**TNOuka**

**Schedule from 2020-04-29 to 2020-06-01**

**(Total time = 0hr, technical loss = 0hr, weather loss = 0hr, Exotime = 0hr, cometime = 0hr, chilean time = 0hr)**

**Night starting on the 2020-04-30**

*Moon illumination: 48.0 %*

*Sunset - Sunrise: 19h06 / 05h50*

*Civil/Naut./Astro. twilights: 19h36-05h20 / 20h06-04h50 / 20h38-04h18*

*Start-end of night (Naut. twil.): 20h07 to 04h50*

*Night duration (Naut. twil.): 8.722 h*

**From 20h07 to 04h50 : Sp1524+2925**

Note: Prio\_target

SPECULOOS : 73.25 h of obs over 200.0 h

Jmag= 11.21, SpT= 6.5

RA = 15 24 24.751, DEC = 29 25 31.542, texp=34 , filt=I+z

**Night starting on the 2020-05-01**

*Moon illumination: 59.0 %*

*Sunset - Sunrise: 19h06 / 05h49*

*Civil/Naut./Astro. twilights: 19h36-05h19 / 20h07-04h49 / 20h39-04h16*

*Start-end of night (Naut. twil.): 20h08 to 04h49*

*Night duration (Naut. twil.): 8.691 h*

**From 20h08 to 04h49 : Sp1524+2925**

Note: Prio\_target

SPECULOOS : 73.25 h of obs over 200.0 h

Jmag= 11.21, SpT= 6.5

RA = 15 24 24.751, DEC = 29 25 31.542, texp=34 , filt=I+z

**Night starting on the 2020-05-02**

*Moon illumination: 70.0 %*

*Sunset - Sunrise: 19h07 / 05h48*

*Civil/Naut./Astro. twilights: 19h37-05h18 / 20h08-04h47 / 20h40-04h15*

*Start-end of night (Naut. twil.): 20h08 to 04h47*

*Night duration (Naut. twil.): 8.659 h*

**From 20h08 to 04h47 : Sp1524+2925**

Note: Prio\_target

SPECULOOS : 73.25 h of obs over 200.0 h

Jmag= 11.21, SpT= 6.5

RA = 15 24 24.751, DEC = 29 25 31.542, texp=34 , filt=I+z

**Night starting on the 2020-05-03**

*Moon illumination: 80.0 %*

*Sunset - Sunrise: 19h08 / 05h47*

*Civil/Naut./Astro. twilights: 19h38-05h17 / 20h09-04h46 / 20h41-04h14*

*Start-end of night (Naut. twil.): 20h09 to 04h47*

*Night duration (Naut. twil.): 8.628 h*

**From 20h09 to 04h47 : Sp1524+2925**

Note: Prio\_target

SPECULOOS : 73.25 h of obs over 200.0 h

Jmag= 11.21, SpT= 6.5

RA = 15 24 24.751, DEC = 29 25 31.542, texp=34 , filt=I+z

**Night starting on the 2020-05-04**

*Moon illumination: 88.0 %*

*Sunset - Sunrise: 19h08 / 05h47*

*Civil/Naut./Astro. twilights: 19h39-05h16 / 20h10-04h45 / 20h42-04h13*

*Start-end of night (Naut. twil.): 20h10 to 04h45*

*Night duration (Naut. twil.): 8.597 h*

**From 20h10 to 04h45 : Sp1524+2925**

Note: Prio\_target

SPECULOOS : 73.25 h of obs over 200.0 h

Jmag= 11.21, SpT= 6.5

RA = 15 24 24.751, DEC = 29 25 31.542, texp=34 , filt=I+z

**Night starting on the 2020-05-05**

*Moon illumination: 95.0 %*

*Sunset - Sunrise: 19h09 / 05h46*

*Civil/Naut./Astro. twilights: 19h39-05h16 / 20h10-04h44 / 20h43-04h12*

*Start-end of night (Naut. twil.): 20h11 to 04h44*

*Night duration (Naut. twil.): 8.567 h*

**From 20h11 to 04h44 : Sp1521+5053**

Note: Prio\_target

SPECULOOS : 64.0 h of obs over 200.0 h

Jmag= 12.01, SpT= 7.5

RA = 15 21 1.083, DEC = 50 53 22.794, texp=72 , filt=I+z

**Night starting on the 2020-05-06**

*Moon illumination: 99.0 %*

*Sunset - Sunrise: 19h10 / 05h45*

*Civil/Naut./Astro. twilights: 19h40-05h15 / 20h11-04h43 / 20h44-04h11*

*Start-end of night (Naut. twil.): 20h12 to 04h43*

*Night duration (Naut. twil.): 8.537 h*

**From 20h12 to 04h43 : Sp1521+5053**

Note: Prio\_target

SPECULOOS : 64.0 h of obs over 200.0 h

Jmag= 12.01, SpT= 7.5

RA = 15 21 1.083, DEC = 50 53 22.794, texp=72 , filt=I+z

**Night starting on the 2020-05-07**

*Moon illumination: 100.0 %*

*Sunset - Sunrise: 19h10 / 05h44*

*Civil/Naut./Astro. twilights: 19h41-05h14 / 20h12-04h43 / 20h45-04h10*

*Start-end of night (Naut. twil.): 20h12 to 04h42*

*Night duration (Naut. twil.): 8.507 h*

**From 20h12 to 04h42 : Sp1521+5053**

Note: Prio\_target

SPECULOOS : 64.0 h of obs over 200.0 h

Jmag= 12.01, SpT= 7.5

RA = 15 21 1.083, DEC = 50 53 22.794, texp=72 , filt=I+z

**Night starting on the 2020-05-08**

*Moon illumination: 98.0 %*

*Sunset - Sunrise: 19h11 / 05h43*

*Civil/Naut./Astro. twilights: 19h41-05h13 / 20h13-04h42 / 20h46-04h09*

*Start-end of night (Naut. twil.): 20h13 to 04h42*

*Night duration (Naut. twil.): 8.477 h*

**From 20h13 to 04h42 : Sp1521+5053**

Note: Prio\_target

SPECULOOS : 64.0 h of obs over 200.0 h

Jmag= 12.01, SpT= 7.5

RA = 15 21 1.083, DEC = 50 53 22.794, texp=72 , filt=I+z

**Night starting on the 2020-05-09**

*Moon illumination: 93.0 %*

*Sunset - Sunrise: 19h12 / 05h43*

*Civil/Naut./Astro. twilights: 19h42-05h12 / 20h14-04h41 / 20h47-04h08*

*Start-end of night (Naut. twil.): 20h14 to 04h40*

*Night duration (Naut. twil.): 8.448 h*

**From 20h14 to 04h40 : Sp1521+5053**

Note: Prio\_target

SPECULOOS : 64.0 h of obs over 200.0 h

Jmag= 12.01, SpT= 7.5

RA = 15 21 1.083, DEC = 50 53 22.794, texp=72 , filt=I+z

**Night starting on the 2020-05-10**

*Moon illumination: 87.0 %*

*Sunset - Sunrise: 19h12 / 05h42*

*Civil/Naut./Astro. twilights: 19h43-05h11 / 20h15-04h40 / 20h48-04h06*

*Start-end of night (Naut. twil.): 20h15 to 04h40*

*Night duration (Naut. twil.): 8.419 h*

**From 20h15 to 04h40 : Sp1521+5053**

Note: Prio\_target

SPECULOOS : 64.0 h of obs over 200.0 h

Jmag= 12.01, SpT= 7.5

RA = 15 21 1.083, DEC = 50 53 22.794, texp=72 , filt=I+z

**Night starting on the 2020-05-11**

*Moon illumination: 79.0 %*

*Sunset - Sunrise: 19h13 / 05h41*

*Civil/Naut./Astro. twilights: 19h44-05h11 / 20h15-04h39 / 20h49-04h05*

*Start-end of night (Naut. twil.): 20h16 to 04h39*

*Night duration (Naut. twil.): 8.391 h*

**From 20h16 to 04h39 : Sp1521+5053**

Note: Prio\_target

SPECULOOS : 64.0 h of obs over 200.0 h

Jmag= 12.01, SpT= 7.5

RA = 15 21 1.083, DEC = 50 53 22.794, texp=72 , filt=I+z

**Night starting on the 2020-05-12**

*Moon illumination: 69.0 %*

*Sunset - Sunrise: 19h14 / 05h41*

*Civil/Naut./Astro. twilights: 19h44-05h10 / 20h16-04h38 / 20h50-04h05*

*Start-end of night (Naut. twil.): 20h17 to 04h38*

*Night duration (Naut. twil.): 8.363 h*

**From 20h17 to 04h38 : Sp1521+5053**

Note: Prio\_target

SPECULOOS : 64.0 h of obs over 200.0 h

Jmag= 12.01, SpT= 7.5

RA = 15 21 1.083, DEC = 50 53 22.794, texp=72 , filt=I+z

**Night starting on the 2020-05-13**

*Moon illumination: 60.0 %*

*Sunset - Sunrise: 19h14 / 05h40*

*Civil/Naut./Astro. twilights: 19h45-05h09 / 20h17-04h37 / 20h51-04h04*

*Start-end of night (Naut. twil.): 20h17 to 04h37*

*Night duration (Naut. twil.): 8.335 h*

**From 20h17 to 04h37 : Sp1423+5146**

Note: Prio\_target

SPECULOOS : 22.25 h of obs over 60.0 h

Jmag= 11.88, SpT= 7.0

RA = 14 23 2.804, DEC = 51 46 30.522, texp=64 , filt=I+z

**Night starting on the 2020-05-14**

*Moon illumination: 50.0 %*

*Sunset - Sunrise: 19h15 / 05h39*

*Civil/Naut./Astro. twilights: 19h46-05h08 / 20h18-04h36 / 20h52-04h03*

*Start-end of night (Naut. twil.): 20h18 to 04h36*

*Night duration (Naut. twil.): 8.308 h*

**From 20h18 to 04h36 : Sp1423+5146**

Note: Prio\_target

SPECULOOS : 22.25 h of obs over 60.0 h

Jmag= 11.88, SpT= 7.0

RA = 14 23 2.804, DEC = 51 46 30.522, texp=64 , filt=I+z

**Night starting on the 2020-05-15**

*Moon illumination: 40.0 %*

*Sunset - Sunrise: 19h16 / 05h39*

*Civil/Naut./Astro. twilights: 19h47-05h08 / 20h19-04h36 / 20h53-04h02*

*Start-end of night (Naut. twil.): 20h20 to 04h36*

*Night duration (Naut. twil.): 8.281 h*

**From 20h20 to 04h36 : Sp1423+5146**

Note: Prio\_target

SPECULOOS : 22.25 h of obs over 60.0 h

Jmag= 11.88, SpT= 7.0

RA = 14 23 2.804, DEC = 51 46 30.522, texp=64 , filt=I+z

**Night starting on the 2020-05-16**

*Moon illumination: 31.0 %*

*Sunset - Sunrise: 19h16 / 05h38*

*Civil/Naut./Astro. twilights: 19h47-05h07 / 20h20-04h35 / 20h54-04h01*

*Start-end of night (Naut. twil.): 20h20 to 04h35*

*Night duration (Naut. twil.): 8.255 h*

**From 20h20 to 04h35 : Sp1423+5146**

Note: Prio\_target

SPECULOOS : 22.25 h of obs over 60.0 h

Jmag= 11.88, SpT= 7.0

RA = 14 23 2.804, DEC = 51 46 30.522, texp=64 , filt=I+z

**Night starting on the 2020-05-17**

*Moon illumination: 23.0 %*

*Sunset - Sunrise: 19h17 / 05h37*

*Civil/Naut./Astro. twilights: 19h48-05h06 / 20h20-04h34 / 20h55-04h00*

*Start-end of night (Naut. twil.): 20h21 to 04h34*

*Night duration (Naut. twil.): 8.229 h*

**From 20h21 to 04h34 : Sp1423+5146**

Note: Prio\_target

SPECULOOS : 22.25 h of obs over 60.0 h

Jmag= 11.88, SpT= 7.0

RA = 14 23 2.804, DEC = 51 46 30.522, texp=64 , filt=I+z

**Night starting on the 2020-05-18**

*Moon illumination: 15.0 %*

*Sunset - Sunrise: 19h18 / 05h37*

*Civil/Naut./Astro. twilights: 19h49-05h06 / 20h21-04h33 / 20h55-03h59*

*Start-end of night (Naut. twil.): 20h22 to 04h33*

*Night duration (Naut. twil.): 8.204 h*

**From 20h22 to 04h33 : Sp1423+5146**

Note: Prio\_target

SPECULOOS : 22.25 h of obs over 60.0 h

Jmag= 11.88, SpT= 7.0

RA = 14 23 2.804, DEC = 51 46 30.522, texp=64 , filt=I+z

**Night starting on the 2020-05-19**

*Moon illumination: 9.0 %*

*Sunset - Sunrise: 19h18 / 05h36*

*Civil/Naut./Astro. twilights: 19h50-05h05 / 20h22-04h33 / 20h56-03h58*

*Start-end of night (Naut. twil.): 20h22 to 04h33*

*Night duration (Naut. twil.): 8.179 h*

**From 20h22 to 04h33 : Sp1423+5146**

Note: Prio\_target

SPECULOOS : 22.25 h of obs over 60.0 h

Jmag= 11.88, SpT= 7.0

RA = 14 23 2.804, DEC = 51 46 30.522, texp=64 , filt=I+z

**Night starting on the 2020-05-20**

*Moon illumination: 4.0 %*

*Sunset - Sunrise: 19h19 / 05h36*

*Civil/Naut./Astro. twilights: 19h50-05h05 / 20h23-04h32 / 20h57-03h58*

*Start-end of night (Naut. twil.): 20h23 to 04h32*

*Night duration (Naut. twil.): 8.155 h*

**From 20h23 to 04h32 : Sp1423+5146**

Note: Prio\_target

SPECULOOS : 22.25 h of obs over 60.0 h

Jmag= 11.88, SpT= 7.0

RA = 14 23 2.804, DEC = 51 46 30.522, texp=64 , filt=I+z

**Night starting on the 2020-05-21**

*Moon illumination: 1.0 %*

*Sunset - Sunrise: 19h20 / 05h35*

*Civil/Naut./Astro. twilights: 19h51-05h04 / 20h24-04h31 / 20h58-03h57*

*Start-end of night (Naut. twil.): 20h24 to 04h32*

*Night duration (Naut. twil.): 8.131 h*

**From 20h24 to 04h32 : Sp1423+5146**

Note: Prio\_target

SPECULOOS : 22.25 h of obs over 60.0 h

Jmag= 11.88, SpT= 7.0

RA = 14 23 2.804, DEC = 51 46 30.522, texp=64 , filt=I+z

**Night starting on the 2020-05-22**

*Moon illumination: 0.0 %*

*Sunset - Sunrise: 19h20 / 05h35*

*Civil/Naut./Astro. twilights: 19h52-05h04 / 20h24-04h31 / 20h59-03h56*

*Start-end of night (Naut. twil.): 20h25 to 04h31*

*Night duration (Naut. twil.): 8.108 h*

**From 20h25 to 04h31 : Sp1423+5146**

Note: Prio\_target

SPECULOOS : 22.25 h of obs over 60.0 h

Jmag= 11.88, SpT= 7.0

RA = 14 23 2.804, DEC = 51 46 30.522, texp=64 , filt=I+z

**Night starting on the 2020-05-23**

*Moon illumination: 1.0 %*

*Sunset - Sunrise: 19h21 / 05h34*

*Civil/Naut./Astro. twilights: 19h52-05h03 / 20h25-04h30 / 21h00-03h55*

*Start-end of night (Naut. twil.): 20h26 to 04h31*

*Night duration (Naut. twil.): 8.085 h*

**From 20h26 to 04h31 : Sp1423+5146**

Note: Prio\_target

SPECULOOS : 22.25 h of obs over 60.0 h

Jmag= 11.88, SpT= 7.0

RA = 14 23 2.804, DEC = 51 46 30.522, texp=64 , filt=I+z

**Night starting on the 2020-05-24**

*Moon illumination: 4.0 %*

*Sunset - Sunrise: 19h22 / 05h34*

*Civil/Naut./Astro. twilights: 19h53-05h03 / 20h26-04h30 / 21h01-03h55*

*Start-end of night (Naut. twil.): 20h27 to 04h30*

*Night duration (Naut. twil.): 8.064 h*

**From 20h27 to 04h30 : Sp1524+2925**

Note: Prio\_target

SPECULOOS : 73.25 h of obs over 200.0 h

Jmag= 11.21, SpT= 6.5

RA = 15 24 24.751, DEC = 29 25 31.542, texp=34 , filt=I+z

**Night starting on the 2020-05-25**

*Moon illumination: 8.0 %*

*Sunset - Sunrise: 19h22 / 05h34*

*Civil/Naut./Astro. twilights: 19h54-05h02 / 20h27-04h29 / 21h02-03h54*

*Start-end of night (Naut. twil.): 20h28 to 04h30*

*Night duration (Naut. twil.): 8.042 h*

**From 20h28 to 04h30 : Sp1707+6439**

Note: Prio\_target

SPECULOOS : 0.0 h of obs over 100.0 h

Jmag= 12.54, SpT= 8.2

RA = 17 07 18.621, DEC = 64 39 33.187, texp=145 , filt=I+z

**Night starting on the 2020-05-26**

*Moon illumination: 15.0 %*

*Sunset - Sunrise: 19h23 / 05h33*

*Civil/Naut./Astro. twilights: 19h54-05h02 / 20h27-04h29 / 21h03-03h53*

*Start-end of night (Naut. twil.): 20h28 to 04h29*

*Night duration (Naut. twil.): 8.022 h*

**From 20h28 to 04h29 : Sp1707+6439**

Note: Prio\_target

SPECULOOS : 0.0 h of obs over 100.0 h

Jmag= 12.54, SpT= 8.2

RA = 17 07 18.621, DEC = 64 39 33.187, texp=145 , filt=I+z

**Night starting on the 2020-05-27**

*Moon illumination: 24.0 %*

*Sunset - Sunrise: 19h23 / 05h33*

*Civil/Naut./Astro. twilights: 19h55-05h01 / 20h28-04h28 / 21h03-03h53*

*Start-end of night (Naut. twil.): 20h29 to 04h29*

*Night duration (Naut. twil.): 8.002 h*

**From 20h29 to 04h29 : Sp1707+6439**

Note: Prio\_target

SPECULOOS : 0.0 h of obs over 100.0 h

Jmag= 12.54, SpT= 8.2

RA = 17 07 18.621, DEC = 64 39 33.187, texp=145 , filt=I+z

**Night starting on the 2020-05-28**

*Moon illumination: 33.0 %*

*Sunset - Sunrise: 19h24 / 05h33*

*Civil/Naut./Astro. twilights: 19h56-05h01 / 20h29-04h28 / 21h04-03h52*

*Start-end of night (Naut. twil.): 20h29 to 04h28*

*Night duration (Naut. twil.): 7.982 h*

**From 20h29 to 04h28 : Sp1707+6439**

Note: Prio\_target

SPECULOOS : 0.0 h of obs over 100.0 h

Jmag= 12.54, SpT= 8.2

RA = 17 07 18.621, DEC = 64 39 33.187, texp=145 , filt=I+z

**Night starting on the 2020-05-29**

*Moon illumination: 44.0 %*

*Sunset - Sunrise: 19h25 / 05h32*

*Civil/Naut./Astro. twilights: 19h56-05h01 / 20h30-04h27 / 21h05-03h52*

*Start-end of night (Naut. twil.): 20h30 to 04h28*

*Night duration (Naut. twil.): 7.964 h*

**From 20h30 to 04h28 : Sp1707+6439**

Note: Prio\_target

SPECULOOS : 0.0 h of obs over 100.0 h

Jmag= 12.54, SpT= 8.2

RA = 17 07 18.621, DEC = 64 39 33.187, texp=145 , filt=I+z

**Night starting on the 2020-05-30**

*Moon illumination: 56.0 %*

*Sunset - Sunrise: 19h25 / 05h32*

*Civil/Naut./Astro. twilights: 19h57-05h00 / 20h30-04h27 / 21h06-03h51*

*Start-end of night (Naut. twil.): 20h31 to 04h27*

*Night duration (Naut. twil.): 7.946 h*

**From 20h31 to 04h27 : Sp1707+6439**

Note: Prio\_target

SPECULOOS : 0.0 h of obs over 100.0 h

Jmag= 12.54, SpT= 8.2

RA = 17 07 18.621, DEC = 64 39 33.187, texp=145 , filt=I+z

**Night starting on the 2020-05-31**

*Moon illumination: 67.0 %*

*Sunset - Sunrise: 19h26 / 05h32*

*Civil/Naut./Astro. twilights: 19h57-05h00 / 20h31-04h27 / 21h07-03h51*

*Start-end of night (Naut. twil.): 20h31 to 04h27*

*Night duration (Naut. twil.): 7.928 h*

**From 20h31 to 04h27 : Sp1707+6439**

Note: Prio\_target

SPECULOOS : 0.0 h of obs over 100.0 h

Jmag= 12.54, SpT= 8.2

RA = 17 07 18.621, DEC = 64 39 33.187, texp=145 , filt=I+z