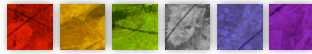


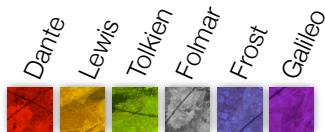
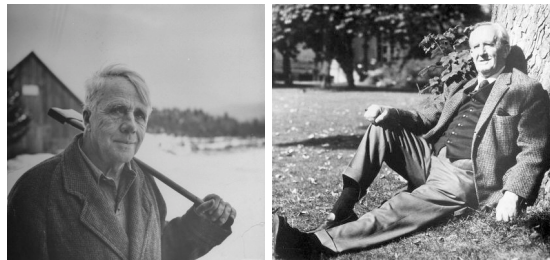
Under the Starry Skies
of J.R.R. Tolkien and Robert Frost

Kerry Magruder, Curator
History of Science Collections, University of Oklahoma

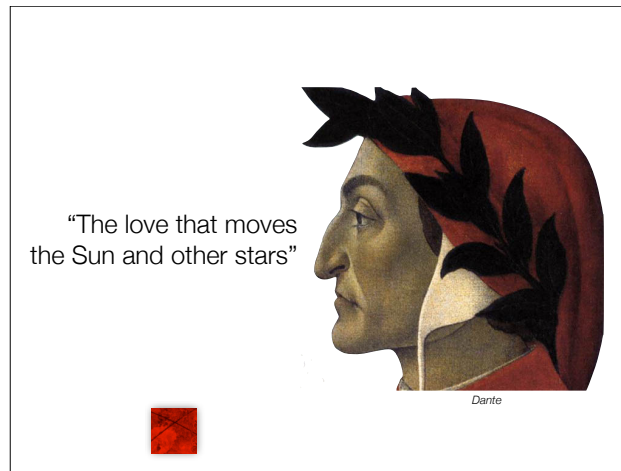
Download this presentation at kerrysloft.com



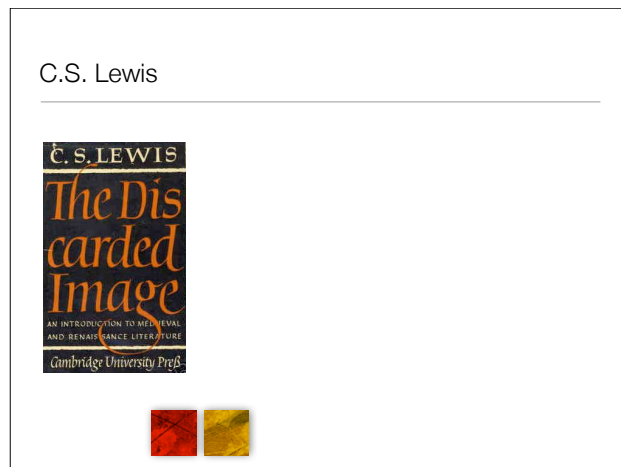
Thank you for inviting me.



My talk has six parts, but we'll spend most of our time with Tolkien and Frost. Both Tolkien and Frost encourage their readers to take an interest in astronomy and skywatching.

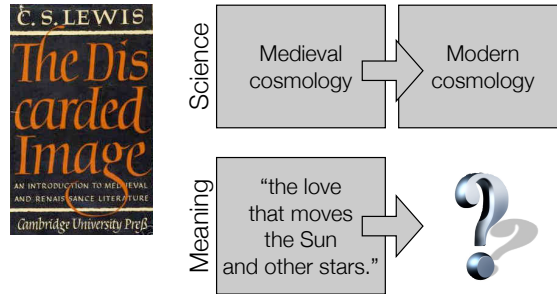


Does the universe have meaning? Dante's *Divine Comedy* ends with this phrase: [read] Surprisingly, EACH of the three volumes concludes with the word "stars." Dante's epic represents the universe as animated by love. For Dante, the universe is a place filled with meaning, and it is no wonder that he pays close attention to the stars. [The Penguin edition, translated by Tolkien's friend Dorothy Sayers, includes a volvelle or calculating wheel to follow Dante's references to time on different sides of the world. Dante and astronomy would be another talk in itself.]



C.S. Lewis, a friend of Tolkien's, was an amateur astronomer. Lewis owned and regularly used a backyard telescope, and frequently mentions in his letters the weekly configuration of planets and seasonal appearance of constellations. similarly a medieval scholar.

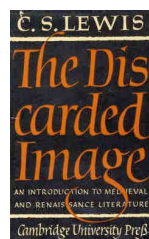
C.S. Lewis



Like Tolkien, Lewis was also a medieval scholar. Lewis believed that although the science of cosmology had changed greatly since medieval times,

- the medieval sensibility of the MEANING of the cosmos had been needlessly discarded. In a classic little work, *The Discarded Image*, Lewis penned a masterful introduction to the medieval cosmos and its imaginative sensibility.

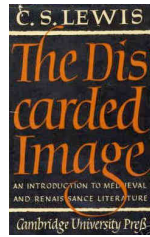
C.S. Lewis, *The Discarded Image*



- “You must go out on a starry night and walk about for half an hour trying to see the sky in terms of the old cosmology.... As a modern, you located the stars at a great distance. For distance you must now substitute that very special, and far less abstract, sort of distance which we call height.... the Medieval Model is vertiginous.”

If we're trying to understand Tolkien, or Dante, we should follow Lewis' advice when he wrote:
[read bold]
Tolkien will help us do this.

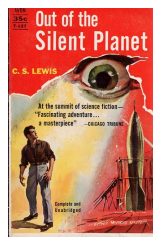
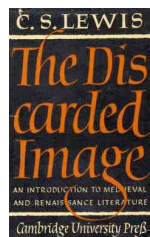
C.S. Lewis, *The Discarded Image*



- “You must go out on a starry night and walk about for half an hour trying to see the sky in terms of the old cosmology.... As a modern, you located the stars at a great distance. For distance you must now substitute that very special, and far less abstract, sort of distance which we call height.... the Medieval Model is vertiginous.”
- **Medieval cosmos (JRR Tolkien):** we are *finite*, placed in a larger and meaningful *story*.
- **Modern cosmos (Robert Frost):** we are *small*, drifting in infinite space, imbued with irony if not meaning.

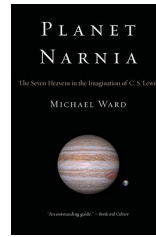
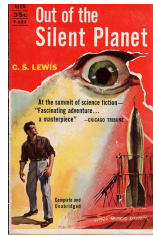
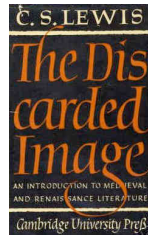
[Read this little book if you want to understand the medieval cosmos that animates the imaginative literature of Lewis and Tolkien, as well as Dante. We’ll see that Tolkien and Frost illustrate fairly well the contrast Lewis was drawing between medieval and modern sensibilities in this study.]

C.S. Lewis



Lewis put his understanding of the medieval cosmos into [the imagery of the planets of Mars and Venus in] his space trilogy. His space trilogy helps us moderns step back inside the medieval cosmos and imagine what it felt like to live in a world of meaning, suffused with love and hope.

C.S. Lewis



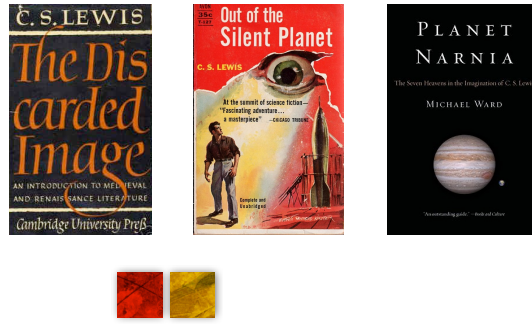
In his recent book, *Planet Narnia*, Michael Ward shows that the same aim underlay Lewis' series of Narnia books as well.

Michael Ward, *Planet Narnia* (Oxford, 2008)

Chronicle of Narnia	Planet
The Lion, the Witch & the Wardrobe	Jupiter
Prince Caspian	Mars
Voyage of the Dawn Treader	Sol
The Silver Chair	Luna
The Horse and His Boy	Mercury
The Magician's Nephew	Venus
The Last Battle	Saturn

Ward demonstrates that each Chronicle is structured around the symbolism and imagery of one of the planets in the medieval cosmos. By conveying the medieval meaning of the planets, the Chronicles enable us to imagine today something of how medieval humans understood their own story in the universe.

C.S. Lewis



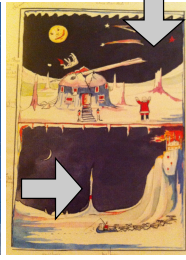
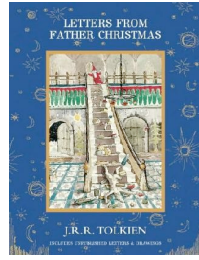
The medieval sense of the cosmos common to Dante and Lewis was also shared by

J.R.R. Tolkien



J.R.R. Tolkien. In a famous conversation, Lewis and Tolkien agreed to write works of imaginative literature that would recover the medieval sensibility for modern times.

J.R.R. Tolkien, *Letters from Father Christmas*



North pole



Rory Bory Alis

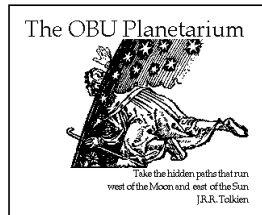
As any reader of Tolkien's *Letters from Father Christmas* can attest, Tolkien loved to tell his children about the aurora borealis, and

- the north pole (shown here snapped in two and knocked down by the Great Polar Bear).

J.R.R. Tolkien, Bilbo's walking song

- "Roads go ever ever on,
Over rock and under tree,
By caves where never sun has shone,
By streams that never find the sea;
Over snow by winter sown,
And through the merry flowers of June,
Over grass and over stone,
And under mountains in the moon.
- Roads go ever ever on
Under cloud and under star,
Yet feet that wandering have gone
Turn at last to home afar.
Eyes that fire and sword have seen
And horror in the halls of stone
Look at last on meadows green
And trees and hills they long have known."

The Hobbit



Fellowship of the Ring, Book I,
Ch. 2, "Three is Company"

And Tolkien frequently wrote of the Sun, Moon and stars, as in Bilbo's walking song, which first appears in *The Hobbit*. [read first stanza] Long ago, I once adopted lines from this poem as part of the logo for the OBU Planetarium. "Take the hidden paths that run west of the Moon and east of the Sun" comes from a later version that occurs in *Fellowship of the Ring*.

J.R.R. Tolkien, *Fellowship of the Ring*

• “Away high in the East swung
Remmirath, the Netted Stars, and
slowly above the mists red **Borgil**
rose, glowing like a jewel of fire.
Then by some shifts of airs all the
mist was drawn away like a veil, and
there leaned up, as he climbed over
the rim of the world, the Swordsman
of the Sky, **Menelvagor** with his
shining belt.”

• Pleiades
• Aldebaran

• Orion

• Book I, Ch. 3, “Three is Company”

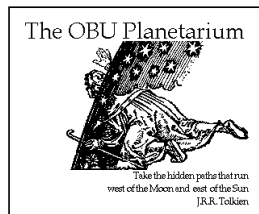
Tolkien frequently refers to the stars and constellations in his tales, as here, where he recounts three rising events above the eastern horizon. [read, showing equivalents]

J.R.R. Tolkien, *Eärendil*

• “East of the Moon
West of the Sun
There stands a lonely hill
Its feet are in the pale green Sea
Its towers are white & still
Beyond Taniquetil in **Valinor**....

• O West of the Sun, East of the Moon
Lies the Haven of the **Star**
The white tower of the Wanderer,
And the rock of Eglamar,
Where **Vingelot** is harboured
While **Earéndel** looks afar...

• “The Shores of Faery,” 1915



[need not read if short on time]

In an early poem, written long before the Hobbit and Lord of the Rings, Tolkien linked Bilbo's walking song with the voyages of the ship Vingelot of Earendil harbored in Valinor in the far west. Eärendil's tale, one of the earliest stories of Tolkien's legendarium, is also the story of the planet Venus.

Elwing saves the Silmaril

J.R.R. Tolkien, *The Silmarillion*

- “Too late the ships of Cirdan and Gil-galad the High King came hasting to the aid of the Elves of Sirion; and **Elwing** was gone, and her sons. Then such few of the people as did not perish in the assault joined themselves to Gil-galad, and went with him to Balar; and they told that Elros and Elrond were taken captive, but Elwing with the **Silmaril** upon her breast had **cast herself into the sea**. Thus Maedros and Maglor gained not the jewel;



Douglas Chaffee, card art for "Middle-earth Collectible Card Game"

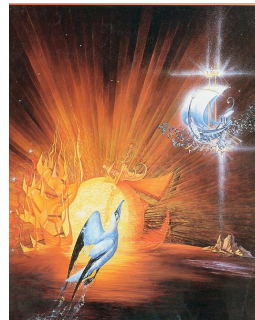


Silmaril emblem, J.R.R. Tolkien

Tolkien explains the story of Eärendil in the Silmarillion. Here's an excerpt: [read all]

J.R.R. Tolkien, *The Silmarillion*

- “...but it was not lost. For **Ulmo** bore up Elwing out of the waves, and he gave her the likeness of a great white bird, and upon her breast there shone as a star the Silmaril, as she flew over the water to seek **Eärendil** her beloved. On a time of night Eärendil at the helm of his ship saw her come towards him, as a white cloud exceeding swift beneath the moon, as a star over the sea moving in strange course, a pale flame on the wings of storm....”

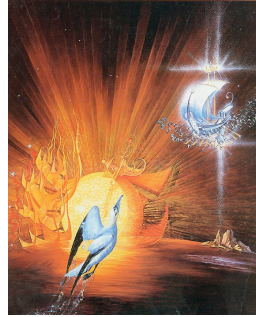


Roger Garland, *Tolkien's World*

[read all]

Elwing, Eärendil and Venus

- **Eärendil** the Mariner:
husband of Elwing & father of Elrond,
sailed his ship into the heavens.
- **Elwing** ("Star-spray," wife of Eärendil),
raised in the form of a swan.
- **Ulmo** (Valar of the Waters)
- Origin of the planet **Venus**:
Eärendil was lifted into the heavens
with the **Silmaril** at his brow as the
brightest star, Venus.
 - *Book of Lost Tales*,
Part 2, pp. 252ff.



Roger Garland, *Tolkien's World*

[Read first two points, if time]

So Eärendil was lifted into the heavens, with the Silmaril at his brow as the brightest star, Venus. The tale of Eärendil and Venus shows how, for Tolkien, our lives are a story, and it's a story that is interconnected with the story of the stars. [Like Dante, Tolkien had a medieval sense of the cosmos, as Lewis described it, where we are finite, but placed in a larger and meaningful story.]

Where did the light come from?



Frodo's light in the darkness of Shelob's lair

So now we're able to answer: When Frodo unveiled light in the darkness of Shelob's lair, where did the light come from?

Where did the light come from?



Silmaril of
Elwing & Eärendil
(Venus)



Phial of Galadriel



Frodo's light
in the darkness of Shelob's lair

Frodo's light came from

The vial of Galadriel. This vial contained light captured from Venus, the Silmaril of Elwing and Earendil.

[Before that, three silmarils crystallized light from the two primeval trees, and were stolen by Melkor, with the help of Ungoliant, Shelob's mother, who blotted out stars and sucked the light out of the trees.]

What is Legolas doing?



Return of the King, Part 1

Stars and sleep

- “The night grew ever colder. Aragorn and Gimli slept fitfully, and whenever they awoke they saw Legolas standing beside them, or walking to and fro, singing softly to himself in his own tongue, and as he sang the white stars opened in the hard black vault above.”
- “...and he could sleep, if sleep it could be called by Men, resting his mind in the strange paths of Elvish dreams, even as he walked open-eyed in the light of this world.”
- “Legolas already lay motionless, his fair hands folded upon his breast, his eyes un-closed, blending living night and deep dream, as is the way with Elves.”
The Two Towers, “Riders of Rohan”
- “The heart of Legolas was running under the stars of a summer night some northern glade amid the beech-woods.”
The Two Towers, “The Great River”

[read first quote] Elves do sleep at times, in LOTR and the Silmarillion. Yet they don't have to sleep, and their sleep is not like that of humans. Watching the stars is like sleep to them; they also find restoration and regain their strength through mediation upon the stars.

J.R.R. Tolkien, *The Silmarillion*
“Of the Coming of the Elves...” (ch. 3)

- | | |
|---|--|
| • “But at the bidding of Manwë | • Eldest Valar, King of Arda |
| Mandos spoke, and he said: ‘In this age the Children of Ilúvatar shall come indeed, and shall look first upon the stars. To Varda ever shall they call at need.’ | • a Valar |
| Then Varda went forth from the council and she beheld the darkness of Middle-earth beneath the innumerable stars, faint and far . Then she began a great labour, greatest of all the works of the Valar since their coming into Arda . | • a Valar, wife of Manwë |
| | • Faint stars, or other galaxies? |
| | • World
(Earth, Solar System, Milky Way, Universe) |
| | (abridged for brevity) |

Tolkien explains how the Elves first came to be in the Silmarillion: [read all, disclosing equivalents]

J.R.R. Tolkien, *The Silmarillion*
“Of the Coming of the Elves...” (ch. 3)

- “She took the silver dew from the vats of Telperion, and therewith she made new stars and better against the coming of the Firstborn; wherefore she whose name was **Tintallë**, *the Kindler*, became called after by the Elves **Elentári**, *Queen of the Stars*.

Carnil

and **Luinil**, **Nénar** and **Lumbar**,

Alcarinquë and **Elemmírë** she wrought in that time,
- **Other names for Varda, also Elbereth, Gilthoniel**
 - **Mars**
 - **Neptune, Uranus, Saturn**
 - **Jupiter, Mercury**

(abridged for brevity)

J.R.R. Tolkien, *The Silmarillion*
“Of the Coming of the Elves...” (ch. 3)

- “and many other of the ancient stars she gathered together and set as signs in the heavens of Arda: **Wilwarin**,

Telumendil,
Soronúmë, and
Anarríma;

and **Menelmacar** with his shining belt, that forebodes the Last Battle that shall be at the end of days. And high in the north as a challenge to Melkor she set the crown of seven mighty stars to swing, **Valacirca**, the Sickle of the Valar and sign of doom.
- **Cassiopeia**
 - **Gemini?**
Aquila?
Auriga or Sagittarius?
 - **Orion**
 - **Big Dipper**

(abridged for brevity)

J.R.R. Tolkien, *The Silmarillion*
“Of the Coming of the Elves...” (ch. 3)

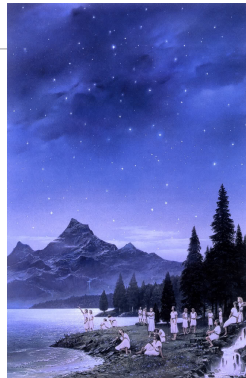
- “It is told that even as Varda ended her labours, and they were long, when first **Menelmacar** strode up the sky and the blue fire of **Helluin** flickered in the mists above the borders of the world, in that hour the Children of the Earth awoke, the Firstborn of Ilúvatar.”

- Orion
- Sirius

(abridged for brevity)

The Silmarillion, ch. 3:
Of the Coming of the Elves

- “By the starlit mere of Cuiviénen, Water of Awakening, they rose from the sleep of Ilúvatar; and while they dwelt yet silent by Cuiviénen their eyes beheld first of all things the stars of heaven. Therefore they have ever loved the starlight, and have revered Varda Elentári above all the Valar....”



Ted Nasmith, “Awakening,” *The Silmarillion*

[finish reading] After their awakening under the stars, the Elves invented poetry and music. Astronomy, music and literature go together! (Look at the people around you... you are the Elves!)

Restoration for the Elves



Return of the King, Part 1



Ted Nasmith, "Awakening," *The Silmarillion*

The awakening of the Elves by the starlit mere of Cuiviénen helps explain why the Elves find restoration from the stars as much as from sleep.

Tolkien's medieval cosmos

- "The longing for transcendent beauty is associated with a sense of melancholy, of infinite distance or separation, because we are far from home. Tolkien associates this especially with starlight, with music, and with the sound of water.... Elvishness when mingled with humanity 'ennobles' us because the **Elves are our link back to the first Light**, and their presence in our bloodstream enables us to recall the Light that shone in the eyes of those who lived in Valinor before ever the Moon rose or the Sun shone."

• Stratford Caldecott, *Secret Fire* (2003), p. 98.

Caldecott explains: [read]

J.R.R. Tolkien, *The Return of the King*

• "In western lands beneath the Sun
the flowers may rise in Spring,
the trees may bud, the waters run,
the merry finches sing.

Or there maybe 'tis cloudless night
and swaying beeches hear
the **Elven-stars as jewels white**
amid their branching hair."

• Book VI, Ch. 1, "The Tower of Cirith Ungol"

Sam sings this song when nearly without hope, when Sam believes Frodo lies dead in Shelob's lair. [read] Sam defies despair by singing a song that recalls the sight of the stars as Elven jewels.



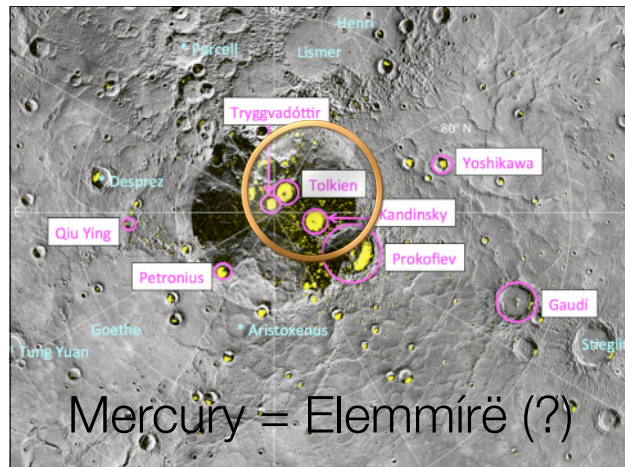
Earlier, when weary in Mordor, Sam saw a single star break through the clouds, likely Venus, the light of Eärendil's Silmaril. The sight of it kindled a transcendent hope from beyond the bounds of the world.

J.R.R. Tolkien, *The Return of the King*

• “Frodo sighed and was asleep almost before the words were spoken. Sam struggled with his own weariness, and he took Frodo’s hand; and there he sat silent till deep night fell. Then at last, to keep himself awake, he crawled from the hiding place and looked out. The land seemed full of creaking and cracking and sly noises, but there was no sound of voice or of foot. Far above the Ephel Dúath in the West the night sky was still dim and pale. There, peeping among the cloud-wrack above a dark tor high up in the mountains, **Sam saw a white star twinkle for a while. The beauty of it smote his heart, as he looked up out of the forsaken land, and hope returned to him.** For like a shaft, clear and cold, the thought pierced him that in the end the Shadow was only a small and passing thing: there was light and high beauty forever beyond its reach.”

• Book VI, Ch. 2, “The Land of Shadow”

[read bold to end] For Tolkien, stars express our longing for home, our hope for eternal love, in a way that is not far from Dante’s vision of the love that moves the Sun and other stars.



No wonder the mercurial mind of J.R.R. Tolkien has now found an appropriate home in the solar system, a newly-named crater on the planet nearest the intense golden rays of the Sun.

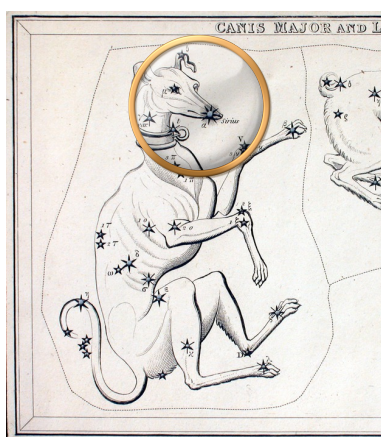
Menelmacar,
Menelvagil,
Telumehtar



Aspin, *Urania's Mirror* (1825)

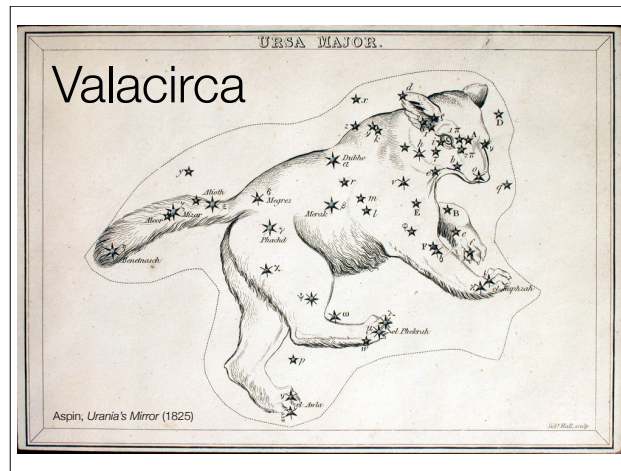
To review... Tolkien called Orion...

Helluin

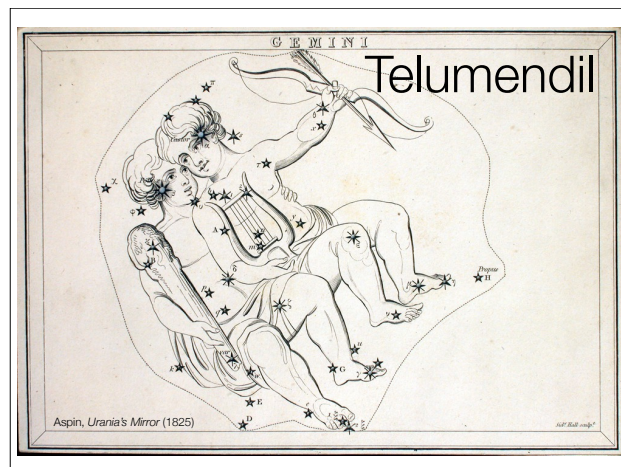


Aspin, *Urania's Mirror* (1825)

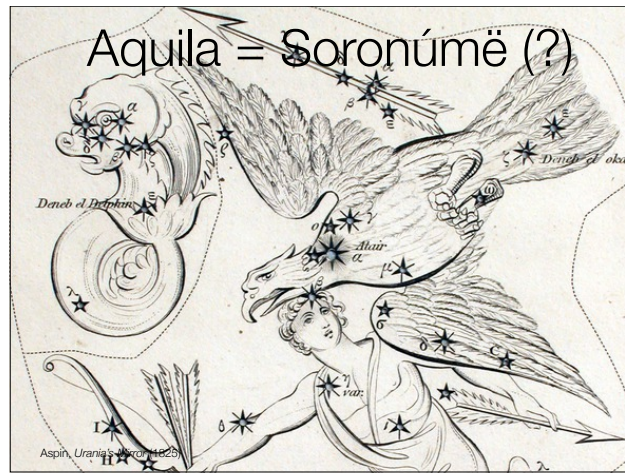
The star Sirius, in Canis Major, Tolkien called:



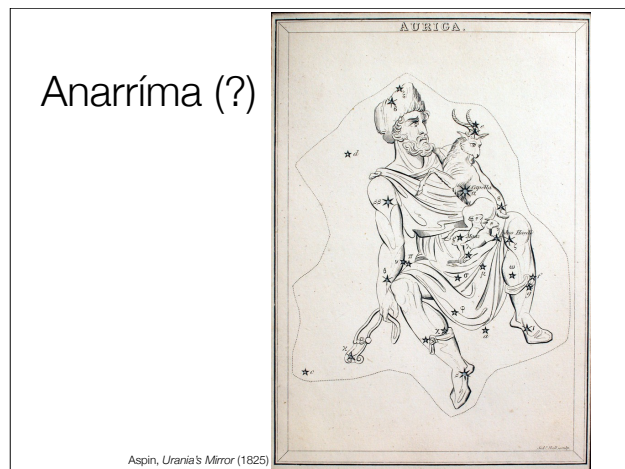
The stars of the Big Dipper, within Ursa Major, he called:



Gemini is probably:



Aquila is probably:



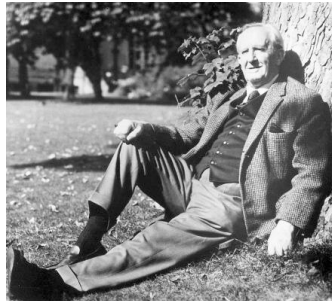
And Auriga might the constellation Tolkien called:

More info...

- J.R.R. Tolkien: *The Hobbit, The Lord of the Rings, The Silmarillion*
- Christopher Tolkien, ed., *The Making of Middle Earth*, 12 vols.
- Jim Manning, "Elvish Star Lore," *The Planetarian*, December 2003, pp. 14-22.
- Articles by Kristine Larson, including:
 - "A Definitive Identification of Tolkien's 'Borgil': An Astronomical and Literary Approach." *Tolkien Studies* 2 (2005): 161-70.
 - "Swords and Sky Stones." *Mallorn* 44 (2006): 22-26.
 - "Myth, Milky Way, and the Mysteries of Tolkien's Morwinyon, Telumendil, and Anarrima." *Tolkien Studies* 7 (2010): 197-210.
 - "Tolkien's Burning Briar: An Astronomical Explanation." *Mallorn* 43 (2005): 49-52.
 - "Sea Birds and Morning Stars: Ceyx, Alcyone, and the Many Metamorphoses of Earendel and Elwing." *Tolkien and the Study of His Sources: Critical Essays*. Ed. Fisher, Jason. Jefferson: McFarland, 2011. 69-83.
 - "An Elrond by Any Other Name." *Mallorn* 53 (2012): 4-8.

Read more in these sources, listed on the blog.

J.R.R. Tolkien



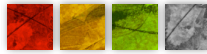
Now I want to show you a poem, not written by Tolkien himself, which nevertheless represents Tolkien's love of the starry sky.

Rachel Magruder Folmar

- Lindë Elenion, "Song of the Stars"
- Commentary
 - kerrysloft.com,
search for "Tolkien"



Arwen, by R.M.F.



Many years ago, early in her high school years, my daughter Rachel wrote a poem called Song of the Stars. It's a great way to introduce your friends to Tolkien's astronomy – poetry heightens interest in skywatching.

Lindë Elenion, the Song of the Stars
by Rachel Magruder Folmar

- Even-time is drawing nigh
And in the fastly dimming sky
Bright **Anor** sinks her flaming head
And silver **Ithil**, round and fair,
Ascends once more the starry road
Of night, and mighty figures high.
 - Sun
 - Moon
- The stars of **hrivë**, clear and bright
Surround the swordsman of the sky
Arrayed in silver and in blue
Upon his shoulder a scarlet jewel.
Menelvagil, **Telumhtar** fair,
Shakes his sword at the frostbit air.
 - Winter
 - Orion

Let's read through the poem, and when we come to words in bold, see if you can guess what they are. Call it out whenever you have a guess. :)

Lindë Elenion, the Song of the Stars

by Rachel Magruder Folmar

- And at his feet soars **Helluin**
Ice-blue fire flickering
A drop of water in a sea of stars
Yet ever bright with silver glow
As seen by Elves awakening
In Cuiviénen, long ago.
 - Still even then above his helm
Yet at his side **Telumendil** strode
Sky-friend holding two fair jewels
One of silver, one of gold.
Anarríma near them was set -
The golden crown of Elbereth.
- **Sirius**
 - **Gemini?**
Pollux (yellowish),
Castor (silvery-blue)
 - **Auriga?**

Lindë Elenion, the Song of the Stars

by Rachel Magruder Folmar

- To hail the come of **Menelvagil**
Arise the **Remmirath**, the Netted Stars
Jewels blue as the sky by Anars light
Woven by Varda's silver threads
A sentinel against the might
Of the bull from the east, and his scarlet eye.
 - Ever swinging in the north
The Sickle of the Valar speaks
A mighty challenge to the dark
A sign of doom, a sign of hope.
The Wain, The Seven Butterflies
Valacirca reaps the fruit of the skies.
- **Orion**
 - **Pleiades**
 - **Big Dipper**

Lindë Elenion, the Song of the Stars

by Rachel Magruder Folmar

- And round the sickle lightly flying
Drinking the nectar of the night
In the north and east it flitters-
Wilwarin, the Butterfly.
Her counterpart in **lairë** soars
Soronúmë, the Eagle lord.
 - And now the **seven jewels** most fair
Across the sky are wandering:
Wat'ry **Nénar** and **Luinil** blue
Carnil, scarlet red as war
Elemmírë and clouded **Lumbar**,
Alcarinquë, glorious star.
- **Cassiopeia**
 - **Summer**
 - **Aquila?**
 - **Planets**
 - **Neptune? Uranus?**
 - **Mars**
 - **Mercury? Saturn?**
 - **Jupiter**

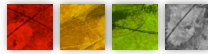
Lindë Elenion, the Song of the Stars

by Rachel Magruder Folmar

- And on the edge of night arising
The Mariner sails his glistening ship
Beyond the starlight journeying
Through shades of rose, and silver and blue
Eärendil bears the Silmaril
Star of Hope, and brightest of jewels.
 - When winter's bite has met its night
And breezes warm from the sea are blown
A white swan lifts its wings to fly
And sails the stars to islands far
As sail the ships of Alqualond
Across the sea by Valimar.
- **Venus**

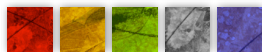
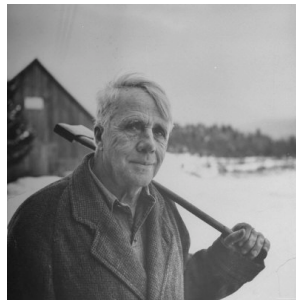
kerrysloft.com, search for "Tolkien"

- Rachel Magruder Folmar
 - Lindë Elenion, "Song of the Stars"
 - Commentary
- This presentation (pdf)



You can download the poem, with commentary by Rachel, from kerrysloft.com, along with this presentation. Share the poem with any Tolkien fan and maybe they will want to come out with you next time you go star-watching.

Robert Frost



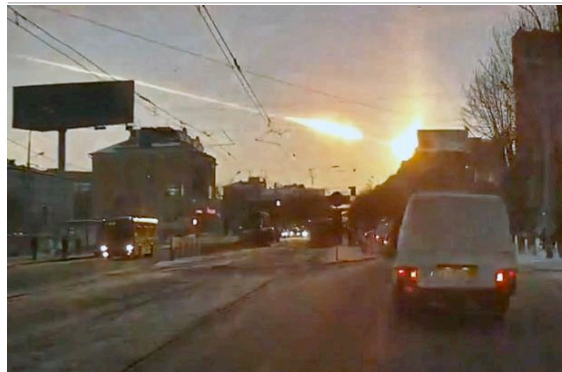
If Tolkien is the road most traveled these days, because of the movies, let's turn now to Robert Frost.

Frost's modern cosmos

- “Space ails us moderns: we are sick with space.
Its contemplation makes us out as small
As a brief epidemic of microbes
That in a good glass may be seen to crawl
The patina of this the least of globes....
- The cloister and the observatory saint
Take comfort in about the same complaint.
So science and religion really meet.”
 - Robert Frost, “The Lesson for Today”

Frost writes: [Read all first, then comment] If Tolkien represented the medieval sense of the cosmos, then Frost illustrates what Lewis meant by the modern cosmos, with its sense of distance in infinite space. When we read Frost's first stanza here, we're now far from Dante. Yet the last three lines show that Frost's take on the cosmos is pervaded by a sense of irony and irenic humor. We may be small, but we can recognize the irony in our situation.

Russia, Ural Mountains, Chelyabinsk
Feb 15, 2013



Did you follow the news of the Russian meteorite that injured over 1,000 people last month?

Meteorites

- “Have I not walked without an upward look
Of caution under stars that very well
Might not have missed me when they shot and fell?
It was a risk I had to take – and took.”

• Robert Frost, “Five Noctournes: III. Bravado”

- “Never tell me that not one star of all
That slip from heaven at night and softly fall
has been picked up with stones to build a wall....”

• Robert Frost, “A Star in a Stone-Boat”

Frost wrote about meteorites with his trademark, light-hearted, ironic humor...

Meteors

- “Did you stay up last night (the Magi did)
To see the star shower known as Leonid
That once a year by hand or apparatus
Is so mysteriously pelted at us?

It is but fiery puffs of dust and pebbles,
No doubt directed at our heads as rebels
In having taken artificial light
Against the ancient sovereignty of night...”

• Robert Frost, “A Loose Mountain”

Frost stood against light pollution in his poem
“A Loose Mountain”: [read]

The dog star

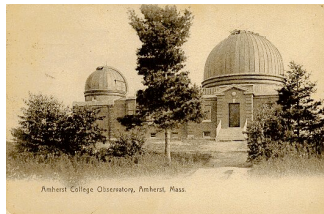
- “.... He dances upright
All the way to the west
And never once drops
On his forefeet to rest.
- I’m a poor underdog,
But tonight I will bark
With the great Overdog
That romps through the dark.”
 - Robert Frost, “Canis Major”



Constellations frequently attracted Frost’s attention, as in this little poem about Canis Major:

Frost and telescopes

- “The strongest thing that’s given to us to see with’s
A telescope. Someone in every town
Seems to me owes it to the town to keep one.
In Littleton it may as well be me.”
 - Robert Frost, “The Star-splitter”



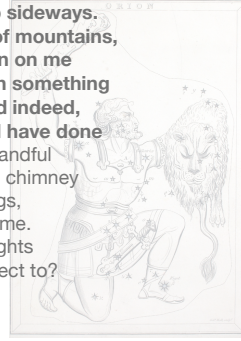
Amherst observatory

[Read] Frost was himself a star-watcher, who acquired his first telescope when he was 15 years old. He wrote an editorial for his high school newspaper urging the school to buy a telescope of its own.

- He taught off and on at Amherst College in Massachusetts, which boasted an observatory with an 18-inch refractor. Frost believed that every town should have its own telescope. This poem, The Star-splitter, illustrates how the presence of a telescope will change people, and entire communities, for the better.

Robert Frost, "The Star-splitter"

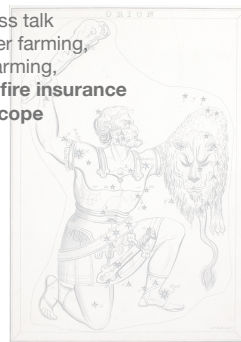
• "You know Orion always comes up sideways.
Throwing a leg up over our fence of mountains,
And rising on his hands, he looks in on me
Busy outdoors by lantern-light with something
I should have done by daylight, and indeed,
After the ground is frozen, I should have done
Before it froze, and a gust flings a handful
Of waste leaves at my smoky lantern chimney
To make fun of my way of doing things,
Or else fun of Orion's having caught me.
Has a man, I should like to ask, no rights
These forces are obliged to pay respect to?"



[Read bold] You may be familiar with this poem's humorous tale. It begins with a stanza where, rather than us watching the sky, ironically, Orion watches us - as we're going about our business poorly.

Robert Frost, "The Star-splitter"

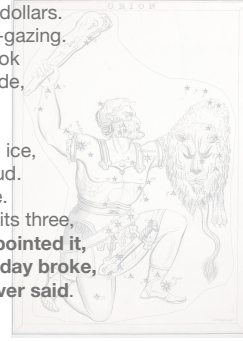
• "So Brad McLaughlin mingled reckless talk
Of heavenly stars with hugger-mugger farming,
Till having failed at hugger-mugger farming,
He burned his house down for the fire insurance
And spent the proceeds on a telescope
To satisfy a life-long curiosity
About our place among the infinities.



Then Frost turns to Brad McLaughlin, who wanted to become an amateur astronomer so badly that he traded in his house for a telescope. [read bold]

Robert Frost, "The Star-splitter"

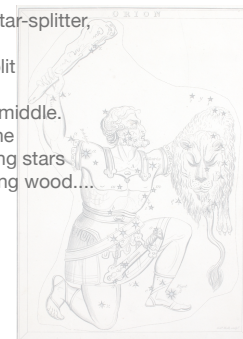
• He got a good glass for six hundred dollars.
His new job gave him leisure for star-gazing.
Often he bid me come and have a look
Up the brass barrel, velvet black inside,
At a star quaking in the other end.
I recollect a night of broken clouds
And underfoot snow melted down to ice,
And melting further in the wind to mud.
Bradford and I had out the telescope.
We spread our two legs as it spread its three,
Pointed our thoughts the way we pointed it,
And standing at our leisure till the day broke,
Said some of the best things we ever said.



Brad McLaughlin's telescope created friendships and started conversations. [read bold]

Robert Frost, "The Star-splitter"

• That telescope was christened the Star-splitter,
Because it didn't do a thing but split
A star in two or three the way you split
A globule of quicksilver in your hand
With one stroke of your finger in the middle.
It's a star-splitter if there ever was one
And ought to do some good if splitting stars
'Sa thing to be compared with splitting wood....



[read all] There's much more to this long poem, but we can spot Frost's delightful sense of irony: While Orion watched Frost splitting wood, McLaughlin watched Orion with a telescope that could split stars.

Robert Frost, *Collected Poems, Prose & Plays*

Library of America edition

• A Star in a Stone-Boat	162
• The Star-splitter	166
• Fire and Ice	204
• The Freedom of the Moon	224
• Fireflies in the Garden	225
• Acquainted with the Night	234
• Canis Major	239
• On Looking Up By Chance at the Constellations	246
• Lost in Heaven	269
• The Lesson for Today	318
• A Loose Mountain	327
• The Literate Farmer and the Planet Venus	335
• Five Nocturnes	346
• Night Light, Were I in Trouble, Bravado, On Making Certain Anything has Happened, In the Long Night	
• Astrometaphysical	352
• Skeptic	353
• Two Leading Lights	354
• Take Something Like a Star	365
	and more...

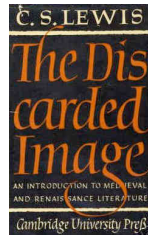
Amazon sells Frost's collected poems in a handsome hardback "Library of America" edition for only \$23. Run out and order a copy, and these page numbers will work for you. These are not all of Frost's astronomical poems; but reading them is a way to begin enjoying the starry skies of Robert Frost.

Robert Frost, more info...

- Charles Laird Calia, "The Astronomy of Robert Frost," *Sky and Telescope* 2005, v. 109, issue 4, pp. 50-53.
- For more astronomical poetry, an out-of-print compilation of astronomical poems that I've treasured through the years: Jerome J. Knuijt, *Poetry of the Heavens* (Mira Publishing, 1989).

For more, don't miss Calia's *Sky and Telescope* article on Frost.

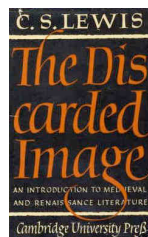
C.S. Lewis, *The Discarded Image*



- “You must go out on a starry night and walk about for half an hour trying to see the sky in terms of the old cosmology.... **As a modern, you located the stars at a great distance. For distance you must now substitute that very special, and far less abstract, sort of distance which we call height.... the Medieval Model is vertiginous.**”

Let's go back to the contrast Lewis described between medieval and modern sensibilities of the cosmos. [read bold]

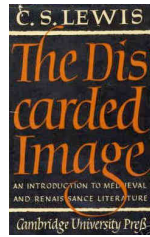
C.S. Lewis, *The Discarded Image*



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- **Modern cosmos (Robert Frost):** we are *small*, drifting in infinite space, imbued with irony if not meaning.

Frost represents the modern sensibility. We saw that in Frost, we humans can easily become lost in space. Yet Frost's light-hearted humor strengthens our imaginations so that we can find meaning, even in the ironies.

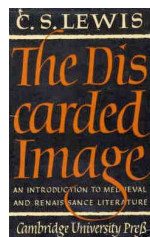
C.S. Lewis, *The Discarded Image*



- “You must go out on a starry night and walk about for half an hour trying to see the sky in terms of the old cosmology.... **As a modern, you located the stars at a great distance. For distance you must now substitute that very special, and far less abstract, sort of distance which we call height.... the Medieval Model is vertiginous.**”
- **Modern cosmos (Robert Frost):** we are *small*, drifting in infinite space, imbued with irony if not meaning.
- **Medieval cosmos (JRR Tolkien):** we are *finite*, placed in a larger and meaningful *story*.

In contrast, Tolkien represents the medieval sensibility. For Tolkien, looking up at the starry night is more like looking up through the tall windows of a medieval cathedral, whose stained glass brings to mind stories upon stories in which we participate, like Dante, in the love that moves the Sun and other stars. In this respect, Frost appears to be a suitable representative of the modern cosmos and Tolkien of the medieval.

C.S. Lewis, *The Discarded Image*



Science

Medieval
cosmology

Modern
cosmology

Meaning

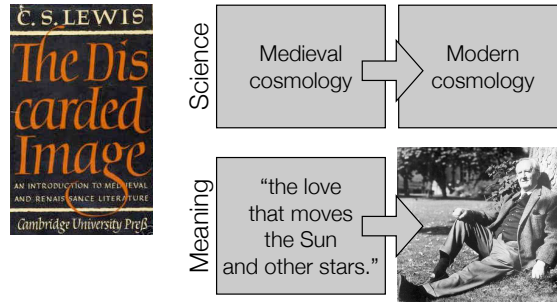
“the love
that moves
the Sun
and other stars.”



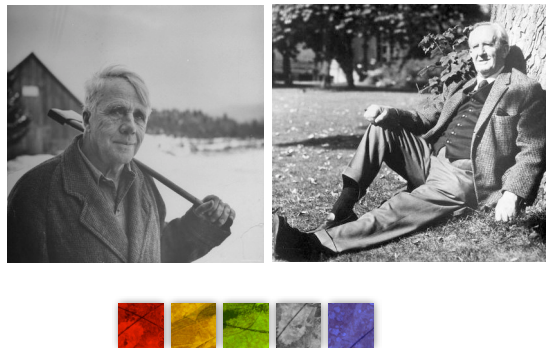
The science of cosmology changed greatly from the medieval to the modern cosmos. The medieval scientific image of the cosmos was discarded. But as the science changed,

- did the MEANING of the cosmos also have to be discarded? For Tolkien and Lewis, the answer is no.

C.S. Lewis, *The Discarded Image*



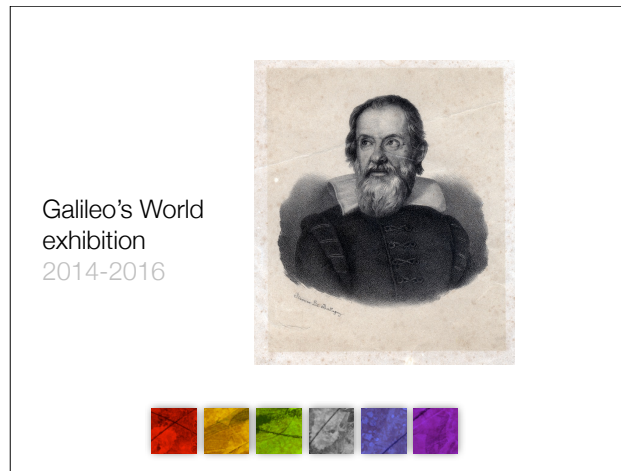
The meaning of the medieval cosmos might be recovered for us moderns, through imagination. If you are among the many readers who enjoy the imaginative literature of Tolkien or Lewis, then you probably agree that they have succeeded in recovering “the discarded image.”



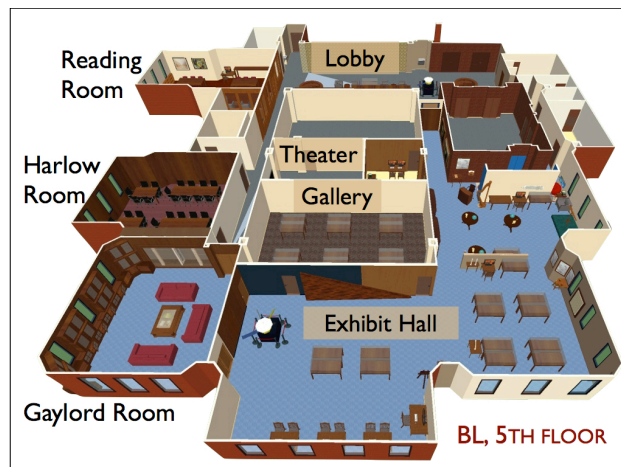
Both Tolkien and Frost can reinvigorate our imaginations as we ponder the meaning of love in the universe under a starry night. Both Tolkien and Frost shared a common wonder toward the night sky. A regular reader of either Tolkien or Frost sooner or later will be stimulated to watch the starry heavens. For these and other reasons, I love them both.

[end of talk] Much more could be said, but I'd like to close by giving you a sneak peek of...

[Tonight I have used Lewis' distinction between the medieval and the modern cosmologies to contrast the sensibilities of Tolkien and Frost. This is an oversimplification. Their sensibilities are different, and I hope that I've indicated something of that. Yet, just as with any collection of amateur astronomers gathered under a starry night, their evident similarities are more significant.]



an upcoming Galileo exhibition. This will be unlike anything we have ever done before at OU.



We're renovating a new exhibit hall on the 5th floor of the library.



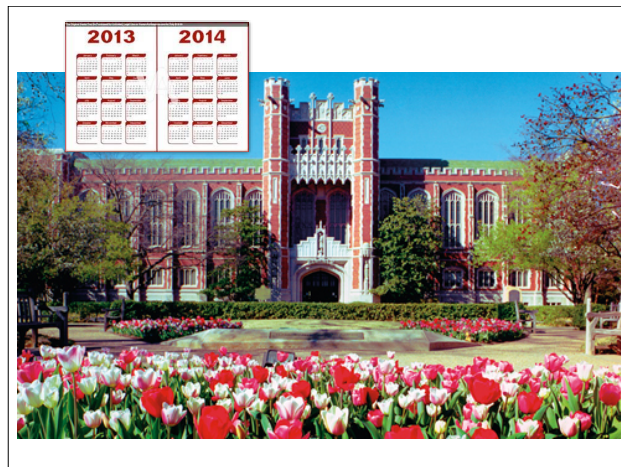
Rare books like these will make the Galileo's World exhibition an international event. To see all of the works of Galileo in first editions is a once-in-a-lifetime opportunity.



The telescope gallery will have a working replica of Galileo's telescope trained upon a scale model of the Moon down the hallway. Visitors will look into the telescope and see what Galileo saw.



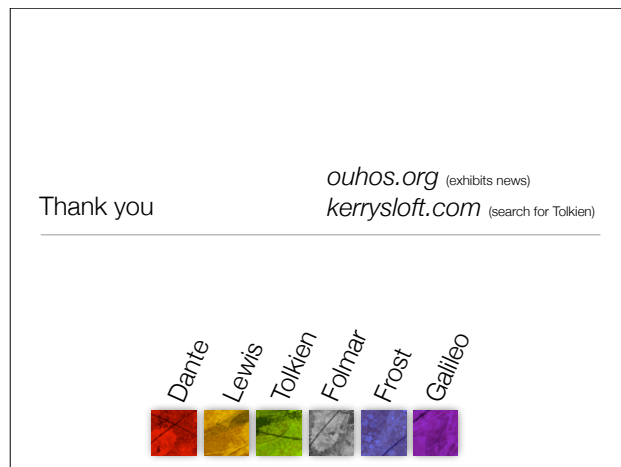
The instrument stations in the Music of the Spheres gallery will include classic instruments for learning the motions of the heavens, including orreries (like these), an astrolabe, •armillary sphere, •and even a harp. As the harp strings are plucked, visitors will observe the mathematical character of sound and harmony.



We are planning many special events, including an opening symposium, a speakers series, two orchestral concerts and a theater performance, as well as an athletics-sponsored event we're calling "Stadium under the Stars."



All this and more is coming up, and we'll be asking for your help.



As a thank you for inviting me here today, I have a little gift...