**Loop Closure**

**// when processing each frame**

**// after LK, calculate the ratio of track lost**

**// then detect new feature**

if( track\_lost\_ratio>=0.4 ){

1. Detect ORB features
2. Match with previous 1 or 2 frames
3. Propose F to filter outliers for matching
4. Update Global Feature DB: update tracks for existing features
5. Update Global Feature DB: create new tracks for new features

}

// 此处 loop\_closure function 返回 match\_frame\_idx

if( loop\_closure(descriptor vectors, …, match\_frame\_idx) ){

1. Calculate F between the matching frame and the current frame
2. Anchor loop closure frame and BA from the loop closure frame to now.

}

**loop\_closure(descriptor vectors, …, match\_frame\_idx)**

**返回最早的match frame**