



Gola – Summer 2022

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Gola is the observational astronomy limb of Jyotish. For most of the summer we can observe Shani, Guru, Mangala and Shukra in the morning sky before sunrise. Shani and Guru oppose Surya this summer and will become visible at sunset accordingly. This will cause

them to transition from morning planets to evening planets. Budha, whose cycle around Surya is 88 days will make both an evening and morning appearance this summer. Chandra's 27.5 day cycle through the zodiac provides opportunities to witness conjunctions with each visible graha every month. Go out and locate the grahas in the night sky as they travel through rashis and pass the primary stars of nakshatras. Commune with them in the heavens and experience a level of Seeing, beyond a computer screen, that deepens your understanding and practice of Jyotish.

*Summer kicks off with all five starry grahas and Chandra in the **morning sky** just before dawn. Locate **Shani** in the south directly below the star Sadalsuud in Kumbha and a bit above and east of Deneb Algedi in Makara - the stars marking Dhanistha nakshatra. In the south-east among the dim stars of Mina constellation, locate **Guru and Mangala**. Above them is the Great Square of Pegasus or the couch of the Bhadrapadas. The eastern most stars of the couch, Algenib and Alpheratz, above Guru and Mangala mark Uttara Bhadrapada nakshatra. **Shukra and Budha** will be in Vrishabha lower to the eastern horizon. Shukra will be below the Pleiades or Krittika star cluster and Budha will be above Aldebaran marking Rohini nakshatra.*

On June 21st, Chandra will be below Guru. The following morning, Chandra will be between Guru and Mangala. On the morning of the June 23rd, Chandra will be below and east of Mangala. On June 26th, observers in India will find Chandra will be above Shukra while observers in the USA will find Chandra slightly east of Shukra. The following morning, Chandra will be above Budha for Indian observers and east of Budha for American observers.

Fig. 1: India, dawn, June 26, 2022

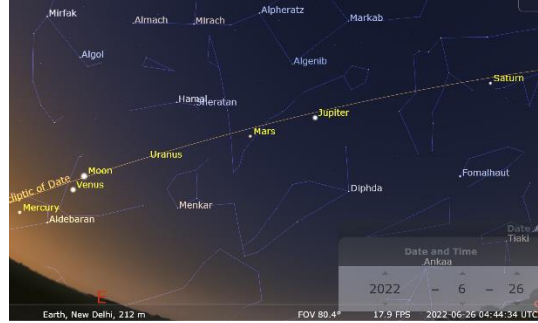
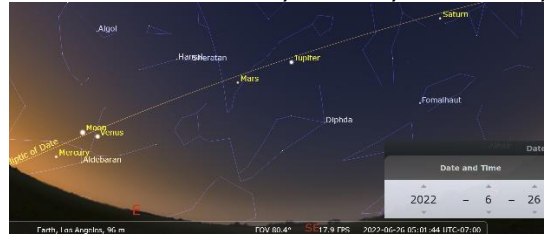


Fig. 2: USA west coast, dawn, June 26, 2022



On the morning of June 30th, locate **Shukra** above Aldebaran of Vrishabha, the star marking Rohini nakshatra. Budha will disappear from the morning sky during the first week of July. On July 8th, Shukra passes above Bellatrix of Orion, marking Mrigashira nakshatra. On July 14th, Shukra passes between the horns of Vrishabha the Bull, below is Betelgeuse of Orion marking Ardra nakshatra. On the morning of July 15th, **Mangala** will be below the star Shertan of Mesha marking Ashwini nakshatra. Throughout July, **Guru** remains below Algenib in Uttara Bhadrpada and **Shani** remains above Deneb Algedi in Dhanistha.

Fig.3: India, dawn, July 14, 2022



Fig. 4: USA, west coast, dawn, July 14, 2022



*Chandra joins four starry grahas in the **morning sky** during the second half of July. On July 16th observers in India will find Chandra directly below **Shani** while observers in the USA will find Chandra below and slightly east of Shani. On July 19th observers in the USA will find Chandra directly below **Guru**, while observers in India will find Chandra below and slightly west of Guru. On July 21st observers in India will find Mangala east of Chandra and then west of Chandra on July 22nd. Meanwhile, observers in the USA will find Chandra very close to Mangala on July 21st. On July 24th, **Mangala** passes above Menkar of the constellation Cetus (below Mesha) marking Bharani nakshatra. On July 26th, Chandra will pass above **Shukra**. Just before sunrise, Chandra will be slightly west of Shukra in India and slightly east of Shukra in the USA.*

Fig. 5: India, dawn, July 21, 2022



Fig. 6: USA, west coast, dawn, July 21, 2022



During August there is a graha to look for in the **evening sky**. On the evening of August 3rd, try to locate **Budha** low to the western horizon near Regulus of Simha, the star marking Magha nakshatra. The bright star near Chandra this night is Spica or Chitra in Kanya. Observers in India will find Chitra east of Chandra and observers in the USA will find Chitra below Chandra. Budha will gain in brightness over the next week which typically makes the graha easier to locate, however, Budha will remain low to the horizon where it is easily obscured by city lights. On August 29th look for Budha below Chandra. Budha will disappear from view in September a few days before stationing retrograde.

Fig 7: India, dusk, Aug 3, 2022



Fig 8: USA, east coast, dusk, Aug 3, 2022

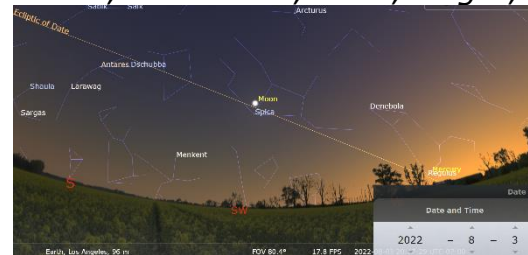


Fig 9: India, dusk, Aug 29, 2022

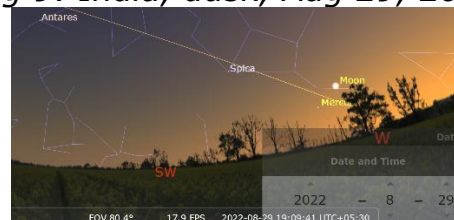
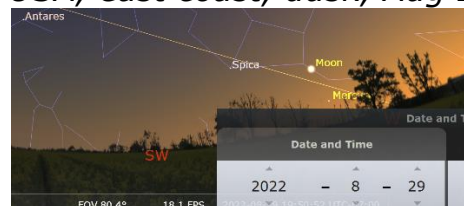


Fig 10: USA, east coast, dusk, Aug 29, 2022



The **morning sky** in August and September provides the opportunity to observe the retrograde motion of **Shani and Guru**. Notice Shani moving west of Deneb Algedi (below the graha) and Guru moving west of Algenib (above the graha). On August 3rd **Mangala** passes below Almach of the constellation Andromeda (above Mesha) also marking Bharani nakshatra. On August 8th **Shukra** passes below Castor and Pollux of Mithuna, the stars marking Purnarvasu nakshatra.

On August 12th observers in India can locate Shani above Chandra while observers in the USA can locate Shani above and east of Chandra. On August 15th, observers in the USA can locate Guru slightly above Chandra while observers in India can locate Guru slightly above and east of Chandra. On August 19th observers in the USA can locate Mangala slightly below Chandra while observers in India can locate Mangala slightly below and east of Chandra. The cluster of stars above them will be the Krittikas, the seven wives of the seven Rishis (Big Dipper stars). Observers in the USA can locate Shukra below Chandra just before dawn on August 25th. Observers in India can locate Shukra below and east of Chandra on the morning of August 25th and below and west of Chandra on the 26th. Toward the end of August, it will not be possible to observe all four morning planets simultaneously. Shani will set around 4:30 a.m. and Shukra will rise around 5:00 a.m.

Fig. 11: India, dawn, Aug 19, 2022



Fig. 12: USA, east coast, dawn, Aug 19, 2022



Shani and Guru will also become evening planets in mid-August. Shani will rise as the sunsets and Guru will rise around 9:30 p.m. During September, Shani will rise before sunset. Guru will rise at sunset in late-September.

On the **morning** of September 5th **Shurka** will pass slightly above Regulus, marking Magha nakshatra in the constellation Simha. On September 6th, **Mangala** will pass above Aldebaran, marking Rohini nakshatra in the constellation Vrishabha.

Looking east on the **evening** of September 8th, observers in India can locate **Shani** above Chandra. Observers the USA can locate Shani above and east of Chandra on September 7th and above and west of Chandra on September 8th. For observers in the USA Shani will be above and slightly west of Chandra. Observers in the USA can locate **Guru** east of Chandra on September 10th and west of Chandra on September 11th after they rise around 8:00 p.m. Observers in India can locate Guru above Chandra as they rise around 7:30 p.m. Guru and Chandra will also be visible in the west before dawn.

Fig. 13: India, 7:30 p.m., Sep 11, 2022



Fig.14: USA, west coast, 8:00 p.m., Sep 10, 2022



On the **morning** of September 17th observers in India can locate **Mangala** just below Chandra in the southern sky before dawn. Observers in the USA can locate Mangala slightly below and east of Chandra on September 16th and below and west on September 17th.

Fig. 15: India, dawn, Sep 17, 2022



Fig.16: USA, west coast, dawn, Sep 16, 2022



On the **morning** September 24th, observers in the USA can locate **Shukra** below Chandra during sunrise. On September 25th, observers in India can locate Shukra slightly below Chandra at sunrise.

Fig. 17: India, dawn, Sep 25, 2022



Fig. 18: USA west coast, dawn, Sep 25, 2022



Don't miss the Perseid meteor shower on August 11th. Happy Stargazing and Planet Tracking!