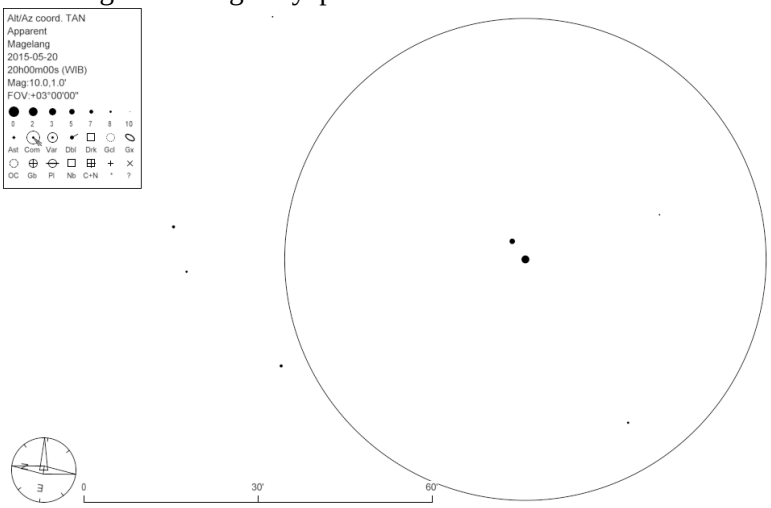
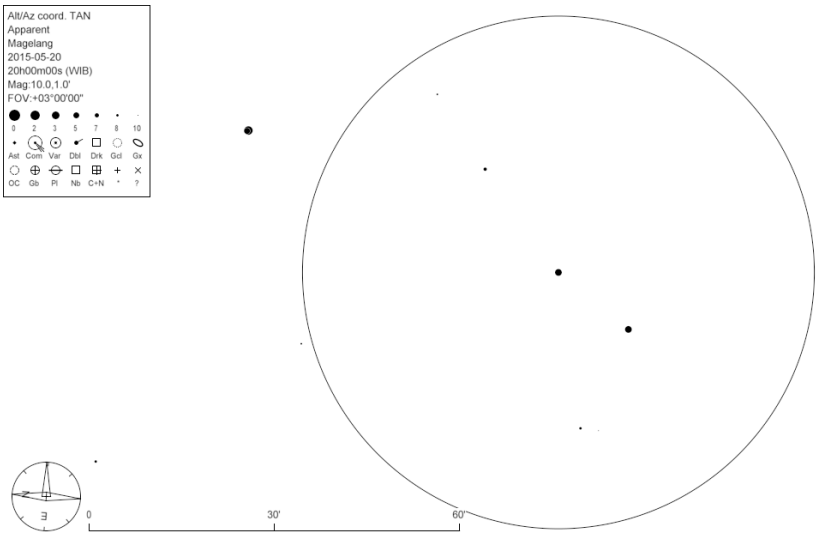
Ronde Observasi

1. Soal cerah
   a. Zubenelgenubi dengan eyepiece 25 mm :



   ω1 dan ω2 Scorpii dengan eyepiece 25 mm :



   b. Zubenelgenubi: RA: $14^h50^m52^s$; Dec: $-16^o2'31.5"$
   ω1 Sco: RA: $16^h06^m48^s$; Dec: $-20^o40'09.3"$
   ω2 Sco: RA: $16^h07^m24.4^s$; Dec: $-20^o52'08.1"$

   c. Zubenelgenubi: 3’52”
   ω Sco: 14’40”

Soal mendung atau hujan

c. Posisi Zubenelgenubi:

Waktu	Azimuth	Altitude
18.00	$104^o25'41"$	$+21^o19'24"$
19.00	$104^o29'45"$	$+35^o44'57"$
20.00	$106^o13'30"$	$+50^o07'56"$
21.00	$111^o51'13"$	$+64^o15'49"$
22.00	$133^o00'06"$	$+77^o07'42"$
23.00	$210^o23'49"$	$+79^o56'28"$

Posisi ω Sco:

Waktu	Azimuth	Altitude
18.00	$110^o25'44"$	$+3^o50'12"$
19.00	$109^o25'25"$	$+17^o42'52"$
20.00	$109^o46'13"$	$+31^o44'52"$
21.00	$112^o05'51"$	$+45^o41'02"$
22.00	$118^o28'05"$	$+59^o12'42"$
23.00	$136^o20'52"$	$+71^o15'31"$

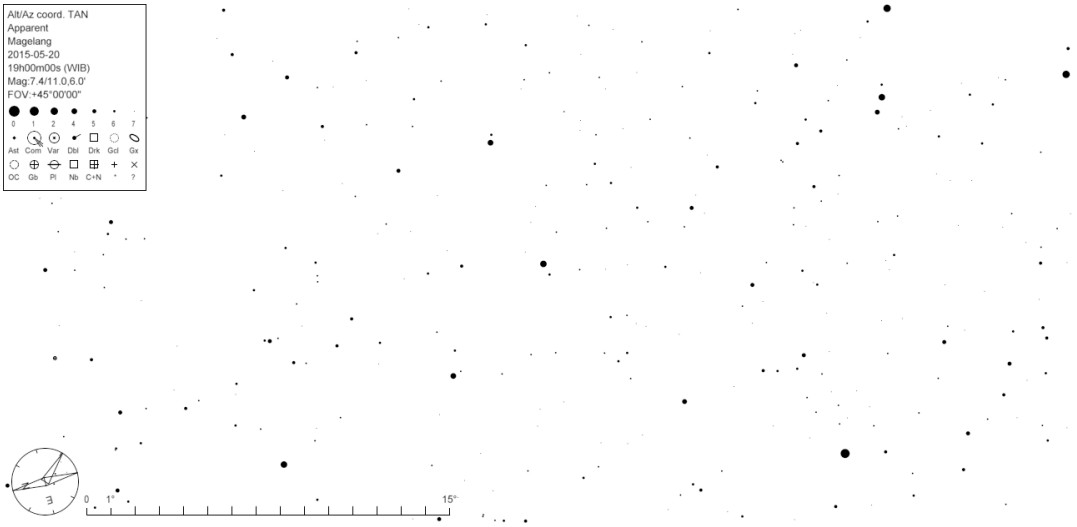
2. Soal cerah atau mendung

a.

RA	Deklinasi	Nama objek
$9^h11^m39.0^s$	$17^o08'24.0"$	Jupiter
$16^h00^m41.0^s$	$-18^o22'45.0"$	Saturnus

b. RA: $12^h42^m27.35^s$

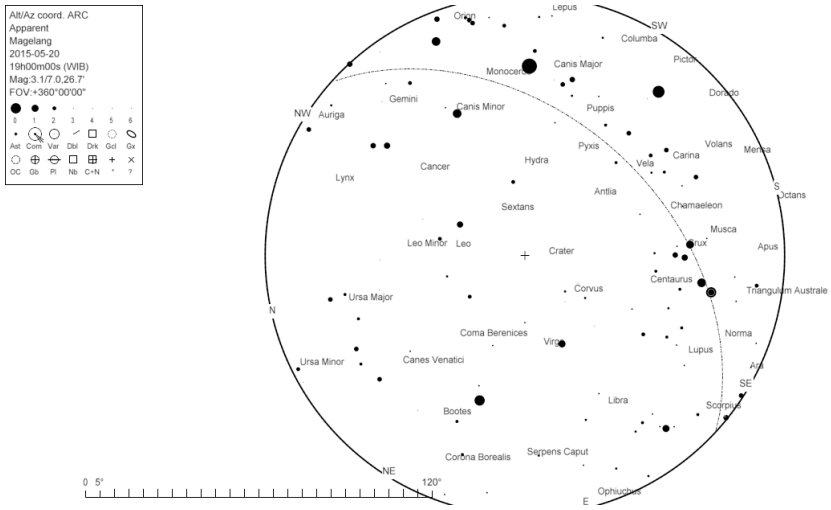
Dec: $-01^o32'03.3"$



c. Kutub Utara Galaktik: RA = $12^h51^m26.00^s$, Dec = $+27^o$ 7’ 42.0”

Kutub Selatan Galaktik: RA = $0^h51^m26.00^s$, Dec = -27^o 7’ 42.0”

d. Bidang galaktik (ditunjukkan dengan garis putus-putus):



3. Soal Cerah
(terlampir)

4. Soal Uraian
a. Medan pandang:

$$M = \frac{fob}{fok} = \frac{80\ mm \times 11.25}{25\ mm} = 36$$

$$FoV = \frac{Medan\ Pandang\ Semu\ Okuler}{M} = \frac{45}{36} = 1{,}25\ derajat$$

Limitting magnitude:

$$6 + 5log\frac{D_{teleskop}}{D_{pupil\ mata}} = 6 + 5log\frac{80\ mm}{7\ mm} = 11{,}289$$

Light gathering power:

$$\frac{{D_{teleskop}}^2}{{D_{pupil\ mata}}^2} = \frac{(80\ mm)^2}{(7\ mm)^2} = 130{,}61$$

b. Medan pandang:

$$M = \frac{fob}{fok} = \frac{90\ mm \times 10}{25\ mm} = 36$$

$$FoV = \frac{Medan\ Pandang\ Semu\ Okuler}{M} = \frac{45}{36} = 1{,}25\ derajat$$

Limitting magnitude:

$$6 + 5log\frac{D_{teleskop}}{D_{pupil\ mata}} = 6 + 5log\frac{90\ mm}{7\ mm} = 11{,}546$$

Light gathering power:

$$\frac{{D_{teleskop}}^2}{{D_{pupil\ mata}}^2} = \frac{(90\ mm)^2}{(7\ mm)^2} = 165{,}31$$