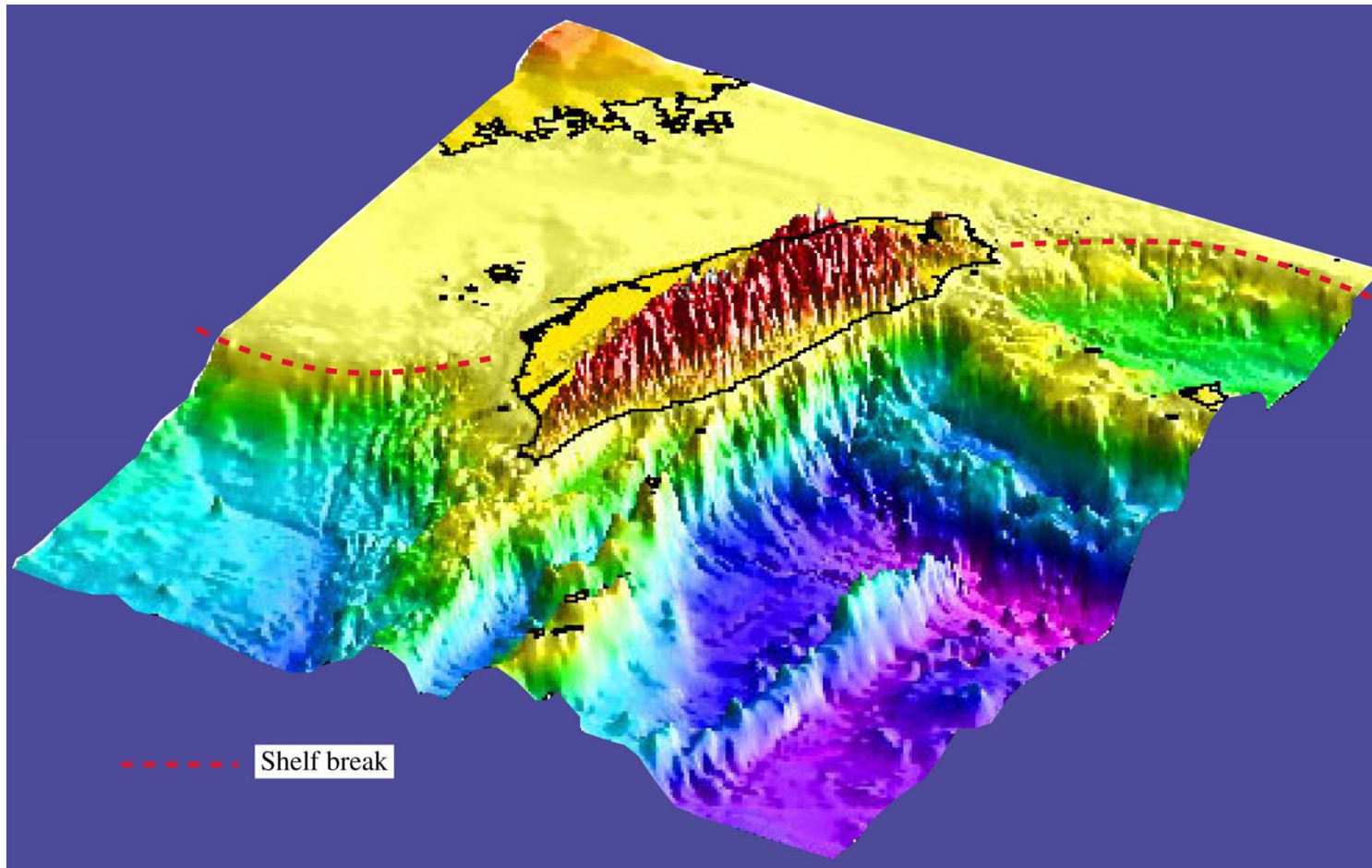
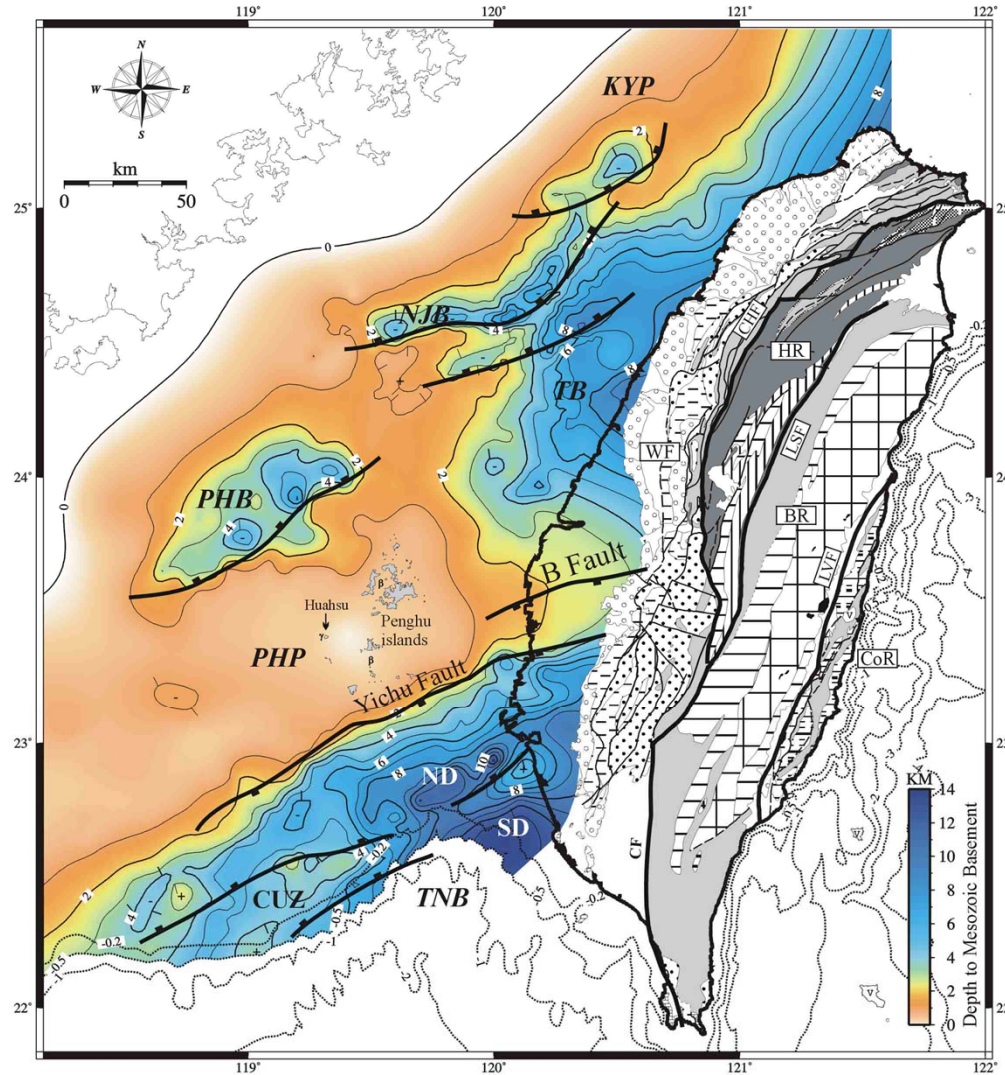


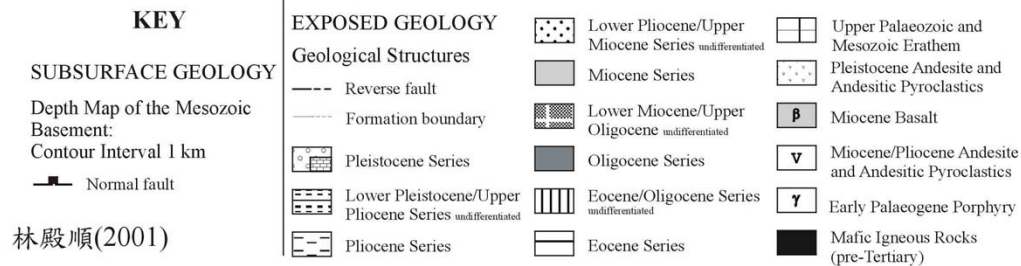
# 1. 台灣陸海域地體構造、盆地及地質分區



# 台灣地區 地質架構



Lin et al. (2003)



BR=奇標山脈, CF=潮洲斷層, CHF=屈尺斷層, CoR=海岸山脈, CUZ=中央隆起帶, HR=雪山山脈, KYP=觀音地台, LSF=梨山斷層, LVF=花東縱谷斷層, ND=北部凹地, NJB=南日島盆地, PHB=澎湖盆地, PHP=澎湖地台, SD=南部凹地, TNB=台南盆地, TB=台西盆地, WF=西部麓山帶

## 台灣島與台海地質分區

由東往西

**1. 海岸山脈**：中中新世-第四紀火山島弧(都巒山層)及其上覆沉積物(菲律賓海板塊)。

**邊界斷層**：靠海岸山脈西緣的花東縱谷斷層(或稱海岸山脈斷層)與靠中央山脈東緣的中央山脈斷層(未完全證實)

**2. 中央山脈**：中央山脈以梨山斷層為界可分為東邊的脊樑山脈與西邊的雪山山脈

**2A, 脊樑山脈**(狹義中央山脈)：分成三個地質區，

先第三紀基盤(**pre-Tertiary basement**)，即大南澳變質雜岩(沉積年代為二疊紀至白堊紀，變質年代有三期：中侏羅紀-中白堊紀、始新世-漸新世、中中新世以後(<13 Ma))。岩性包括：黑色片岩、綠色片岩、矽質片岩、大理岩、混成岩(**migmatite**)、片麻岩、角閃岩、蛇紋岩、變質基性岩(**metabasite**)等。

始新統畢祿山層

中新統廬山層

**邊界斷層**:梨山斷層

**2B 雪山山脈**:始新統至中新統(漸新世時為連續沉積且達2至3千公尺)，雪山山脈沒有主要不整合面

**邊界斷層**:屈尺斷層

**3. 西部麓山帶**:漸新統至更新統。

**邊界斷層**:變形前緣(**deformation fronts**)

**4. 海岸平原**:古新世-現代沉積物(鑽獲基盤年代為二疊紀(佳里)至白堊紀)。

**5. 台海**:古新世-現代沉積物(鑽獲基盤年代為下部白堊紀)

台海東部與海岸平原為前陸盆地(自中新世最晚期以來)，台海西部(包括澎湖島)與福建沿海現今屬於前陸凸起(**foreland forebulge**)。

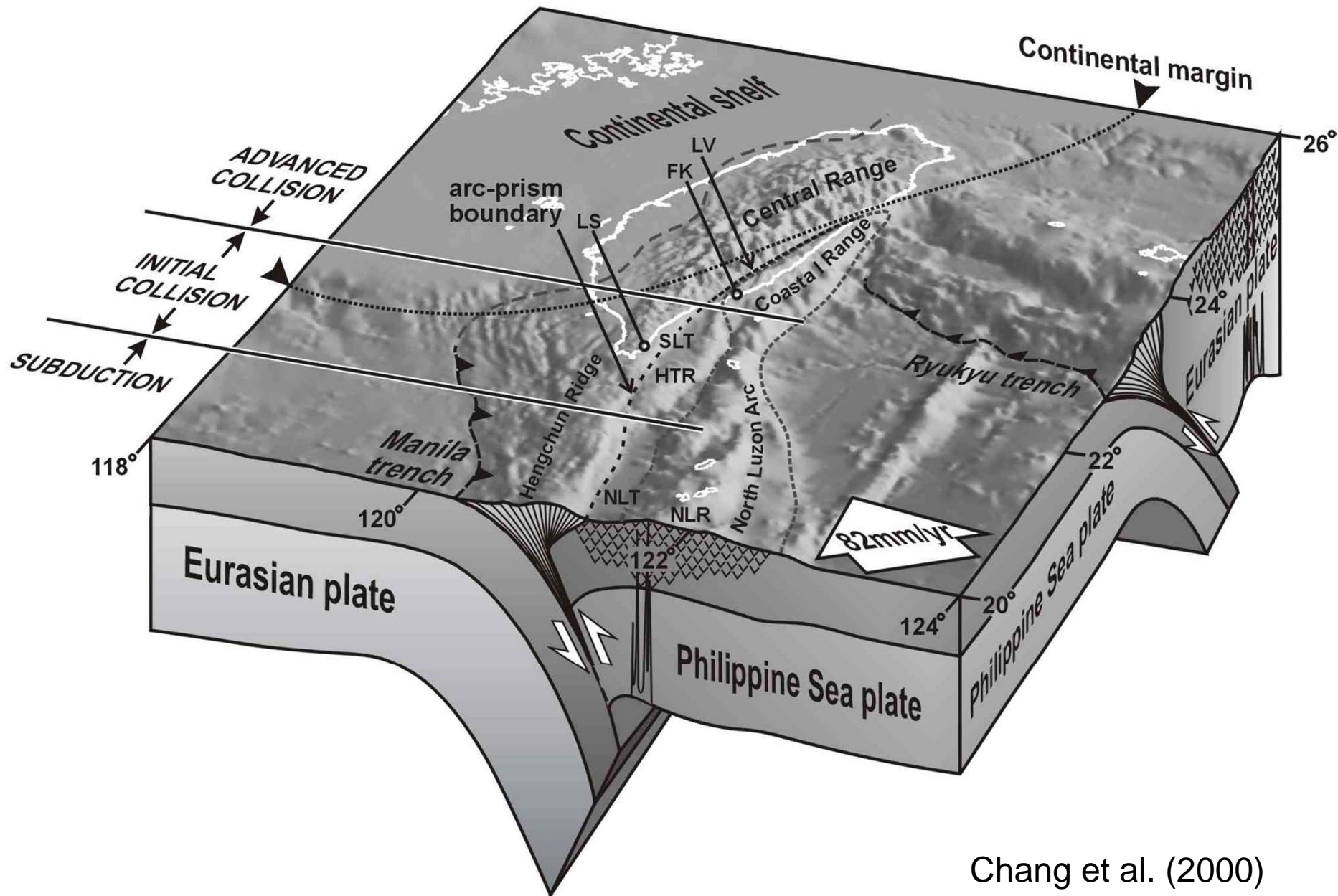
# 台灣地質圖



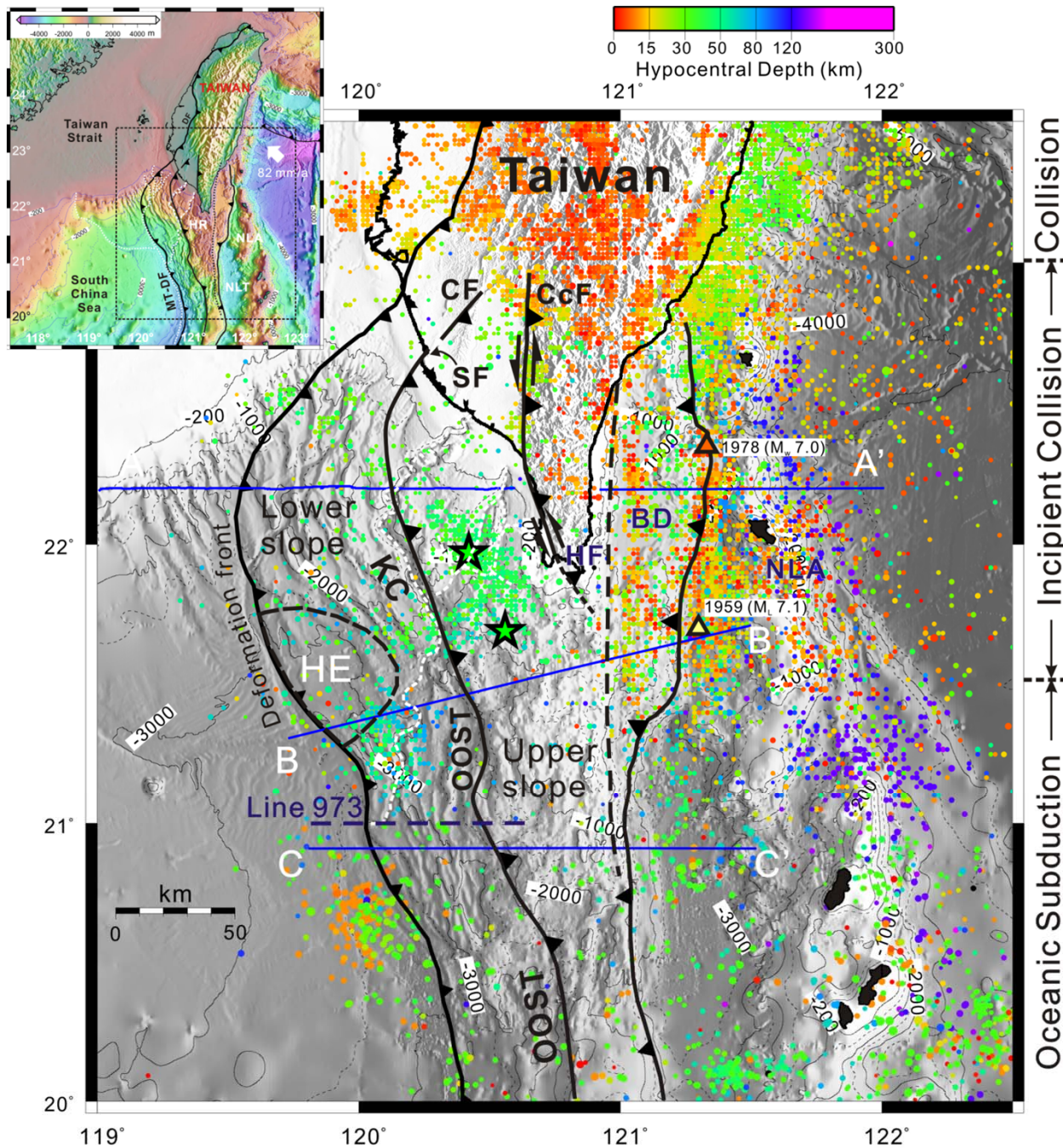
編製：陳華夏、何信百、謝淑波、張偉、林偉雄、張繼五、黃耀水、林啓文、陳政廷、楊顯男、李元希  
Compiled by: Chao-Hsia Chen, Hsin-Cheng Ho, Hsueh-Shue Shee, Wei Li, Wei-Hsiung Lin, Hui-Cheng Cheng, Chen-Shui Huang, Chiu-Wen Lin, Sam-Hong Chen, Chao-Nan Yang, Tsuan-Hsi Lee

繪圖：王俊宏、李明鳳  
Drawn by: Jun-Hua Wang, Ming-Feng Lee





Chang et al. (2000)



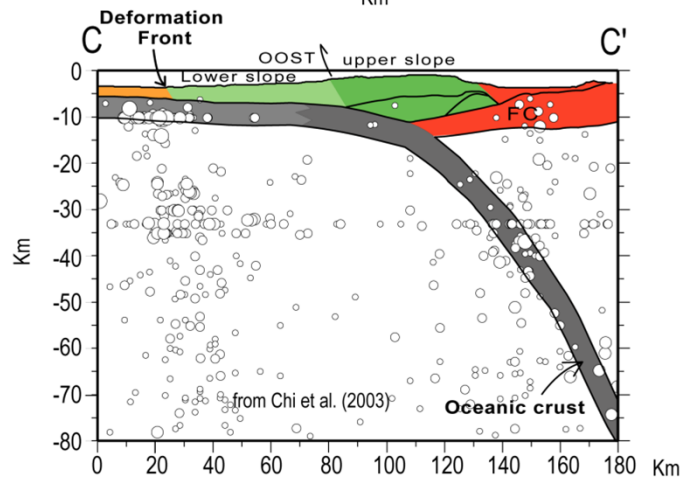
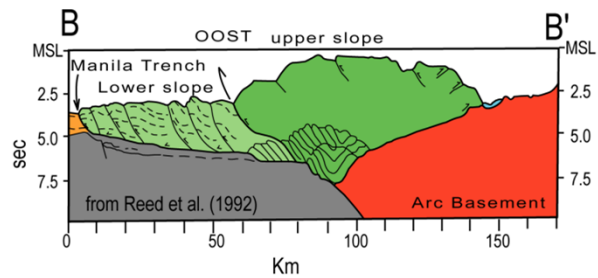
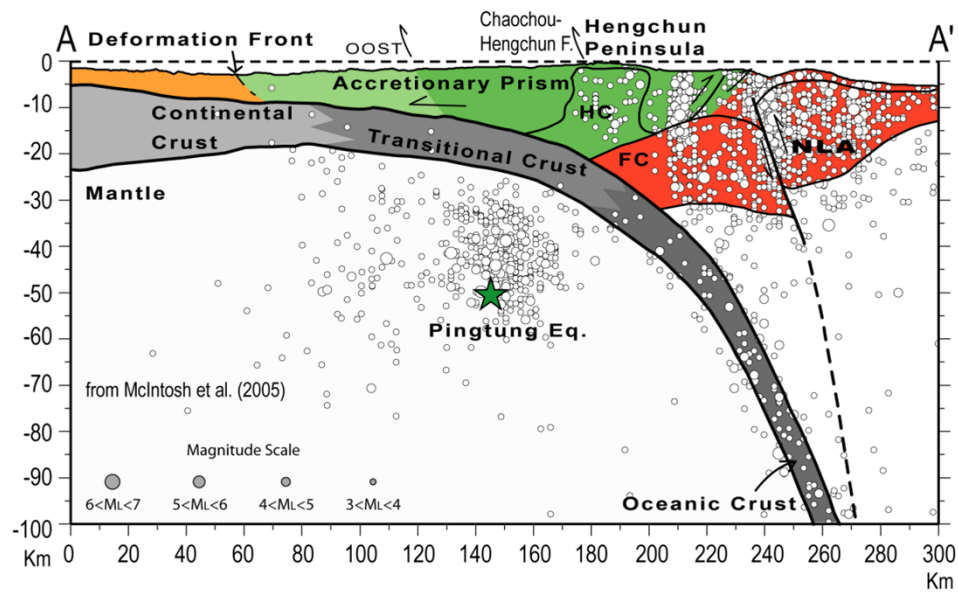
## 呂宋弧溝系統

台灣南部外海增積岩體分成上部與下部斜坡，中間被脫序斷層 (OOST) 分隔。

Lin et al. (2008)

Fig. 1 of Lin et al.

# 呂宋弧溝系統



Lin et al. (2008)

Fig. 2 of Lin et al.

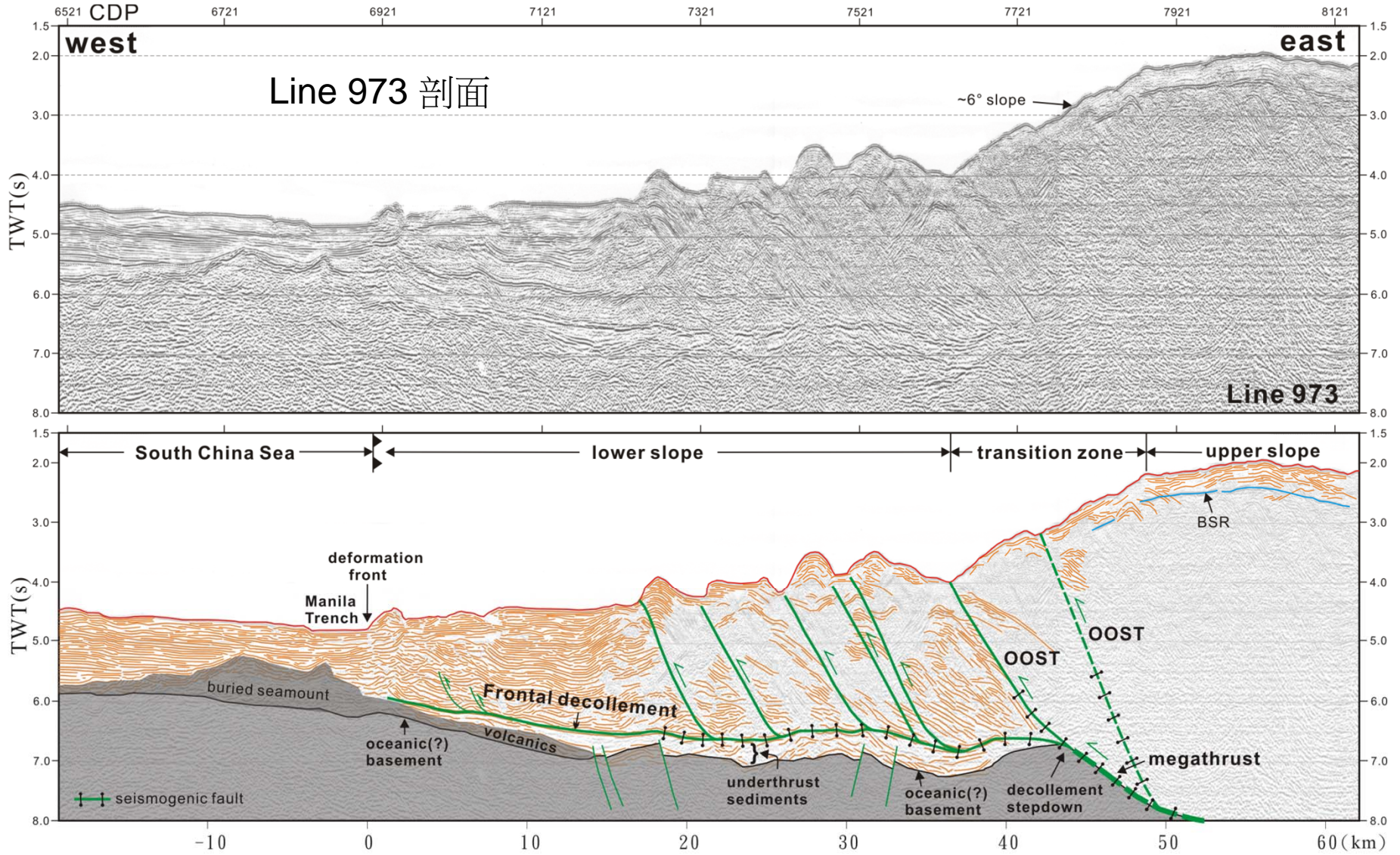


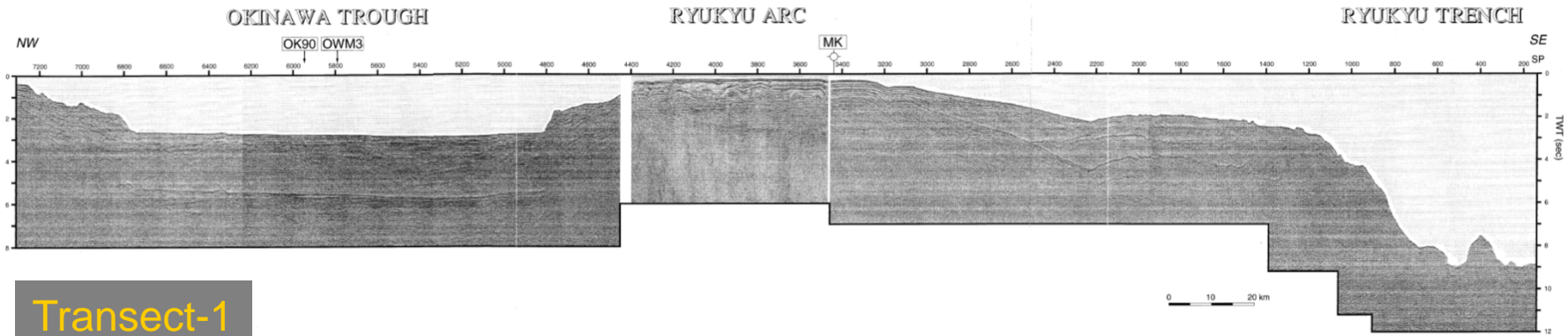
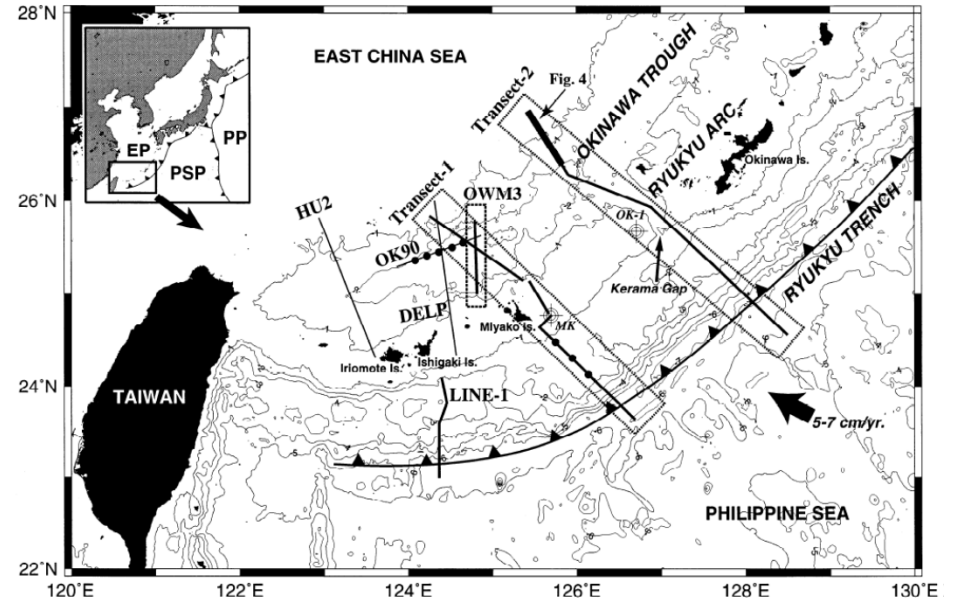
Fig. 5 of Lin et al.

Lin et al. (2008)

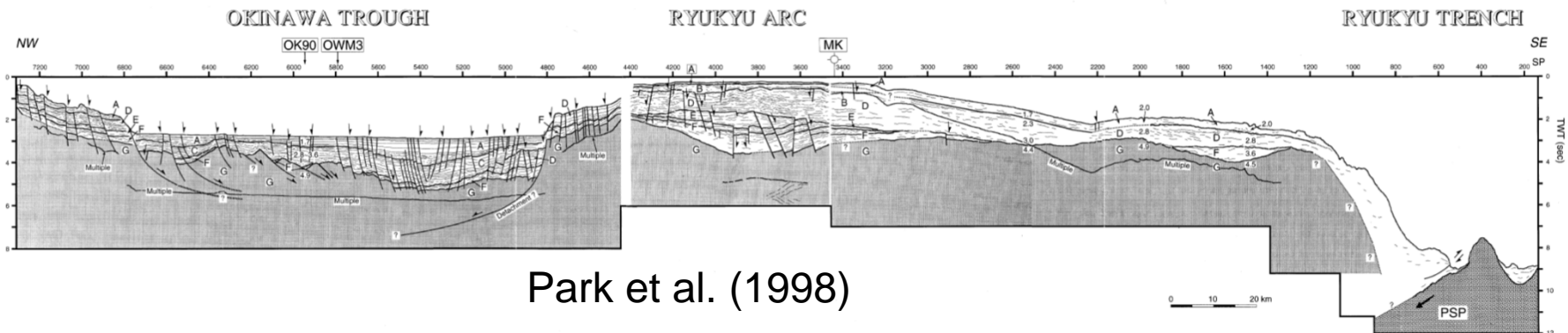
# 琉球弧溝系統

沖繩海槽張裂時期：

1. 晚中新世 (9-6 Ma)
2. 2~? Ma (更新世)
3. 近代 (幾萬年前至現代)



Transect-1

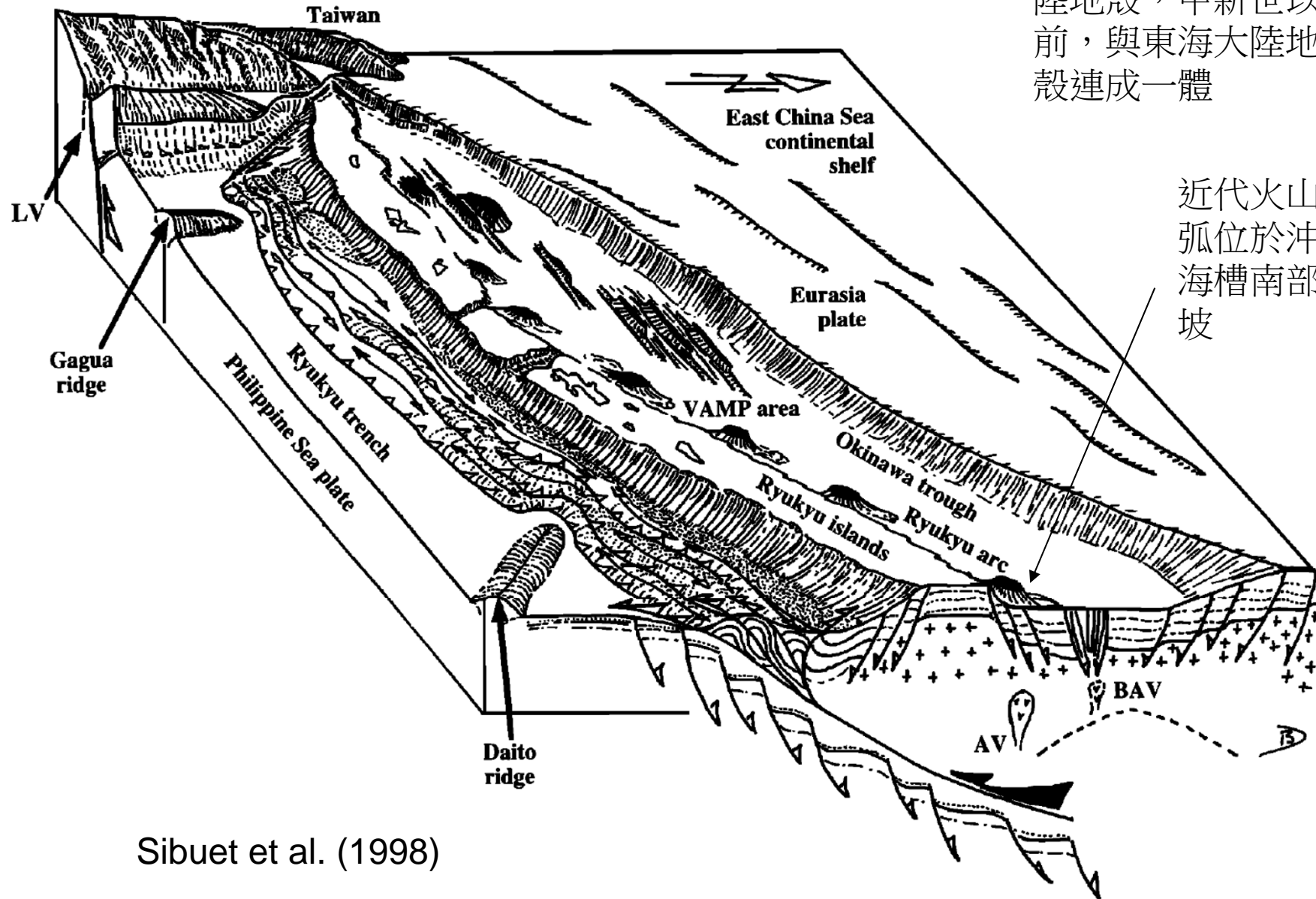


Park et al. (1998)

# 琉球弧溝系統

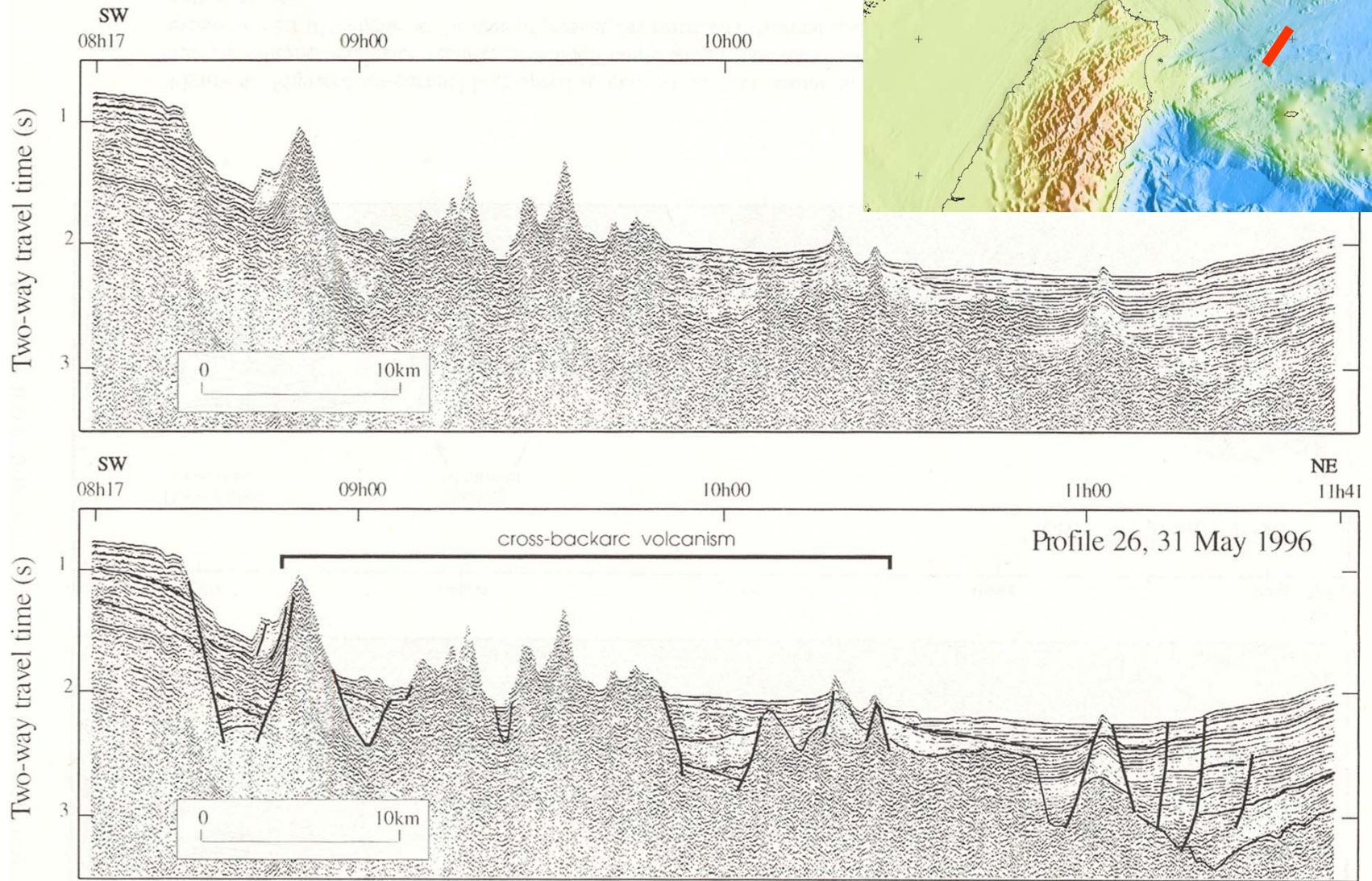
琉球諸島基盤是大陸地殼，中新世以前，與東海大陸地殼連成一體

近代火山島弧位於沖繩海槽南部斜坡



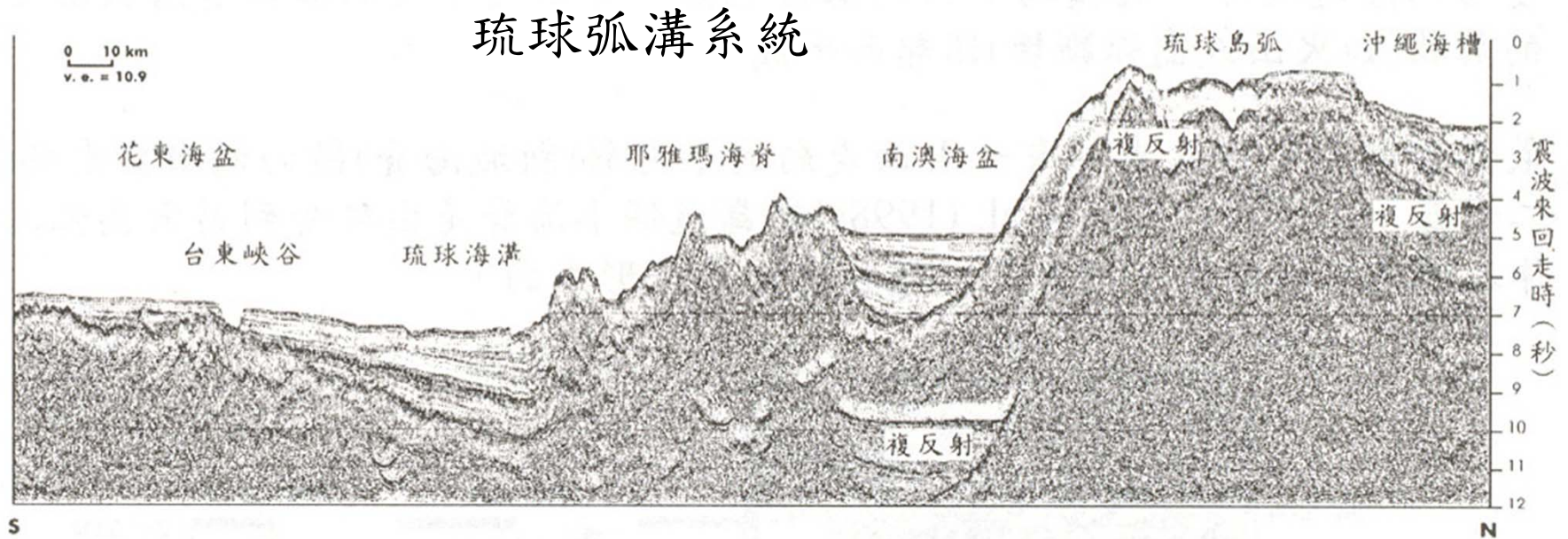
Sibuet et al. (1998)

# 沖繩海槽



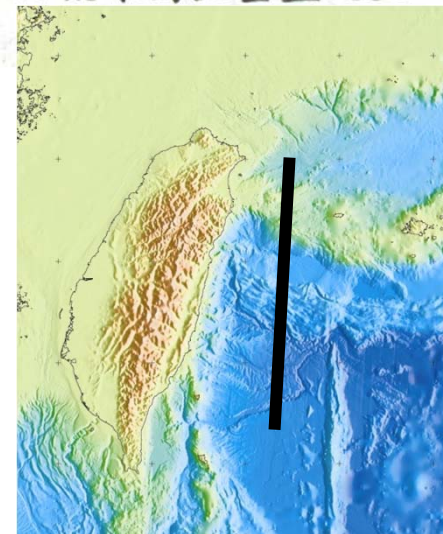
Sibuet et al. (1998)

**Figure 7.** Migrated six-channel high-speed seismic profile 26 (location in Figure 2) across the OT, with the intense volcanism emplaced along the N045° cross-backarc trail. Normal faults and basement are underlined in the bottom panel.



圖二十七、南北走向從花東海盆經琉球海溝、耶雅瑪(八重山)海脊、南澳海盆到琉球島弧的多頻道反射震測剖面 EW9509-1 (摘自 Liu et al., 1997b)。反射剖面清楚顯示地形與大地構造單元的密切對應關係，並顯示弧前盆地座落於琉球島弧基盤之上。剖面位置見圖二十五 AA'線。

劉家瑄(2002)



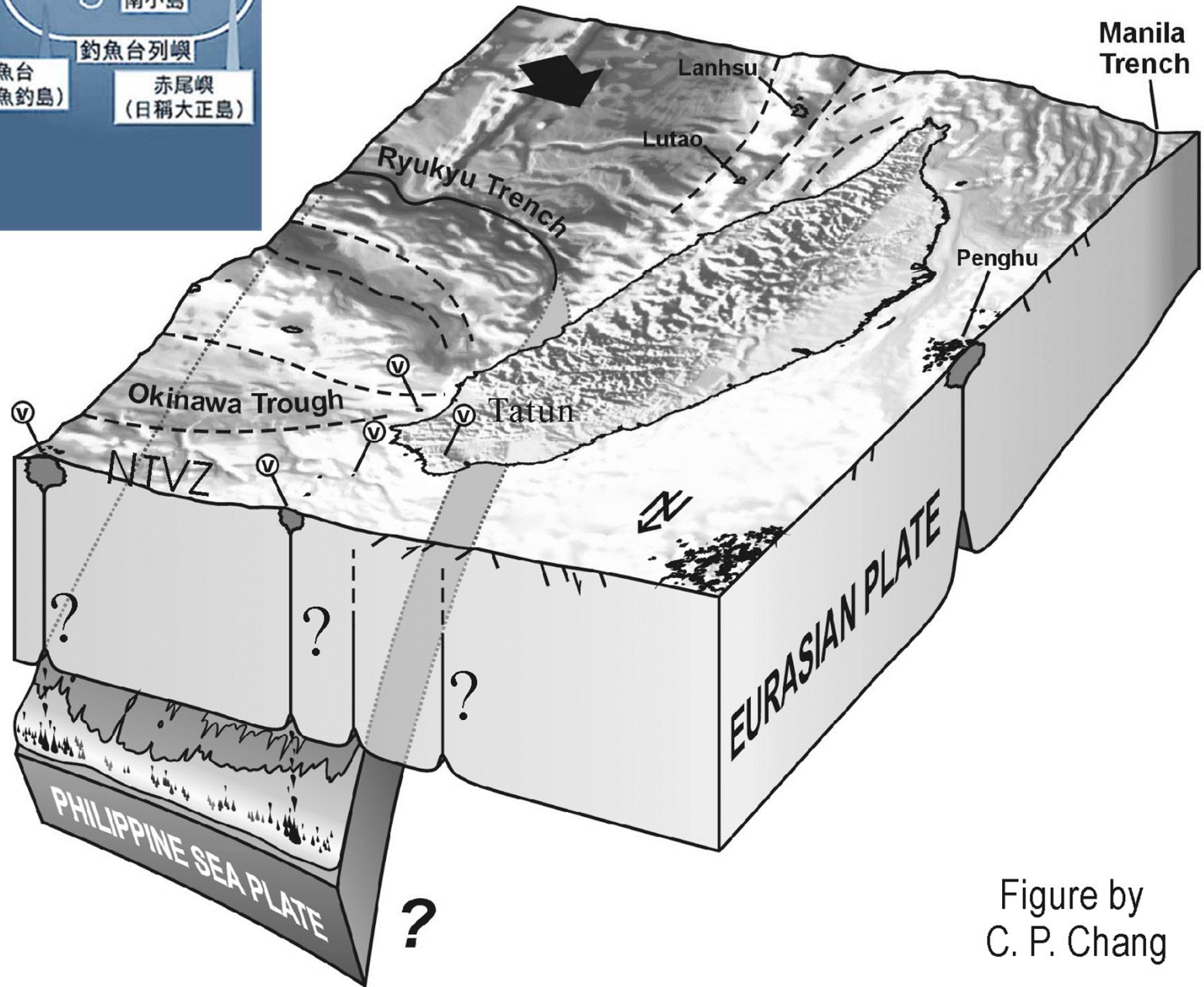


Figure by  
C. P. Chang

# 釣魚台島地形圖



內政部地政司 [www.land.moi.gov.tw/filelink/uploadlink-127.jpg](http://www.land.moi.gov.tw/filelink/uploadlink-127.jpg)



# 花東海盆

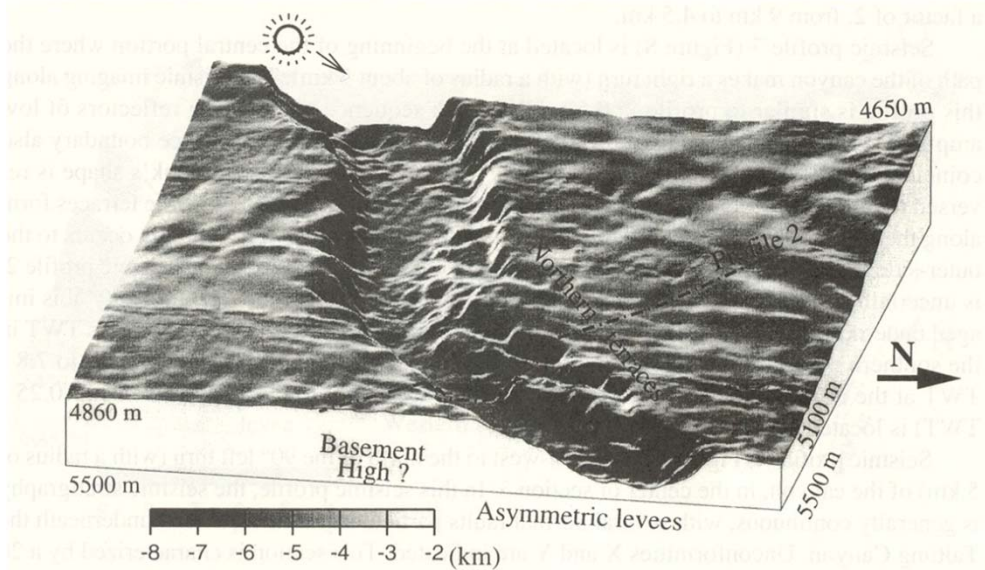


Fig. 5. Perspective shaded view of upper portion of the Taitung Canyon (section 2; see Figure 2 for location). The view is from the east (N80°), with a 20° elevation and N250° illumination angle. Water depths at the corners are indicated. The location of seismic profile 2 (line EW9509-23) is indicated by a dashed line.

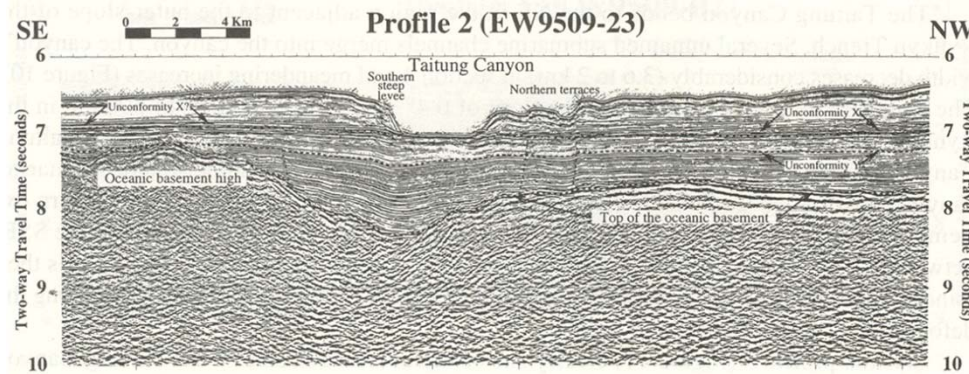
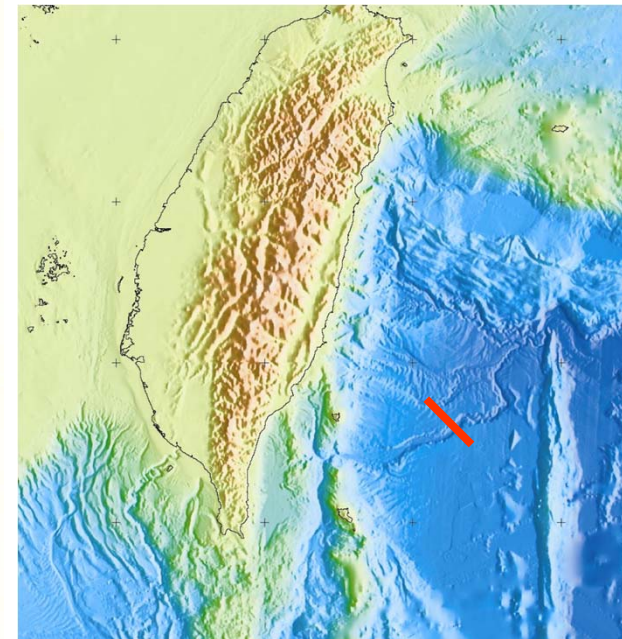
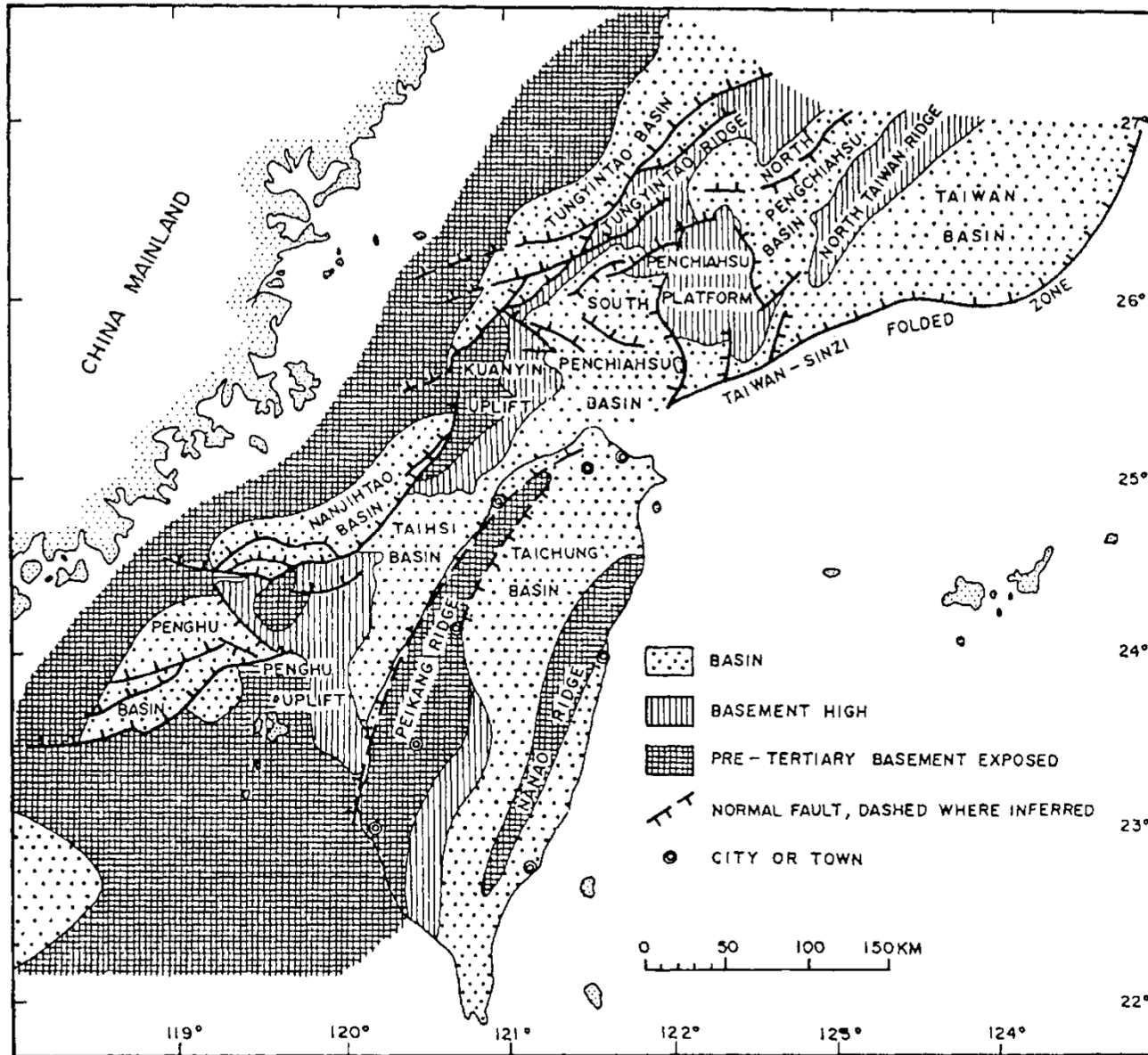


Fig. 6. Time-migrated seismic section of profile 2 (line EW9509-23). This profile runs SE-NW (see Figure 2 for location) across the upper portion of the Taitung Canyon. Vertical exaggeration at sea-floor is about 2x.

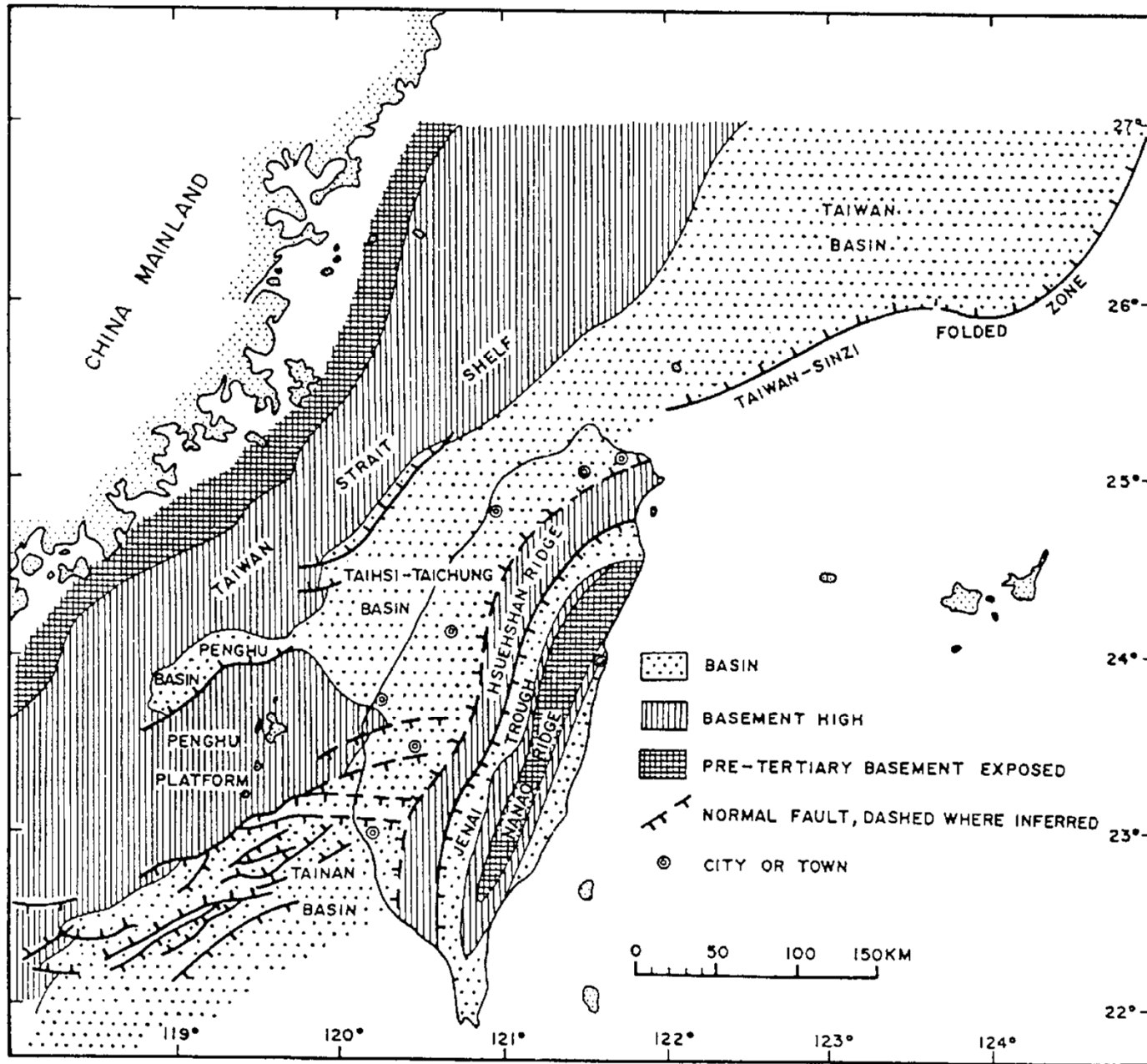


# 古第三紀盆地架構圖



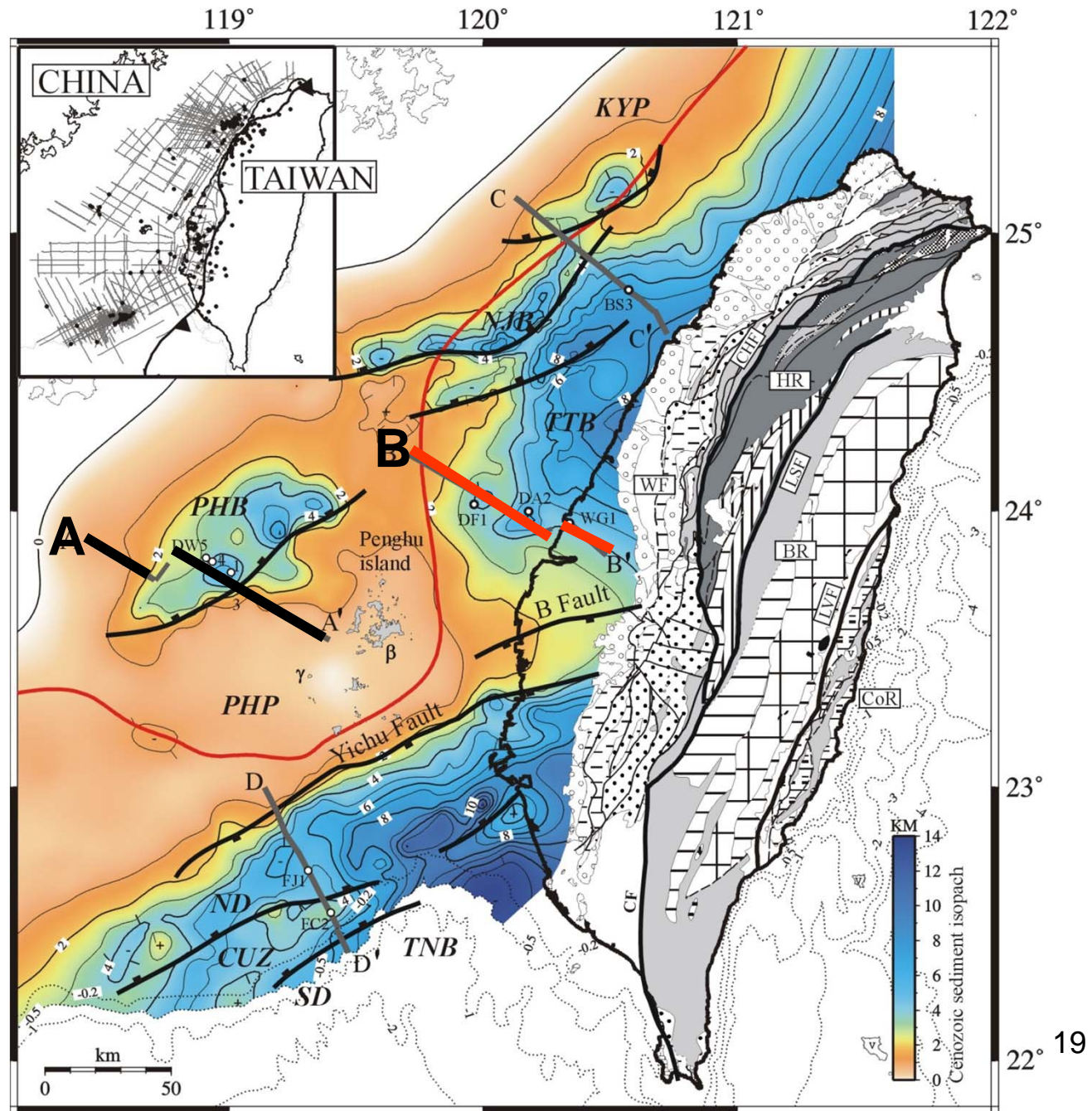
Sun(1982)

# 新第三紀盆地架構圖

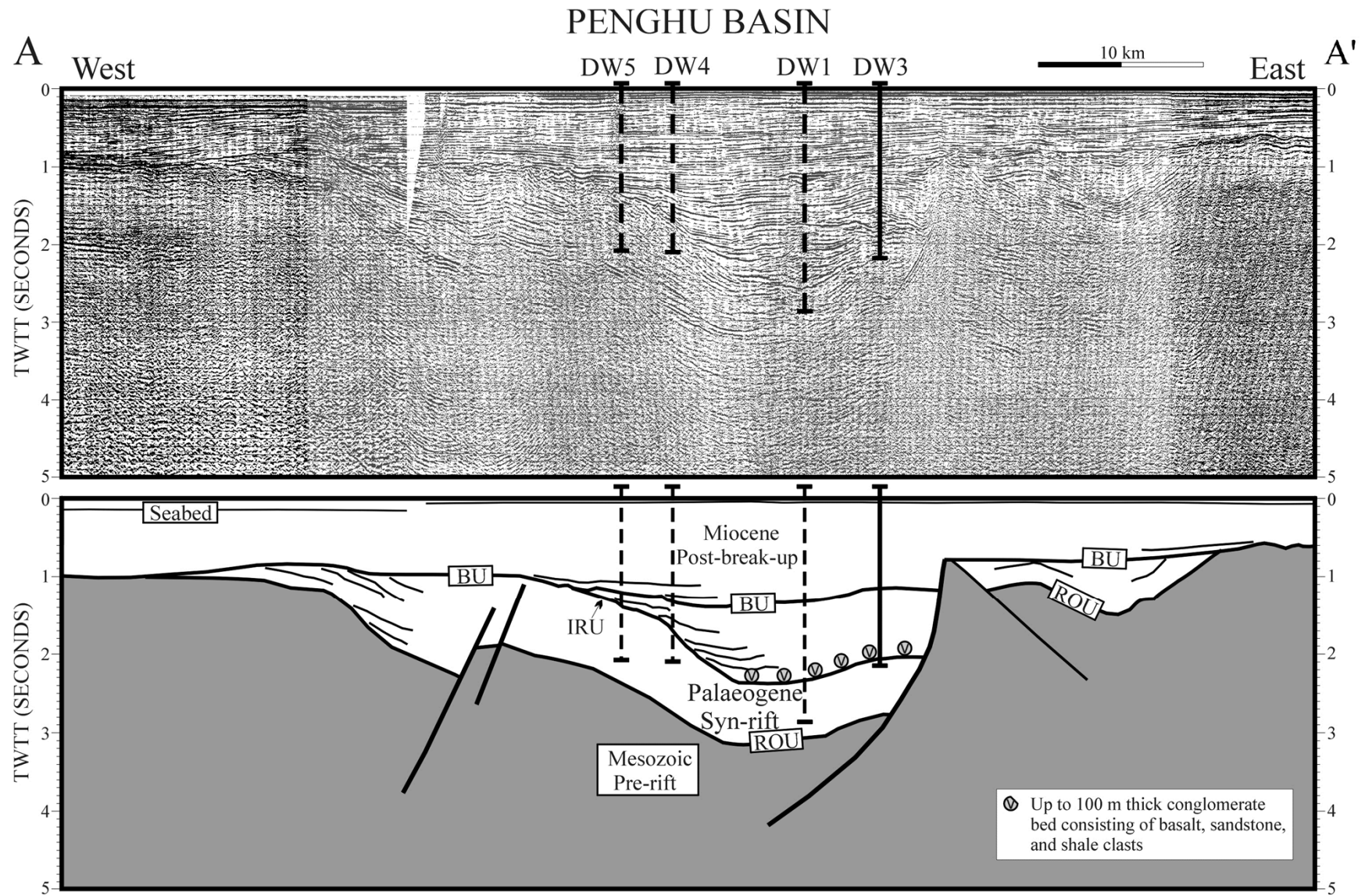


Sun(1982)

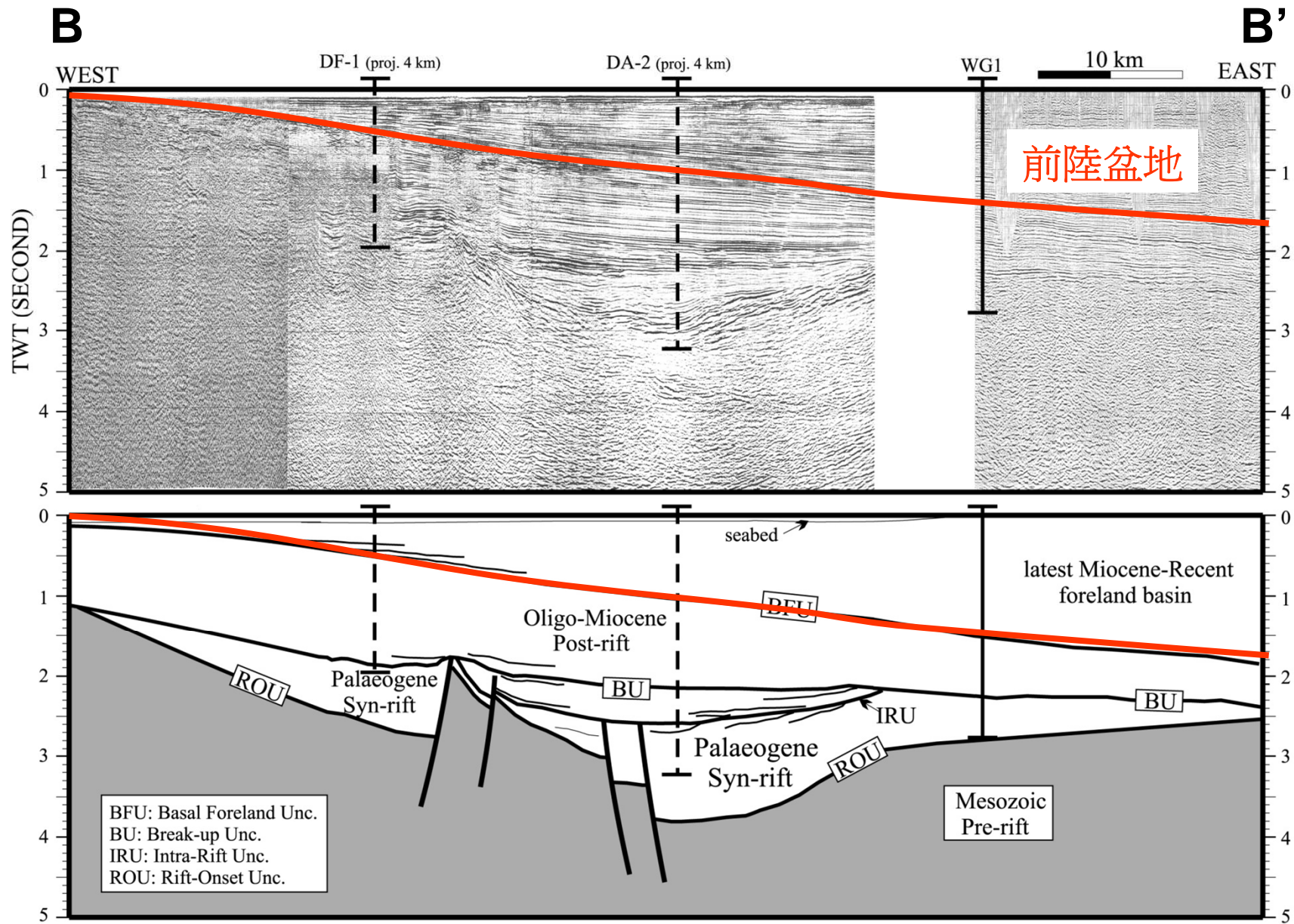
# Cenozoic sediment thickness in the Taiwan region



Lin et al. (2003)

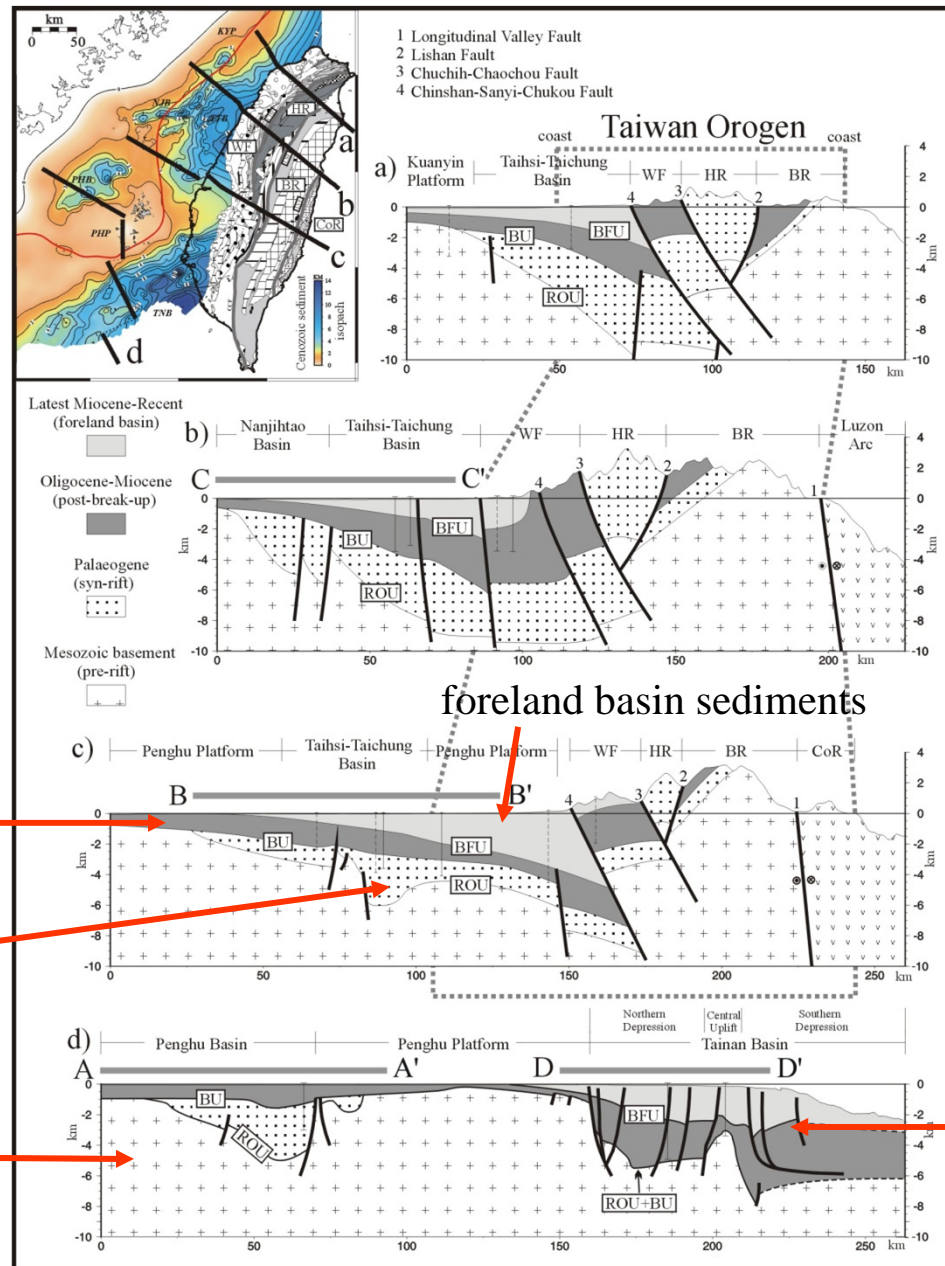


Lin et al. (2003)



Lin & Watts (2002)

# 台灣地區上部地殼剖面



Oligocene-Miocene  
post-breakup sediments

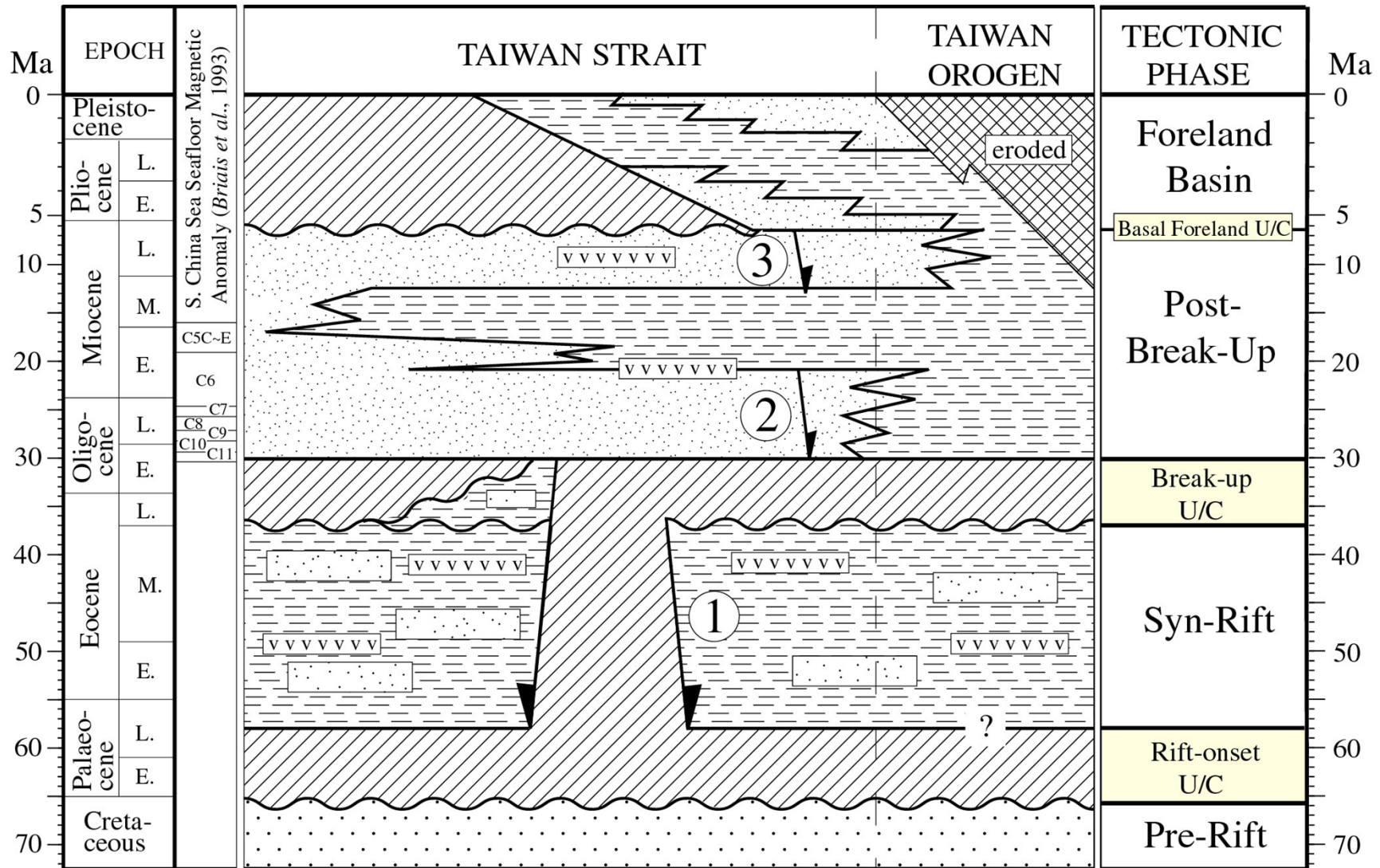
Paleogene syn-rift  
sediments

Mesozoic basement

Lin et al. (2003)

Tainan basin --  
a post-breakup  
basin

# 簡化的台灣地區地層



Lin & Watts (2002)

