

**Meeting Date**

February 04, 2024

**Night Begins**

7:25 PM. EST

Note: Astronomical Twilight Ends

**Solar Noon / Midnight**

12:46 EST

Note: on Meeting Date

**Moon Quarters**

Last 02/02, New 02/09, First 02/16, Full 02/24

**Darkest Evenings**

02/01 – 02/14

Note: 2 days before Last thru 2 days before First

**Viewing Resources**

Evening Sky Maps

<http://skymaps.com/>

Astronomy Forecasts

<https://clearoutside.com/forecast/42.82/-83.14>[http://oaklandastronomy.net/ambient\\_RH.html](http://oaklandastronomy.net/ambient_RH.html)

Peter Birren's Deep-Sky Fieldbooks

<http://www.birrendesign.com/astro.html>**Featured Constellation: Ursa Major**A selection from Peter Birren's excellent deep-sky fieldbook, "*Objects in the Heavens*", pages 122-125

CONSTELLATION	COMMON NAME	SEASON,	ON MERIDIAN	ABBREVIATION
ITEM IDENTIFIER	TYPE	DETAILS	☆☆ SEPARATION / SIZE	RA DEC MAG

## Ursa Major *the Big Bear and Big Dipper* Spring Apr 20 **UMA**

*"Several telescopic objects will require care in their identification."*

Numerous galaxies mag10.5-15 in the Big Dipper.

☆☆ Mizar/Alcor ζ	Naked eye ☆☆; tele. quad	14.5'	13:25.0	54°50'	2.2/4/4
☆☆ Alula Australis ξ	27.3LY; binary double	1.1"	11:19.2	31°25'	3.8/5
☆☆ 65	☆☆☆; near χ	4-63"	11:56.2	46°22'	6.5/8
☆ RT®	Carbon ☆; irreg var; near NGC2841	09:19.8	51°19'	8.6-9.6	
☆ VY®	Carbon ☆; orange to orange-red	10:46.4	67°18'	6-6.6	
☆ Lelande 21185®	Brightest red dwarf in N sky	11:04.3	35°52'	7.5	
☆☆ M40 WNC 4	Ast 2 ☆; arguably nebulous	52.8'	12:23.1	57°58'	9/9.3
◯◯ M81 3031	SG ! Sa-Sb; Bode's Neb.; 11.8MLY 25'x10'	09:57.1	68°58'	<b>6.8</b>	
◯◯ M82 3034	IG ! lp; Cigar Galaxy; dusty.	9'x5'	09:57.5	69°35'	8.3
◯ M97 3587	PN Owl Neb; pale; remarkable	3'x3'	11:15.9	54°55'	9.0
◯◯ M101 5457	SG Sc; Pinwheel; faint; 1 hvy arm	24'x23'	14:03.9	54°15'	7.9
◯ M108 3556	SG Sbc; edge-on; 1° NE of M97	7'x1.5'	11:12.7	55°34'	10.0
◯ M109 3992	SG SBC; bright core; barred	8'x5'	11:58.6	53°16'	9.7
◯ NGC2681	SG S0-Sa; fine, even whorls	4'x4'	08:54.9	51°14'	10.0
◯ NGC2768	EG E5; elongated, smooth neb	8'x5'	09:13.1	59°57'	9.8
◯ NGC2841	SG ! Sb; dusty; classic elongated	7'x4'	09:23.4	50°53'	9.2
◯ NGC2976	IG Irr; 50☆; rich; cond; nebulous	7'x4'	09:48.8	67°50'	10.0
◯ NGC2985	SG Sa/b; fine whorls; NGC3027 near 3.6'x3'	09:52.1	72°11'	10.5	
◯ NGC3077	IG Irr; colliding with M81; 20kLY wide	5'x5'	10:04.2	68°41'	9.8

CONSTELLATION		COMMON NAME	SEASON,	ON MERIDIAN	ABBREVIATION	
ITEM IDENTIFIER	TYPE	DETAILS	☆☆ SEPARATION / SIZE	RA	DEC	MAG
○ NGC3184	SG	Sc; diffuse knots; halo; face-on	7'x7'	10:18.9	41°22'	9.8
○ NGC3198	SG	Sc; hub partly obscured; edge-on	8'x3'	10:20.6	45°30'	10.0
○ NGC3359	SG	SBC; grad brighter center	7'x4.3'	10:47.4	63°10'	10.5
○ NGC3631	SG	Sc; face-on spiral; rich	3.7'x3'	11:21.7	53°07'	10.2
○ NGC3675	SG	Sb; dusty; 40 <sub>M</sub> LY; 100 <sub>K</sub> LY wide	6'x3.2'	11:27.3	43°28'	10.0
○ NGC3726	SG	Sc; good spiral pattern	5'x3.5'	11:33.9	46°58'	10.2
○ NGC3898	SG	Sab; diffuse, long streak	3.5'x2'	11:49.9	56°01'	10.5
○ NGC3938	SG	Sc; fine face-on spiral	5'x5'	11:53.4	44°03'	10.4
○ NGC3941	SG	E3-S0; round hub; nebulosity	3.5'x2'	11:53.5	36°55'	10.0
○ NGC3953	SG	SBb; bright, elliptical, no core	7'x3.5'	11:54.4	52°16'	10.0
○ NGC4051	SG	Sb/Sc; thick spiral arms	4.9'x3'	12:03.7	44°28'	10.1
○ NGC4088	SG	SB/Sc; almost edge-on	7.1'x2.7'	12:06.1	50°29'	10.5
○ NGC4605	SG	SBC/p; bright; distinct; edge-on	6'x2.3'	12:40.5	61°33'	10.0
○ NGC5322	EG	E2-E3; round; smooth center	5.6'x4'	13:49.6	60°08'	10.2
○ Star 19	Ast	Broken Engagement Ring	20'	10:51.0	56°09'	8.5
○○ Cr 285	OC	UMA Moving Cluster	23°	12:03.0	58°00'	0.4
		Includes Mizar-Alcor, 78, Alioth, Megrez, Phad, Merak, 37				
		Galaxy designations, p.20				