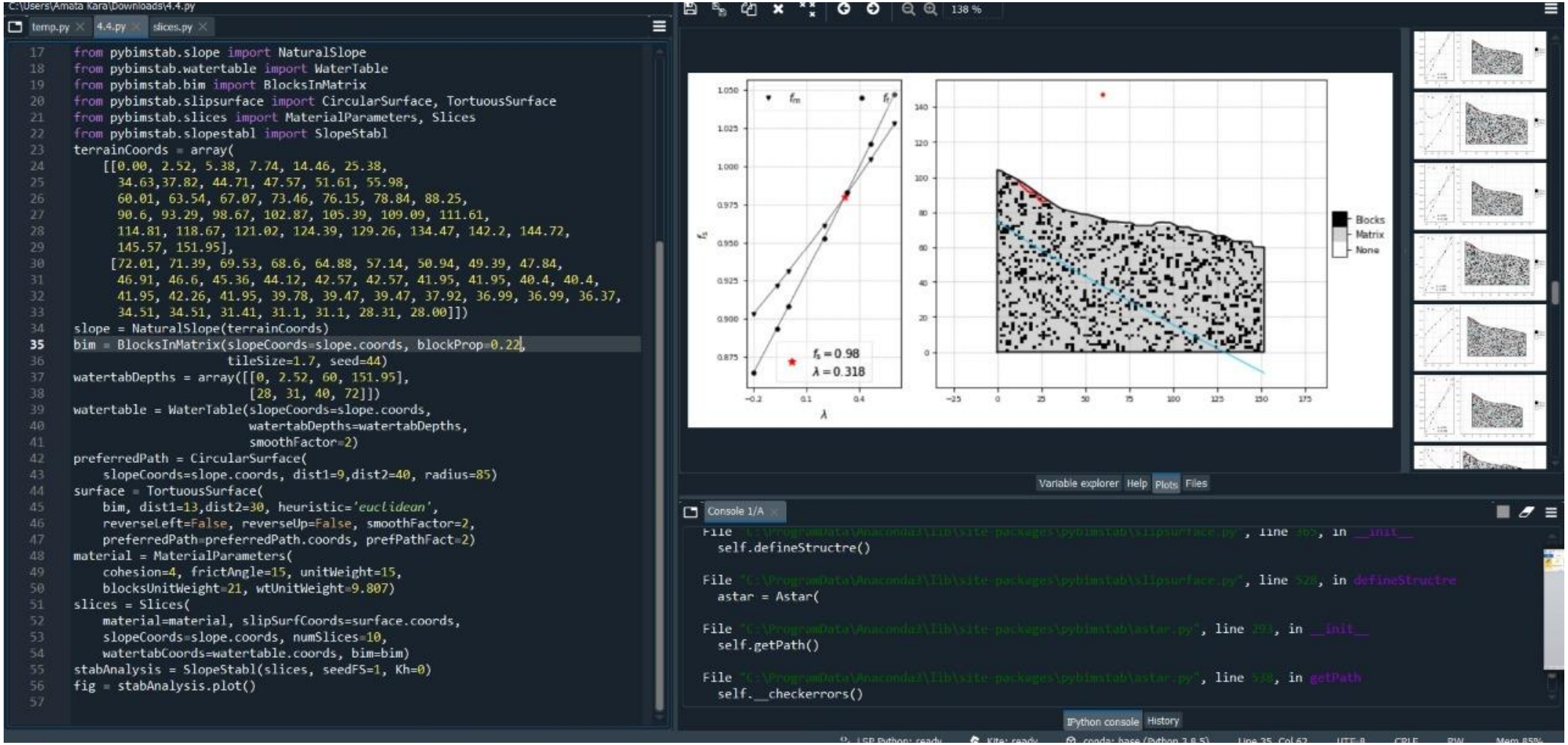
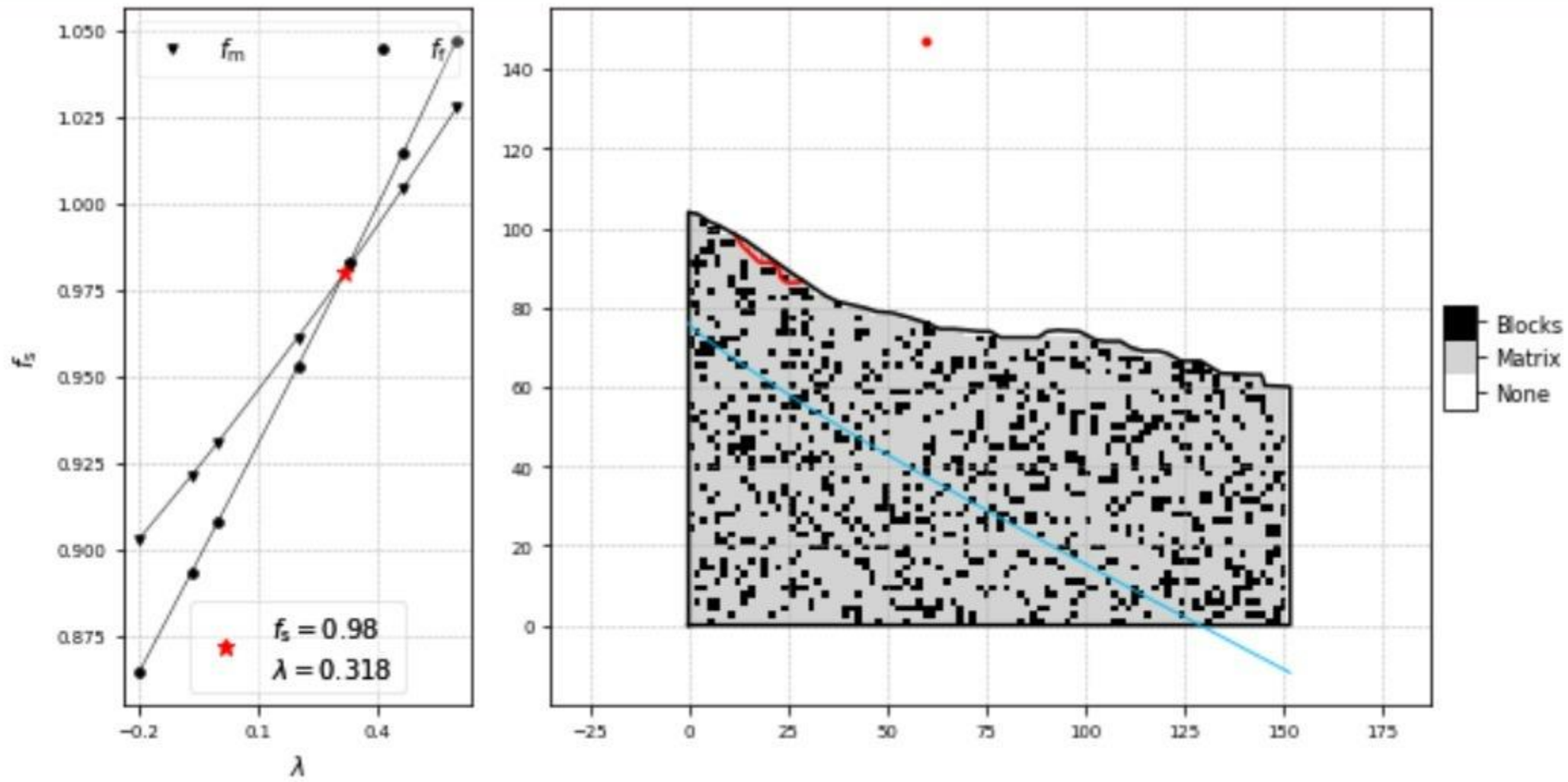
AMATA KARA 1900799

NILAI Fs Mendekati 1

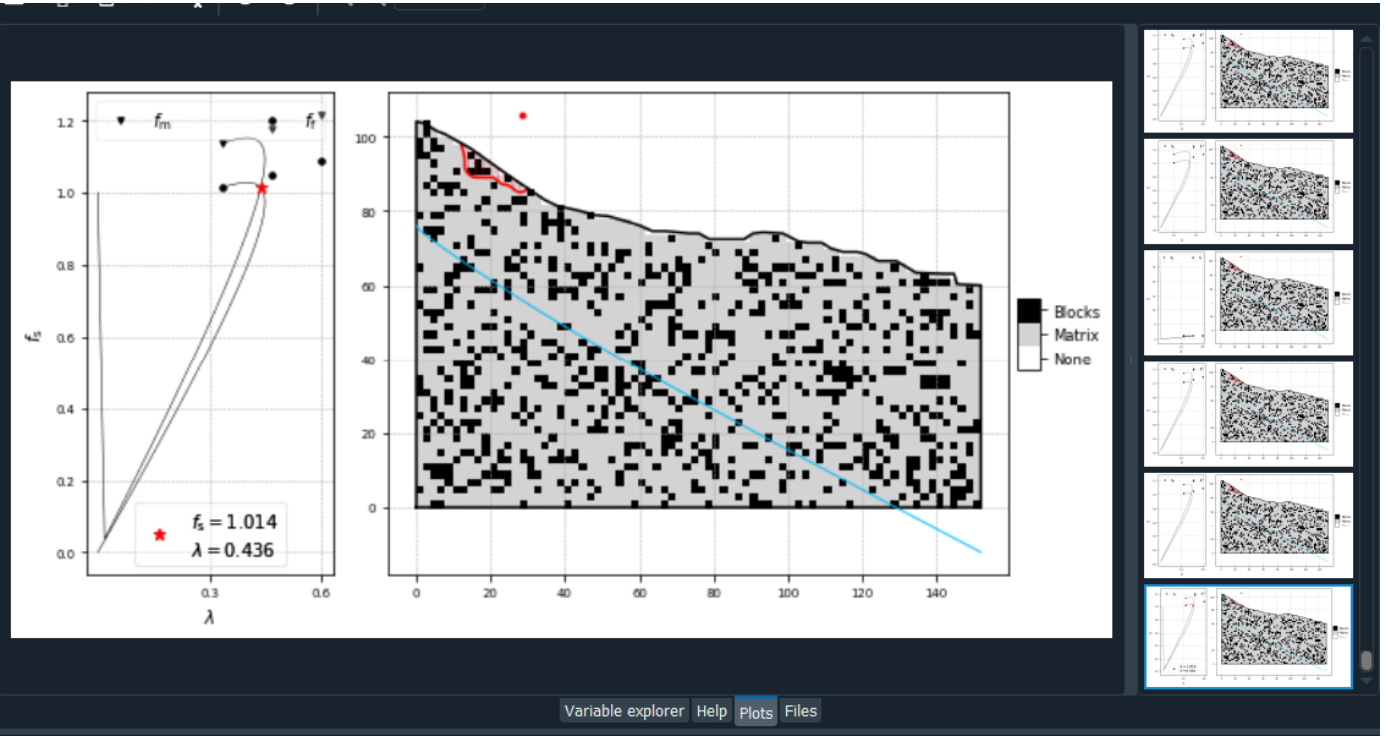



f_m
f_f
$f_s = 0.98$
$\lambda = 0.318$
f_s
λ
Blocks
Matrix
None

Mendekati Fs =1

temp.py | 4.4.py | slices.py

```
from pybimstab.slope import NaturalSlope
from pybimstab.watertable import WaterTable
from pybimstab.bim import BlocksInMatrix
from pybimstab.slipsurface import CircularSurface, TortuousSurface
from pybimstab.slices import MaterialParameters, Slices
from pybimstab.slopestabl import SlopeStabl
terrainCoords = array(
    [[0.00, 2.52, 5.38, 7.74, 14.46, 25.38,
      34.63,37.82, 44.71, 47.57, 51.61, 55.98,
      60.01, 63.54, 67.07, 73.46, 76.15, 78.84, 88.25,
      90.6, 93.29, 98.67, 102.87, 105.39, 109.09, 111.61,
      114.81, 118.67, 121.02, 124.39, 129.26, 134.47, 142.2, 144.72,
      145.57, 151.95],
     [72.01, 71.39, 69.53, 68.6, 64.88, 57.14, 50.94, 49.39, 47.84,
      46.91, 46.6, 45.36, 44.12, 42.57, 42.57, 41.95, 41.95, 40.4, 40.4,
      41.95, 42.26, 41.95, 39.78, 39.47, 39.47, 37.92, 36.99, 36.99, 36.3
      34.51, 34.51, 31.41, 31.1, 31.1, 28.31, 28.00]])
slope = NaturalSlope(terrainCoords)
bim = BlocksInMatrix(slopeCoords=slope.coords, blockProp=0.25,
                     tileSize=2, seed=63)
watertabDepths = array([[0, 2.52, 60, 151.95],
                        [28, 31, 40, 72]])
watertable = WaterTable(slopeCoords=slope.coords,
                        watertabDepths=watertabDepths,
                        smoothFactor=2)
preferredPath = CircularSurface(
    slopeCoords=slope.coords, dist1=4.6,dist2=46.6, radius=66)
surface = TortuousSurface(
    bim, dist1=13,dist2=30, heuristic='euclidean',
    reverseLeft=False, reverseUp=False, smoothFactor=2,
    preferredPath=preferredPath.coords, prefPathFact=2)
material = MaterialParameters(
    cohesion=4, frictAngle=15, unitWeight=15,
    blocksUnitWeight=21, wtUnitWeight=9.807)
slices = Slices(
    material=material, slipSurfCoords=surface.coords,
    slopeCoords=slope.coords, numSlices=10,
    watertabCoords=watertable.coords, bim=bim)
stabAnalysis = SlopeStabl(slices, seedFS=1, Kh=0)
fig = stabAnalysis.plot()
```



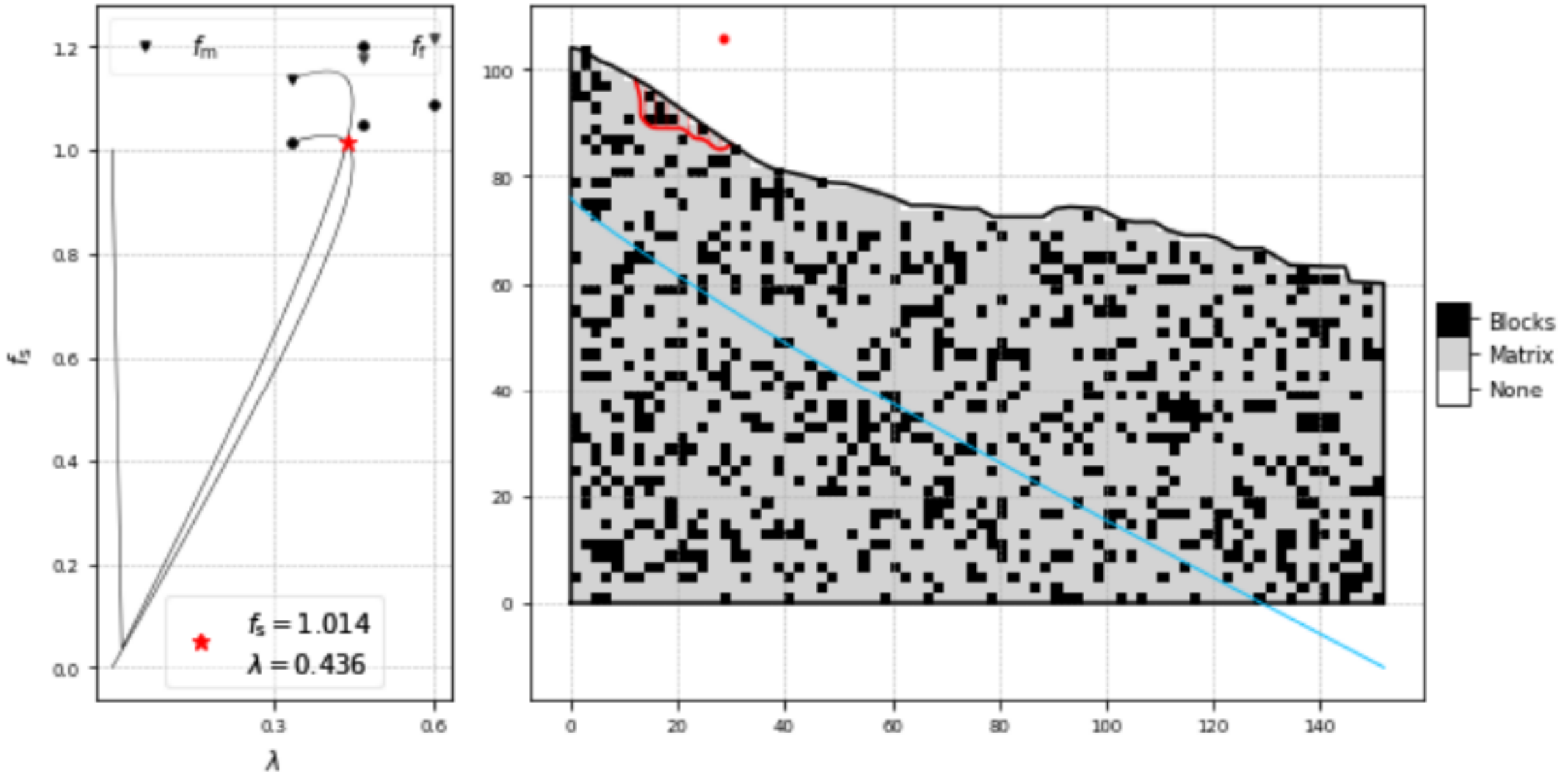
Variable explorer | Help | Plots | Files

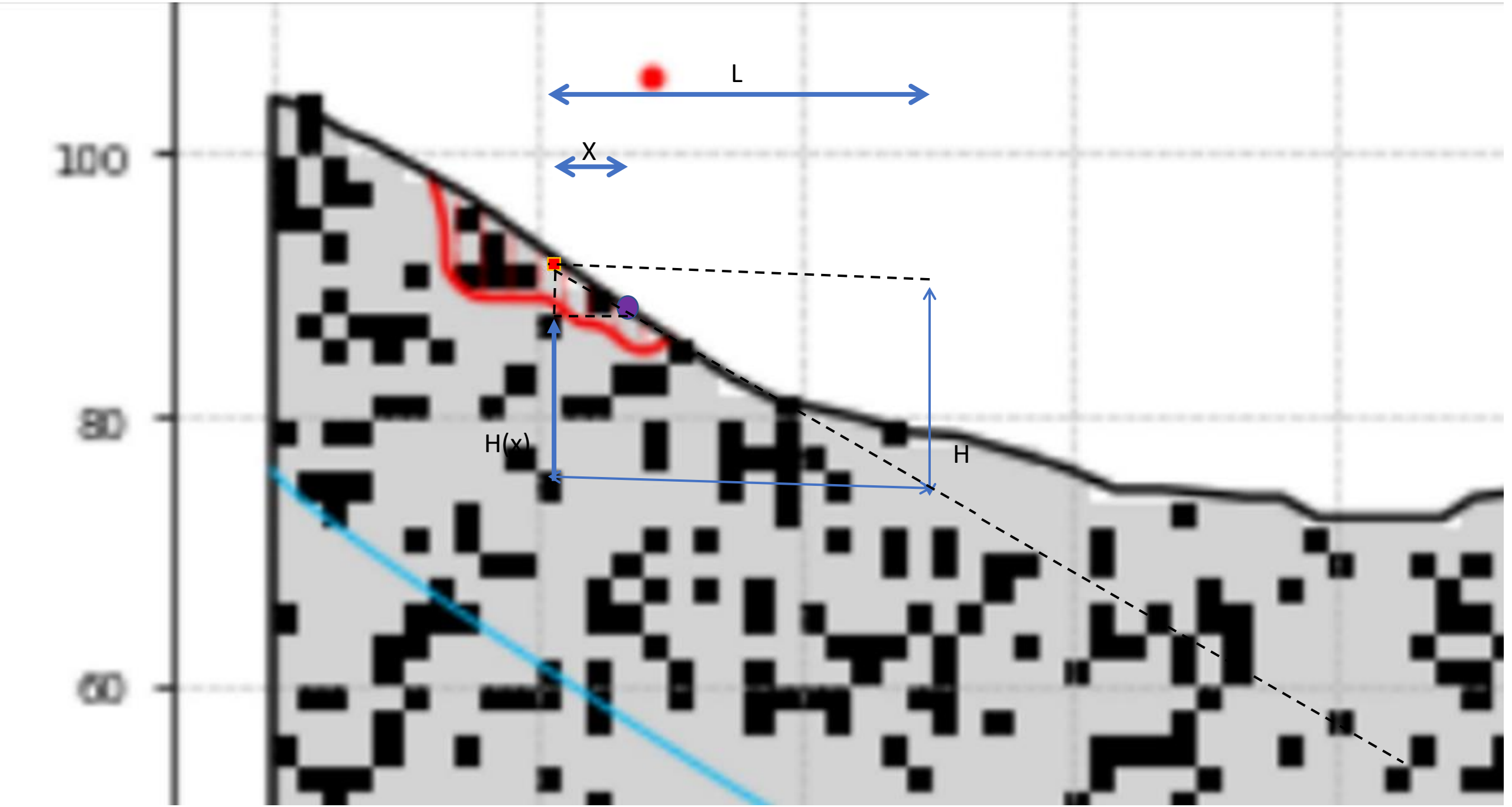
Console 1/A

```
deprecated and will no longer work in Shapely 2.0. Convert the '.coords' to a numpy array instead.
  self.defineStructre()
C:\ProgramData\Anaconda3\lib\site-packages\pybimstab\slices.py:476: ShapelyDeprecationWarning: __getitem__ for multi-part
geometries is deprecated and will be removed in Shapely 2.0. Use the `geoms` property to access the constituent parts of
a multi-part geometry.
  dist1, dist2 = intersections[0].x, intersections[-1].x
C:\ProgramData\Anaconda3\lib\site-packages\pybimstab\slopestabl.py:103: ShapelyDeprecationWarning: The array interface is
deprecated and will no longer work in Shapely 2.0. Convert the '.coords' to a numpy array instead.
  self.calculateArms()

In [27]:
```

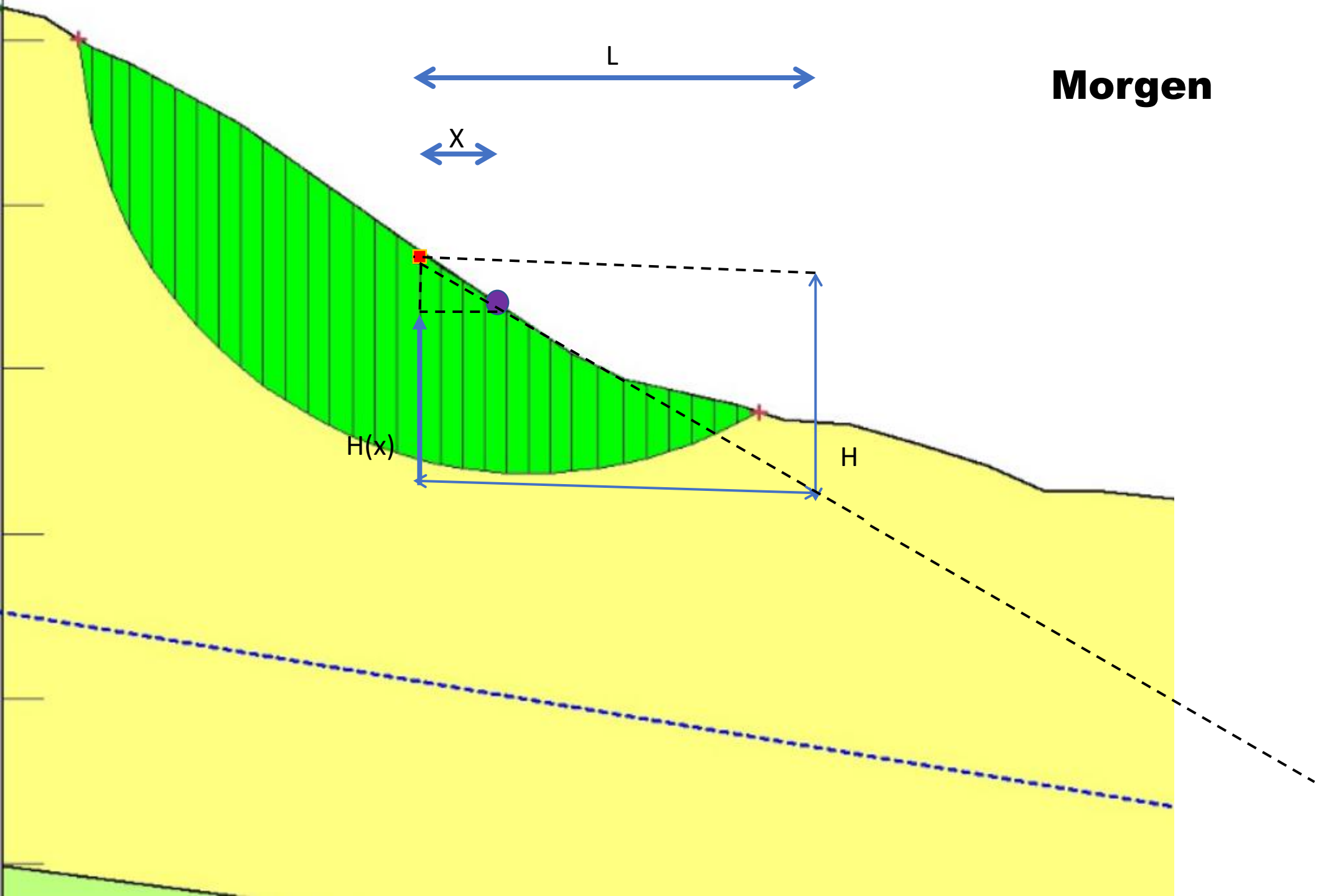
IPython console | History


f_m
f_f
f_s
λ
$f_s = 1.014$
$\lambda = 0.436$
Blocks
Matrix
None


L
X
100
80
60
H(x)
H

FK = 1.014

Center Of Mass 1		H	21.37555
x	13.11064	Sudut Kemiringan	60
y	65.58492	Friction Coefficient	1.73205
Center Of Mass 2		Run - Out	12.3411853
x	12.73048	Velocity	20.46853146
y	65.79228		
Acuan Titik H			
x	51.33406		
y	44.20937		
Delta H	0.20736		
H(x)	21.58291		

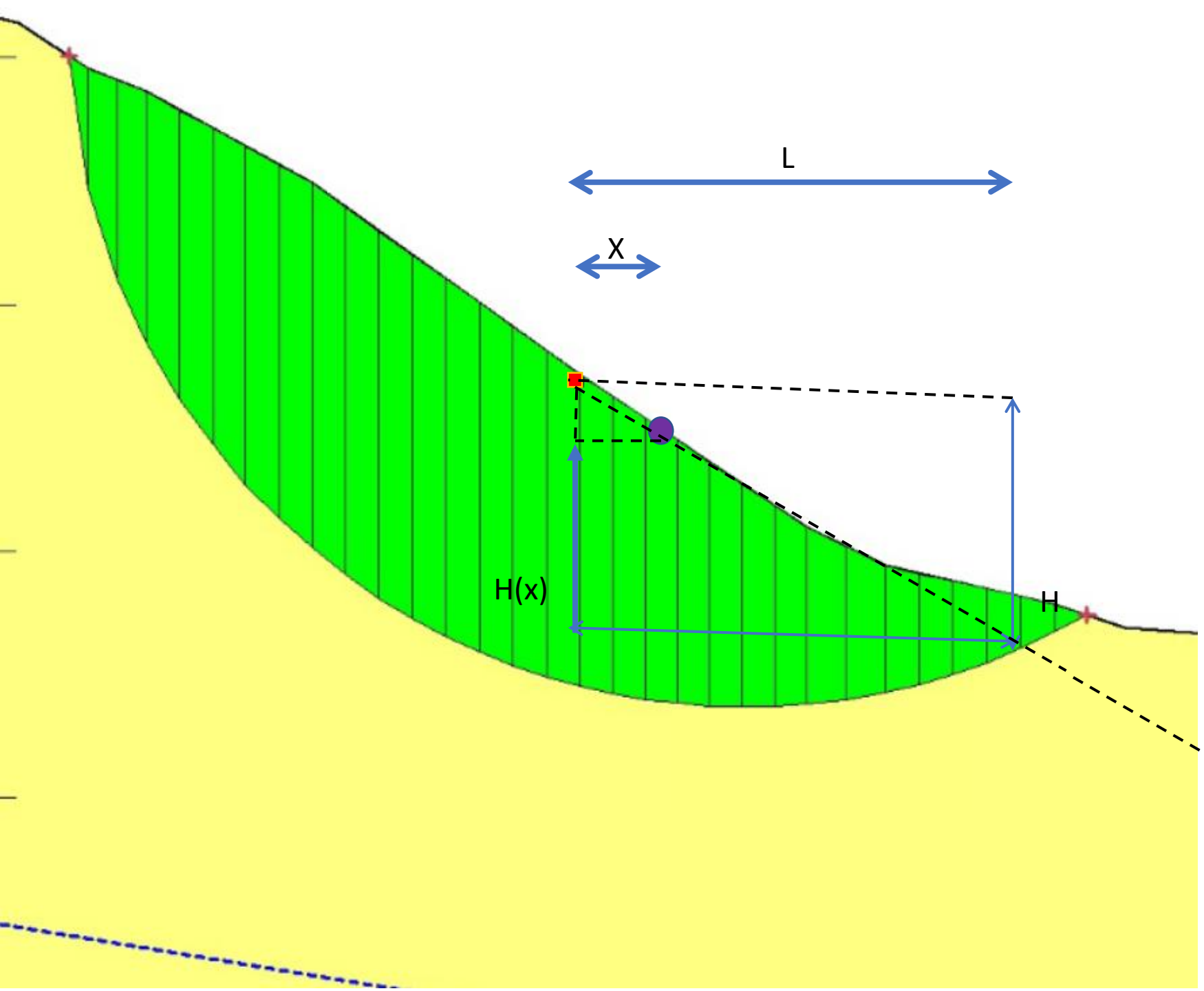


Morgen

Morgen

FK = 1.014

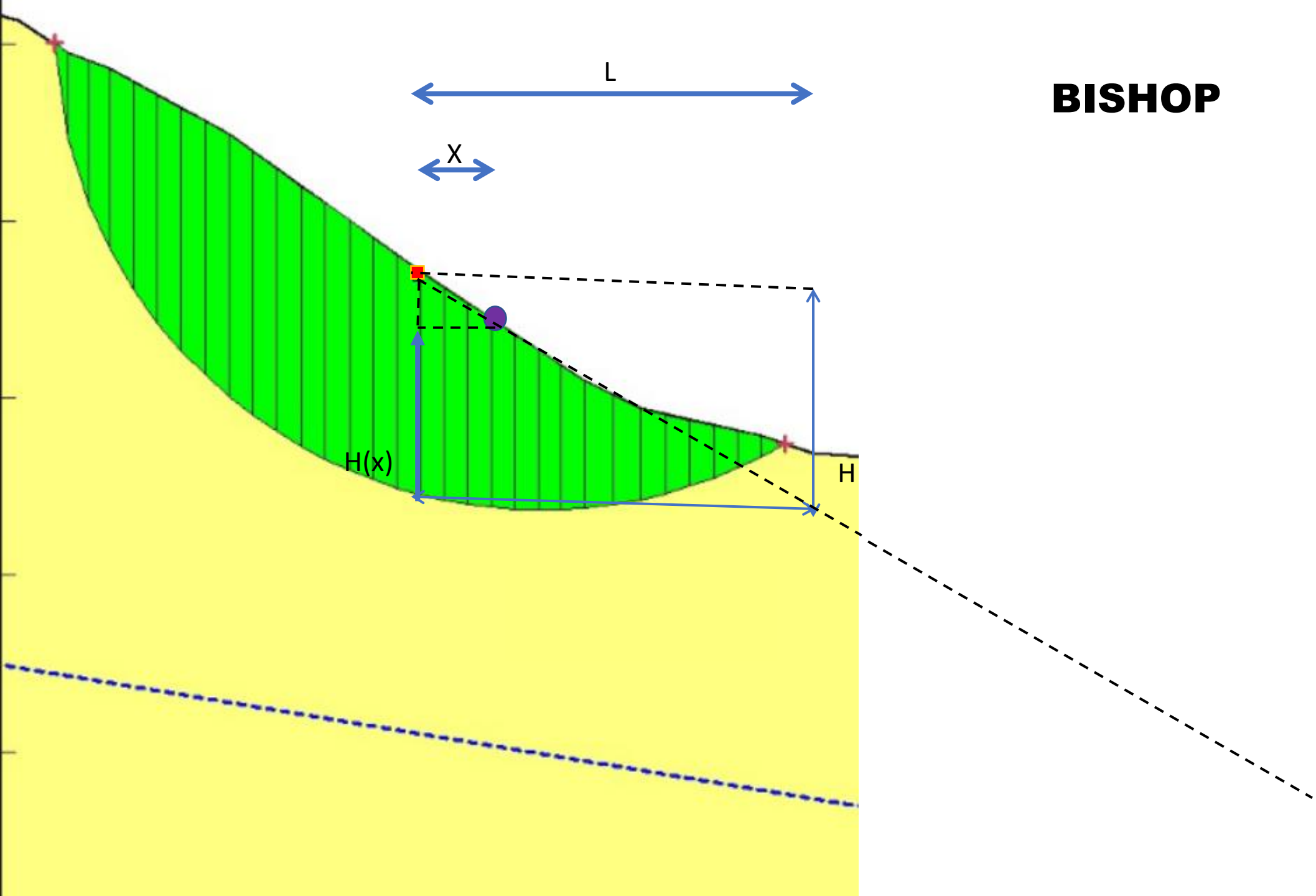
Center Of Mass 1		**H**	**15.73862**
x	**25.32414**	**Sudut Kemiringan**	**60**
y	**57.23522**	**Friction Coefficient**	**1.73205**
Center Of Mass 2		**Run - Out**	**9.08670073**
x	**25.2412**	**Velocity**	**17.56351195**
y	**56.36431**		
Acuan Titik H			
x	**47.6476**		
y	**41.4966**		
H(x)	**14.86771**		
Delta H	**0.87091**		



SPENCER

SPENCER

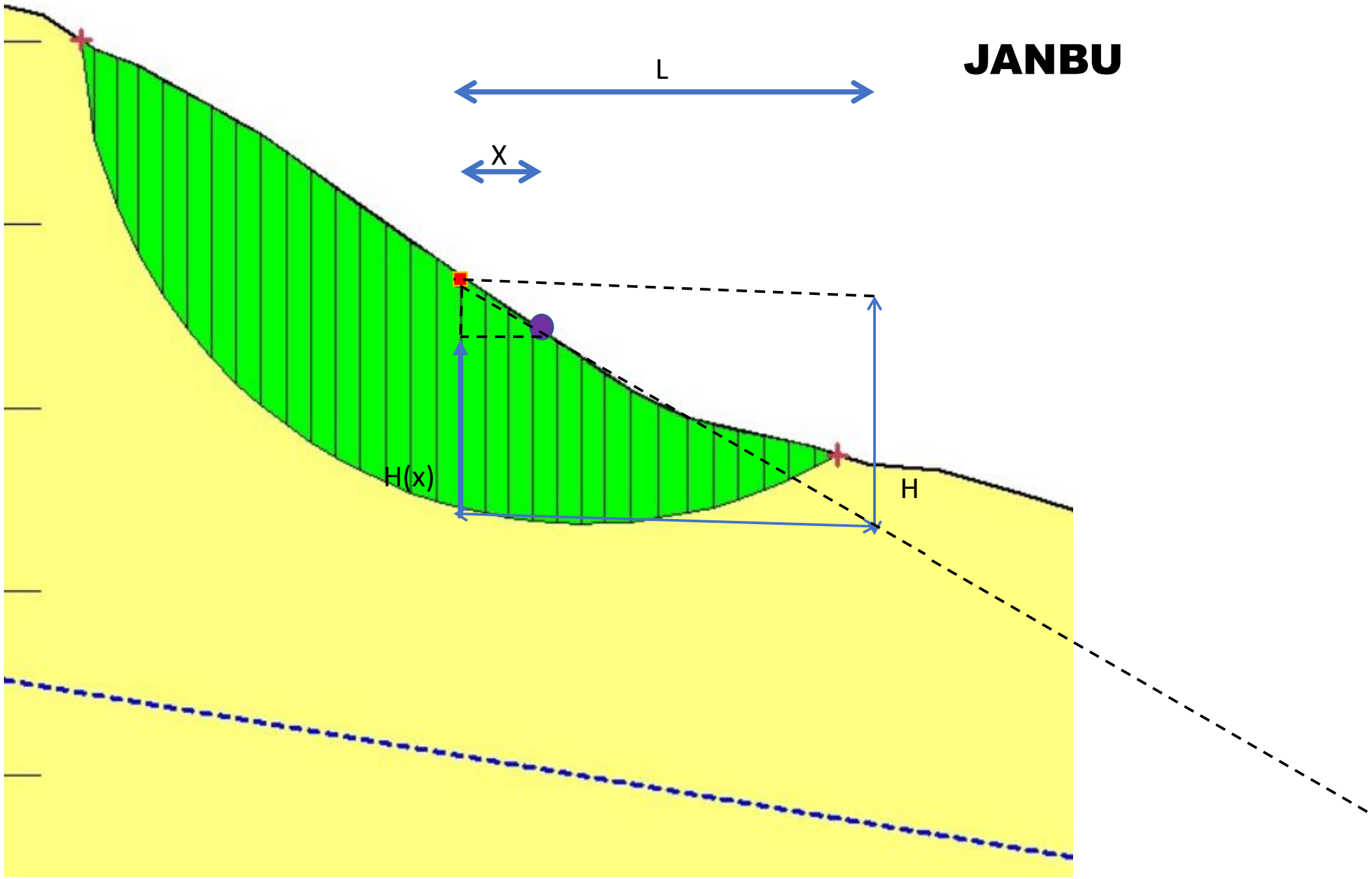
FK = 1.014			
Center Of Mass 1		H	12.47616
x	22.58008	Sudut Kemiringan	60
y	58.9494	Friction Coefficient	1.73205
Center Of Mass 2		Run - Out	7.203117693
x	23.44408	Velocity	15.63754252
y	57.9126		
Acuan Titik H			
x	42.17784		
y	46.47324		
H(x)	11.43936		
Delta H	1.0368		



BISHOP

BISHOP

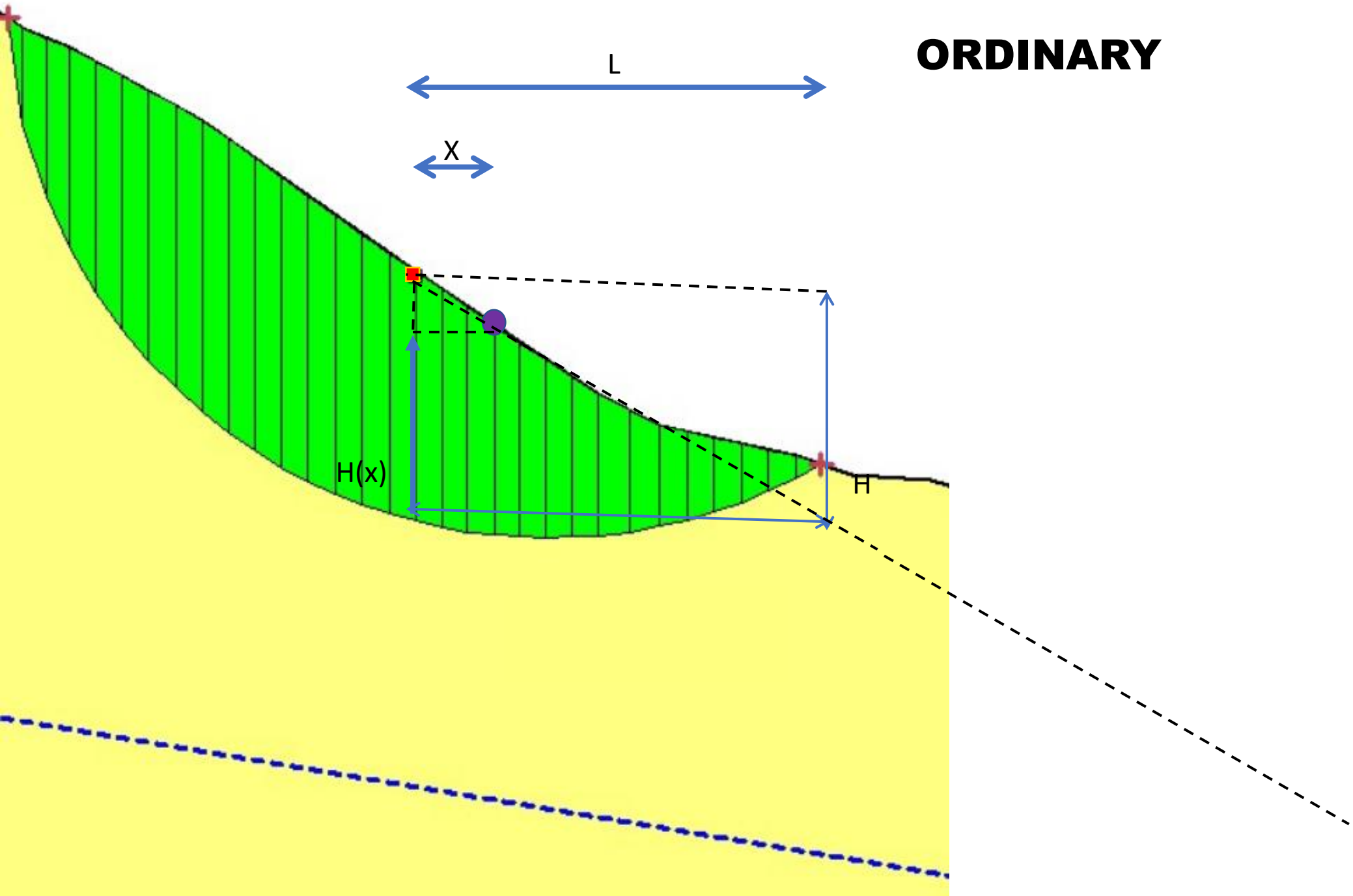
FK = 1.014			
Center Of Mass 1		H	16.05684
x	22.37272	Sudut Kemiringan	60
y	59.2032	Friction Coefficient	1.73205
Center Of Mass 2		Run - Out	9.270425219
x	22.51096	Velocity	17.74018219
y	58.22364		
Acuan Titik H			
x	47.20145		
y	43.14636		
H(x)	15.07728		
Delta H	0.97956		


JANBU
L
X
H(x)
H

JANBU

FK = 1.014			
Center Of Mass 1		H	14.10048
x	23.95557	Sudut Kemiringan	60
y	58.10614	Friction Coefficient	1.73205
Center Of Mass 2		Run - Out	8.140919719
x	23.83582	Velocity	16.62436188
y	58.3135		
Acuan Titik H			
x	48.75582		
y	44.00566		
H(x)	14.30784		
Delta H	0.20736		

ORDINARY



ORDINARY

FK = 1.014			
Center Of Mass 1		H	11.29698
x	25.27438	Sudut Kemiringan	60
y	57.01128	Friction Coefficient	1.73205
Center Of Mass 2		Run - Out	6.522317485
x	25.22462	Velocity	14.88021532
y	57.35964		
Acuan Titik H			
x	45.72837		
y	45.7143		
H(x)	11.64534		
Delta H	0.34836		