.

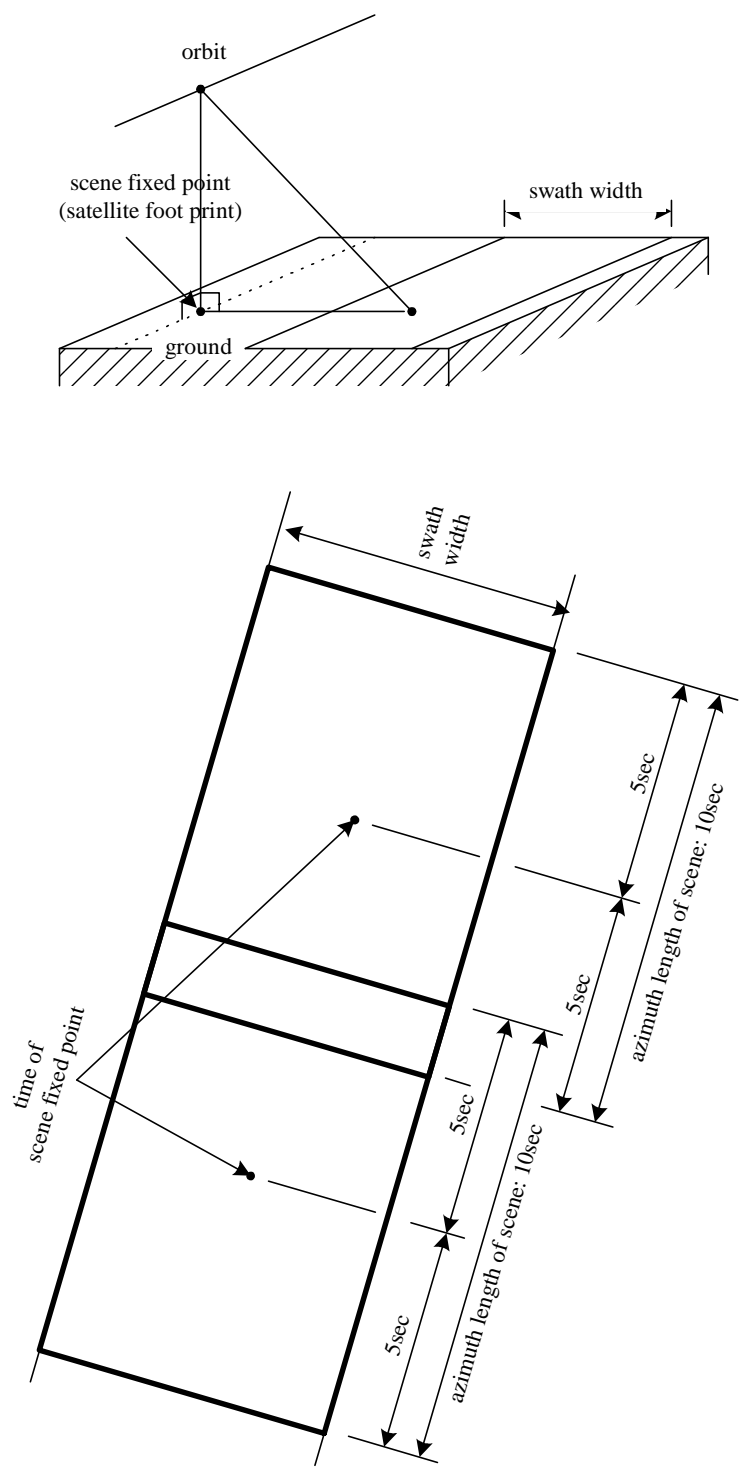


Fig. 2 Scene Definition of Single Beam

## 2. Scene Definition of Scan Beam

The scene of scan beam is defined as follows.

- (1) Range length of scene depends on swath width.
  - In the case that observation mode is ScanSAR mode and number of scans is 3, swath width is 250 km.
  - In the case that observation mode is ScanSAR mode and number of scans is 4, swath width is 300 km.
  - In the case that observation mode is ScanSAR mode and number of scans is 5, swath width is 350 km.

(These swath widths are on the equator.)
- (2) Azimuth length of scene is corresponding to azimuth length of five scenes for single beam. This length is about 300 km. (In the case that azimuth length is shorter than five scene's length for single beam, its length is azimuth length of scene.)