

Orion Molecular Cloud Complex

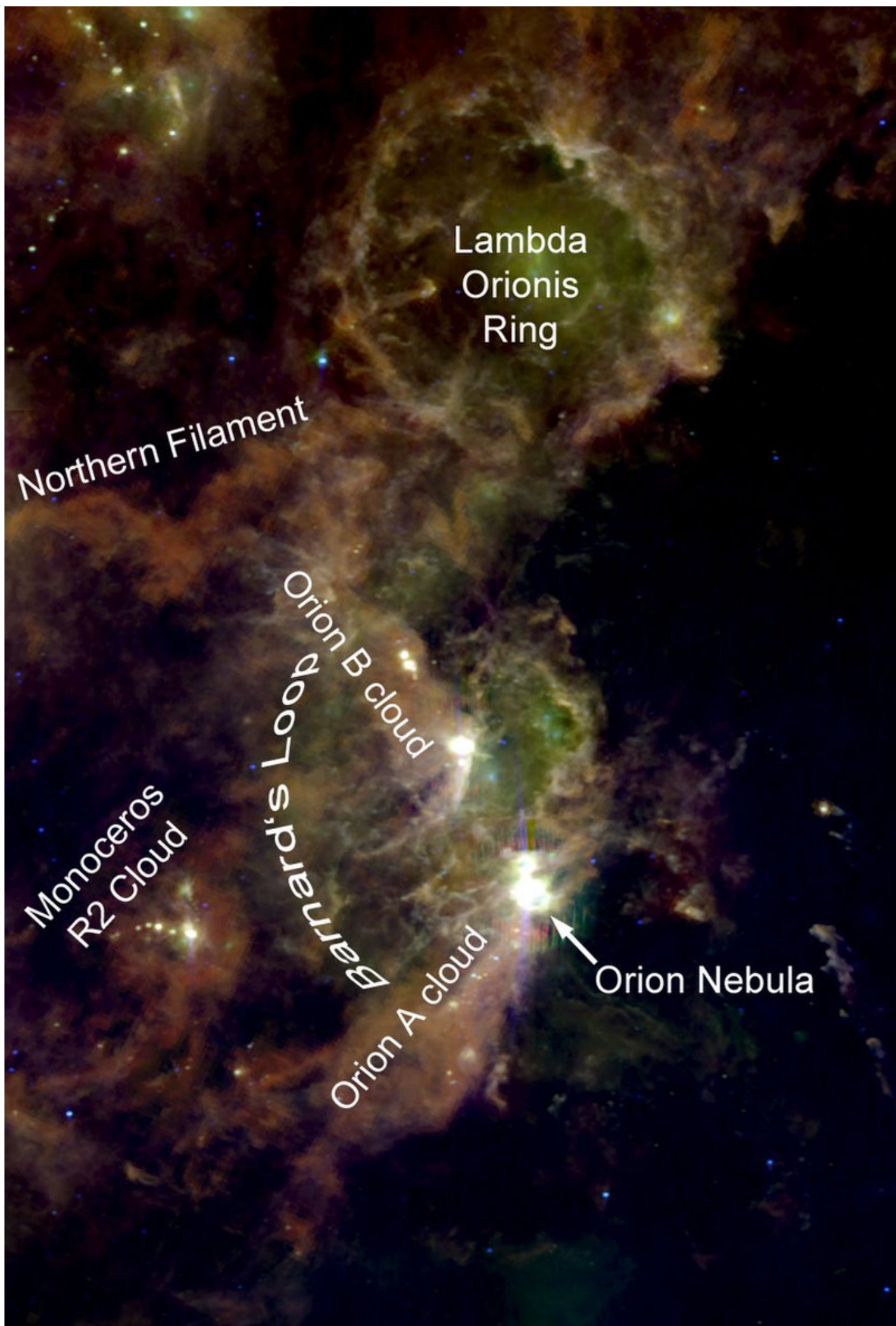
A huge cloud of gas and dust in the Orion Arm of the Milky Way Galaxy that is forming stars and stellar systems. It covers most of the area of the constellation Orion as viewed from Earth, and contains new stars, protostellar objects, forming stellar systems, emission and absorption nebulae, and more. It lies between 1000-1400 light years (LY) away, and is easily hundreds of light years in diameter. A partial list of the objects within the cloud complex includes, but is not limited to:

- *Orion A Molecular cloud +The Orion Nebula, also known as M42 (part of Orion's Sword) +M43, which is part of the Orion Nebula +Sh2-279 (part of Orion's Sword) +NGC 1980 (part of Orion's Sword) +Orion Molecular Cloud 1 (OMC-1) =Becklin-Neugebauer Object =Kleinmann-Low Nebula +Orion Molecular Cloud 2 (OMC-2) +Orion Molecular Cloud 3 (OMC-3) +Orion Molecular Cloud 4 (OMC-4) +NGC 1981 +NGC 1999 +LDN 1641 +HH 1/2, the first two recognized Herbig-Haro objects +HH 34 a Herbig-Haro object with symmetric bow shocks
- *Orion B Molecular cloud +Flame Nebula (NGC 2024) +IC 434 =The Horsehead Nebula (Barnard 33) +M78, a reflection nebula (NGC 2068) +McNeil's Nebula is a variable nebula discovered in 2004 near M78 +Orion East Cloud (LDN 1621 + LDN 1622) +HH 24-26 +HH 111
- *Orion OB1 Association +Orion's Belt +Sigma Ori cluster +25 Ori cluster
- *Lambda Orionis molecular ring (Sh2-264)[4] +Lambda Ori cluster +Barnard 30 +Barnard 35
- *Orion-Eridanus superbubble +Barnard's Loop (Sh2-276) +Eridanus Loop

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Orion Molecular Cloud Complex, Labeled

This is a labeled version of the Orion Molecular Cloud. It shows an IRIS 25+60+100 Micron map combined with the CO map from Dame et al. 2001. The regions are labeled with the help of Maddalena et al. 1986 Image Credit: IRIS + Dame et al. 2001



Lambda
Orionis
Ring

Northern Filament

Orion B cloud
Barnard's Loop

Monoceros
R2 Cloud

Orion A cloud

Orion Nebula

Orion with the Cloud Complex

Photo credit: Rogelio Bernal Andreo in October 2010. The Orion constellation showing the surrounding nebulas of the Orion Molecular Cloud complex. Also captured is the red supergiant Betelgeuse (top left) and the famous belt of Orion composed of the OB stars Alnitak, Alnilam and Mintaka. To the bottom right can be found the star Rigel. The red crescent shape is Barnard's Loop. The photograph appeared as the Astronomy Picture of the Day on October 23, 2010.

