

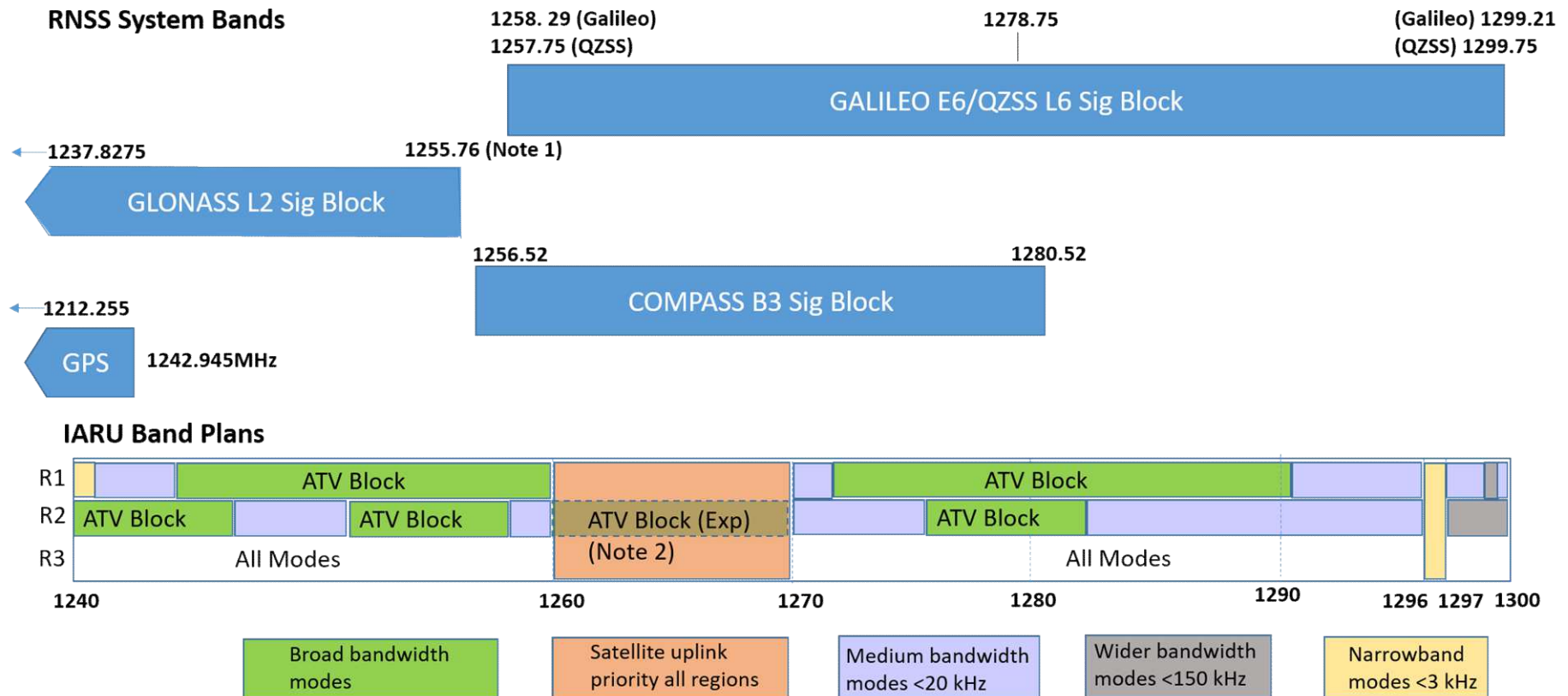


Amateur / RNSS Coexistence in the 23cm band

- Barry Lewis G4SJH
- IARU Lead on WRC23 AI9.1b
- June 2023 Update



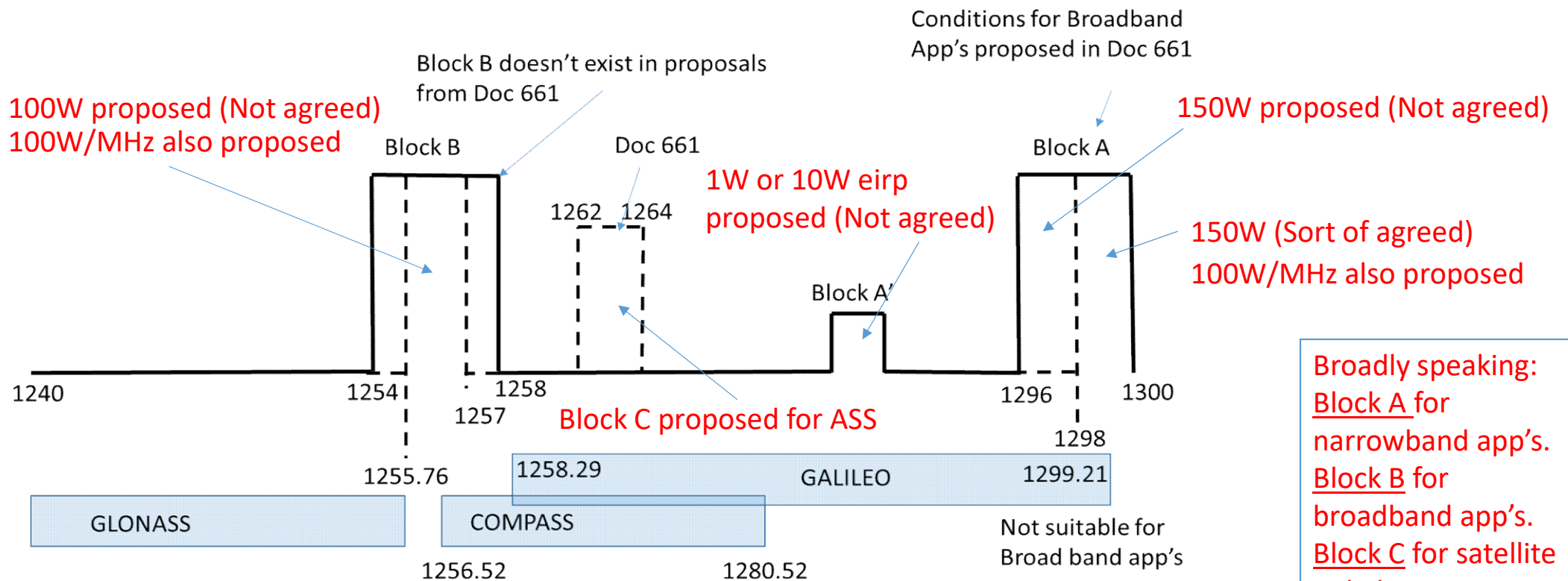
The RNSS systems within the scope of studies





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April 2023



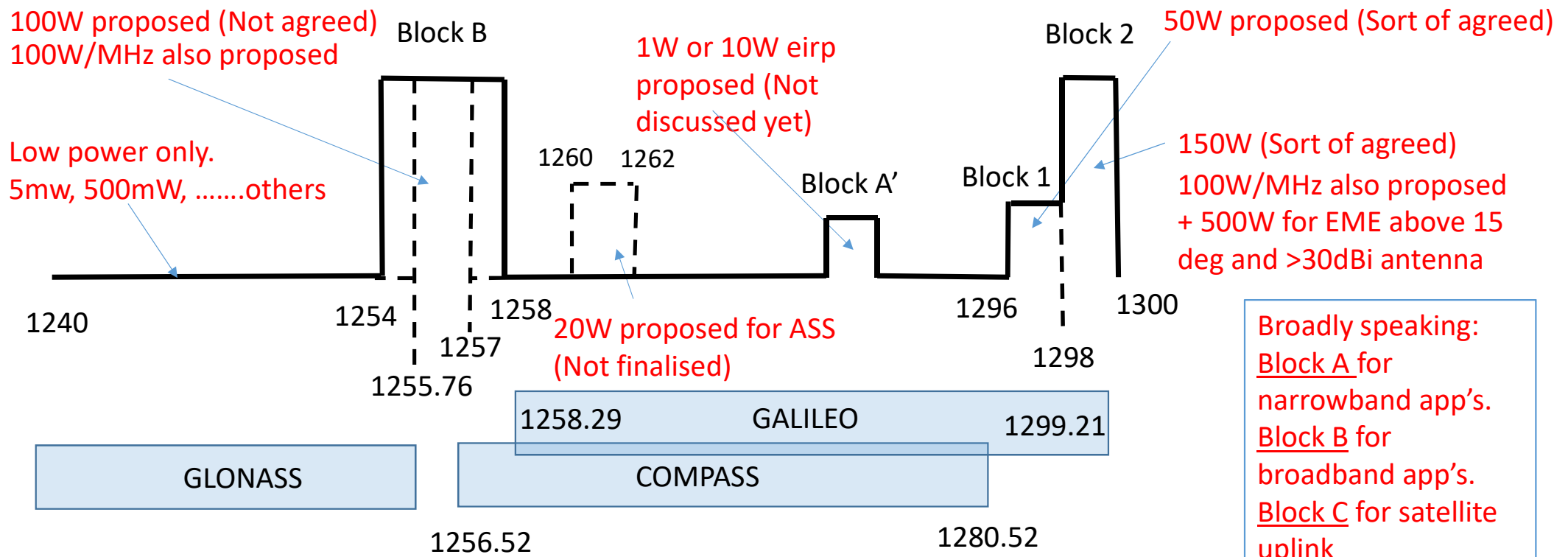
Broadly speaking:
Block A for narrowband app's.
Block B for broadband app's.
Block C for satellite uplink



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June 2023

For app's with BW
<150kHz



Broadly speaking:
Block A for narrowband app's.
Block B for broadband app's.
Block C for satellite uplink



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June 2023

Not yet agreed

Nearly agreed

More or less agreed

100W proposed (Not agreed)
100W/MHz also proposed

Low power only.
5mw, 500mW,others

1W or 10W eirp
proposed (Not
discussed yet)

50W proposed (Sort of agreed)

150W (Sort of agreed)
100W/MHz also proposed
+ 500W for EME above 15
deg and >30dBi antenna

20W proposed for ASS
(Not finalised)

1240

1254

1258

1257

1255.76

1258.29

GALILEO

1299.21

GLONASS

COMPASS

1256.52

1280.52

Block B

1260

1262

Block A'

Block 2

Block 1

1296

1298

1300

For app's with BW
<150kHz

Broadly speaking:
Blocks 1 and 2 for
narrowband app's.
Block B for
broadband app's.
Block C for satellite
uplink

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Block B options:

IARU Proposed

Narrow band Applications	Broadband Applications
1254 – 1258 MHz @ 100W	1 254-1 258 MHz; [Maximum transmitter power = [100W][100W/1MHz]]
1255 – 1257 MHz @ 100W	1 255-1 257 MHz; [Maximum transmitter power = [100W][100W/1MHz]]
1258 – 1260 MHz @ xxW	1 258-1 260 MHz; [Maximum EIRP – xx dBW/yy MHz]
1255 – 1257 MHz @ 100W for Regions 2 and 3	
1258 – 1260 MHz @ xxW for Region 1	

IARU does not support any EIRP or spectral density proposal.

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- Amateur Satellite Service (Block C)
 - 1 260-1 262 MHz; Maximum EIRP = [28.0] dBW/150 kHz.
 - This equates to around 10W.
 - Spectral density aspect not preferred.
- Outside the identified blocks for very low power experimental applications :
 - A max power = [500 mW][100 mW][5 mW] or [EIRP =-xx dBW per yy MHz.]
OR:
 - exclude [1 263.75-1 293.75] MHz and [1 259.25-1 277.25] MHz [1240 – 1261 MHz and 1 262-1 293.75 MHz]for national licensing and assignments of ATV

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- Other Aspects still under discussion:
 - “...it is recommended amateur satellites stations only operate when elevation angle exceeds 45 Deg, in order to alleviate the potential interference to nearby RNSS receivers”
 - “amateur stations need not to be deployed at a distance of less than 20 km from airports”.
 - “administrations should be mindful about the location of amateur stations in order to avoid pointing of the station antenna pattern peak in the direction of airports and air corridors for aircraft flights.”
 - “the main lobe of the amateur station antenna pattern need not to be directed in the $\pm 30^\circ$ sector towards the airport, located at less than 100 km from such amateur station”
 - the main lobe of the amateur station antenna pattern need not to be directed in the $\pm 10^\circ$ sector towards the airport, located at less than 120 km from such amateur station (for amateur-satellite service uplink).
- IARU sees no need for any of these provisions.
- Next WP5A Meeting: Sept 14 - 22